Consumers Energy

A CMS Energy Company

Kurt M. Haas
General Manager

November 7, 2006

Mr. Anton Martig
U.S. EPA Region 5
77 W. Jackson Blvd.
Chicago, IL 60604

Re: **Final Report for Big Rock Point Containment Shell Dismantlement TSCA Approval – 40 CFR § 761.62(c)**

Dear Mr. Martig:

On September 6, 2006, Consumers Energy Company's Big Rock Point Restoration Project completed all post-demolition verification and PCB storage area sampling in accordance with the March 21, 2005, Environmental Protection Agency (EPA) letter re: Big Rock Point Containment Shell Dismantlement TSCA Approval – 40 CFR § 761.62(c).

As required by the March 21, 2005, letter, Enclosure 1, Conditions of Approval Step 15, Consumers Energy Company submits the enclosed PCB Bulk Product Waste Management Summary Report, Big Rock Point Restoration Project.

Please contact Kenneth Pallagi (231-547-8416) should you have any questions regarding this report.

Sincerely,

K.M. Haas
Site General Manager

cc: W.J. Wilson (P24-509)
T. Strong, Michigan Department of Environmental Quality
J.C. Shepherd, U.S. Nuclear Regulatory Commission

PCB Bulk Product Waste Management Summary Report

Big Rock Point Restoration Project
Consumers Energy Co.

PCB Summary Report
Big Rock Point Restoration Project

Table of Contents

1.0 INTRODUCTION

- 1.1 Executive Summary
- 1.2 Purpose of Report
- 1.3 Site Location and Description
- 1.4 Background

2.0 CHARACTERIZATION SAMPLING

- 2.1 System Components and Structural Steel Characterization
- 2.2 Containment Shell Characterization

3.0 SUMMARY OF REMEDIAL ACTIVITIES

- 3.1 Dismantlement of Systems
- 3.2 Dismantlement of Containment
- 3.3 Demolition of Other Buildings and Structures
- 3.4 On-Site PCB Management Activities

4.0 POST-DEMOLITION AND PCB STORAGE AREA VERIFICATION SAMPLING

5.0 SUMMARY OF PCB WASTE DISPOSAL

6.0 CONCLUSIONS

LIST OF TABLES:

1. Project Chronological Summary
2. Summary of Containment Interior Screening Samples
3. Final Containment Sample Results and Waste Classifications for Sections above Equator
4. Summary of Post-Demolition and Storage Area Verification Sampling
5. Summary of PCB Waste Shipments (2004-2006)

LIST OF FIGURES:

1. Big Rock Point Site Plan
2a. Containment Cut Plan Schematic – Typical Elevation
2b. Containment Cut Plan Schematic – Plan View Upper Hemisphere

LIST OF APPENDICES:

A – Correspondence
B – BRP Heath & Safety and Waste Management Procedures
C – Containment Shell Interior Screening Sample Laboratory Analyses
D – Post-Dismantlement Containment Shell Section Sampling Laboratory Analyses
E – Photographs and Field Notes from Containment Dismantlement
F – Inspection Records and Logs
G – Post-Demolition and Storage Area Verification Records
H – PCB Waste Disposal Records

1.0 INTRODUCTION

1.1 Executive Summary

This report provides a summary of management and disposal of PCB Bulk Product Wastes generated while decommissioning the Big Rock Point (BRP) Nuclear Plant. Big Rock Point is a former nuclear plant that permanently ceased operation and began decommissioning in late 1997. Decommissioning activities were conducted from 1997 through August 2006 when the project was completed and the site restored to a Greenfield condition.

PCB wastes at Big Rock Point consisted of painted metals and concrete meeting the criteria for classification as PCB Bulk Product Waste under 40 CFR 761.62(b)(1)(i). All decommissioning work activities involving management/disposal of PCB waste materials, including those also classified as radioactive wastes, were performed in accordance with applicable U.S. Environmental Protection Agency (EPA) regulations (40 CFR 761) and with correspondence and approval documents described in the following sections. Radioactive, PCB waste materials generated at the BRP facility were also managed in accordance with applicable U.S. Nuclear Regulatory Commission (NRC) regulations and site license requirements.

1.2 Purpose of Report

This final report provides documentation for characterization, management and disposal of PCB Bulk Product Wastes generated while decommissioning the BRP Nuclear Plant. The U.S. EPA granted approval under the Toxic Substance Control Act (TSCA, 40 CFR 761.62(c)) to characterize and dismantle the Containment Building and demolish other buildings containing PCB Bulk Product Waste at BRP. This approval letter dated March 21, 2005, required that a final report be submitted to the U.S. EPA Region 5 within 90 days of completing all activities relating to PCB waste. All PCB activities at BRP were completed on September 6, 2006. Pursuant to the TSCA approval, this report includes the following information[1]:

- a summary of remedial activities;
- characterization and verification laboratory analytical results and corresponding sample chains of custody;
- quality control and quality assurance checks for verification sampling;
- waste shipment manifests for PCB Bulk Product Wastes including certificates of disposal, as applicable; and
- a summary of waste quantities generated during the BRP decommissioning project.

1.3 Site Location and Description

The Big Rock Point Restoration Project site, formerly known as the Big Rock Point Nuclear Plant, is located approximately four miles north of Charlevoix, Michigan along U.S. Highway 31 North. The site is owned by Consumers Energy Company. Formerly, the BRP Plant was a 75 MW commercial nuclear generating station. The plant began operation in 1962 and following 35 years of operation, the plant ceased commercial power generation in August, 1997. Consumers Energy immediately began the process of decommissioning the facility in accordance with U.S. NRC regulations (10 CFR 50.82). The majority of physical work associated with decommissioning and site

[1] See Conditions of Approval, Item 15, Record Keeping and Reporting contained in the March 21, 2005 TSCA Approval letter .

restoration was completed at the end of August 2006. All plant components, buildings and structures have been dismantled and removed, leaving the site in a Greenfield condition. Figure 1 depicts the site location and layout of the Big Rock Point facility prior to completion of decommissioning.

1.4 Background

PCB Bulk Product Waste materials at the BRP facility consisted of system equipment (piping, tanks, etc...), building structural steel, and some concrete surfaces painted with coatings containing PCBs above 50 ppm. Extensive characterization of plant equipment and structures was performed early in the decommissioning process resulting in classification of specific equipment and structure coatings containing PCBs above 50 ppm as PCB Bulk Product Waste. The majority of this material was carbon steel piping and building structural steel coated with silver paint. PCB waste materials at the BRP facility were only found bound within the dried paint matrix, a form recognized as not likely to leach to the environment.

A brief chronological summary of correspondence associated with management of PCB Bulk Product Waste during the latter phases (2004-2006) of decommissioning activities at the BRP site is provided in Table 1. Copies of written correspondence referenced in this table are provided in Appendix A. Appendix B contains site-specific procedures utilized to ensure safe and proper sampling, management and storage of PCB wastes generated at the BRP facility.

2.0 CHARACTERIZATION SAMPLING

2.1 System Components and Structural Steel Characterization

Following review of the original construction paint specification, plant modifications, maintenance activities, and the performance of a site walkdown, coating samples were collected from accessible plant areas and equipment types. Specific attention was given to various paint colors and coating types known to have been utilized at the site. This characterization effort involved collection and analysis of approximately 500 paint samples collected between 1997 and 2000[2]. Classification of specific equipment and structure coatings containing PCBs above 50 ppm was completed after a detailed review of analytical results.

2.2 Containment Shell Characterization

The Containment Building structure was a spherical, carbon steel shell approximately 130 feet in diameter with a nominal steel thickness of three-quarters inch. The top of Containment was approximately 102 feet above grade and the remaining 28 feet below grade elevation. Preliminary scoping samples obtained from accessible areas of the Containment shell interior determined that the interior, cream-colored coating above the equator had the potential to contain PCBs above 50 ppm. However, the majority of the Containment shell interior was inaccessible due the curvature, height, and lack of safe areas to install scaffolding or utilize lifting equipment, making additional characterization prohibitive prior to dismantlement. The Containment shell interior coating below the equator and the exterior mastic/insulation coatings were determined not to contain PCBs

[2] Paint sample analysis was performed in accordance with U.S. EPA Method 8082, Polychlorinated Biphenyls by Gas Chromatography, SW-846, Test Methods for Evaluating Solid Waste – Physical/Chemical Methods.

above 50 ppm. Containment exterior areas where adjacent structures existed were painted silver paint containing PCBs and, thus, classified as PCB Bulk Product Wastes in accordance with characterization conclusions discussed in the previous section.

Due to safety considerations for working aloft inside the Containment Building structure above the equator and combined with the possibility of PCBs in the interior coatings, Consumers Energy submitted a request for approval of alternative approach to mitigate risk for Containment dismantlement methodology as allowed under 40 CFR 761.62(c) of the Toxic Substance Control Act (TSCA). This approval of alternative approach included a detailed work plan for the dismantlement process and a sampling methodology for the containment interior coating[3]. The requested TSCA approval for these work activities was received from the U.S. EPA Region 5 on March 21, 2005.

The methodology for sampling the Containment interior coating consisted of collecting additional screening samples from accessible areas of the Containment interior above the equator. These samples were assigned three to four specific shell section numbers that corresponded to the final sections to be cut during dismantlement of this structure. If the analysis of the screening samples exceeded an administrative limit of 40 ppm PCB, then each corresponding shell piece required further sampling once it was removed and lowered to ground level to determine its final PCB waste classification.

Containment shell interior screening sampling resulted in 23 of 75 sections that required additional sampling and analyses due to exceeding the 40 ppm PCB screening criteria. Table 2 provides a summary of the analytical results corresponding to specific areas of the Containment shell and Figures 2a and 2b depict the Containment shell piece configuration prior to removal. Appendix C contains laboratory analyses and corresponding sample chains of custody for the screening samples. A summary of Containment dismantlement activities and subsequent sample results is discussed in Section 3.2.

3.0 SUMMARY OF REMEDIAL ACTIVITIES

3.1 Dismantlement of Systems

Early decommissioning activities (prior to 2004) generally involved dismantlement of system components and equipment (e.g., piping, tanks, motors, etc...) inside existing buildings. Equipment removal was performed using standard techniques including both cold (saws and hydraulic shears) and hot (torch) cutting methods. Prior to performing any hot cuts, paint coatings were mechanically removed a minimum of 4 inches on each side of the cut line in accordance with site health and safety procedures. All paint removed was collected and containerized for waste characterization upon completion. Paint removal processes, i.e., chemical strippers, which had the potential to chemically alter PCB constituents in the coatings known or suspected to contain PCBs above 50 ppm were not utilized at the BRP facility. Plant system components classified as PCB waste were then placed in a disposal container, labeled, and transported to a designated storage area in accordance with applicable PCB regulations and site procedures.

[3] See September 8, 2004, September 16, 2004, and November 30, 2004, letters from Consumers Energy Co. to U.S. EPA Region 5 provided in Appendix A.

3.2 Dismantlement of Containment

The process of dismantling the Containment shell structure began on October 14, 2005, following Containment interior screening sampling and TSCA approval by the U.S. EPA Region 5. Containment shell sections above the equator were cut away, lowered to ground level, and immediately labeled with the appropriate section number from the cut plan. If the section required additional sampling to determine PCB waste classification, it was placed in a designated area for potential PCBs wastes. Following radiological decontamination and evaluation, sub-section cut lines were marked on each piece and paint samples were collected from each subsection. Typical subsection size was approximately 300-400 square feet. Prior to beginning dismantlement of the Containment shell, it was determined that the number of Containment sections removed aloft could be reduced from 86 to 75 by cutting some of these sections simultaneously[4]. This change did not alter the paint sampling plan specified in the TSCA approval letter dated March 21, 2005, based on 86 total sections.

Containment shell subsection paint samples were collected by removing all paint layers to bare metal in a one-foot square area in the center of each subsection. Once the PCB analytical results were obtained, the non-PCB sections/subsections were removed from the designated area. Table 3 provides a summary of analytical results for Containment shell sections that required additional analyses for PCB waste determination. Appendix D contains copies of the laboratory analyses and corresponding sample chains of custody for this sampling effort.

Shell subsections containing PCBs above 50 ppm were marked to prevent improper handling, and then underwent size-reduction to fit into disposal containers. The primary method of size reduction utilized hydraulic shears; torch cutting was only performed on a limited basis when necessary. No remediation of PCB coatings, i.e. paint removal, to alter the waste classification was performed on Containment shell sections classified as PCB Bulk Product Wastes. Following size-reduction, the shell sections were then placed into disposal containers, the containers labeled and moved to a designated PCB waste storage area. Section 3.4.1 provides a general description of PCB waste storage and handling activities. Photographs of Containment dismantlement are provided in Appendix E, along with copies of work instructions, field notes and checklists used to ensure that Containment shell sections classified as PCB Bulk Product Waste were tracked and handled in accordance with applicable requirements.

On November 10, 2005, Consumers Energy provided notification to U.S. EPA – Region 5 of a deviation from the provisions contained in the March 21, 2005, TSCA Approval[5]. This deviation involved an inadvertent torch cut of a containment shell section without prior removal of paint along the exterior cut line. This section coating was silver paint, known to contain PCBs above the 50 ppm limit. In addition to notification to the U.S. EPA, a Condition Report was generated to document this occurrence and address corrective actions to prevent recurrence. Appendix A contains a copy of the notification letter and the corresponding Condition Report.

---

[4] Notification of this revision was made in a letter dated October 3, 2005 from Consumers Energy to U.S. EPA Region 5 and subsequently approved in a by the U.S. EPA Region 5 on October 27, 2005.

[5] Notification was made in accordance with the Conditions Approval (General Item 3) contained in the March 21, 2005 letter.

3.3 Demolition of Other Building and Structures

All buildings and structures associated with the BRP Nuclear plant were demolished to restore the site to a Greenfield condition. Several of the demolished buildings contained structural surfaces with coatings meeting the PCB Bulk Product Waste criterion. These buildings included the Screenhouse, Turbine Building, Service Building, interior rooms and structures located within and adjacent to the Containment Building, and miscellaneous storage buildings. When feasible, waste materials with coatings containing PCBs above 50 ppm were removed from buildings prior to demolition. However, removal of building structural steel (silver paint) prior to demolition was not always possible. After buildings were demolished, silver-painted structural steel was segregated from the debris pile, sized for disposal and placed in designated PCB waste containers as soon as practicable. Demolition of all buildings and structures was completed as described in Consumers Energy's letter dated September 8, 2004, and pursuant to the U.S. EPA TSCA Approval dated March 21, 2005.

The Turbine Building shield wall was a concrete wall located entirely within the Turbine Building painted with PCB paint above 50 ppm. In order to reduce the disposal volume for this wall, the painted surface and approximately one-half inch of concrete was removed prior to demolition of this wall. The scabbled material was disposed of as PCB Bulk Product Waste. The remaining concrete surface was then sampled to ensure all PCBs were removed. Sampling was performed in accordance with EPA's *Draft Standard Operating Procedure for Sampling Concrete in the Field* and Region 5 guidance. Sample analysis was conducted in accordance with Method 8082[6]. All samples results were less than 50 ppm, allowing the remaining concrete wall to be disposed of as demolition debris[7]. Appendix G contains sample design, documentation and corresponding laboratory analysis reports for the Turbine Building Shield wall. Section 4.0 and Table 4 of this report contain additional information on verification sampling activities.

3.4 On-Site PCB Management Activities

The following sections describe the controls and waste management activities in place during decommissioning of the BRP facility. Appendix B contains copies of site procedures utilized to implement these controls.

3.4.1 PCB Waste Storage

PCB Bulk Product Waste storage areas inside buildings were generally not available once demolition of buildings/structures began in late 2003. Beginning in 2004, PCB Bulk Product Waste demolition debris was placed in roll-off boxes lined with two 8-mil thick polyethylene liners and covered with a metal lid. Roll-off boxes were not opened or loaded during rainfall events. The roll-offs were labeled in accordance with 40 CFR 761.40 and 761.45 requirements and stored in designated areas posted for storage of PCB wastes. Inspections of these waste containers and storage areas were performed each scheduled work day for containers stored outside and weekly for containers stored inside buildings. Copies of these inspections are provided in Appendix F.

---

[6] Method 8082, Polychlorinated Biphenyls by Gas Chromatography, SW-846, Test Methods for Evaluating Solid Waste – Physical/Chemical Methods.

[7] Analytical results for one concrete sample were slightly above 50 ppm; reanalysis of this sample yielded results below 50 ppm.

3.4.2 *Worker Protection*

Work activities at BRP were completed in accordance with applicable NRC requirements, Michigan OSHA standards, Consumers Energy Health and Safety Programs and BRP site safety procedures and programs. Work activities with the potential for exposure to PCBs were identified during work planning activities to ensure the appropriate worker protection controls were instituted.

3.4.3 *Decontamination and Disposal of Equipment*

All materials and equipment utilized during work activities pertaining to PCBs, e.g., personnel protective equipment, tools, sampling equipment, etc., were disposed of as PCB wastes or decontaminated in accordance with site procedures and applicable federal PCB regulations. PPE and disposable equipment (e.g., saw blades, etc.) were placed in PCB waste containers with the PCB Bulk Product Wastes. Large equipment used on PCB materials, such as hydraulic shears, were decontaminated via a wipedown with detergent and then wiping with damp rags. Verification of decontamination was made by collecting a PCB wipe sample from the equipment. Water was only utilized on rags to wipe equipment after decontamination. No free-liquid PCB wastes were generated.

3.4.4 *Additional Controls*

During decommissioning activities, public access to the BRP site was restricted. Site security staff was present 24 hours a day, 7 days a week. Controls to prevent PCB paint chips and small debris from migrating outside of demolitions areas included stormwater runoff controls (silt fence) and frequent inspections of these areas. Site employees and contractors directly involved in demolition activities were provided copies of the TSCA Approval and associated documents and were briefed at frequent planning meetings and pre-job briefs to ensure site workers had adequate knowledge of applicable controls.

4.0 POST-DEMOLITION AND PCB STORAGE AREA VERIFICATION SAMPLING

Upon completion of demolition activities for a specific building or area, the area was inspected for debris and then post demolition verification sampling was performed. Designated PCB waste storage areas also underwent post storage verification sampling. All post-demolition and storage area verification sampling was performed as specified in the TSCA Approval dated March 21, 2005, and associated correspondence[8]. Table 4 summarizes the areas that were sampled following completion of demolition or container storage activities and Figure 1 shows general sampling locations. Verification sampling typically involved the following activities:

- developing a sample design including quality control measures (field blanks and duplicate samples);
- inspection of the area to ensure all demolition debris and/or paint chips were removed prior to sample collection, as applicable;
- collection of samples for laboratory analysis following the sample collection procedure (see Appendix B); and
- review and approval of sample results for each area.

[8] Sampling was conducted in accordance with 40 CFR 761 Subpart N with exceptions detailed in Consumers Energy's letter dated September 8, 2004.

Appendix G contains completed records of sampling survey designs, sample location maps, laboratory analyses, corresponding sample chains of custody, and documentation of field and laboratory quality control and quality assurance measures for each of these areas. All post-demolition and storage area sampling results met the required criteria of 10 µg/100cm^2 for surfaces (concrete or asphalt) and 1.0 mg/kg (ppm) for soils.

Samples collected from two PCB storage areas, the South Laydown Area and the NE Laydown Area (see Figure 1), exceeded the soil criteria of 1 ppm following verification sampling. These areas were remediated by removing approximately three inches of soil around the sample location that exceeded the acceptance criteria (1 ppm) and then resampled to ensure the remaining soil met the PCB criteria. The soil removed was disposed of as a non-radioactive PCB waste. Appendix G contains documentation of both the initial and subsequent sampling activities for these areas.

5.0 SUMMARY OF PCB WASTE DISPOSAL

PCB waste shipments from BRP were sent to disposal facilities licensed to receive PCB waste materials. These disposal facilities include:

1. Duratek's Bear Creek facility in Oak Ridge, Tennessee, for painted metal classified as radioactive/PCB Bulk Product Waste[9];
2. Wayne Disposal, Inc. in Belleville, Michigan, for building demolition debris classified as non-radioactive/PCB Bulk Product Waste; and
3. Energy Solutions, LLC facility located in Clive, Utah, (formerly Envirocare) for non-metal radioactive/PCB Bulk Product Waste[10].

All shipments consisted of PCB Bulk Product Wastes and were made in accordance with the requirements contained in 40 CFR 761. Table 5 provides a summary of PCB Bulk Product Waste shipments from 2004 to 2006 containing painted metal, building demolition debris and containment shell steel. Appendix H contains copies of the manifests and certificates of disposal or documentation of processing, as applicable, for these waste shipments.

Total waste shipment quantities from BRP decommissioning activities are summarized below[11]:

Radioactive/PCB Bulk Product Waste:	3,437,000	lbs
Non-Radioactive PCB Bulk Product Waste:	690,000	lbs
Radioactive/Non-PCB Waste:	37,363,000	lbs
Non-PCB/Non-Radioactive Demolition Debris:	65,065,000	lbs

[9] Metal PCB Bulk Product waste was sent to Duratek's Bear Creek facility for processing and to Envirocare of Utah for disposal. Both Duratek and Envirocare facilities are now owned by Energy Solutions, LLC.

[10] Five waste shipments were sent to Alaron Corp. as a transfer facility and were loaded onto rail cars and sent to Energy Solutions, LLC in Utah for final disposal.

[11] Includes waste shipments (i.e., radioactive, non-radioactive, PCB, etc.) made between 1998 and 2006 for the BRP decommissioning project.

6.0 CONCLUSIONS

This final report provides documentation for characterization, management and disposal of PCB Bulk Product Wastes generated while decommissioning the BRP Nuclear Plant. This document satisfies the requirement for a report summarizing activities conducted while decommissioning the BRP Nuclear plant as specified in the TSCA Approval dated March 21, 2005. All decommissioning activities conducted between 1997 through August 2006 were performed in accordance with applicable federal PCB regulations contained in 40 CFR 761 allowing final restoration of the former commercial facility to a Greenfield condition.

Table 1. Project Chronological Summary

Date	Description
March 11, 2004	Consumers Energy Co. personnel met with U.S. EPA Region 5 staff to discuss Containment shell interior coating characterization and planned demolition of buildings supported with structural steel containing PCBs above 50 ppm.
April 1, 2004	Letter from Consumers Energy Co. to U.S. EPA – Region 5 addressing methodology for characterization of the Containment shell interior coating.
July 14, 2004	Letter from Consumers Energy Co. to U.S. EPA – Region 5 addressing storage of PCB bulk waste generated from demolition of building and structures.
September 8, 2004	Letter from Consumers Energy Co. to U.S. EPA – Region 5 clarifying storage of PCB Bulk Waste generated from demolition of building and structures. *Superseded information provided in July 14, 2004, letter.*
September 16, 2004	Letter from Consumers Energy Co. to U.S. EPA – Region 5 requesting approval of alternative approach to mitigate risks associated with dismantlement of the Containment shell structure.
November 30, 2004	Letter from Consumers Energy Co. to U.S. EPA – Region 5 providing clarification of Containment shell dismantlement methodology.
March 21, 2005	Received TSCA approval from U.S. EPA - Region 5 under 40 CFR 761.62(c) for Containment shell dismantlement and demolition of other site buildings.
October 3, 2005	Letter from Consumers Energy Co. to U.S. EPA – Region 5 providing notification of minor modifications in the Containment shell dismantlement work plan.
October 14, 2005	Began dismantlement of Containment shell. Note: Minor modifications to Containment shell dismantlement plan referenced above did not affect initial dismantlement work.
October 27, 2005	Received letter from U.S. EPA - Region 5 for minor modifications to Containment shell dismantlement work plan.
November 4, 2005	Completed sampling of containment shell piece interior coatings in accordance with March 21, 2005, TSCA approval.
November 10, 2005	Letter from Consumers Energy Co. to U.S. EPA – Region 5 providing notification of inadvertent torch cut of Containment Shell piece.
May 25, 2006	Completed dismantlement of Containment shell including below-grade structure.
July 20, 2006	Completed demolition of all buildings/structures.
August 10, 2006	Completed shipment of all PCB bulk product waste material from building demolition.
September 6, 2006	Completed all post-demolition verification and PCB storage area sampling in accordance with March 21. 2005, TSCA approval,

Table 2. Summary of Containment Interior Screening Samples

Screening Sample Number	Date Collected	Description	Sample Elevation (ft)	Total Area Assigned to Sample (ft2)	Shell Section Numbers Assigned	Screening Result (ppm PCB)
1	12-Jan-05	N, near Escape Lock	616	1021	69, 81	17
2	13-Jan-05	NNE, east of Escape Lock	616	1021	70, 82	17
3	17-Dec-04	ENE, Access doorway	616	1021	71, 83	11
4	15-Dec-04	E, near walkway	616	1021	72, 84	26
5	15-Dec-04	ESE, walkway	616	1021	73, 85	11
6	15-Dec-04	SSE, near Personnel Lock	616	1021	74, 86	11
7	15-Dec-04	S, above Pipe Tunnel	616	1000	63, 75	16
8	15-Dec-04	SSW, west of Pipe Tunnel	616	1021	64, 76	24
9	16-Dec-04	WSW, near stairway	616	1021	65, 77	14
10	4-Jan-05	W, near CCA door	616	1021	66, 78	18
11	12-Jan-05	WNW, above laydown area	616	1021	67, 79	9
12	12-Jan-05	NNW, above laydown area	616	1021	68, 80	13
13	9-Mar-05	SE Upper 1	660	1579	**46, 60, 61**	**41**
14	9-Mar-05	SSE Upper 1	660	1034	47, 62	12
15	9-Mar-05	S Upper 1	660	1034	33, 48	15
16	9-Mar-05	SSW Upper 1	660	1034	34, 49	8
17	9-Mar-05	SW Upper 1	660	1034	35, 50	26
18	8-Mar-05	WSW Upper 1	660	1034	36, 51	15
19	8-Mar-05	W Upper 1	660	1034	37, 52	13
20	8-Mar-05	WNW Upper 1	660	1034	38, 53	13
21	7-Mar-05	NW Upper 1	660	1034	39, 54	25
22	7-Mar-05	NNW Upper 1	660	1034	40, 55	27
23	7-Mar-05	N Upper 1	660	1580	41,56, 57	23
24	9-Mar-05	SE Upper 2	680	925	16, 17, 31, 32	37
25	4-Mar-05	S Upper 2	685	925	3, 4, 18, 19	33
26	4-Mar-05	SW Upper 2	680	925	5, 6, 20, 21	10
27	9-Mar-05	W Upper 2	685	925	7, 8, 22, 23	19
28	7-Mar-05	NW Upper 2	680	925	**9, 10, 24, 25**	**42**
29	8-Mar-05	N Upper 2	685	653	**11, 12, 26**	**44**
30	8-Mar-05	NNE Upper 2	680	1252	**42, 43, 27**	**54**
31	8-Mar-05	NE Upper 2	685	925	**13, 14, 28, 29**	**56**
32	8-Mar-05	E Upper 2	685	953	**15, 30, 45**	**52**
33	7-Mar-05	E Upper 3	695	820	1, 2, cap	35
--	--	--	--	--	**44, 58, 59**	**NT**

Notes: 1. Bolded text indicated shell sections exceeding screening value of 40 ppm PCB and requiring further analysis.
2. NT indicates screening test not performed, sampling was performed when shell sections were at ground level.

Table 3. Final Containment Sample Results and Waste Classifications for Sections above Equator

Section Number	Sub-section Number	Date Collected	PCB Result (ppm)	Waste Classification
9	9.1	26-Oct-05	31	Non- PCB Waste
	9.2	26-Oct-05	29	Non- PCB Waste
	9.3	26-Oct-05	36	Non- PCB Waste
	9.4	26-Oct-05	32	Non- PCB Waste
10	10.1	26-Oct-05	32	Non- PCB Waste
	10.2	26-Oct-05	27	Non- PCB Waste
	10.3	26-Oct-05	**54**	PCB Bulk Product Waste
	10.4	26-Oct-05	46	Non- PCB Waste
11	11.1	26-Oct-05	46	Non- PCB Waste
	11.2	26-Oct-05	45	Non- PCB Waste
	11.3	26-Oct-05	45	Non- PCB Waste
	11.4	26-Oct-05	**73**	PCB Bulk Product Waste
12	12.1	26-Oct-05	49	Non- PCB Waste
	12.2	26-Oct-05	41	Non- PCB Waste
	12.3	26-Oct-05	38	Non- PCB Waste
	12.4	26-Oct-05	**54**	PCB Bulk Product Waste
13	13.1	21-Oct-05	**57**	PCB Bulk Product Waste
	13.2	21-Oct-05	44	Non- PCB Waste
	13.3	21-Oct-05	36	Non- PCB Waste
	13.4	21-Oct-05	**51**	PCB Bulk Product Waste
14	14.1	21-Oct-05	48	Non- PCB Waste
	14.2	21-Oct-05	36	Non- PCB Waste
	14.3	21-Oct-05	39	Non- PCB Waste
	14.4	21-Oct-05	34	Non- PCB Waste
15	15.1	21-Oct-05	48	Non- PCB Waste
	15.2	21-Oct-05	21	Non- PCB Waste
	15.3	21-Oct-05	49	Non- PCB Waste
	15.4	21-Oct-05	36	Non- PCB Waste
24	24.1	28-Oct-05	36	Non- PCB Waste
	24.2	28-Oct-05	**52**	PCB Bulk Product Waste
	24.3	28-Oct-05	42	Non- PCB Waste
25	25.1	28-Oct-05	33	Non- PCB Waste
	25.2	28-Oct-05	34	Non- PCB Waste
	25.3	28-Oct-05	37	Non- PCB Waste
26	26.1	26-Oct-05	48	Non- PCB Waste
	26.2	26-Oct-05	42	Non- PCB Waste
	26.3	26-Oct-05	47	Non- PCB Waste
27	27.1	26-Oct-05	49	Non- PCB Waste
	27.2	26-Oct-05	**52**	PCB Bulk Product Waste
	27.3	26-Oct-05	42	Non- PCB Waste

Table 3. Final Containment Sample Results and Waste Classifications for Sections above Equator

Section Number	Sub-section Number	Date Collected	PCB Result (ppm)	Waste Classification
28	28.1	21-Oct-05	**55**	PCB Bulk Product Waste
	28.2	21-Oct-05	**73**	PCB Bulk Product Waste
	28.3	21-Oct-05	36	Non- PCB Waste
29	28.1	21-Oct-05	33	Non- PCB Waste
	28.2	21-Oct-05	29	Non- PCB Waste
	28.3	21-Oct-05	25	Non- PCB Waste
30	30.1	21-Oct-05	42	Non- PCB Waste
	30.2	21-Oct-05	47	Non- PCB Waste
	30.3	21-Oct-05	41	Non- PCB Waste
42	42.1	31-Oct-05	35	Non- PCB Waste
	42.2	31-Oct-05	30	Non- PCB Waste
	42.3	31-Oct-05	41	Non- PCB Waste
	42.4	31-Oct-05	42	Non- PCB Waste
	42.5	31-Oct-05	**58**	PCB Bulk Product Waste
43	43.1	31-Oct-05	45	Non- PCB Waste
	43.2	31-Oct-05	**60**	PCB Bulk Product Waste
	43.3	31-Oct-05	48	Non- PCB Waste
	43.4	31-Oct-05	39	Non- PCB Waste
	43.5	31-Oct-05	37	Non- PCB Waste
44	44.1	31-Oct-05	26	Non- PCB Waste
	44.2	31-Oct-05	27	Non- PCB Waste
	44.3	31-Oct-05	30	Non- PCB Waste
	44.4	31-Oct-05	31	Non- PCB Waste
	44.5	31-Oct-05	39	Non- PCB Waste
45	45.1	02-Nov-05	24	Non- PCB Waste
	45.2	02-Nov-05	35	Non- PCB Waste
	45.3	02-Nov-05	35	Non- PCB Waste
	45.4	02-Nov-05	37	Non- PCB Waste
	45.5	02-Nov-05	**94**	PCB Bulk Product Waste
46	46.1	02-Nov-05	37	Non- PCB Waste
	46.2	02-Nov-05	27	Non- PCB Waste
	46.3	02-Nov-05	**51**	PCB Bulk Product Waste
	46.4	02-Nov-05	37	Non- PCB Waste
	46.5	02-Nov-05	**62**	PCB Bulk Product Waste
58	58.1	04-Nov-05	30	Non- PCB Waste
	58.2	04-Nov-05	34	Non- PCB Waste
	58.3	04-Nov-05	29	Non- PCB Waste
	58.4	04-Nov-05	32	Non- PCB Waste
	58.5	04-Nov-05	29	Non- PCB Waste
59	59.1	04-Nov-05	24	Non- PCB Waste
	59.2	04-Nov-05	19	Non- PCB Waste
	59.3	04-Nov-05	16	Non- PCB Waste

Table 3. Final Containment Sample Results and Waste Classifications for Sections above Equator

Section Number	Sub-section Number	Date Collected	PCB Result (ppm)	Waste Classification
	59.4	04-Nov-05	20	Non- PCB Waste
	59.5	04-Nov-05	27	Non- PCB Waste
60	60.1	04-Nov-05	22	Non- PCB Waste
	60.2	04-Nov-05	14	Non- PCB Waste
	60.3	04-Nov-05	17	Non- PCB Waste
	60.4	04-Nov-05	14	Non- PCB Waste
	60.5	04-Nov-05	16	Non- PCB Waste
61	61.1	04-Nov-05	14	Non- PCB Waste
	61.2	04-Nov-05	14	Non- PCB Waste
	61.3	04-Nov-05	26	Non- PCB Waste
	61.4	04-Nov-05	19	Non- PCB Waste
	16.5	04-Nov-05	19	Non- PCB Waste

Table 4. Summary of Post-Demolition and Storage Area Verification Sampling[12]

Package Number	Description	Sample Type	Sampling Date
001	Turbine Building Shield Wall (Post-Demolition)	Concrete Bulk Samples	04/29/04
002	Screenhouse Floor (Post-Demolition)	Wipe	09/17/04
003	Service Building Floor (Post-Demolition)	Wipe	01/21/05
004	Turbine Building Operating Floor (Post-Demolition)	Wipe	02/04/05
005	Turbine Building/Service Building Area (Post-Demolition)	Wipe/Soil	03/31/05
006	Containment Construction Access (CCA) Area (Post-Demolition)	Wipe/Soil	11/08/05
007	South PCB Laydown Area (Storage Area)	Soil	12/22/05
008	Containment Floor, 599.5' Elevation (Post-Demolition)	Wipe	01/31/06
009	South PCB Laydown Area - Secondary Sampling (Storage Area)	Soil	02/02/06
010	NE PCB Laydown Area (Storage Area)	Soil	03/27/06
011	SE PCB Laydown Area (Storage Area)	Soil	04/04/06
012	Bulk Material Release (BMR) Building (Storage Area)	Wipe	06/12/06
013	NE PCB Laydown Area – Secondary Sampling (Storage Area)	Soil	05-04-06
014	Radioactive Waste (RW) Building (Storage Area)	Wipe	08-01-06
015	East Parking Lot (Storage Area)	Soil	09-05-06
016	Radioactive Waste Yard (Storage Area)	Soil	09-06-06

[12] See Appendix G for post demolition and storage area verification sampling documentation. Figure 1 shows the general locations of these areas.

Table 5. Summary of PCB Waste Shipments (2004-2006)

Shipment Number	Ship Date	Michigan Manifest Number	Waste Classification	Waste Material	Waste Weight (lbs)	Disposal Facility
2004 Shipments:						
S-2301	1/8/2004	MI9127638	Rad / PCB BPW	Metal	34,789	Duratek
S-2303	1/13/2004	MI9127641	Rad / PCB BPW	Metal	35,378	Duratek
S-2306	1/20/2004	MI9127642	Rad / PCB BPW	Metal	22,586	Duratek
S-2310	1/27/2004	MI9127643	Rad / PCB BPW	Metal	10,664	Duratek
S-2311	1/29/2004	MI9127644	Rad / PCB BPW	Metal	6,737	Duratek
S-2313	2/4/2004	MI9127639	Rad / PCB BPW	Metal	12,211	Duratek
S-2317	2/10/2004	MI9127640	Rad / PCB BPW	Metal	5,886	Duratek
S-2326	3/11/2004	MI9127645	Rad / PCB BPW	Metal	5,071	Duratek
S-2330	3/18/2004	MI9127647	Rad / PCB BPW	Metal	3,765	Duratek
S-2334	3/31/2004	MI9127649	Rad / PCB BPW	Metal	6,263	Duratek
S-2337	4/7/2004	MI9127650	Rad / PCB BPW	Metal	9,766	Duratek
S-2341	4/15/2004	MI9127651	Rad / PCB BPW	Metal	27,977	Duratek
S-2342	4/27/2004	MI9127660	Rad / PCB BPW	Metal	19,775	Duratek
S-2351	5/13/2004	MI9127664	Rad / PCB BPW	Metal	41,008	Duratek
S-2356	5/18/2004	MI9127665	Rad / PCB BPW	Metal	8,034	Duratek
S-2358	5/20/2004	MI9127666	Rad / PCB BPW	Metal	3,519	Duratek
S-2364	6/17/2004	MI9127668	Rad / PCB BPW	Metal	39,200	Duratek
S-2378	7/15/2004	MI9127669	Rad / PCB BPW	Metal	11,599	Duratek
S-2417	9/9/2004	MI9127670	Rad / PCB BPW	Metal	11,806	Duratek
S-2445	10/13/2004	MI9127671	Rad / PCB BPW	Metal	3,602	Duratek
S-2448	10/20/2004	MI9127672	Rad / PCB BPW	Metal	10,571	Duratek
2004 Total Weight (lbs)					**330,207**	
2005 Shipments:						
C05-015	1/24/2005	MI9127689	PCB BPW	Demo debris	15,274	Wayne Disposal
S-2505	1/25/2005	MI9127691	Rad / PCB BPW	Metal	10,809	Duratek
C05-016	1/26/2005	MI9127690	PCB BPW	Demo debris	23,041	Wayne Disposal
C05-021	1/28/2005	MI9127692	PCB BPW	Demo debris	23,863	Wayne Disposal
C05-032	2/1/2005	MI9127694	PCB BPW	Demo debris	26,103	Wayne Disposal
C05-033	2/3/2005	MI9127695	PCB BPW	Demo debris	16,934	Wayne Disposal
C05-042	2/3/2005	MI9127699	PCB BPW	Demo debris	22,181	Wayne Disposal
C05-041	2/8/2005	MI9127700	PCB BPW	Demo debris	20,499	Wayne Disposal
C05-040	2/8/2005	MI9127503	PCB BPW	Demo debris	20,320	Wayne Disposal
C05-043	2/9/2005	MI9127505	PCB BPW	Demo debris	11,330	Wayne Disposal
C05-044	2/14/2005	MI9127506	PCB BPW	Demo debris	17,216	Wayne Disposal
C05-045	2/15/2005	MI9127507	PCB BPW	Demo debris	16,755	Wayne Disposal
C05-046	2/16/2005	MI9127509	PCB BPW	Demo debris	15,715	Wayne Disposal
S-2527	2/16/2005	MI9127524	Rad / PCB BPW	Metal	21,008	Duratek

Table 5. Summary of PCB Waste Shipments (2004-2006)

Shipment Number	Ship Date	Michigan Manifest Number	Waste Classification	Waste Material	Waste Weight (lbs)	Disposal Facility
C05-047	2/17/2005	MI9127510	PCB BPW	Demo debris	13,173	Wayne Disposal
C05-049	2/18/2005	MI9127512	PCB BPW	Demo debris	20,759	Wayne Disposal
C05-048	2/21/2005	MI9127511	PCB BPW	Demo debris	21,579	Wayne Disposal
C05-050	2/21/2005	MI9127514	PCB BPW	Demo debris	21,219	Wayne Disposal
C05-051	2/23/2005	MI9127516	PCB BPW	Demo debris	17,776	Wayne Disposal
C05-052	2/24/2005	MI9127518	PCB BPW	Demo debris	16,815	Wayne Disposal
C05-054	2/25/2005	MI9127520	PCB BPW	Demo debris	21,499	Wayne Disposal
C05-055	2/28/2005	MI9127521	PCB BPW	Demo debris	28,867	Wayne Disposal
C05-053	3/1/2005	MI9127519	PCB BPW	Demo debris	14,513	Wayne Disposal
C05-080	3/3/2005	MI9127526	PCB BPW	Demo debris	28,687	Wayne Disposal
C05-089	3/4/2005	MI9127528	PCB BPW	Demo debris	27,763	Wayne Disposal
C05-094	3/8/2005	MI9127529	PCB BPW	Demo debris	23,321	Wayne Disposal
S-2549	3/23/2005	MI9127530	Rad / PCB BPW	Metal	16,466	Duratek
S-2576	5/5/2005	MI9127531	Rad / PCB BPW	Metal	33,740	Duratek
C05-196	5/13/2005	MI9127537	PCB BPW	Demo debris	55,830	Wayne Disposal
C05-200	5/17/2005	MI9127534	PCB BPW	Demo debris	54,309	Wayne Disposal
C05-201	5/19/2005	MI9127533	PCB BPW	Demo debris	53,348	Wayne Disposal
C05-195	5/23/2005	MI9127541	PCB BPW	Demo debris	49,763	Wayne Disposal
C05-194	5/25/2005	MI9127543	PCB BPW	Demo debris	61,954	Wayne Disposal
C05-193	5/27/2005	MI9127544	PCB BPW	Demo debris	52,768	Wayne Disposal
S-2600	6/10/2005	MI9127545	Rad / PCB BPW	Metal	31,919	Duratek
S-2660	8/23/2005	MI9127548	Rad / PCB BPW	Metal	6,367	Duratek
S-2665	8/31/2005	MI9127549	Rad / PCB BPW	Metal	8,069	Duratek
S-2673	9/8/2005	MI9127551	Rad / PCB BPW	Metal	13,267	Duratek
S-2712	10/20/2005	MI9127552	Rad / PCB BPW	Metal	14,789	Duratek
S-2717	11/3/2005	MI9127553	Rad / PCB BPW	Metal	18,135	Duratek
S-2723	11/10/2005	MI9127554	Rad / PCB BPW	Metal	20,538	Duratek
2005 Total Weight (lbs)					**1,008,281**	
2006 Shipments:						
C06-012	3/10/2006	MI9127562	PCB BPW	Demo debris	56,831	Wayne Disposal
C06-013	3/14/2006	MI9127563	PCB BPW	Demo debris	34,809	Wayne Disposal
C06-014	3/16/2006	MI9127564	PCB BPW	Demo debris	39,057	Wayne Disposal
C06-015	3/20/2006	MI9127565	PCB BPW	Demo debris	37,615	Wayne Disposal
C06-093	5/2/2006	MI9127566	PCB BPW	Demo debris/soil	42,236	Wayne Disposal
S-3531	5/31/2006	MI9127587	Rad / PCB BPW	Metal/Conc.	29,886	Alaron
S-3532	5/31/2006	MI9127589	Rad / PCB BPW	Metal/Conc.	31,828	Alaron
S-3533	5/31/2006	MI9127590	Rad / PCB BPW	Metal/Conc.	30,547	Alaron
S-3545	6/12/2006	MI9127592	Rad / PCB BPW	Metal/Conc.	30,867	Alaron
S-3546	6/12/2006	MI9127591	Rad / PCB BPW	Metal/Conc.	23,140	Alaron

Table 5. Summary of PCB Waste Shipments (2004-2006)

Shipment Number	Ship Date	Michigan Manifest Number	Waste Classification	Waste Material	Waste Weight (lbs)	Disposal Facility
C06-425	8/8/2006	MI9127594	PCB BPW	Demo debris/soil	32,408	Wayne Disposal
C06-424	8/10/2006	MI9127595	PCB BPW	Demo debris	8,267	Wayne Disposal
S-3659	8/10/2006	MI9127802	Rad / PCB BPW	Metal/Conc.	7,747	Energy Solutions
S-3663	8/10/2006	MI9127812	Rad / PCB BPW	Metal/Conc.	3,250	Energy Solutions
S-3687	8/24/2006	MI9127825	Rad / PCB BPW	Metal	2,683	Duratek
2006 Total Weight (lbs)					**411,171**	

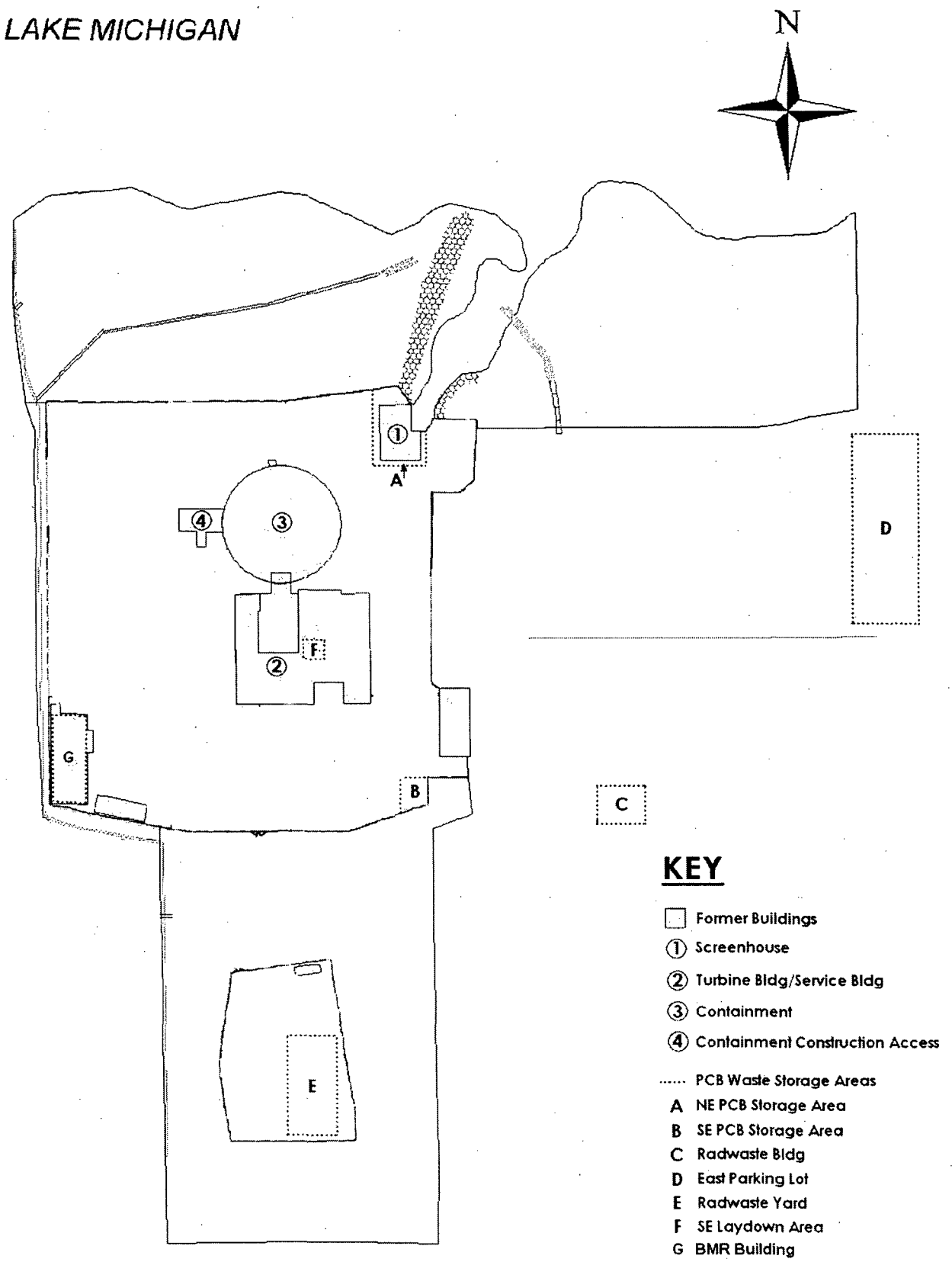


Figure 1. Big Rock Point Site Plan

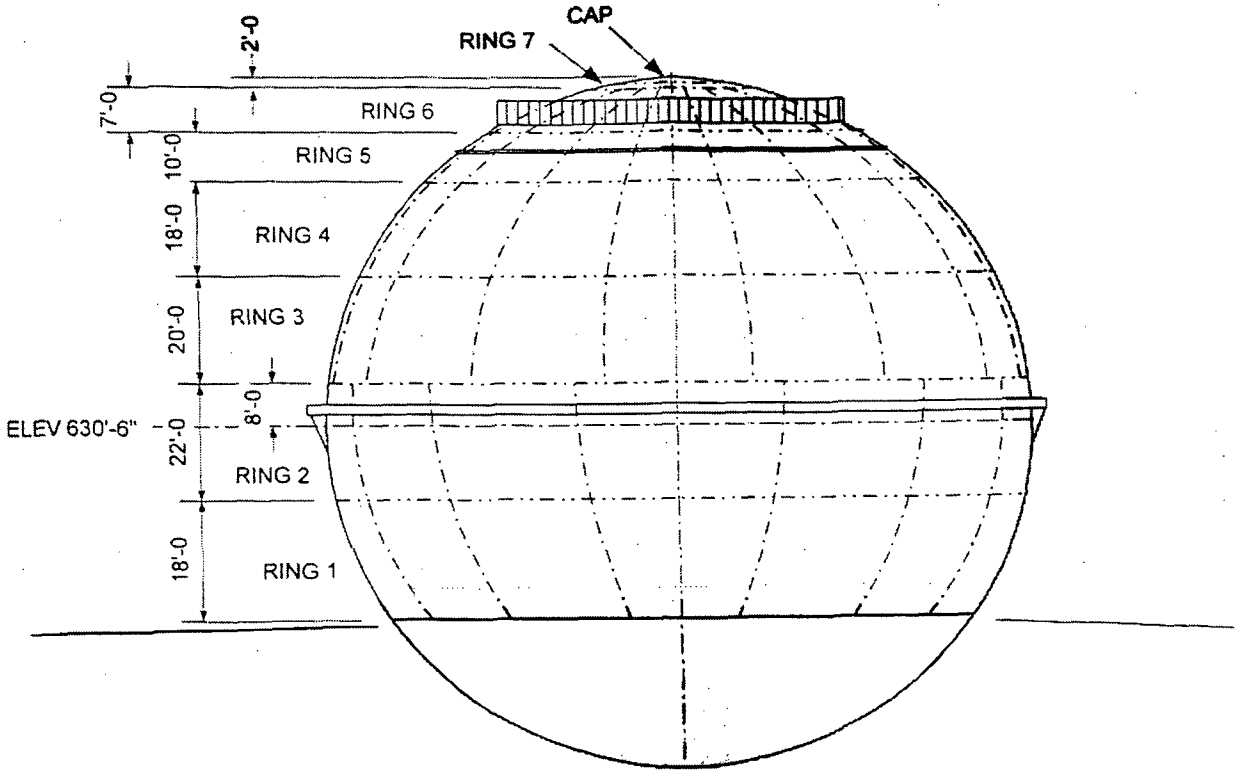


Figure 2a. Containment Cut Plan Schematic – Typical Elevation

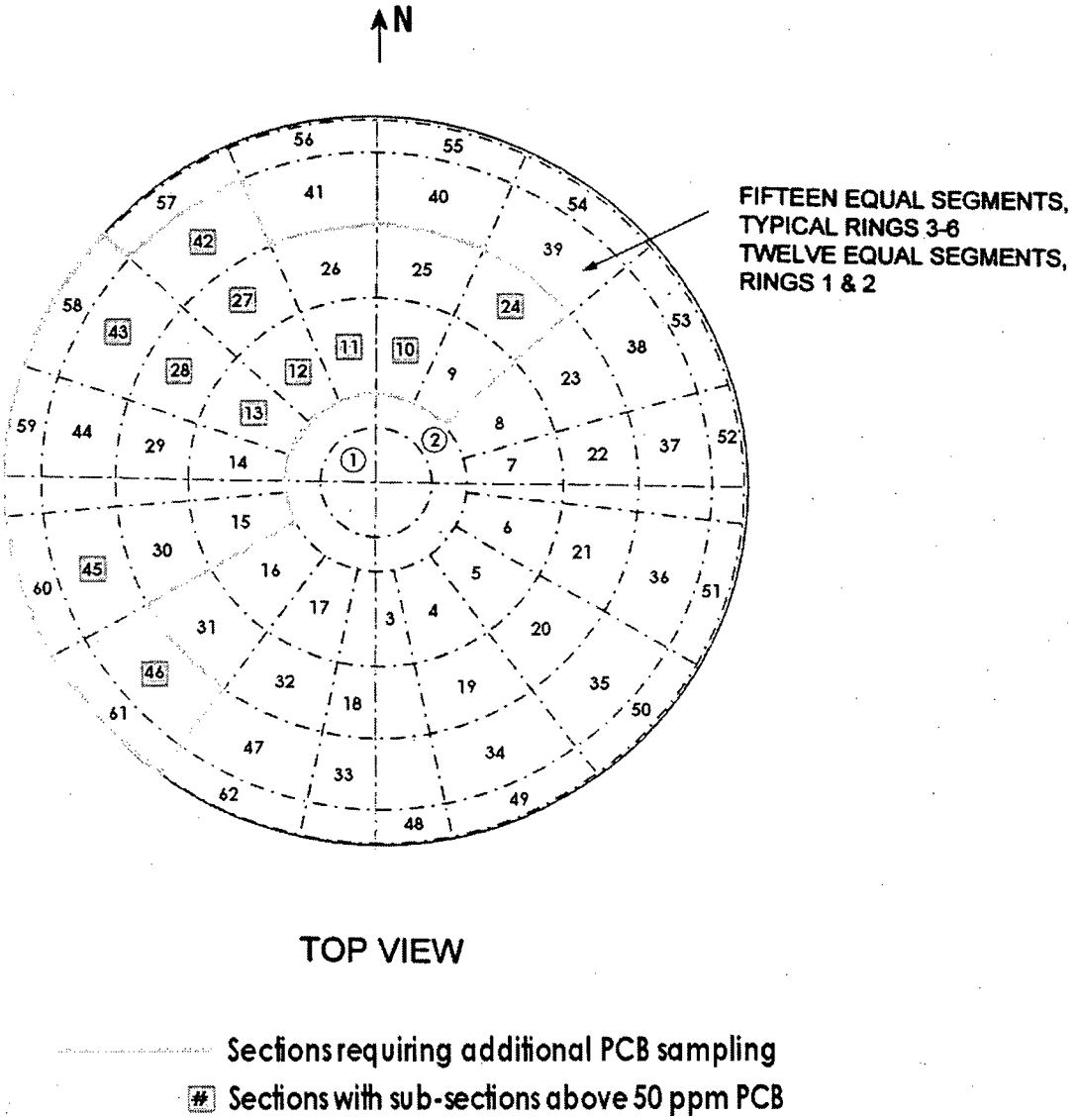


Figure 2b. Containment Cut Plan Schematic – Plan View Upper Hemisphere

APPENDIX A

Correspondence

Consumers Energy

A CMS Energy Company

Big Rock Point Restoration Project
10269 US-31 North
Charlevoix, MI 49720

Kurt M. Haas
General Manager

April 1, 2004

Mr. Anton Martig
Region 5, US Environmental Protection Agency
Toxics Program Section
Waste Pesticides and Toxics Division
77 W. Jackson Blvd (DT-8J)
Chicago, IL 60604-3590

Subject: Big Rock Point Containment Shell Characterization

Mr. Martig,

As requested at the March 11, 2004 meeting with Consumers Energy Company representatives, enclosed for your review and approval is Consumers Energy's *PCB Evaluation of the Containment Shell Interior Wall Coating* performed for characterization of the Big Rock Point Containment shell. The attached evaluation uses a statistical approach to classify the Containment interior coating as a non-PCB material. We request your concurrence with the evaluation's conclusion that shell interior coating can be categorized as non-PCB for disposal purposes. Consumers Energy plans to dismantle the Containment structure in mid-2005. Pending US Environmental Protection Agency Region 5 approval with the conclusion of the attached evaluation, the Containment shell will be disposed of at a licensed Type II landfill located in Michigan in accordance will all applicable regulations and Big Rock Point disposal approvals.

As discussed at the March 11, 2004 meeting Consumers Energy is preparing a request for dismantlement methods for this Containment shell similar the EPA Region 1 approval for the Yankee Rowe facility dated (October 2, 2003). The Big Rock Point request is scheduled to be submitted to you by 3rd quarter 2004.

If you have any questions or require additional information please do not hesitate to contact me at (517) 788-1969 or by email at wjwilson@cmsenergy.com or contact Big Rock Point site representative, Tracy Goble at (231) 547-8389 or by email at tmgoble@cmsenergy.com

Sincerely,

TM Goble for W.J. WILSON

W.J. Wilson
Environmental and Laboratory Services
Consumers Energy Company

Title: PCB Evaluation of the Containment Shell Interior Wall Coating

INITIATION AND REVIEW

Rev. #	Description	Initiated By	Initiated Date	Rev. Method Ck. (X) Alt Calc	Det Rvw.	Qual Test	Technically Rev'd. By	Date
0	Original Issue	TAGoble	3-30-04		X		RAEnglish	3/31/04

Data Quality Objectives

1. Problem Statement

   Identify and quantify the level of PCBs contained within the paint coating of the Containment shell interior wall for waste classification and disposal purposes.

2. Decision

   Determine if the Containment shell interior surface is coated with PCB-contaminated paint above the regulatory limit. Classify the Containment structure for waste disposition.

3. Decision Inputs

   Evaluation of PCB contamination will be conducted by independent laboratory analysis utilizing EPA analytical Method Nos. 8082 or 8080A as specified in SW846. The extraction method utilized prior to the analysis is Method 3550B (Reference 1). The regulatory limit for classifying a waste material is 50 ppm as specified in 40 CFR 761. The decision process will be used to determine waste disposition of the Containment structure. Statistical evaluation of the data will be utilized, if required, for comparison with regulatory limits to classify this waste material.

4. Boundary Definition

   The study boundary encompasses the entire Containment shell interior walls.

5. Decision Rule

Null Hypothesis: The mean concentration (at a 95% confidence interval) for PCB content of the Containment shell interior walls exceeds the regulatory limit of 50 ppm.

Evaluate laboratory analyses to identify and quantify potential PCB contaminant levels in the painted Containment shell interior walls. The evaluation will utilize the decision steps below:

1. If all analyses are less than detection limits or below 50 ppm PCB, then applicable portions of the Containment structure shall be classified as non-PCB waste[1].
2. If any analysis identifies PCB contamination exceeding the regulatory limit of 50 ppm, perform a statistical evaluation in accordance with EPA guidance (Reference 2).
   i. If the upper confidence limit (UCL) of the mean value exceeds a PCB concentration of 50 ppm, classify the Containment structure as a PCB bulk product waste.
   ii. If the upper confidence limit (UCL) of the mean value does not exceed a PCB concentration of 50 ppm, applicable portions of the Containment structure shall be classified as non-PCB waste (see footnote).

6. Decision Errors

The upper confidence limit on the mean shall be at a 95% confidence interval ($1-\alpha$, where $\alpha = 5\%$) for statistical evaluation. The Shapiro-Wilk test will be utilized as a test for normality of the data.

---

[1] Specific portions of the Containment exterior that are adjacent to other site buildings have been previously classified based on PCB content in the *exterior* coating (silver paint) exceeding 50 ppm. These surfaces are to be managed as PCB Bulk Product waste following dismantlement.

7. Design

Sample locations will judgmentally be selected in accessible areas to be representative of the Containment shell interior wall; a minimum of eight paint samples will be collected at various elevations. The Containment structure is a spherical carbon steel structure that is 130 feet in diameter; approximately two-thirds of this structure is above grade. A majority of the inner surface of this structure is inaccessible due to the high elevations. The interior steel walls are painted with a dark red primer coating under a top coating of cream-colored paint. This paint was required to possess specific design requirements during postulated operational accident conditions. These design requirements were maintained over the life of the plant, and therefore, this painted surface can be considered a uniform, homogeneous coating.

Samples of the paint coating, where accessible, are to be collected and analyzed for PCB content. All layers of paint to the base metal will be removed to the extent possible. Workers collecting samples shall possess current qualifications in Lead Worker, Industrial, and Chemical safety. Sample chain-of-custody requirements shall be followed in accordance with site procedures.

References

1. Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, EPA Publication SW-846.
2. RCRA Waste Sampling Draft Technical Guidance, EPA530-D-02-002, August 2002

Analyses

Laboratory Results

Table 1 below summarizes the Containment shell interior paint sample PCB results. This data includes both samples collected as described in the section above as well as the initial scoping sample results for the Containment shell interior walls. Attachment 1 is a diagram of the sample location elevations using a two-dimensional cross-section of the Containment structure.

Table 1. Summary of PCB Analyses for the Containment Shell Interior Walls

Location	Elevation (ft)	PCB (ppm)
Northeast Wall - Walkway to Cable Penetration Room	599'-5"	8
North Wall – Laydown	599'-5"	13
Northeast Wall – Laydown	599'-5"	16
West Wall - Near ventilation duct	590'	19
West Wall - Off catwalk	660'-6"	19
South Wall - Near personnel lock	616'	20
North Wall - SAC Entrance	595'	26
Southwest Wall - near pipeway	590'	28
East Wall - Off catwalk	660'-6"	33
North - Escape Lock Penetration	599'-5"	43
West - Equipment Lock Penetration	599'-5"	49
Northeast Wall – Reactor Deck	632'	52
North Wall – Laydown	599'-5"	56
Northwest Wall – Laydown	599'-5"	58

Statistical Analysis

Review of the data set show laboratory results of greater than 50 ppm for 3 of the 14 analyses. Therefore, a statistical test will be used to evaluate the data.

Test for Normality:

The Shapiro-Wilk test was utilized to determine if the data in Table 1 were normally distributed. Dataquest software was used to conduct this test. It was concluded from the results of this statistical test that the data are normally distributed and that it is acceptable to use the confidence interval for a percentile as outlined in Reference 2 (Appendix F). Output from Dataquest software is contained in Attachment 2.

Equations Used:

Mean: $$\bar{x} = \frac{\sum_{i=1}^{n} x_i}{n}$$

Variance: $$s^2 = \frac{\sum_{i=1}^{n} x_i^2 - (\sum_{i=1}^{n} x_i)^2 / n}{n-1}$$

Standard Deviation: $$s = \sqrt{s^2}$$

Standard Error: $$s_{\bar{x}} = \frac{s}{\sqrt{n}}$$

Upper Confidence Limit: $$UCL = \bar{x} + t_{.05}\, s_{\bar{x}}$$ (95% confidence interval)

Required Number of Samples: $$n_{req} = \frac{t_{.05}^2 s^2}{(RT - \bar{x})^2}$$

Using the above equations with the PCB content data in Table 1 yields the following values:

$\bar{x}$ = 31.4 ppm

s^2 = 291.2

s = 17.1 ppm

s_x = 4.6 ppm

UCL = 39.5 ppm $t_{.05}$ = 1.771 for n-1=13

n_{req} = 2.6 ==> 3 samples required - Number of samples O.K.

Conclusion

The normality of the distribution and sample size for statistical evaluation have been satisfied. The UCL (at 95% confidence interval) of the mean, 39.5 ppm, is less than regulatory limit of 50 ppm for PCB content. Thus, the Null Hypothesis is rejected and the Containment interior coating is classified as non-PCB waste[2]. Following dismantlement the Containment structure will be disposed of at a licensed Type II industrial landfill.

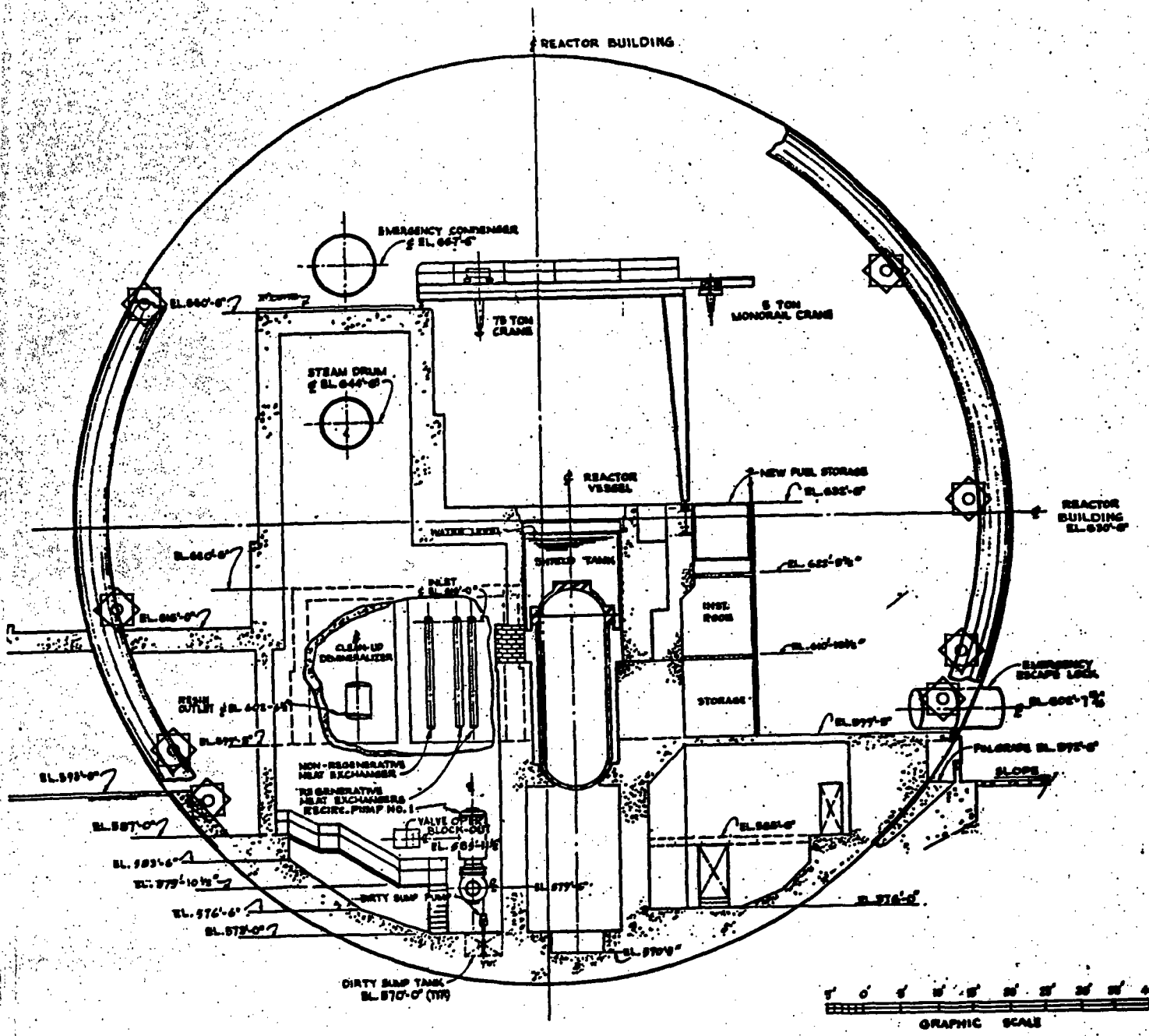
Attachments

1. Containment shell interior wall sample locations
2. Output from Dataquest Software

---

[2] Specific portions of the Containment exterior that are adjacent to other site buildings have been previously classified based on PCB content in the *exterior* coating (silver paint) exceeding 50 ppm. These surfaces are to be managed as PCB Bulk Product waste following dismantlement.

Elevation of Containment Sample Locations



GRAPHIC SCALE

(Note: More than one sample taken at elevations indicated—see Table 1 for data.)

4	7/7/	GENERAL REVISION
3	7/6/	ISSUED FOR CONSTR.
2	1/1/	ISSUED FOR CONSTR.
1	7/5/	ISSUED FOR APPROVAL

BECHTEL CORPORATION
SAN FRANCISCO

BIG ROCK POINT PLANT
CHARLEVOIX, MICHIGAN
CONSUMERS POWER COMPANY

EQUIPMENT LOCATION
SECTION A–A

3159 | M-102

STATISTICAL EVALUATION OF PCB CONCENTRATION IN CONTAINMENT

STATISTICAL QUANTITIES

Filename = 4.TXT

Number of Observations: 14

Minimum:	8.000	Maximum:	58.000
Mean:	31.429	Median:	27.000
Variance:	291.187	Standard Deviation:	17.064
Range:	50.000	Interquartile Range:	30.000

Coefficient of Variation: 0.543
Coefficient of Skewness: 0.337
Coefficient of Kurtosis: -1.345

Percentiles:

1st:	8.000	75th:	49.000
7th:	8.000	90th:	56.000
10th:	13.000	95th:	58.000
25th:	19.000	99th:	58.000
50th:	27.000 (median)		

STATISTICAL EVALUATION OF PCB CONCENTRATION IN CONTAINMENT

SAMPLE SIZE 14

8.0
13.0
16.0
19.0
19.0
20.0
26.0
28.0
33.0
43.0
49.0
52.0
56.0
58.0

STATISTICAL EVALUATION OF PCB CONCENTRATION IN CONTAINMENT

Shapiro-Wilk Test

Null Hypothesis: 'Data are normally distributed'

Sample Value: 0.912
Tabled Value: 0.874

There is not enough evidence to reject the assumption of normality with a 5.0% significance level.

STATISTICAL EVALUATION OF PCB CONCENTRATION IN CONTAINMENT

Shapiro-Wilk Test

Null Hypothesis: 'Data are normally distributed'

Sample Value: 0.912
Tabled Value: 0.825

There is not enough evidence to reject the assumption of normality with a 1.0% significance level.

Location	Elevation (ft)	PCB (ppm)	Comments
Northeast Wall - Walkway to Cable Pen.	599'-5"	8	No. 006 near SFP Demin
North Wall - laydown	599'-5"	13	No. 002
Northeast Wall - laydown	599'-5"	16	
West Wall - near ventilation duct	590'	19	No. 003
West Wall - off catwalk	660'-6"	19	
South Wall - near pers.lock	616'	20	No. 001
North Wall - SAC Entrance	595'	26	No. 005
Southwest Wall - near pipeway	590'	28	No. 004
East Wall - off catwalk	660'-6"	33	
North - Escape Lock Pen.	599'-5"	43	
West - Equipment Lock Pen.	599'-5"	49	
Northeast Wall - Rx Deck	632'	52	
North Wall - Laydown	599'-5"	56	
Northwest Wall - Laydown	599'-5"	58	
	Total	440	

Statistical Analysis:

Mean	31.4		n=	14
Variance (s2)	291.2			
Std Deviation (s)	17.1			
Std Error (sx)	4.6			
95% Upper Confidence Level	39.5		t=	1.771 (.95, 13)
Number of Required Samples	2.6	Round up to 3 samples		

Consumers Energy

A CMS Energy Company

Environmental & Lab Services
1945 West Parnall Road
Jackson, MI 49201-8643

Fax: 517 788 2329
www.consumersenergy.com

July 14, 2004

Mr. Anton Martig
Region 5, U.S. Environmental Protection Agency
Toxics Program Section
Waste Pesticides and Toxics Division
77 W. Jackson Blvd (DT-8J)
Chicago, IL 60604-3590

Subject: Storage of PCB Bulk Product Waste Demolition Debris

Mr. Martig,

This letter and attachment describes a proposed plan for your approval for the handling and segregating the demolition waste into non-PCB waste and PCB Bulk Product Waste and temporary storage of PCB Bulk Product Waste resulting from the demolition of buildings at the Big Rock Point facility.

Consumers Energy's Big Rock Point facility is a former nuclear power generation facility and has been actively decommissioning since 1997. Remaining buildings on-site are scheduled for demolition as part of the decommissioning process. Most of the buildings' foundations, floors, wall and roofs are constructed of concrete and steel. Some of the structural steel was painted with PCB containing paint, meeting the criteria for classification as PCB Bulk Product Waste. The demolition rubble will consist of both the non-PCB debris and the PCB Bulk Product Waste. After the demolition of a building is completed, the PCB Bulk Product Waste will be segregated from the non-PCB demolition debris. Following this separation, the PCB Bulk Product Waste will be stored in lined roll-off boxes equipped with lids and managed as a PCB Bulk Product Waste pile as described in the March 9, 2000 letter to Mr. David Kwasny, GM Worldwide Facilities Group.

Please review the attached plan and provide your approval of the plan. If you have any questions or need additional information, please contact either Tracy Goble at (231) 547-8389) or me at (517) 788-1969.

Sincerely,

Ward Wilson

Ward Wilson
Environmental and Laboratory Services

Big Rock Point Plant
Painted Demolition Structural Steel and Other Debris
Collection/Segregation/Storage Plan
July 14, 2004

Purpose

This plan describes the methods for the collection, segregation, on-site storage, and post-demolition verification of PCB wastes resulting from the demolition of building and structures at the Consumers Energy Big Rock Point Plant. This plan is not applicable to buildings or areas where PCB Bulk Product Wastes have been removed prior to demolition except that the storage and on-site management of the PCB Bulk Product Waste removed prior to demolition will also be conducted as described in plan.

Waste Description

1. PCB Bulk Product Waste, including the silver-painted structural steel, other painted steel and small amounts of painted concrete, will be generated from the demolition of the containment building, screen house, turbine building and a few miscellaneous buildings. No liquid PCB wastes will be generated from these activities.
2. PCB Bulk Product Wastes at Big Rock Point consist of painted metals and concrete. This waste is the type of waste described in 40 CFR 761.62 (b) (1) (i). Therefore, the probability of any of the waste producing leachate through decomposition or exposure to precipitation is minimal.

Waste Collection and Segregation

1. During demolition engineering controls will be instituted where possible to prevent PCB painted debris from contacting concrete floors or underlying soils surfaces. These controls will consist of a polyethylene liner protected from damage by a layer of plywood or equivalent material.
2. Upon completion of the demolition of the building, the PCB Bulk Product waste materials will be segregated, sized for disposal, and placed in storage containers as soon a practicable. Depending on the size of the structure to be demolished, it is anticipated that the segregation and roll-off box loading process may require several weeks.
3. The non-PCB debris will be inspected to ensure that the PCB Bulk Product Wastes have been removed prior to disposal as a non-PCB solid waste.

4. The potential for paint chips to migrate outside the demolition areas due to storm water runoff will be controlled as follows:
   a. A slurry wall is already present for groundwater control. This slurry wall extends from the surface to approximately 15 feet below grade.
   b. All floor drains inside buildings will be removed or plugged prior to building demolition.
   c. Filter fabric (silt fence) will be installed around demolition areas to prevent small paint particles from migrating to any storm-water drainage area.

PCB Bulk Storage Unit/Area Description

1. All PCB Bulk Product Wastes will be placed in heavy-duty, 22 cubic yard roll-off box. Each roll-off box used to stored PCB waste will be lined with two 8-mil thick polyethylene liners and be covered with a metal lid. See Attachment 1 for roll off and lid specifications. The polyethylene liner will be inspected prior to any loading of the roll-off.
2. Only roll-offs with liners that are intact and properly installed will be used in order to meet the technical requirements of 40 CFR 761.65 (c) (9) (iii) (A).
3. Each roll-off box will remain closed unless waste is being placed in the roll-off box. The roll-off boxes will not be opened or loaded whenever rainfall is occurring.
4. All PCB waste roll-off containers will be labeled in accordance with the requirements of 40 CFR 761.40 and 761.45.
5. Each roll-off box will be placed on ground in areas designated for storage of PCB waste. Each storage area will be marked with a PCB label.

Storage Operations/Controls

1. Weekly inspections of all PCB waste roll-off containers and storage areas will be conducted. These inspections will include labeling, container closure and container leak-tightness. If any damage is discovered, repairs or replacement will be promptly initiated.

3. PCB Bulk Product Waste roll off containers will be stored at the Big Rock Point site for a maximum of 180 days prior to shipment to a licensed PCB disposal facility or Type II landfill in accordance with 40 CFR 761.50 and 40 CFR 761.62.

5. All areas where the demolition debris is present will be inspected for paint debris following the segregation of the debris. Any PCB paint chips discovered will be removed and placed in the PCB labeled roll-off boxes and properly shipped off-site for disposal with the PCB Bulk Product Waste.

6. All areas where PCB-painted steel and concrete demolition debris come in contact with soils or concrete floors, including all container loading and storage areas, will undergo post-demolition clean-up verification as outlined below once demolition and storage is completed.

Post-Demolition Clean-up Verification

1. Once cleanup of demolition debris is completed, all areas where PCB-painted steel and concrete demolition debris come in contact with soils or concrete floors, including all container loading and storage areas, will undergo sampling to verify clean up criteria in accordance 40 CFR 761 Subpart N, except as noted below.
    a. Sample grid spacing scheme will be designed for each separate area to ensure that areas of contamination of a radius of two feet or more within the sampling area will be detected; the minimum number of samples is 3 and the maximum number of samples 40;
    b. Core samples of the soil to a depth of 3 inches;
    c. Standard wipe test samples from concrete or wood surfaces will be collected as described in 40 CFR 761.123.
2. Samples will be analyzed in accordance with methods established in SW-846 (Method 3500B/3550B for extraction and Method 8082 for chemical analysis).
3. The clean up criteria to be used for soil is 1 ppm PCB and for the concrete or wood is 10 $\mu g/100\ cm^2$.
4. Soils containing PCB above 1 ppm criteria will be excavated and resampled to verify acceptable clean up.
5. Concrete or wood containing 10 $\mu g/100\ cm^2$ will either removed and disposed as PCB waste or decontaminated.

Big Rock Point Plant
Painted Demolition Structural Steel and Other Debris
Collection/Segregation/Storage Plan
July 14, 2004

ATTACHMENT 1

PCB Bulk Product Waste Roll–Off Container/Lid Specifications

The roll-off container to be used for the storage of PCB Bulk Product will be a rectangular heavy-duty single piece tailgate container with the following specifications.

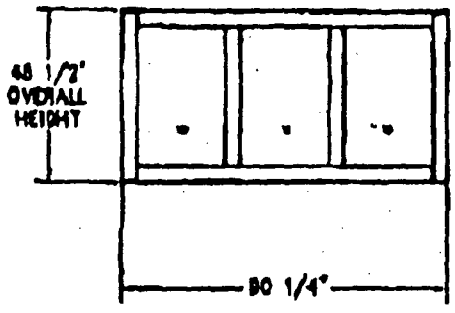
Skid Length	22 Feet (264 inches)
Container Height	45 1/2 inches
Interior Width	84 inches
Steel Floor Thickness	¼ inches
Wall Uprights	10 gauge at 24-inch centers

Each roll-off will be covered with a metal lid that is sloped.

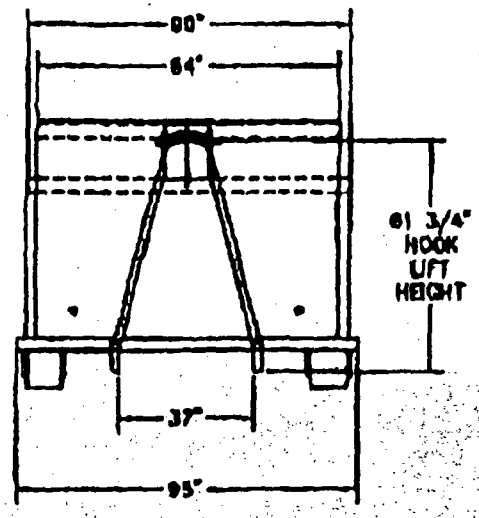
Lid Length	267 ½ inches
Lid Width	92 inches

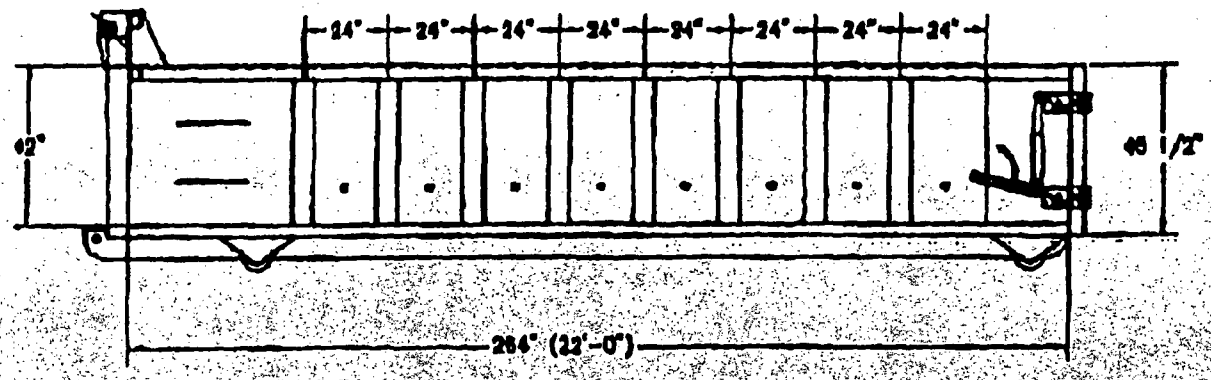
Additional roll-off and lid specifications and diagrams are attached.

ROLL-OFF CONTAINER DIAGRAM



TAILGATE

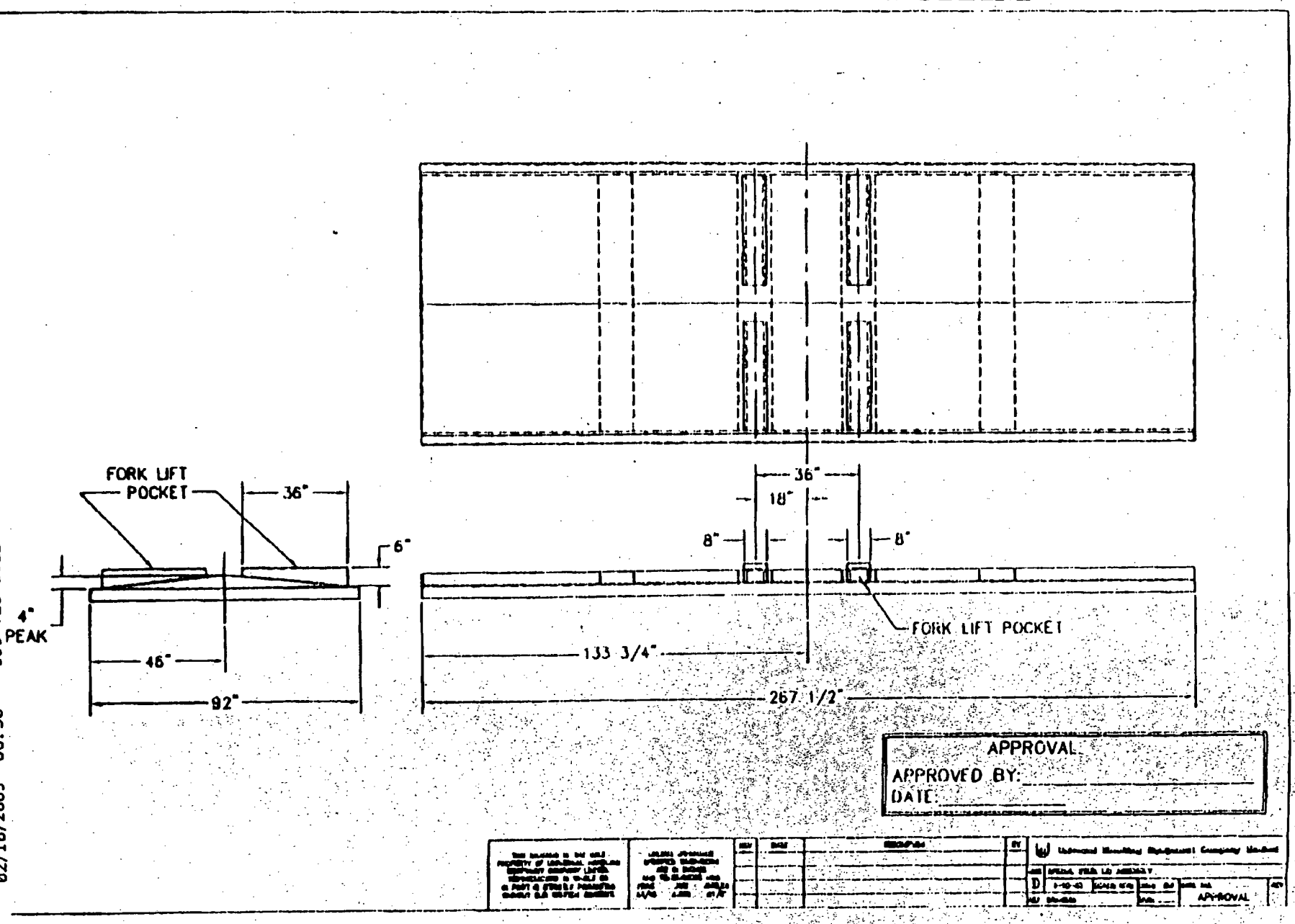




Roll of Container Specification

- Rectangular Heavy Duty Style
- Skid Length 22'
- ¼ inch thick steel floor
- 4 rollers 8" large c/w grease fitting
- Single Piece Tailgate
- 10 gauge uprights on 24" centers
- 3/16" x 4" X 3" tubing top rail
- ¼" x 6" x 2" tubing main rails
- ¼" push plate
- lever lock
- 4" diameter x 6" long lead on rollers c/w grease fittings
- Understructure 3" channel on 12" centers
- 2 fork pockets 12" wide 4" high with a 95" outside to outside dimension, centered on container
- Primed and painted.

ROLL-OFF CONTAINER LID DIAGRAM



02/10/2005 08:58 989-727-1322 UNIVERSAL MANUFACTURING

Consumers Energy

A CMS Energy Company

Environmental & Lab
Services Department
1945 West Parnall Road
Jackson, MI 49201-8643

Fax: 517 788 1064
www.consumersenergy.com

September 8, 2004

Mr. Anton Martig
Region 5, U.S. Environmental Protection Agency
Toxics Program Section
Waste Pesticides and Toxics Division
77 W. Jackson Blvd (DT-8J)
Chicago, IL 60604-3590

Subject: Storage of PCB Bulk Product Waste Demolition Debris

Mr. Martig,

On July 14, 2004, Consumers Energy sent a proposal to you describing a plan for the handling and segregating the demolition waste into non-PCB waste and PCB Bulk Product Waste and temporary storage of PCB Bulk Product Waste resulting from the demolition of buildings at the Big Rock Point facility. Following our September 2, 2004 conversation between you, Ken Pallagi and myself, the attached plan was prepared to include the clarifications of the points and changes that we agreed to during our conversation. The clarifications and changes are italized.

Please review the attached plan and provide your concurrence that this plan is consistent with your understanding of the agreed upon activities to complete the appropriate demolition of the buildings. As we discussed, the demolition of the Screen House building is scheduled to begin in mid-September so your prompt response would be appreciated. If you have any questions or need additional information, please contact either Tracy Goble at (231) 547-8389 or me at (517) 788-1969.

Sincerely,

Ward Wilson

Ward Wilson
Environmental and Laboratory Services

bcc: TA Goble, Big Rock Point Restoration Project
KE Pallagi, Big Rock Point Restoration Project
JP Dickey, EP11-428

Big Rock Point Plant
Painted Structural Steel and Other Demolition Debris
Collection/Segregation/Storage Plan
September 8, 2004

Purpose

This plan describes the methods for the collection, segregation, on-site storage, and post-demolition verification of PCB wastes resulting from the demolition of the Screen House, Turbine Building and other miscellaneous buildings and structures at the Consumers Energy Big Rock Point Plant.

This plan is not applicable to buildings or areas where PCB Bulk Product Wastes have already been removed prior to demolition except that the storage and on-site management of the PCB Bulk Product Waste removed prior to demolition will also be conducted as described in plan. *This plan also does not apply to the demolition of the Containment shell.*

Background

Consumers Energy's Big Rock Point facility is a former nuclear power generation facility and has been actively decommissioning since 1997. Remaining buildings on-site are scheduled for demolition as part of the decommissioning process. Most of the buildings' foundations, floors, walls and roofs are constructed of concrete and steel. These buildings contain structural steel painted with *low concentrations of* PCB-containing paint meeting the PCB Bulk Product Waste criteria.

In some of the demolition activities, the painted structural steel will be removed from the building area prior to demolition of non-PCB walls, roofs, foundations and other building structures. Other demolition work will result in rubble consisting of both the non-PCB debris and the painted structural steel. In the latter case after the demolition of a section of a building is completed, the painted structural steel will be segregated from the non-PCB demolition debris. The painted structural steel be stored in lined roll-off boxes equipped with lids and managed as a PCB Bulk Product Waste pile as described in the EPA letter to GM Worldwide Facilities Group, Mr. David Kwasny dated March 9, 2000.

Waste Description

1. PCB Bulk Product Waste includes silver-painted structural steel and other painted metals generated from the demolition of the Screen House, Turbine Building and other miscellaneous buildings.
2. The PCB Bulk Product Waste is the type of waste described in 40 CFR 761.62 (b) (1) (i). Therefore, the probability of any of the waste producing leachate through decomposition or exposure to precipitation is minimal. No liquid PCB wastes will be generated from these activities.

Demolition Process Description

1. *Safety and Health*

   All work will be completed in accordance with applicable Nuclear Regulatory Commission and Michigan OHSA standards, and Consumers Energy Health and Safety Programs.

2. *Equipment*

   The demolition will primarily be completed using demolition equipment capable of cold shearing the roof and walls. The demolition equipment will also be used to push some of the walls inward.

3. *Screen House Demolition*

   a. *The metal roof coated with PCB containing-paint will be cut from the wall mounts. The roof will be lowered or allowed to fall to the concrete floor immediately below. This will be performed while the remaining building walls and floor remain intact.*

   b. *Once on the concrete floor, the roof will be cut into sections suitable for collection and storage in a roll-off containers described in Attachment 1. The sectioning will be completed using the cold shears. Torch cutting will not be performed on painted structural steel.*

   c. *After the roof is removed from the screen house, the concrete floor will be sampled in accordance with 40 CFR 761.123 for PCB analysis.*

   d. *Following the sampling, the demolition of the walls and floor will be completed.*

   e. *If the concrete samples contain less than 10 ug/100 cm^2 PCB, the remaining demolition debris will be disposed in a Type II landfill as non-PCB waste.*

   f. *If the concrete samples contain 10 ug/100 cm^2 or greater PCB, the demolition debris will be disposed as PCB waste.*

4. *Turbine Building and Other Buildings*

   a. *The demolition equipment will be used to cold shear cut sections of the building. Each section may contain the painted structural steel classified as PCB Bulk Product Waste. All cutting of painted structural steel will be performed using mechanical methods. Torch cutting will not be performed on painted structural steel.*

   b. Upon completion of the demolition *of the section(s) of the building,* the painted structural steel waste materials will be segregated, sized for disposal, and placed in storage containers as soon a practicable. Depending on the size of the structure to be demolished, it is anticipated that the segregation and roll-off box loading process may require several weeks.

c. The non-PCB debris will be inspected to ensure that the PCB Bulk Product Wastes have been removed prior to disposal as a non-PCB solid waste.

d. The potential for paint chips to migrate outside the demolition areas due to storm water runoff will be controlled as follows:

1) A slurry wall is already present for groundwater control. This slurry wall extends from the surface to approximately 15 feet below grade.

2) All floor drains inside buildings will be removed or plugged prior to building demolition

3) Filter fabric (silt fence) will be installed around demolition areas to prevent small paint particles from migrating to any storm-water drainage area.

PCB Bulk Storage Unit/Area Description

1. All PCB Bulk Product Wastes will be placed into heavy-duty, 22 cubic yard roll-off boxes. Each roll-off box used to stored PCB waste will be lined with two 8-mil thick polyethylene liners and be covered with a metal lid. See Attachment 1 for roll off and lid specifications. The polyethylene liner will be inspected prior to any loading of the roll-off.
2. Only roll-offs with liners that are intact and properly installed will be used in order to meet the technical requirements of 40 CFR 761.65 (c) (9) (iii) (A).
3. Each roll-off box will remain closed unless waste is being placed in the roll-off box. The roll-off boxes will not be opened or loaded whenever rainfall is occurring.
4. All PCB waste roll-off containers will be labeled in accordance with the requirements of 40 CFR 761.40 and 761.45.
5. Each roll-off box will be placed on ground in areas designated and posted for storage of PCB waste.

Storage Operations/Controls

1. Weekly inspections of all PCB waste roll-off containers and storage areas will be conducted. These inspections will include labeling, container closure and container leak-tightness. If any damage is discovered, repairs or replacement will be promptly initiated.
2. PCB Bulk Product Waste roll off containers will be stored at the Big Rock Point site for a maximum of 180 days prior to shipment to a *licensed PCB disposal facility.*
3. Following completion of demolition activities, areas will be inspected for presence of any paint debris. Any PCB paint chips discovered will be removed and placed in a roll-off boxes for off-site disposal as PCB Bulk Product Waste.

4. All areas where PCB-painted steel and concrete demolition debris come in contact with soils or concrete floors, including all container loading and storage areas, will undergo post-demolition verification as outlined below once demolition and storage is completed.

Post-Demolition Verification

1. Once removal of debris from the demolition of a building is completed, all areas where PCB-painted steel demolition debris may come in contact with soils or concrete floors, including all container loading and storage areas, will undergo sampling to verify adequate removal in accordance 40 CFR 761 Subpart N, except as noted below.
   a. Sample grid spacing scheme will be designed for each separate area to ensure that areas of contamination will be detected; the minimum number of samples is 3 and the maximum number of samples 40;
   b. Core samples of the soil will be collected to a depth of 3 inches.
   c. Standard wipe test samples from concrete will be collected as described in 40 CFR 761.123.
2. Samples will be analyzed *for PCB* in accordance with methods established in SW-846 (Method 3500B/3550B for extraction and Method 8082 for chemical analysis).
3. The criteria to be used for soil are 1 ppm PCB and for the concrete is 10 µg/100 cm^2.
4. Soils containing PCB 1 ppm or above criteria will be excavated and resampled to verify acceptable clean up. *Excavated soils containing 1 ppm or greater will be managed as PCB waste.*
5. Concrete containing 10 µg/100 cm^2 or greater will be removed and *disposed as PCB waste.*
6. *Soils and concrete containing less than the criteria will be managed as non-PCB waste.*

ATTACHMENT 1

PCB Bulk Product Waste Roll–Off Container/Lid Specifications

The roll-off container to be used for the storage of PCB Bulk Product will be a rectangular heavy-duty single piece tailgate container with the following specifications.

Skid Length	22 Feet (264 inches)
Container Height	45 1/2 inches
Interior Width	84 inches
Steel Floor Thickness	¼ inches
Wall Uprights	10 gauge at 24-inch centers

Each roll-off will be covered with a metal lid that is sloped.

Lid Length	267 ½ inches
Lid Width	92 inches

Additional roll-off and lid specifications and diagrams are attached.

Consumers Energy

A CMS Energy Company

Big Rock Point Restoration Project
10269 US-31 North
Charlevoix, MI 49720

Kurt M. Haas
General Manager

September 16, 2004

Mr. Anton Martig
Region 5, US Environmental Protection Agency
Toxics Program Section
Waste Pesticides and Toxics Division
77 W. Jackson Blvd (DT-8J)
Chicago, IL 60604-3590

Re: Consumers Energy Company - Big Rock Point Containment Shell Dismantlement - Request for Approval of Alternative Approach to Mitigate Risk

Dear Mr. Martig,

Consumers Energy would like to thank you for your time and consideration regarding the technical difficulties associated with dismantling the Containment shell at the Big Rock Point facility.

We are herein requesting EPA approval of an alternative approach to dismantle portions of the Containment shell in order to mitigate the risk to worker health and safety posed by the unique nature of this project. The attached document provides background information, description of planned dismantlement techniques including a discussion of paint removal methods, risk analysis of applicable health and safety issues and environmental impacts associated with this project, and waste disposal considerations as the basis for the specific request for approval of an alternate dismantlement method for portions of the Containment structure (as outlined in Section 5.0 of the attached detailed request).

Consumers Energy believes that the approach contained in this request will facilitate the safe dismantlement of the Containment structure for the following reasons:

1. The individuals performing the work are afforded the maximum safety and health protection attainable.
2. The overall worker risk and hazard exposure is maintained at a minimum from an overall project standpoint.
3. There is no unreasonable risk to the environment.
4. All work will be performed in accordance with applicable local, state and federal regulations.

It is our hope that the Containment dismantlement process can be performed as outlined in the attached document and within existing project schedules to facilitate safe exterior work while weather permits. Consumers Energy respectfully requests your approval of this alternative method for dismantlement as soon as possible but no later than December 15, 2004 to allow adequate work planning time. If you have any questions, please feel free to contact either Tracy Goble (231-547-8389) or Ward Wilson (517-788-1969). Thank you again for your thoughtful consideration of this project.

Sincerely,

Kurt M. Haas
Site General Manager
Big Rock Point Restoration Project

cc: TA Goble, Big Rock Point
KE Pallagi, Big Rock Point
WJ Wilson, ConsumersEnergy
A Merricle, Michigan Department of Environmental Quality
NRC MNSS Project Manager
NRC Decommissioning Inspector - Big Rock Point

Big Rock Point Containment Shell Dismantlement
Request for Approval of Alternative Approach to Mitigate Risk

1.0 Background

The Big Rock Point (BRP) site is owned by Consumers Energy Company and is located in Charlevoix, Michigan. Formerly, BRP was a 75 MW nuclear generating station. The plant began commercial power generation in 1962, and after 35 years of safe operation, the plant was permanently shutdown in 1997. Immediately following shutdown, Consumers Energy began the process of decommissioning the facility in accordance with U.S. Nuclear Regulatory Commission (NRC) regulations (10CFR§50.82).

As part of the decommissioning project, Consumers Energy plans to dismantle the Containment building in mid-2005. The Containment building is a spherical, carbon steel shell approximately 130 feet in diameter with a nominal steel thickness of three-quarters inch. Approximately three-quarters of the Containment shell is above grade. The base of the Containment is 28 feet below ground level at an elevation of 565.5 feet and the top of the shell is approximately 102 feet above grade at the 695.5-foot elevation. The steel shell weighs approximately 1.6 million pounds. Attachment A provides detailed drawings of the Containment building.

The interior of the Containment shell is coated with a paint containing low concentrations of polychlorinated biphenyls (PCBs)[1]. The interior paint coating was applied at the time of original plant construction (circa 1960). The PCB-containing paint is uniformly applied to the interior of the Containment structure from elevation 595 feet to the top of the shell at elevation 695.5 feet. Design specifications for postulated nuclear accident scenarios required that the Containment interior coating be able to withstand high pressure and temperature conditions for long periods; therefore, the original interior coating was maintained throughout the entire operational life of the Big Rock Point plant. The exterior coatings of the Containment shell have been analyzed and do not contain PCBs.

The task of dismantling the Containment shell is considered unique when compared to typical building demolition projects. Demolition of the Containment shell requires this structure be cut into pieces; these pieces are then to be lowered and further cut to a size to meet packaging, transportation and disposal requirements. Demolition of the Containment shell involves specific industrial safety considerations because of its size, shape, location in relation to other demolition activities, presence of internal structures, and potential radiological contamination concerns. Consumers Energy believes that the primary consideration for dismantlement of the Containment shell is minimizing the risks to workers performing the demolition. The environmental impact associated with disturbance of interior paint coatings with low-level PCB concentrations is considered minimal when compared with worker safety issues.

[1] The average PCB concentration of the Containment interior coating is 31 ppm, (8 – 58 ppm range) for samples collected to date.

2.0 Planned Containment Shell Dismantlement Technique

Based on an evaluation of this demolition project, it has been determined that thermally cutting the Containment shell into sections is the safest and most reliable method of dismantlement. The planned work scope requires workers to cut large sections of the steel shell into predetermined sizes and shapes. The Containment sections above the equator (elevation 630.5 feet) would be cut from the exterior, removed, and lowered to the ground with a crane. The lower sections below the equator would be cut from the inside and lowered to the ground in a similar manner. There are a total of 86 steel shell sections to be cut above grade level with the approximate maximum size of these sections estimated to be 27 feet x 20 feet. These large sections would be further size-reduced at ground level as required for packaging and off-site disposal. Thermal cuts will be made using a plasma torch, oxy-fuel gas cutting torch, or other high-temperature device. A crane or manlift will be utilized to position the worker at the various cut location elevations. For cutting of the upper Containment sections, the torch would be located on the outside of the shell, limiting worker exposure to PCBs, therefore, providing an additional measure of safety between the worker and the interior coating.

Paint Removal

Big Rock Point site safety requirements generally specify that paint removal be performed prior to using any type of high-temperature cutting device. If interior paint removal was required prior to thermal cutting of the Containment shell, a strip of paint approximately 12 inches wide along all cut-lines would need to be removed. The paint removal process would employ worker-controlled wheel scabbling with vacuum head, ultra high pressure (UHP) water-jet cleaning with a closed-loop collection system, or abrasive scraping. These technologies have proven to be very effective at controlling emissions and rendering an appropriate clean work surface on many large structures. All feasible paint removal processes require that the workers hold the equipment to the Containment surface. In order to affect this, worker placement would occur as described below:

1. Interior paint removal above the 630.5-foot equator elevation would be performed using a combination of high-reach skylifts, scaffolding constructed on the emergency condenser level floor (elevation 660 feet), and scaffolding constructed from the platforms and slabs at elevation 616 feet. These scaffolds would be elaborate, multi-level and curved in plan. The concave shape of the interior Containment presents a significant safety challenge for adequately securing elevated scaffold platforms. Many man-hours would be required to erect and dismantle this scaffolding. In addition, the curvature of the Containment shell necessitates workers holding equipment overhead, at an angle for an extended time period, posing ergonomic difficulties to workers.
2. Interior paint removal below the equator (630.5 feet) to the 599.5-foot and 616-foot floor elevations will utilize workers in scissors lifts, skylifts, or on scaffolds constructed from these floor elevations.
3. Only a small area of paint is present in the lower portions of the interior Containment shell wall below the 599.5-foot elevation. Necessary paint removal below this elevation will be accomplished with the workers located on scaffolding or directly on the concrete ledge at elevation 593 feet. While access is somewhat limited in this area, work does not require protection against fall hazards.

5. Exterior paint, insulation and mastic coating will be removed along cut-lines to a width of approximately 12 inches prior to thermal cutting.

Attachment A provides drawings showing the physical layout of the Containment interior and exterior along with a site plan depicting the area surrounding the Containment structure. Attachment A also provides details of the Containment proposed cut-lines locations and supporting data. Attachment B contains the Containment Demolition Scheduleillustrating the project sequence for exterior coating removal, interior paint removal, thermal cutting, and demolition.

3.0 Risk Analysis - Health and Safety and Environmental Impact

Consumers Energy planning and technical personnel have performed a risk analysis of this project and determined that leaving the interior paint intact for the thermal cutting process meets the guiding principles of the project and OSHA regulations to minimize worker exposure and risk. The Containment interior portions associated with this request would be limited to those areas above the 630.5-foot elevation that pose a significant fall hazard. While it is expected that PCBs immediately adjacent to the cut-line would be thermally destroyed (converted to hydrochloric acid and water) due to the high operating temperature of the flame torch, the products of incomplete combustion (PICs) beyond the cut-lines may be released in small quantities due to lower temperatures. Since the workers performing the thermal cuts would be located on the outside of the upper Containment shell, exposure to PICs from PCBs contained in the interior coating would be minimal during the cutting process. Attachment C addresses important health and safety issues as well as environmental issues associated with the project. Appropriate worker protection and engineering controls will be utilized for all thermal cutting procedures. A discussion of the anticipated personal protective equipment (PPE) to be utilized for the project is provided in Attachment D.

Consumers Energy believes from a risk-based perspective, thermal cutting with the paint in place on the upper portion of the Containment interior is preferred in terms of worker health and safety. The environmental risk resulting from the potential disturbance of less than 0.01 pounds of PCBs is insignificant when compared to the objective worker risks associated with the removal of the paint on the upper shell (see Attachments A and C).

4.0 Disposal of the Containment Shell Pieces

The specification-cut pieces of the Containment shell are currently targeted for disposal at a Michigan-licensed Type II landfill or a licensed PCB landfill located in Michigan depending on the final PCB concentration determination of the Containment shell sections. Disposal will be in accordance with all state and federal regulations and approved Big Rock Point programs. Onsite waste management of the steel sections will be conducted in accordance applicable regulations, site procedures, and established practices.

5.0 Request for Approval of Alternate Dismantlement Method for Portion of the Containment Shell

While the process for interior paint removal can be performed from a technical standpoint, there are significant health and safety concerns associated with work at elevation for the upper portion (above the 630.5-foot equator elevation) of the Containment interior shell exposing workers to unnecessary risks. Consumers Energy is requesting that the EPA grant approval to thermally cut portions of the Containment shell above the equator elevation of 630.5 feet with the paint intact. It is believed that the paint should remain in place for the thermal cuts above the equator due to the excessive fall hazard risks posed to workers resulting from the combined height and angle of the cut-line, curvature of the Containment shell, physical obstructions inside the Containment, and time required to erect and dismantle multi-level, curved scaffolds. The total cut-line distance for this waiver request is 2700 linear feet; this corresponds to less than 0.01 pounds of PCBs contained in the associated paint volume.

Consumers Energy believes that the interior paint can safely be removed without unacceptable worker risk prior to both performance of thermal cuts below the equator and size reduction of the shell pieces at ground level.

Attachment A

Containment Shell Cut-lines and Supporting Information

- Site Plan
- Containment Pictures and Drawings
- Plan and Elevation Views of Proposed Cut-lines
- Supporting Data

Site Plan
Big Rock Point

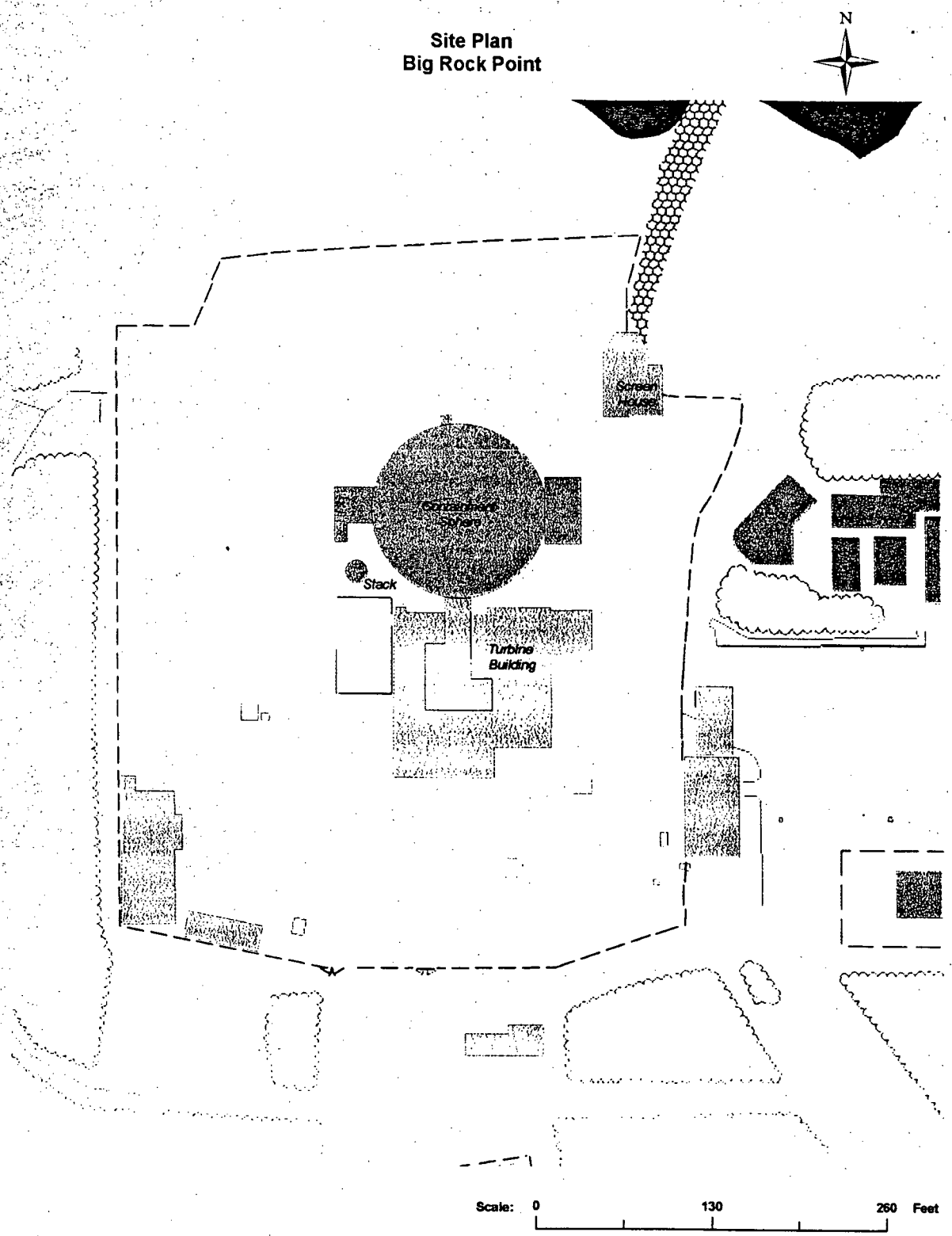
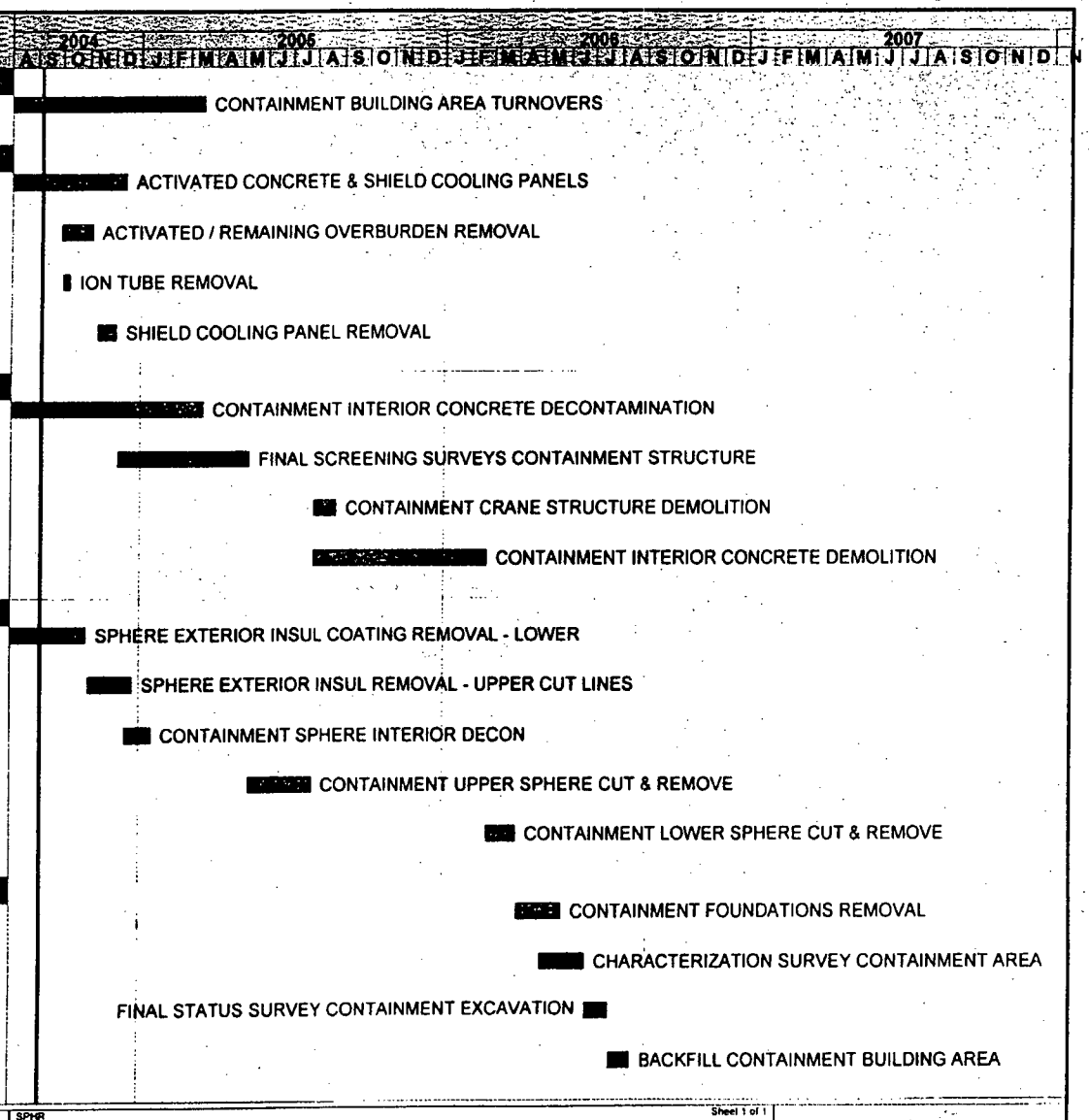


Table A-1. Supporting Data

Description	Value	Units
Containment inside radius	65	ft
Surface area of Containment (inside)	53093	ft^2
Circumference at equator	408.2	ft
Length of large-cut Containment shell section	27	ft
Width of large-cut Containment shell section	20	ft
Number of large-cut sections of Containment shell	86	--
Length of cut-lines with interior paint remaining on steel shell above equator	2700	linear feet
Pounds of PCB contained in paint along cut-lines above equator (see Attachment C)	0.004	pounds

Attachment B
Containment Demolition Schedule

Start	Finish	
SYSTEM REMOVAL / AREA TURNOVER		
26JUL04A	17MAR05	CONTAINMENT BUILDING AREA TURNOVERS
ACTIVATED CONCRETE		
12APR04A	13DEC04	ACTIVATED CONCRETE & SHIELD COOLING PANELS
28SEP04	05NOV04	ACTIVATED / REMAINING OVERBURDEN REMOVAL
30SEP04	08OCT04	ION TUBE REMOVAL
11NOV04	03DEC04	SHIELD COOLING PANEL REMOVAL
CONTAINMENT INTERIOR CONCRETE		
29JUN04A	17MAR05	CONTAINMENT INTERIOR CONCRETE DECONTAMINATION
06DEC04	10MAY05	FINAL SCREENING SURVEYS CONTAINMENT STRUCTURE
27JUL05	24AUG05	CONTAINMENT CRANE STRUCTURE DEMOLITION
27JUL05	23FEB06	CONTAINMENT INTERIOR CONCRETE DEMOLITION
CONTAINMENT SPHERE		
18JUN04A	29OCT04	SPHERE EXTERIOR INSUL COATING REMOVAL - LOWER
01NOV04	23DEC04	SPHERE EXTERIOR INSUL REMOVAL - UPPER CUT LINES
14DEC04	14JAN05	CONTAINMENT SPHERE INTERIOR DECON
11MAY05	26JUL05	CONTAINMENT UPPER SPHERE CUT & REMOVE
24FEB06	30MAR06	CONTAINMENT LOWER SPHERE CUT & REMOVE
BUILDING FOUNDATIONS		
31MAR06	25MAY06	CONTAINMENT FOUNDATIONS REMOVAL
28APR06	22JUN06	CHARACTERIZATION SURVEY CONTAINMENT AREA
23JUN06	20JUL06	FINAL STATUS SURVEY CONTAINMENT EXCAVATION
21JUL06	16AUG06	BACKFILL CONTAINMENT BUILDING AREA



Project Start	01APR97	Current Status
Project Finish	01OCT12	Progress Bar
Data Date	05SEP04	
Run Date	09SEP04	

© Primavera Systems, Inc

SPHR

Sheet 1 of 1

BIG ROCK POINT RESTORATION PROJECT
DECOMMISSIONING PROJECT PLAN
CONTAINMENT BUILDING DEMOLITION

Attachment C
Health and Safety and Environmental Impact

After considerable evaluation, thermal torch cutting with the interior paint left intact in specified areas emerged as the preferred method of Containment dismantlement. The evaluation assessed hazards and risks associated with working at high elevations, including utilizing equipment overhead on concave surfaces, during postulated PCB-containing paint removal activities on the Containment interior shell above the equator. This conclusion is based on several factors including worker fall protection, emergency rescue considerations, potential for operator error, worker chemical exposure, and environmental impact and protection as discussed below.

Paint removal from the Containment interior shell would employ worker-controlled techniques including a wheel scabbler with vacuum head, ultra high pressure (UHP) water-jet cleaner with a closed-loop collection system or abrasive scraping. While these technologies have proven to be very effective at controlling emissions and rendering an appropriate clean work surface on many large structures, workers must hold the equipment to the Containment surface. In order to affect this, worker placement would occur as described below:

1. Interior paint removal above the 630.5-foot equator elevation would be performed using a combination of high-reach skylifts, scaffolding constructed on the emergency condenser level floor (elevation 660 feet), and scaffolding constructed from the platforms and slabs at elevation 616 feet. These scaffolds would be elaborate, multi-level and curved in plan. The concave shape of the interior Containment presents a significant safety challenge for adequately securing elevated scaffold platforms. Many man-hours would be required to erect and dismantle this scaffolding. In addition, the curvature of the Containment shell necessitates workers holding equipment overhead, at an angle for an extended time period, posing ergonomic difficulties to workers.
2. Interior paint removal below the 630.5-foot equator elevation to 599.5-foot and 616-foot floor elevations will utilize workers in scissors lifts, skylifts or on scaffolds constructed from these floor elevations.
3. Only a small area of paint is present in the lower portions of the interior Containment shell below the 599.5-foot elevation. Necessary paint removal below this elevation will be accomplished with the workers located on scaffolding or directly on the concrete ledge at elevation 593 feet. While access is somewhat limited in this area, work does not require protection against fall hazards.
4. Exterior paint, insulation and mastic coating will be removed along cut-lines to a width of approximately 12 inches.

Worker Fall Protection

It is a generally accepted fact that falls are a leading cause of workplace fatalities in the construction industry. With regards to fall hazards, OSHA prefers prevention (hazard elimination) to protection (harnesses and lanyards). Workers in elevated positions are required to use fall protection equipment to prevent injury in the event that a worker trips or falls from the elevation.

Containment shell interior paint removal above the equator will require working at elevations between 35 – 85 feet above the floor elevations. Considerations for worker fall hazards will include fall exposure, emergency recovery, emergency evacuation, and stabilization of life-threatening injuries. A significant hazard is one that can result in a life-threatening consequence or an inability to perform self-rescue or self-recovery. A brief presentation of each hazard follows:

- *Fall Exposure*: Assembly of scaffolding, work from the finished platform, and dismantlement of the scaffolding pose hazards within the Containment. Further, due to the curvature of the Containment, scaffold construction will likely require additional man-hours beyond what would normally be necessary for similar vertical heights. Scaffold assembly and dismantlement occur with increased exposure to fall hazards, as safe anchorages or working platforms would not exist. At an estimated maximum height of 85 feet, the amount of time spent staging equipment, assembling scaffold, performing paint removal, and dismantling scaffold significantly increases the exposure time to life-threatening hazards for personnel assigned to the tasks. Operations involving scaffolding in this environment must be continuously monitored to verify the structure remains intact and other demolition activities within the Containment do not pose hazards to the scaffold or workers on it.

- *Emergency Evacuation:* If, for any reason, an emergency evacuation is ordered involving operations within the Containment, workers on scaffolding will be unable to make a smooth egress. They will face obstructions, equipment difficulties, fall exposure, potential impacts from nearby operations or problems, potential entanglement, and encumbrances posed by the extra fall protection PPE and work equipment used for coating removal. Working under these conditions poses a high likelihood of hazard in the event of an emergency evacuation.

- *Fire:* Combustibles and hot work are administratively controlled. While the Containment interior is not combustible, scaffold planks, polyethylene sheeting (fire retardant or otherwise), lighting and heating systems present sources of fuel and ignition. There is no longer an operational ventilation system or other source of breathing air within the Containment should smoke conditions become life threatening. Additionally, lighting service must be adequate and include backup systems.

Emergency Rescue

Risk of injury, particularly when the work involves unique complexities associated with the paint removal process, is always present. Failure of the aerial lift or scaffold platform system will require implementation of a recovery plan. The resources required are significant for a postulated recovery of a 200-pound worker at elevations up to 85 feet. The nearest high-angle rescue units (volunteer and professional) require at least an hour to mobilize at the site as there are potential difficulties in getting emergency equipment inside the Containment and efforts to reach a victim could expose rescue workers to additional elevation hazards. A medical emergency on a platform or basket places the victim at least 30 minutes from advanced medical care in Charlevoix or Petoskey, Michigan, under the best of circumstances.

Operator Error
The operator assigned to the aerial lift will be subject to environmental stressors (heat or cold) and ergonomic stressors (equipment weight, cage restrictions) that will degrade performance and safety. Review of accidents resulting from elevated work often indicates operator error is a significant part of the cause. Given the dimensions of the work, it will be impossible to closely monitor the worker for symptoms of stress and fatigue. Communications will be via radio, voice, and hand signals without benefit of close visual monitoring. A weary or hurried worker may suffer a fall simply by leaning beyond the guardrails.

Worker Chemical Exposure
Prior to commencement of any new work activity, a job-specific plan is developed for the work process. This document specifies the applicable PPE as well as other types of protective equipment and engineering controls appropriate for the assigned task. In addition, a pre-job brief is held prior to the implementation of the work activity. At this time, the work plan will be discussed and the workers may question any of the details associated with the planned work activity. Chemical exposure to workers associated with high-temperature cutting of PCB-containing painted metal surfaces will be controlled in accordance with OSHA, Consumers Energy, and BRP site requirements and procedures. Communication between on-site industrial safety personnel and a corporate industrial hygienist will occur, as necessary, for evaluation of work efforts, determining potential worker exposure, and determining proper PPE and respiratory protection required in the performance of work.

All workers who may potentially be exposed to chemical vapors will be equipped with chemical protective clothing as appropriate. While it is expected that PCBs immediately adjacent to the cut-line would be thermally destroyed (converted to hydrochloric acid and water) due to the high operating temperature of the flame torch, the products of incomplete combustion (PICs) beyond the cut-lines may be released in small quantities due to lower temperatures. Since the workers performing the thermal cuts would be located on the outside of the upper Containment shell, exposure to PICs from PCBs contained in the interior, coating would be minimal during the cutting process.

Respiratory protection will be provided for those involved in cutting operations. The Consumers Energy respiratory protection program meets the requirements of 29CFR191.134 and includes training of workers regarding the proper use of fit testing, inspection, maintenance, and cleaning of respirators. Personal air monitoring will be performed to ensure that emissions from the cutting operations are controlled effectively by engineering measures, work practices, and that the level of respiratory protection is adequate for the hazard.

Environmental Impact
Potential disturbance of PCBs from paint removal along 12-inch wide strips at cut-line locations on the upper Containment shell are addressed using the following assumptions:

- Thickness of PCB coating: 0.005 inches
- PCB concentration: 58 ppm maximum
- Estimated dry weight of paint: 63 pounds/ft^3
- Total length of cut-lines above equator: 2700 linear feet
- Width of cut-lines: 12 inches (1 foot)

Using the above assumptions, the total quantity of PCBs contained in the interior paint along cut-line abatement locations equates to only 0.004 pounds. Release of products of incomplete combustion of PCBs beyond the cut-lines would only be released in minute quantities. Further, the surface temperature adjacent to the thermal cut location is expected to fall to less than 1000°F, two inches from the cut. The thermal disturbance of this very small amount of PCBs and PICs is considered to have an extremely minimal environmental impact resulting from air emissions.

Environmental Protection

Thermal cutting and material handling will proceed under the following controls to prevent excess disturbance of PCB coatings.

- High Efficiency Particulate (HEPA) filters and a local exhaust ventilation system will be employed, as necessary, to collect fume emissions as dictated by work orientation and worker safety.
- Work site housekeeping and inspections will ensure PCB-containing paint chips, debris or metal slag from cutting operations are cleaned up after cutting operations are completed.
- Size-reduction activities (paint removal followed by thermal cutting) for the purpose of creating shell pieces that fit into disposal containers will be performed in a designated area at ground level and as soon as practical, following radiological surveys, to prevent accumulation of cut sections exposed to outdoor environmental conditions.
- Final cut sections of the Containment shell will be loaded directly into designated containers prior to off-site transport to the designated facility(ies) in accordance with established site programs, procedures and agreed upon practices.

Attachment D
Personal Protective Equipment

The following Personal Protective Equipment (PPE) is recommended for the Big Rock Point Containment shell thermal cutting. To ensure the safety of the workers, this task will be performed using Level C PPE (see Table D-1 below). Based on the risk assessment, the primary routes of exposure are respiratory and dermal. In addition to PPE requirements, Consumers Energy will use administrative and engineering controls to minimize potential exposure. Engineering control measures include positioning elevated platform up-wind of cut-lines and rotating personnel assigned to higher-risk tasks.

Table D-1. PPE Requirements

Contaminants of concern: PCBs (Arochlor 1254), Lead

Modified Level C	
Required PPE	**Contaminant Concentration[1]**
Appropriate respirator with combination particulate/organic vapor cartridges.	PCBs: Greater than or equal to 0.5 mg/m^3 Lead: Greater than or equal to 50 Tg/m^3
Disposable flame resistant coveralls with head and foot coverings.	
Dedicated flame retardant leather gloves.	
Safety shoes, hard hats, eye/face protection, and fall-protection equipment in accordance to Consumers Energy and OSHA standards.	

[1]Personal air monitoring for PCBs and lead will be conducted daily to ensure worker safety and comply with OSHA standards. If concentrations for PCBs or lead exceed specified concentrations, with respect to respiratory protection, shown in Table D-1, Level B (supplied air respirators) will be used.

Consumers Energy

A CMS Energy Company

Big Rock Point Nuclear Plant
10269 US-31 North
Charlevoix, MI 49720

Kurt M. Haas
General Manager

November 30, 2004

Mr. Anton Martig
Region 5, US Environmental Protection Agency
Toxics Program Section
Waste Pesticides and Toxics Division
77 W. Jackson Blvd (DT-8J)
Chicago, IL 60604-3590

Re: Consumers Energy Company - Big Rock Point Containment Shell Dismantlement

Dear Mr. Martig,

The following items are enclosed as revisions to the Consumers Energy Company - *Big Rock Point Containment Shell Dismantlement Request for Approval of Alternative Approach to Mitigate Risk*, dated September 16, 2004. These revisions are as agreed upon by yourself and Tracy Goble during a November 9, 2004 telephone conversation.

- Attachment C – Health and Safety and Environmental Impact (Revised to include NIOSH 5503 method for personal monitoring for PCBs, see Worker Protection section, page 3)
- Addendum 1 - Containment Shell PCB Waste Characterization for Disposal (Addition)

Consumers Energy Company respectfully requests your approval of the Containment dismantlement methods described in the September 16, 2004 submittal, as amended by the revised Attachment C and inclusion of Addendum 1; approval is requested by December 31, 2004. If you have any questions please feel free to contact either Tracy Goble (231-547-8389) or Ward Wilson (517-788-1969).

Sincerely,

Kurt M. Haas
Site General Manager
Big Rock Point Restoration Project

cc: TA Goble, Big Rock Point
KE Pallagi, Big Rock Point
WJ Wilson, Consumers Energy

Attachment C
Health and Safety and Environmental Impact

After considerable evaluation, thermal torch cutting with the interior paint left intact in specified areas, emerged as the preferred method of Containment dismantlement. The evaluation assessed hazards and risks associated with working at high elevations, including utilizing equipment overhead on concave surfaces, during postulated PCB-containing paint removal activities on the Containment interior shell above the equator. This conclusion is based on several factors including worker fall protection, emergency rescue considerations, potential for operator error, and environmental impact as discussed in the section below.

Paint removal from the Containment interior shell would employ worker-controlled techniques including a wheel scabbler with vacuum head, ultra high pressure (UHP) water-jet cleaner with a closed-loop collection system or abrasive scraping. While these technologies have proven to be very effective at controlling emissions and rendering an appropriate clean work surface on many large structures, workers must hold the equipment to the Containment surface. In order to affect this, worker placement would occur as described below:

1. Interior paint removal above the 630.5 foot equator elevation would be performed using a combination of high-reach skylifts, scaffolding constructed on the emergency condenser level floor (elevation 660 feet), and scaffolding constructed from the platforms and slabs at elevation 616 feet. These scaffolds would be elaborate, multi-level and curved in plan. The concave shape of the interior Containment presents a significant safety challenge for adequately securing elevated scaffold platforms. Many man-hours would be required to erect and dismantle this scaffolding. In addition, the curvature of the Containment shell necessitates workers holding equipment overhead, at an angle for an extended time period, posing ergonomic difficulties to workers.
2. Interior paint removal below the 630.5 foot equator elevation to 599.5 foot and 616 foot floor elevations will utilize workers in scissors lifts, skylifts or on scaffolds constructed at these floor elevations.
3. Only a small area of paint is present in the lower portions of the interior Containment shell below the 599.5 foot elevation. Necessary paint removal below this elevation will be accomplished with the workers located on scaffolding or directly on the concrete ledge at elevation 593 feet. While access is somewhat limited in this area, work does not require protection against fall hazards.
4. Exterior paint, insulation and mastic coating will be removed along cut lines to a width of approximately 12 inches.

Worker Fall Protection

It is a generally accepted fact that falls are leading cause of workplace fatalities in the construction industry. With regards to fall hazards, OSHA prefers prevention (hazard elimination) to protection (harnesses and lanyards). Workers in elevated positions are required to use fall protection equipment to prevent injury in the event that a worker trips or falls from the elevation.

Containment shell interior paint removal above the equator will require working at elevations between 35 – 85 feet above the floor elevations. Considerations for worker fall hazards will include fall exposure, emergency recovery, emergency evacuation, and stabilization of life-threatening injuries. A significant hazard is one that can result in a life-threatening consequence or an inability to perform self-rescue or self-recovery. A brief presentation of each hazard follows:

- *Fall Exposure*: Assembly of scaffolding, work from the finished platform, and dismantlement of the scaffolding pose hazards within the Containment. Further, due to the curvature of the Containment, scaffold construction will likely require additional man-hours beyond what would normally be necessary for similar vertical heights. Scaffold assembly and dismantlement occur with increased exposure to fall hazards, as safe anchorages or working platforms would not exist. At an estimated maximum height of 85 feet, the amount of time spent staging equipment, assembling scaffold, performing paint removal, and dismantling scaffold significantly increases the exposure time to life-threatening hazards for personnel assigned to the tasks. Operations involving scaffolding in this environment must be continuously monitored to verify the structure remains intact and other demolition activities within the Containment do not pose hazards to the scaffold or workers on it.

- *Emergency Evacuation:* If, for any reason, an emergency evacuation is ordered involving operations within the Containment, workers on scaffolding will be unable to make a smooth egress. They will face obstructions, equipment difficulties, fall exposure, potential impacts from nearby operations or problems, potential entanglement, and encumbrances posed by the extra fall protection PPE and work equipment used for coating removal. Working under these conditions poses a high likelihood of hazard in the event of an emergency evacuation.

- *Fire:* Combustibles and hot work are administratively controlled. While the Containment interior is not combustible, scaffold planks, polyethylene sheeting (fire retardant or otherwise) lighting and heating systems present sources of fuel and ignition. There is no longer an operational ventilation system or other source of breathing air within the Containment should smoke conditions become life threatening. Additionally, lighting service must be adequate and include backup systems.

Emergency Rescue

Risk of injury, particularly when the work involves unique complexities associated with the paint removal process, is always present. Failure of the aerial lift or scaffold platform system will require implementation of a recovery plan. The resources required are significant for a postulated recovery of a 200-pound worker at elevations up to 85-feet. The nearest high-angle rescue units (volunteer and professional) require at least an hour to mobilize at the site as there are potential difficulties in getting emergency equipment inside the Containment and efforts to reach a victim could expose rescue workers to additional elevation hazards. A medical emergency on a platform or basket places the victim at least 30 minutes from advanced medical care in Charlevoix or Petoskey, Michigan under the best of circumstances.

Operator Error

The operator assigned to the aerial lift will be subject to environmental stressors (heat or cold) and ergonomic stressors (equipment weight, cage restrictions) that will degrade performance and safety. Review of accidents resulting from elevated work often indicates operator error is a significant part of the cause. Given the dimensions of the work, it will be impossible to closely monitor the worker for symptoms of stress and fatigue. Communications will be via radio, voice, and hand signals without benefit of close visual monitoring. A weary or hurried worker may suffer a fall simply by leaning beyond the guardrails.

Worker Protection

Prior to commencement of any new work activity, a job-specific plan is developed for the work process. This document specifies the applicable PPE as well as other types of protective equipment and engineering controls appropriate for the assigned task. In addition, a pre-job brief is held prior to the implementation of the work activity. At this time, the work plan will be discussed and the workers may question any of the details associated with the planned work activity. Chemical exposure to workers associated with high-temperature cutting of PCB-containing painted metal surfaces will be controlled in accordance with OSHA, Consumers Energy, and BRP site requirements and procedures. Communication between on-site industrial safety personnel and a corporate industrial hygienist will occur as necessary for evaluation of work efforts, determining potential worker exposure, and determining proper PPE and respiratory protection required in the performance of work.

All workers who may potentially be exposed to chemical vapors will be equipped with chemical protective clothing as appropriate. While it is expected that PCBs immediately adjacent to the cut-line would be thermally destroyed (converted to hydrochloric acid and water) due to the high operating temperature of the flame torch, the products of incomplete combustion (PICs) beyond the cut lines may be released in small quantities due to lower temperatures. Since the workers performing the thermal cuts would be located on the outside of the upper Containment shell exposure to PICs from PCBs contained in the interior coating would be deminimis during the cutting process.

Respiratory protection will be provided for those involved in cutting operations. The Consumers Energy respiratory protection program meets the requirements of 29CFR191.134 and includes training of workers regarding the proper use of, fit testing, inspection, maintenance and cleaning of respirators. Personal air monitoring will be performed in accordance with NIOSH Method 5503 to ensure that emissions from the cutting operations are controlled effectively by engineering measures, work practices, and that the level of respiratory protection is adequate for the hazard.

Environmental Impact

Potential disturbance of PCBs from paint removal along 12-inch wide strips at cut line locations on the upper Containment shell are addressed using the following assumptions:

- Thickness of PCB coating: 0.005 inches

- PCB concentration: 58 ppm maximum
- Estimated dry weight of paint: 63 pounds/ft^3
- Total length of cut lines above equator: 2700 linear feet
- Width of cut lines: 12 inches (1 foot)

Using the above assumptions the total quantity of PCBs contained in the interior paint along cut line abatement locations equates to only 0.004 pounds. Release of products of incomplete combustion of PCBs beyond the cut lines would only be released in minute quantities. Further, the surface temperature adjacent to the thermal cut location is expected to fall to less than 1000°F two inches from the cut. The thermal disturbance of this very small amount of PCBs and PICs is considered to have an extremely minimal environmental impact resulting from air emissions.

Environmental Protection

Thermal cutting and material handling will proceed under the following controls to prevent excess disturbance of PCB coatings.

- High Efficiency Particulate (HEPA) filters and a local exhaust ventilation system will be employed as necessary to collect fume emissions as dictated by work orientation and worker safety.
- Work site housekeeping and inspections will ensure PCB-containing paint chips, debris or metal slag from cutting operations are cleaned up after cutting operations are completed.
- Size-reduction activities (paint removal followed by thermal cutting) for the purpose creating shell pieces that fit into disposal containers will be performed in a designated area at ground level and as soon as practical, following radiological surveys, to prevent accumulation of cut sections exposed to outdoor environmental conditions.
- Final cut sections of the Containment shell will be loaded directly to designated containers meeting EPA and Consumers Energy agreed upon standards prior to off-site transport to the designated facility(ies) in accordance with established site programs and procedures.

Addendum 1
Containment Shell PCB Waste Characterization for Disposal

The following information describes the approach that will be taken to characterize the Big Rock Point Containment shell interior paint coating for determination of remediation or applicable PCB Bulk Product Waste disposal requirements. Included below are sampling methodology, screening criteria, on-site waste management and disposition options, as applicable.

Containment Shell Interior Sampling Methodology

1) Containment shell interior surface will be divided into grids sections. These grids sections will be positioned to achieve maximum accessibility for sampling of the interior surface. The area of each grid section will not exceed 1600 square feet.
2) Interior grid sections will correspond approximately to exterior cut lines to facilitate efficient management of Containment shell sections as they are lowered to the ground during deconstruction. Refer to Attachment A for an overview of the exterior cut line locations.
3) Each interior grid section will encompass two to four exterior cut sections. Grid sections will be positioned to achieve maximum accessibility of the Containment shell interior surface.
4) Each grid will be assigned a unique alphanumeric designator for traceability purposes.
5) All accessible grid sections will be sampled using ladders, scaffold, or man-lifts in accordance with all applicable site and OSHA worker safety requirements. Approximately 10% of the Containment interior shell above the equator is inaccessible for sampling due to physical obstruction from the concrete steam drum enclosure.
6) One interior paint coating sample will be collected near the midpoint of each grid section. No samples will be composited.
7) Containment shell interior surface paint coating samples will be analyzed using EPA Method 8082.

Screening Criteria

The *Containment Shell Dismantlement Technique* (Section 2.0) specifies that each section will be further size-reduced at ground level to fit the pieces into designated waste containers. Based on the interior paint coating sample laboratory analysis results, the Containment grid sections will be designated and managed as described below.

1) Containment shell grid sections with interior paint coating sample results less than or equal to 40 ppm PCB will be designated and managed as non-PCB waste[1].
2) Containment shell grid sections with interior paint coating sample results greater than 40 ppm PCB will be managed as follows:

[1] A site-specific administrative limit is applied at 80% of the federal limit (50 ppm) for PCB waste. This administrative limit is based on statistical review of previously collected Containment interior paint sample results.

a) Once these sections have been removed and placed on the ground, the sections will be resampled at locations corresponding to the final size-reduced pieces.

b) If the secondary paint sample is less than 50 ppm PCB, the size-reduced piece will be designated as non-PCB waste.

c) If any secondary sample result is equal to or greater than 50 ppm PCB, the size-reduced piece will be designated as PCB Bulk Product Waste.

3) For each interior grid section that is not accessible for sampling, sample results from the closest adjacent interior grid section will be used to characterize the PCB concentration of the inaccessible grid section. If the inaccessible interior grid section is bordered closely by more than one accessible grid section, the adjacent grid section with the highest PCB concentration will used to characterize the inaccessible grid section.

On-Site Waste Management

Containment shell PCB Bulk Product Waste collection, segregation, storage and post-demolition clean-up verification will be completed in accordance Consumers Energy Company – *Big Rock Point, Painted Structural Steel and Other Demolition Debris Collection/ Segregation/Storage Plan*, dated September 8, 2004.

Waste Disposition

1) Containment shell sections designated as non-PCB waste will be disposed of at State of Michigan licensed Type II landfill.

2) Containment shell sections designated as PCB Bulk Product Waste will be decontaminated in accordance with 40 CFR 761.79 or will be disposed of as PCB Bulk Product Waste.

3) Small portions of the Containment exterior shell are coated with silver paint containing PCBs above 50 ppm. These portions correspond to where adjacent buildings are connected to Containment structure. These sections will either be decontaminated in accordance with 40CFR761.79 or will be managed and disposed of as a PCB Bulk Product Waste.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:
D-8J

MAR 21 2005

Kurt M. Haas, General Manager
Consumers Energy
Big Rock Point
10269 US-31 North
Charlevoix, Michigan 49720

Re: Big Rock Point Containment Shell Dismantlement
TSCA Approval - 40 CFR § 761.62(c)

Dear Mr. Haas:

This letter is in regard to the dismantlement and disposal of the containment shell and other buildings at Consumers Energy's Big Rock Point facility in Charlevoix, Michigan. Some of the interior of the containment shell is coated with paint contaminated with PCBs at concentrations slightly greater than 50 ppm. The average concentration of samples taken of the paint on the interior of the containment shell is 31 ppm. The paint on the exterior of the containment shell is less than 50 ppm. In addition, some other buildings at the facility also contained surfaces coated with paint contaminated with PCBs at concentrations greater than 50 ppm. Applied dried paint with PCBs at concentrations equal to or greater than 50 ppm is defined as a PCB bulk product waste under the Federal PCB regulations at 40 Code of Federal Regulations (CFR) § 761.3.

The proposed procedures for dismantlement and disposal of the containment shell and other buildings at the Big Rock Point facility are described in your letters of September 16 and November 30, 2004, and Ward Wilson's letter of September 8, 2004 (Enclosure 2). Your September 16 and November 30 letters also provide specific information indicating that the removal of the paint from certain areas of the interior of the containment shell prior to dismantlement poses significant worker protection concerns due to the overall size of the containment shell, limited accessibility, and potential for falls. Accordingly, you request approval to cut specific portions of the containment shell with a thermal torch without removing the PCB-contaminated paint.

Collectively, your September 16 and November 30 letters, and Mr. Wilson's September 8 letter include information on and describe your proposed procedures for the following:

- worker and environmental protection,
- dismantlement and demolition processes for the containment shell and other buildings,
- waste characterization, storage, and disposal, and
- post-demolition verification sampling.

Recycled/Recyclable . Printed with Vegetable Oil Based Inks on 100% Recycled Paper (50% Postconsumer)

We have determined that following the proposed procedures in the above letters will not pose an unreasonable risk of injury to health or the environment if conducted in accordance with the enclosed Conditions of Approval (Enclosure 1).

This approval is granted under the authority of Section 6(e) of the Toxic Substances Control Act (TSCA) and in accordance with 40 CFR § 761.62(c) of the Federal PCB regulations. Under those regulations, a Regional Administrator may approve the sampling, storage, and disposal of PCB bulk product waste using a method which will not pose an unreasonable risk of injury to health or the environment. The authority to approve such methods in this Region has been delegated to Division Directors.

This approval does not relieve you from complying with all applicable Federal, state, and local regulations. In addition, this approval does not preclude the United States Environmental Protection Agency from initiating an enforcement action, including seeking civil penalties, for violation of the TSCA and the Federal PCB regulations.

If you have any questions, please contact Tony Martig, of my staff, at (312) 353-2291.

Sincerely,

Margaret M. Guerriero, Director
Waste, Pesticides and Toxics Division

Enclosures (2)

cc: Stephen Buda, MDEQ

Enclosure 1
Conditions of Approval
Consumers Energy - Big Rock Point Containment Shell Dismantlement

General

1. This Approval is limited to the dismantlement and demolition of the containment shell and other buildings at the Consumers Energy Big Rock Point facility in Charlevoix, Michigan, which are known or assumed to be coated with paint with PCB concentrations of 50 ppm or greater.

2. This Approval is based on the information provided by Consumers Energy in its letters to the United States Environmental Protection Agency (U.S. EPA) of September 8, September 16, and November 30, 2004 (Enclosure 2). In the event that any of these Conditions of Approval are inconsistent with the information in the letters, Consumers Energy must abide by the Conditions of Approval, stated herein.

3. Consumers Energy is responsible for the actions of all officers, employees, agents, contractors, subcontractors, and others involved in activities conducted under this Approval. If at any time Consumers Energy has or receives information indicating that Consumers Energy or any other person has failed, or may have failed, to comply with any provision of this Approval, it must report the information to U.S. EPA in writing within 24 hours of having or receiving the information.

4. Consumers Energy must provide copies of this Approval to its contractors and require them to comply with the applicable conditions of this Approval.

5. Consumers Energy must secure the Big Rock Point facility to restrict public access at all times until the dismantlement and demolition of the containment shell and other buildings have been completed and all PCB-contaminated materials have been remediated and removed from the facility.

Health and Safety

6. Consumers Energy must follow the worker and environmental protection procedures described in the September 16 and November 30, 2004 letters.

Dismantlement and Demolition of Containment Shell and Other Buildings and Management of Wastes

7. Consumers Energy must follow the procedures described in the September 16 and November 30, 2004 letters for the dismantlement, characterization, and disposal of the containment shell.

8. Consumers Energy must follow the procedures described in the September 8, 2004 letter for the demolition and disposal of the screen house and turbine building.

9. If any building other than the screen house, turbine building, or containment shell are found or assumed to be coated with paint with PCB concentrations of 50 ppm or greater, Consumers Energy must follow the procedures described in the September 8, 2004 letter for the demolition and disposal of the building and notify U.S. EPA.

Storage

10. Consumers Energy must follow the storage unit/area description, operations and controls, and container specifications described in the September 8, 2004 letter for the storage of any known or suspected PCB waste generated during the dismantlement and demolition of the containment shell and other buildings and post-demolition remediation of the facility.

11. Consumers Energy must inspect the areas and containers used to store PCB waste each scheduled working day and must maintain written records of the daily storage inspections. If any PCB container is found to be defective or leaking, Consumers Energy must immediately transfer the waste in the container to a container that is properly marked and structurally sound.

Post-demolition Verification

12. Consumers Energy must follow the procedures described in the September 8, 2004 letter for verification sampling of the remaining structures, soil, etc., for PCBs after the dismantlement and demolition of the containment shell and other buildings.

Disposal of Cleaning Materials

13. All non-liquid cleaning materials such as personal protective equipment; moveable equipment; tools and sampling equipment; and PCB-contaminated water generated during decontamination must be disposed of or decontaminated in accordance with the applicable Federal PCB regulations.

Spills

14. Consumers Energy must instantly and properly clean up, store, or dispose of any leaked or spilled materials in accordance with the conditions of this Approval or 40 CFR § 761.61, § 761.62, or Subpart J, as applicable.

Recordkeeping and Reporting

15. Consumers Energy must submit a final report to the U.S. EPA within 90 days of completion of the activities described under this Approval. At a minimum, the final report must include: a short narrative of the remedial activities; characterization and verification sampling analytical results; copies of the accompanying analytical chains of custody; field and laboratory quality control and quality assurance checks; copies of manifests; estimates of the quantity of all PCB and non-PCB wastes generated; and any copies of certificates of disposal or similar certifications issued by the disposer received within the 90 days.

16. Any report or notification required under this Approval must be mailed to:

Tony Martig, Environmental Protection Specialist
U.S. EPA, Region 5
77 W. Jackson Blvd. (DT-8J)
Chicago, IL 60604

Approval Revocation and Modification

17. Departure from these Conditions of Approval, approved modification(s) to this Approval, or the Federal PCB regulations without a prior written approval by U.S. EPA may result in the immediate suspension of this Approval and/or the commencement of proceedings to revoke this Approval and/or appropriate enforcement action under any or all applicable statutes and regulations.

18. Consumers Energy must notify U.S. EPA in writing of any requested or intended modification of the information submitted by Consumers Energy forming the basis upon which this Approval has been issued. Minor modifications to this Approval, considered changes to conform with Agency guidance or regulations, changes which do not affect overall performance or environmental impact of this Approval, or lessor changes, shall be modified upon the written concurrence of the Chief of the Pesticides and Toxics Branch of U.S. EPA, Region 5.

19. U.S. EPA may modify this Approval if it finds an unreasonable risk of injury to health or the environment during the dismantlement and demolition of the containment shell and other buildings at the Big Rock Point facility involving materials with PCB concentrations of 50 ppm or greater.

Consumers Energy

A CMS Energy Company

Big Rock Point Restoration Project
10269 US-31 North
Charlevoix, MI 49720

Kurt M. Haas
General Manager

October 3, 2005

Mr. Tony Martig,
U.S. Environmental Protection Agency, Region 5
Toxics Program Section
77 W. Jackson Blvd (DT-8J)
Chicago, IL 60604

Re: Consumers Energy Company - Big Rock Point Containment Shell Dismantlement – Notification of Minor Modifications

Dear Mr. Martig,

Consumers Energy Co. is providing written notification of minor modifications to the Big Rock Point Containment Shell Dismantlement plan. This notification is in accordance with the March 21, 2005 letter to Consumers Energy Co. granting TSCA approval under 40 CFR 761.62(c) for dismantlement of the Containment Shell.

Detailed work planning and schedule development for the Containment dismantlement have yielded the following minor modifications to the work plan provided to the EPA in Consumers Energy Co. letter dated September 16, 2004. These minor modifications are summarized below:

1. Dismantlement of the Containment Shell is schedule to begin October 14, 2005 and conclude by mid-December 2005. This schedule facilitates both completion of interior radiological decontamination activities and dismantlement of the exterior Containment Shell before winter.
2. The number of Containment sections to be removed has been modified from 86 to 75 by cutting sections from Rings 5 and 6 simultaneously. This revision does not alter the approved paint sampling plan pursuant to March 21, 2005 letter from EPA. The revised cut plan is provided in Attachment 1.
3. Once the Containment Shell sections are placed on the ground, hydraulic shears will be utilized as the primary method to complete size-reduction of these sections to the appropriate disposal dimensions. Use of hydraulic shear equipment does not alter the physical composition of the paint allowing cuts to be performed without paint removal. Hot cutting methods may be utilized on a limited basis and will require paint removal prior to cutting.

The described minor modifications are considered overall process improvements in both worker and environmental safety. Consumers Energy Co. has reviewed the original basis for the Containment Shell dismantlement as communicated in our September 16 and November 30, 2004 letters and have concluded that these minor modifications do not affect overall performance or environmental impact of the Approval granted on March 21, 2005. Consumers Energy Co. is requesting written concurrence for these minor modifications as soon as possible to facilitate the October 14, 2005 schedule start date for the Containment Shell dismantlement.

Please contact Tracy Goble (231-547-8389) should you have any questions regarding the described minor modifications. Thank you for your continued assistance in restoration of the Big Rock Point site.

Sincerely,

FOR KMHAAS

Kurt M. Haas
Site General Manager
Big Rock Point Restoration Project

cc: KE Pallagi, Big Rock Point
TA Goble, Big Rock Point
WJ Wilson, Consumers Energy Co.
JP Dickey, Consumer Energy Co.
Amy Merricle, Michigan Department of Environmental Quality
NRC NMSS Project Manager
NRC Decommissioning Inspector – Big Rock Point

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

2 7 OCT 2005

REPLY TO THE ATTENTION OF:
DT-8J

Kurt M. Haas, General Manager
Consumers Energy
Big Rock Point
10269 US-31 North
Charlevoix, Michigan 49720

Re: Big Rock Point Containment Shell Dismantlement
TSCA Approval - 40 C.F.R. § 761.62(c) - Minor Modification

Dear Mr. Haas:

This letter is in regards to your October 3, 2005 request for a minor modification of the United States Environmental Protection Agency, Region 5, March 21, 2005, Toxic Substances Control Act approval for the dismantlement and disposal of the containment shell and other buildings at Consumers Energy's Big Rock Point facility in Charlevoix, Michigan. The March 21, 2005 approval requires minor modifications, such as changes which would not affect overall performance or environmental impact of the approval, to be approved by the written concurrence of the Chief of the Pesticides and Toxics Branch.

Specifically, you requested the following modifications to the March 21, 2005 approval:

- The number of containment shell sections to be removed will be modified from 86 to 75 by cutting sections from Rings 5 and 6 simultaneously.

- Once the containment shell sections are placed on the ground, hydraulic shears will be used as the primary method to complete the size reduction of the sections to the appropriate disposal dimensions.

Since we have determined that the above modifications do not affect overall performance or environmental impact of the March 21, 2005 approval, by this letter we are providing written concurrence of the modifications. This concurrence of the above modifications, however, does not alter the sampling requirements for the containment shell sections included in the March 21, 2005 approval.

If you have any questions, please contact Tony Martig of my staff at (312) 353-2291.

Sincerely,

Mardi Klevs

Mardi Klevs, Chief
Pesticides and Toxics Branch

cc: Stephen Buda, MDE

Recycled/Recyclable • Printed with Vegetable Oil Based Inks on 50% Recycled Paper (20% Postconsumer)

Consumers Energy

A CMS Energy Company

Big Rock Point Restoration Project
10269 US-31 North
Charlevoix, MI 49720

Kurt M. Haas
General Manager

November 10, 2005

Mr. Tony Martig
U.S. Environmental Protection Agency, Region 5
Toxics Program Section
77 W. Jackson Blvd. (DT-8J)
Chicago, IL 60604

Re: Consumers Energy Company – Big Rock Point Containment Shell Dismantlement – Notification of Inadvertent Torch Cut of Containment Shell Piece

Dear Mr. Martig,

Consumers Energy Company is providing notification of a deviation in the provisions contained in the March 21, 2005, letter granting TSCA approval under 40 CFR 761.62(c) for dismantlement of the Containment shell. This notification is made in accordance with Conditions of Approval (General Item 3) contained in the March 21, 2005, letter.

On November 9, 2005, at approximately 1500 hours, a contract laborer inadvertently torch cut a containment shell piece without prior removal of paint along the exterior cut line. The containment piece originated from the equipment lock and was partially coated with silver-colored paint known to contain PCBs above the 50 ppm limit. The containment subsections have been labeled and placed in the designated location for containment sections coated with paint above the 50 ppm PCB limit. A condition report, C-BRP-05-0234, was generated immediately to document this occurrence and address corrective actions to prevent recurrence; a copy of this condition report is attached.

Please contact Tracy Goble (231-547-8389) should you have any questions regarding this notification.

Sincerely,

KE Pallagi - for KM Haas

Kurt M. Haas
Site General Manager
Big Rock Point Restoration Project

cc: KE Pallagi, Big Rock Point
TA Goble, Big Rock Point
WJ Wilson, Consumers Energy
JP Dickey, Consumers Energy
Amy Merricle, Michigan Department of Environmental Quality
USNRC NMSS Project Manager
USNRC Region III Decommissioning Inspector – Big Rock Point

BIG ROCK POINT NUCLEAR PLANT

740/73*20:03/L

CONDITION REPORT
(INITIATION)

C-BRP- 05 -0234

TITLE **PCB Painted Sphere Pieces Inadvertently Torch Cut**

Discovery Date and Time 11/9/05 ~ 1500

Date of Occurrence if different from Discovery Date _____ Job/System _____

EVENT INFORMATION (IF APPROPRIATE ATTACH ADDITIONAL SHEETS/NOTES/STATEMENTS, ETC.)

DESCRIPTION OF INCIDENT OR ISSUE: (WHAT OCCURRED OR WHAT IS THE ISSUE)

While sizing pieces 75 & 76 of the sphere, a worker inadvertently torch cut through PCB painted material. The previous day, another crew had marked and scabbled cut lines for both segregating the PCB areas and sizing the PCB pieces on one side of the pieces. The crew intended to segregate the PCB material and move the two pieces to the north lay down area prior to sizing. Some of the cut lines were marked "Do Not Cut" and designated the area that contained PCB paint on the outside of the piece. The areas within the lines marked "Do Not Cut" included other cut lines for sizing that were not marked.

The following day, completion of the work was assigned to a different crew. There was no turnover between the two crews. The worker was instructed to cut all lines not marked "Do Not Cut". The position of the pieces was such that worker could not see that some of lines he was cutting traversed the areas of PCB paint on the underside of the pieces.

INITIATOR

APPARENT CAUSE:

The work group assigned to perform a job was changed prior to completion. The turnover and communication of the status of the work was inadequate.

IMMEDIATE ACTION(S) TAKEN: Stopped work on PCB pieces. Notified RP & ES and plant management.

WORK ORDER/REQUEST/INSTRUCTION NUMBER USED TO CORRECT CONDITION: _____

RECOMMENDATION(S) (Operability and/or Corrective Action)

REFERENCES

Initiator Kevin Overly Date 11/10/05 Time 1100

SGM (or designate):	TS Operability applicable? ☐ Yes ☒ No If YES, equipment operable? ☐ Yes ☐ No If NO, equipment functional? ☐ Yes ☐ No ☒ N/A Immediately Reportable: ☐ Yes ☒ No	Equipment Identified? ☐ Yes ☒ No Method _____
SGM (or designate):	Reportable to NRC? ☐ Yes ☐ No ☐ Part 50 after notification to EPK ☐ Part 72 1 Hr ☐ 4 Hr ☒ 24 Hr ☐ 8Hr ☐ 60d ☐ Other ☐	Nonconforming Material? ☐ Yes ☒ No 10CFR21 Evaluation? ☐ Yes ☒ No SGM (or designate): [signature] Date 11-10-05
Review/ Approval	Significance Level: ☐ 1 ☐ 2 ☐ 3 ☐ 4 Comments: _____	Radiological Incident? ☐ Yes ☐ No Industrial Safety? ☐ Yes ☐ No
	Assigned to: _____	Due Date: _____
	Comments: _____ SGM (or designate): _____	Date: _____
EVALUATOR	Evaluator: _____ Date: _____	CE Supervisor: _____ Date: _____
CLOSEOUT	SGM (or designate): _____	Date: _____

C-BRP-05-0234

Containment Shell Sizing Process Control Improvements
11/10/2005

As a result of the inadvertent torch cutting of the silver PCB paint, the following actions will be incorporated:

No work will begin on ring 2 until all sections that contain PCB paint have been identified by their number. Once identified, the cut lines will be clearly marked for these sections on the exterior of the shell section and labeled 'PCB'. Each section that contains PCB material will have a drawing made up with dimensions outlining the location of the PCB material.

Once this is completed, the work on ring 2 can restart.

Prior to cutting out a section that contains PCBs, the following people will be notified:

An Environmental rep., Kevin Overly, PMC rep. and Stu Powrie. These people will give approval for section to be removed. This will be documented on the drawing sheet for that particular section.

Kevin Overly will oversee the removal activity.

These sections will be placed in the North end PCB area for separating out the PCB radwaste material.

The drawings will be used to mark the cut lines on the interior side of each section. The interior side will be clearly marked as to the PCB areas. If torch cutting will be utilized, scabbling of the interior coatings will be performed at this time. Stu will be responsible for this activity.

The section will be turned over and set so the exterior is facing up. During this process, Kevin Overly will ensure the cut lines match up.

Prior to cutting, a brief will be performed with Env. Rep, Kevin Overly, Stu Powrie, PMC rep., and Safety. This will be documented by signing the drawing page for that particular piece. Upon the above peoples' concurrence, the cutting process can begin from the exterior side.

Kevin Overly will be present during the cutting process to ensure lines are followed.

Once cutting is complete, pieces will be dispositioned in accordance with the plan.

Prior to work commencing on Ring 1 the same activities will be performed.

APPENDIX B

Big Rock Point Health & Safety and Waste Management Procedures

ATTACHMENT 1
RADIATION PROTECTION GUIDELINE – ENVIRONMENTAL SERVICES (RPG-ES)
TITLE PAGE

RPG-ES-1
TITLE PAGE

TITLE: RPG-ES-1, ENVIRONMENTAL PLANS MANUAL

SECTION 5, NON-LIQUID PCB WASTE MANAGEMENT

Author/Sponsor: T A Goble

Revision Number: 1

Last revision by: T A Goble Date: 09/08/2005
(formerly Volume 28)

APPROVALS:
RP&ES Manager

_____ Date: _____

Index Page updated _____
Controlled Books updated _____

TABLE OF CONTENTS/EFFECTIVE PAGES

		Revision	Pages
		0	1-19
1.0	PURPOSE		
2.0	PRECAUTION AND LIMITATIONS		
3.0	REFERENCES		
4.0	PREREQUISITES		
5.0	PROCEDURE		
5.1	DEFINITIONS		
5.2	DISCUSSION		
5.3	RESPONSIBILITIES		
5.4	IDENTIFICATION OF PCB-CONTAINING MATERIALS		
5.5	WASTE MANAGEMENT REQUIREMENTS		
6.0	ATTACHMENTS		

1.0 PURPOSE

The purpose of this Polychlorinated Biphenyl (PCB) waste management program is to specify the requirements for properly collecting samples, labeling PCB waste containers, and storing non-liquid PCB waste. All coatings containing more than 50 parts-per-million (ppm) shall be treated as PCB Bulk Product Waste and handled in accordance with this program.

2.0 PRECAUTION AND LIMITATIONS

2.1 The product Iso-octane, or equivalent, is required for PCB sampling. Follow all precautionary and safety requirements listed in the applicable Material Safety Data Sheet (MSDS) when using the product.

2.2 This program pertains only to PCBs in non-liquid form. Polychlorinated Biphenyl (PCB) liquids, for example, transformer fluids, are outside the scope of this program. Refer to Consumers Energy Environmental and Laboratory Services (E&LS) Department procedures for handling of liquid PCBs.

2.3 Torch cutting will not be performed on painted structural steel with PCB coatings, except for specific portions of the containment shell, as described in the March 21, 2005 EPA approval letter, entitled Big Rock Point Containment Shell Dismantlement TSCA Approval – 40CFR761.62(c).

3.0 REFERENCES

3.1 Haas, Kurt; Consumers Energy Company Big Rock Point Containment Shell Dismantlement – Request for Approval of Alternate Approach to Mitigate Risk; Consumers Energy; Charlevoix, Michigan; September 16, 2004

3.2 Haas, Kurt; Consumers Energy Company - Big Rock Point Containment Shell Dismantlement; Consumers Energy; Charlevoix, Michigan; November 30, 2004

3.3 Smith, John H.; Wipe Sampling and Double Wash/Rinse Cleanup as Recommended by the EPA Spill Cleanup Policy; United States Environmental Protection Agency; Washington, D.C.; June 23, 1987; Revised and Clarified on April 18, 1991

3.4 United Sates Environmental Protection Agency; Big Rock Point Containment Shell Dismantlement TSCA Approval – 40CFR761.62(c); Region 5; Chicago, IL; March 21, 2005

3.5 Wilson, Ward; Storage of PCB Bulk Product Waste Demolition Debris; Consumers Energy Environmental and Lab Services Department; Jackson, Michigan; September 8, 2004

3.6 Big Rock Point (BRP) Sampling and Analysis Program for Painted Surfaces; April 1998

3.7 Big Rock Point Health and Safety Plan; Appendix 13.7; PCB Worker Exposure Controls

3.8 Environmental and Laboratory Services (E&LS) Department Procedure WM-100; Waste Transportation; Disposition and Documentation

3.9 40CFR761; Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions

4.0 PREREQUISITES

4.1 Big Rock Point safety personnel will evaluate PCB exposure potential prior to work involving PCBs. Any requirements for engineering controls, work practices and PPE, including respirators, will be included in the appropriate work order.

4.2 Personnel collecting PCB samples must obtain the survey design and relevant materials prior to sample collection.

4.3 Polychlorinated Biphenyl sample wipes should be prepared in the laboratory and stored in sealed glass vials until it is used for the wipe test.

5.0 PROCEDURE

5.1 DEFINITIONS (For purposes of this program)

5.1.1 Polychlorinated Biphenyls (PCBs) - a mixture of chlorinated organic chemical compounds marketed under the name "Aroclor" and used to enhance the properties of paints for specific applications

5.1.2 PCB Coating - a dried paint coating on a surface that contains PCBs at a concentration equal to or greater than 50 parts per million (ppm) by weight

5.1.3 PCB Bulk Product Waste - waste derived from manufactured products containing PCBs in a non-liquid state designated for disposal where the concentration is >50 ppm

5.1.4 PCB Bulk Storage Unit – A heavy-duty sealand or LSA box-type container lined with two eight-mil-thick polyethylene liners and covered with a leak-tight metal lid. Each container shall be labeled as described in Attachment A, PCB Labels and Signs

5.1.5 Standard PCB Wipe Test – Sampling by a standard wipe test to verify that the numerical standards have been met

5.1.6 Toxic Substances Control Act (TSCA) – A law enacted by Congress to give the EPA the ability to track and test for industrial chemicals that might present an unreasonable risk of injury to health or the environment.

5.1.7 TCLP - Toxicity Characteristic Leaching Procedure (SW 846, Method 1311), a chemical test used to determine whether a waste is a hazardous waste based on the leaching of specified contaminants

5.2 DISCUSSION

5.2.1 General

Polychlorinated Biphenyls (PCBs) are toxic materials that must be used, handled, stored and disposed of in accordance with United States Environmental Protection Agency (USEPA) regulations. PCBs are extremely stable and chemically inert compounds that are resistant to heat, and attack by acid and alkali. These properties have made PCBs useful constituents of transformer fluids, plastics, paints, adhesives, insulating materials (cables) and hydraulic fluids.

Polychlorinated Biphenyls (PCBs) are present in paints located throughout the plant. These materials do not pose a problem as long as they remain undisturbed. Decommissioning activities may result in the removal of paint and painted components from plant areas. If the paints contain more than 50 ppm of PCBs by weight, they are considered PCB coatings. When the painted components are removed from service or the paint removed from the components, the materials must be treated as PCB waste and must be handled according to this program. The use and disposal of PCB containing materials is regulated by the USEPA at 40CFR761 pursuant to the Toxic Substances Control Act (TSCA).

Investigation and testing performed to date have shown PCB levels in wires and electrical cables at BRP to be <50 ppm.

5.2.2 Identification and Handling of PCB Material

An extensive survey was conducted at BRP to characterize the PCB concentrations in paints. Concentrations of PCBs above the 50 ppm threshold were found in paint throughout the plant. The Environmental Services Department is responsible for determining PCB concentrations and when sampling and analysis are required. Requests for sampling can be made by or contacting the Environmental Services Department.

Demolition work will result in rubble consisting of both non-PCB debris and painted structural steel. After the demolition of a section of a building is completed, the painted structural steel will be segregated from the non-PCB demolition debris. The painted structural steel will be stored in lined roll-off boxes equipped with lids, and managed as PCB Bulk Product Waste.

Once removal of debris from the demolition of a building is completed, all areas where PCB-painted steel demolition debris may come in contact with soils or concrete floors, including all container loading and storage areas, will undergo sampling to verify adequate removal in accordance with 40CFR761, Subpart N.

Following completion of demolition activities, areas will be inspected for the presence of any paint debris.

To sample bulk PCB remediation waste that is in a container, follow the guidelines set forth in 40CFR761.265.

5.3 RESPONSIBILITIES

5.3.1 All workers shall:

a. Comply with the requirements of the Work Order, the BRP Accident Prevention Manual and the site Health and Safety Plan when working with PCB coatings.

5.3.2 Supervisors shall:

a. Assure adherence to this program for all plant workers and contract personnel handling PCBs.

b. Contact BRP Environmental Services when in doubt about whether or not a work assignment will result in producing a PCB waste.

5.3.3 The Radiation Protection and Environmental Services (RP&ES) Planners shall:

a. Review each Work Package during the work planning process for PCB requirements in accordance with Administrative Procedure D3.3, Work Management Process, this document, and the associated planning guide.

b. Coordinate PCB sampling and/or evaluation with the Environmental Services Department to establish prerequisites for performance of the work.

c. Coordinate with safety personnel to assure appropriate personnel health controls are included with the Work Order.

5.3.4 The RP&ES Technicians shall:

a. Prepare/obtain survey design and drawing, specifying location and number of samples to be taken, in accordance with 40CFR761, Subpart N, and the September 8, 2004 letter from CMS Energy to the EPA.

b. Ensure all sampling materials/supplies are sufficient in quantity and quality for all normally expected occurrences. Provisions must also be made for quality assurance samples, chain of custody forms, and shipping materials for storage.

c. Ensure that each sample location is wiped thoroughly and consistently, and that cross-contamination of samples or sample location is avoided.

d. Obtain samples in a consistent fashion. The Environmental Services Superintendent, or designee, must approve deviation from normal practices/methods, in advance.

5.3.5 Radiation Protection – Operations (RP-Ops) shall:

Determine if PCB waste is radiologically contaminated.

5.3.6 Environmental Services (ES) will:

a. Administer this PCB program.

b. Arrange for the sampling and analysis of PCBs in the workplace including paint and concrete chips, wipes and TCLP analyses, when necessary. Track results for record retention.

c. Determine the proper storage and disposal requirements for PCB wastes and radiologically contaminated PCB wastes. Note that lead and other metals may also be a component of the waste stream and will have to be handled in accordance with site waste management requirements.

5.4 IDENTIFICATION OF PCB-CONTAINING MATERIALS

Samples will be obtained in accordance with the BRP method for sample collection when directed by the Environmental Services Department. Samples will be analyzed for PCB in accordance with methods established in SW-846 (Method 3500B/3550B for extraction, and Method 8082 for chemical analysis). In addition, TCLP may be performed on selected samples to determine whether the PCB in coatings or on substrates may be leached to the environment.

5.4.1 Coatings, including their associated surfaces and sample chips, with less than 50 ppm of PCB by weight are unregulated for disposal.

5.4.2 Surfaces decontaminated to less than 10 μg/100 cm^2 PCB contamination using the Standard Wipe Test are unregulated for disposal.

5.4.3 Soils decontaminated to less than one ppm PCB contamination are unregulated for disposal.

5.5 WASTE MANAGEMENT REQUIREMENTS

a. Polychlorinated Biphenyl (PCB) waste that is being stored for disposal must bear an appropriate designation. The areas where the PCB waste containers and pallets are stored must bear a sign. These are shown in Attachment A, PCB Labels and Signs.

b. All PCB waste storage areas and containers will be inspected every scheduled working day to ensure that they comply with this guidance.

c. Written records of the daily storage inspections must be maintained.

d. If any PCB container is found to be defective, the waste must be immediately transferred to a container that is properly marked and structurally sound. Supervision shall be notified of any defective or opened containers.

NOTE: Non-radiological PCB wastes must be removed from storage for disposal within one year from the date they were first placed into storage unless an extension is received from the USEPA.

e. Polychlorinated Biphenyl (PCB) waste shall be stored in areas as described in Attachment B, Requirements for Non-liquid PCBs Storage for Disposal.

5.5.1 General

a. Properly segregate radiologically and non-radiologically contaminated wastes.

b. Polychlorinated Biphenyl (PCB) wastes must be handled and stored in accordance with the guidance in Sections 5.5.2 though 5.5.4. Contact the Environmental Services section for regulatory requirements for handling and storage of PCB wastes.

c. Contact RP-Ops if PCB waste is radiologically contaminated. Polychlorinated Biphenyl (PCB) waste that is radiologically contaminated and is stored on-site must meet both NRC and EPA requirements.

5.5.2 Waste Storage

a. Waste generated during paint removal (i.e., paint chips, grit, grinding/flapper wheels, rags, used PPE and equipment filters) will be wrapped in plastic bags, labeled and removed from the work area. The materials will be placed into 55-gallon satellite storage drums designated for PCB paint wastes, as appropriate.

b. Plastic wrapped wastes will be checked for radioactivity.

c. Drums will be marked with PCB labels as shown in Attachment A, PCB Labels and Signs, and appropriate radioactive materials label as required by RP&ES procedures. All labels must be placed in a position on the exterior upper 1/3 portion of the drum, so that any persons inspecting or servicing the marked PCB drum can easily read the marks.

d. All non-liquid cleaning materials, such as personal protective equipment, movable equipment, tools, and sampling equipment, must be disposed of or decontaminated in accordance with the standards and procedures in 40CFR761.79.

e. Any leaked or spilled materials must be reported to the Environmental Services Department.

f. Any leaked or spilled materials must be must be properly cleaned up, stored, or disposed of, in accordance with 40CFR761.61, 40CFR761.62, or 40CFR761.125, as applicable.

5.5.3 Bulk Waste Storage

a. Bulky materials such as metal forms, piping, ductwork and conduit that have PCB coatings will be placed in sealand or LSA box-type containers and checked for radioactivity.

b. Sealands and boxes must bear the appropriate PCB labels shown in Attachment A, PCB Labels and Signs, and appropriate radioactive materials labels as required by RP&ES procedures. All labels must be placed in a position so that any persons inspecting or servicing the marked PCB container can easily read the marks.

5.5.4 Documentation

The following documentation must be maintained for the management of PCB wastes:

a. A PCB container/article record for each container that identifies the contents, provides an approximate weight, the date placed in storage, the date transported and the date disposed.

b. A storage record indicating the identification of each container of PCB waste in storage, the date placed in storage and the container location.

c. A PCB container inspection form recording the daily inspection of the waste storage area and the containers in storage including Sea Vans and LSA boxes.

6.0 ATTACHMENTS

6.1 Attachment A, PCB Labels and Signs

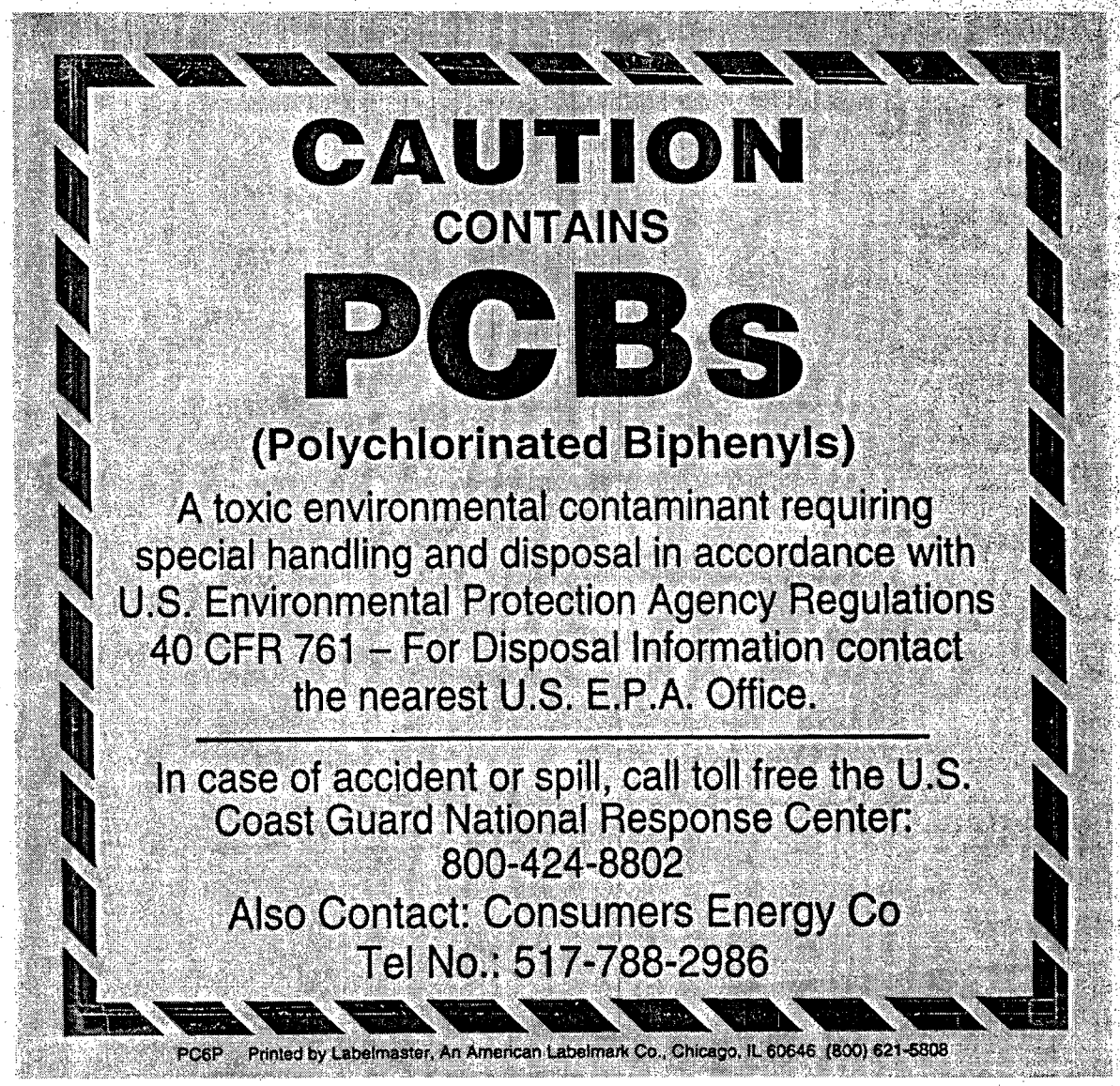
6.2 Attachment B, Requirements for Non-liquid PCBs Storage for Disposal

6.3 Attachment C, PCB Wipe Sampling Process for Bulk Materials

6.4 Attachment D, PCB Sampling Process for Soil

ATTACHMENT A
PCB LABELS AND SIGNS

Mark L - REQUIRED, shall be at least 15.25 cm (6 inches) on each side.



ATTACHMENT A
PCB LABELS AND SIGNS

PCB Waste - Optional

PCB WASTE
BARREL CONTAINS:

- ☐ PCB LIQUID ONLY
- ☐ CAPACITORS INTACT, FILLED WITH PCB LIQUID
- ☐ RUPTURED OR DRAINED CAPACITORS, BASICALLY WITHOUT PCB LIQUID
- ☐ COMBUSTIBLE CONTAMINANTS (BRUSH, CLOTHING, ETC)
- ☐ NONCOMBUSTIBLE CONTAMINANTS (SOIL, METAL, ETC)
- ☐ OTHER _____

SHIPPED BY _____ REGION/AREA

DATE FILLED _____ MANIFEST NO. _____

PCB WASTE MUST BE SEGREGATED AND PACKAGED IN SEPARATE DRUMS IN ACCORDANCE WITH THE ABOVE CATEGORIES, THE APPROPRIATE SQUARE CHECKED AND THE LABEL ATTACHED TO THE UPPER THIRD SIDE OF THE DRUM.

ATTACHMENT B
REQUIREMENTS FOR NON-LIQUID PCBs STORAGE FOR DISPOSAL

Radwaste Building Drum/LSA Box Storage

The requirements for a storage area for dry, non-liquid PCBs wastes in drums or LSA boxes are as follows:

1. An adequate roof and walls to prevent rainwater from reaching the containers.

2. The storage area must be located in a site that is above the 100-year floodplain elevation.

3. Each container will be checked weekly. Degraded containers will have their contents removed and placed into an intact container.

4. The storage area must be marked with a label/sign as shown in Attachment A, PCB Labels and Signs.

5. Each PCB container will be marked with the date that the PCB was placed into storage.

Sealand Waste Storage in Outside Areas

The requirements for a storage area for bulk product PCB wastes (PCB coatings) are as follows:

1. Only 20- and 40-foot sealands (Models CC-20 and CC-40) are to be used for PCB waste storage for material designated for disposal through Duratek. Roll-offs are to be used for PCB waste storage for material designated for disposal through EQ/Romulus.

2. Containers shall be lined with two eight-mil-thick polyethylene liners and covered with a metal lid. The liner shall be inspected for damage prior to loading and repaired/replaced as necessary.

3. Only dry PCB painted metal and concrete can be stored in sealand containers (no liquids, paint chips, dusts, or PCB grinding/flapper wheels).

4. Sealand loading shall not exceed payload capacities of 39,000 and 78,450 pounds net for 20- and 40-foot containers, respectively.

5. Sealands will be loaded indoors and doors/hatches closed prior to moving outside.

ATTACHMENT B
REQUIREMENTS FOR NON-LIQUID PCBs STORAGE FOR DISPOSAL

6. Boxes will be placed on ground in areas designated and posted for storage of PCB waste.

7. Sealands must be kept closed and latched tightly.

8. Boxes will not be opened or loaded whenever rainfall or snow is occurring.

9. The storage area sealand must be marked with a label as shown in Attachment A.

10. The date the materials were placed into the shipping containers will be marked on the containers.

NOTE:
1. Access to the side doors is needed to perform inspections.
2. Units will only be opened during dry weather to add waste or perform inspections.

11. Outside storage areas will be inspected daily and after significant rains for labeling, leakage, and overall container integrity. Degraded containers will have their contents removed and placed into an intact, non-leaking container.

ATTACHMENT C
PCB WIPE SAMPLING PROCESS FOR BULK MATERIALS

Field Sampling

1. Develop/obtain sample points via statistical random sampling.

   a. A minimum of three samples and a maximum of 40 samples will be obtained for each type of material within the survey area.
   b. Develop a sample identification (ID) number for each sample, using the following method:

      1) The first letter, or groups of letters, in the sample ID is the area identifier (i.e., T-Turbine, S-Sphere);
      2) The second group of letters in the sample ID describes what the area is being sampled for (i.e., PCB); and
      3) The last group of letters and numbers in the sample ID is the type of sample (i.e., W-Wipe, S-Soil), and the sequential sample number.

      Example: TB-PCB-W1 = A wipe sample that was taken in the Turbine Building survey area for the presence of PCBs, and it was the first sample point taken.

2. Prepare/obtain survey design, drawing, and survey design summary sheet, specifying location and number of samples to be taken.

3. Obtain necessary supplies:

   a. Applicable procedures or Material Safety Data Sheets (MSDSs);

   b. Metric tape;

   c. Pen and black permanent marker;

   d. 100 cm^2 sampling template;

   e. Fox-tail brush;

   f. Pre-numbered sample labels;

   g. Chain of custody forms;

   h. Disposable gloves;

   i. Safety goggles;

ATTACHMENT C
PCB WIPE SAMPLING PROCESS FOR BULK MATERIALS

j. Glass screw-top vials;

k. 100% cotton two-inch by two-inch gauze pads;

l. Hexane solvent, or equivalent, approximately 1.5 ml per sample gauze pad;

m. Pipette for applying solvent to gauze pad;

n. Forceps for removing (replacing) gauze from (into) glass vials; and

o. Garbage bags/containers for disposal of gloves and other waste materials.

4. Prepare survey area for sampling:

a. Utilizing the survey design data and the metric tape, locate the sample site.

b. Place sampling template over sample site and frame area, using permanent marker. If the site is not easily marked with a template, write a detailed description of the area sampled, or plot it on the drawing.

c. Utilizing the fox-tail brush, thoroughly clean dust and debris off of the sampling site.

d. Write the appropriate sample number adjacent to the marked sample site.

5. Prepare all necessary forms and sampling logs for entry of the sampling time, date, location, and other information describing the sample.

6. Prepare sample media in Chemistry Laboratory **prior to transfer to sample site**:

a. Label glass vial with sample number;

b. Remove lid from vial;

c. Don safety goggles and rubber gloves (see MSDS for specifics);

d. Saturate gauze pad with 1.5 ml of hexane (or equivalent) solution;

ATTACHMENT C
PCB WIPE SAMPLING PROCESS FOR BULK MATERIALS

e. Place saturated gauze pad in glass vial and immediately screw lid on; and

f. Repeat for each given sample.

7. Obtain sample at each sample location:

a. With gloved hands, remove the cap from the sampling vial.

b. With the forceps, remove the gauze from the sampling vial;

c. Utilizing as uniform pressure as possible, wipe the sampling area from left to right, in rows, from the top to the bottom of the framed sampling area. Utilizing the same uniform pressure, wipe the same sampling area from top to bottom, from the left side to the right side of the entire framed area.

NOTE: The time for evaporation is weather-dependent; therefore, if it's too cold or damp for the sample to dry in the open air, it is permissible to transfer the sample to a more conducive environment for complete drying to occur. Samples must be controlled at all times.

d. Allow the sampling gauze to air-dry prior to sealing in sample vial.

e. Fold the dry gauze (sampled side inward) and return it to the sample vial.

f. Secure cap to sample vial.

g. Remove and discard gloves.

h. Label the vial, and fill out sampling details on the sampling forms.

i. Fill out chain of custody form.

j. Repeat process for each sample collected.

k. Prepare samples for storage and shipping to appropriate off-site laboratory for analysis.

ATTACHMENT C
PCB WIPE SAMPLING PROCESS FOR BULK MATERIALS

Quality Control (QC) Sampling

NOTE: It is better not to identify QC samples as such when submitting the QC samples to the analytical laboratory; therefore, the sample identification numbers for QC samples should immediately follow the last sample identification number for the wipe samples.

Example: Seven wipe samples were obtained at a sample site. Two QC samples are required. The wipe samples are assigned identification numbers one through seven. The two QC samples would therefore be assigned identification numbers eight and nine. A note should be made in the survey design package that clearly identifies which samples are the QC samples.

A minimum of 10% of the original sampling locations in the survey area will be selected for QC sampling. Five percent of the total QC samples should be field blanks, and the remaining five percent should be obtained via replicate sampling.

1. To obtain replicate samples, follow the PCB Wipe Sampling Process, as outlined above.

2. To obtain field blank samples:

   a. Prepare sample media in same manner as field samples.

   b. Remove gauze from glass vial but do not use to wipe. Allow solvent to evaporate.

   c. Replace dried gauze back in glass vial and secure cap to sample vial.

   d. Label vial, fill out chain of custody form, and prepare sample for analysis.

ATTACHMENT D
PCB SAMPLING PROCESS FOR SOIL

Field Sampling

1. Develop/obtain sample points via statistical random sampling.

2. Prepare/obtain survey design and drawing, specifying location and number of samples to be taken.

3. Obtain necessary supplies:

   a. Applicable procedures;

   b. Metric tape;

   c. Pen;

   d. Pre-numbered sample labels;

   e. Chain of custody form;

   f. Disposable gloves;

   g. Glass screw-top vials;

   h. Core sampler; and

   i. Garbage bags/containers for disposal of gloves and other waste materials.

4. Prepare all necessary forms and sampling logs for entry of the sampling time, date, location, and other information describing the sample.

5. Utilizing the survey design data and the metric tape, locate the sample site.

6. Obtain sample at each sample location:

   a. With gloved hands, remove the cap form the sampling vial.

   b. With core sampler, core into soil base to a depth of three inches. **Do not core deeper than three inches.**

   c. Place soil sample in sample vial.

   d. Secure cap to sample vial.

ATTACHMENT D
PCB SAMPLING PROCESS FOR SOIL

e. Remove and discard gloves.

f. Label the vial and fill out sampling details on the sampling forms.

g. Fill out chain of custody form.

h. Repeat process for each sample collected.

i. Prepare samples for storage and shipping to appropriate off-site laboratory for analysis.

Quality Control (QC) Sampling

NOTE: It is better not to identify QC samples as such when submitting the QC samples to the analytical laboratory; therefore, the sample identification numbers for QC samples should immediately follow the last sample identification number for soil samples.

Example: Seven soil samples were obtained at a sample site. Two QC samples are required. The soil samples are assigned identification numbers one through seven. The two QC samples would therefore be assigned identification numbers eight and nine. A note should be made in the survey design package that clearly identifies which samples are the QC samples.

A minimum of 10% of the original sampling locations in the survey area will be selected for replicate sampling.

To obtain replicate samples, follow the PCB Sampling Process for Soil, as outlined above.

BIG ROCK POINT NUCLEAR POWER PLANT
PROCEDURE APPROVAL AND AUTHORIZATION

Procedure No. VOLUME 29 Rev No. 11

Procedure Title: HEALTH AND SAFETY PLAN

CURRENT REVISION STATUS

Author ERDrenth Date 10/12/05 Quality Review Form No. 279-05

APPLICABILITY ISSUE HISTORY

Revision No. 11 Date 10/12/05 Quality Review Form No. 279-05

Approved for use

Procedure Sponsor/Designate /s/ L.R. Potter Date 10-20-05

Authorized Period of Use October 12, 2005 through October 12, 2007

BEFORE USING THIS PROCEDURE FOR WORK ACTIVITIES, VERIFY WITH THE RESPECTIVE PROCEDURE CONTROLLING DEPARTMENT THERE ARE NO OUTSTANDING TEMPORARY CHANGES

When applicable:

PROCEDURE IMPLEMENTATION HISTORY

Reviewed for System or Component Operability

Performed by		Completed/Reviewed by		Method of Verification
Title		Title		☐ Functional Test
Date	Time	Date	Time	☐ Physical Inspection ☐ Administrative Review

AMMS WORK ORDER NO. (if applicable) _____

TABLE OF CONTENTS.EFFECTIVE PAGES

		REVISION	PAGES
CHAPTER 1	GENERAL REQUIREMENTS	11	1 - 48
CHAPTER 2	WORK CONTROL FOR HAZARDOUS MATERIALS	11	1 - 13
CHAPTER 3	HEARING CONSERVATION PROGRAM	8	1 - 7
CHAPTER 4	HAZARD COMMUNICATION PROGRAM	8	1 - 7
CHAPTER 5	HEAT STRESS MANAGEMENT	11	1 - 11
CHAPTER 6	LEAD SAFETY PROGRAM	8	1 - 18
CHAPTER 7	MANAGEMENT AND CONTROL OF SILICA DUST	8	1 - 8
CHAPTER 8	POLYCHLORINATED BIPHENYL (PCB) CONTROL	8	1 - 7
CHAPTER 9	RESPIRATORY PROTECTION PROGRAM	11	1 - 47
CHAPTER 10	EXCAVATION AND TRENCHING SAFETY POLICY	8	1 - 32
CHAPTER 11	POWERED INDUSTRIAL TRUCK SAFETY PROGRAM	11	1 - 13
CHAPTER 12	CRANE AND HOIST SAFETY PROGRAM	8	1 - 22

1.0 INTRODUCTION

1.1 PURPOSE

The purpose of this Health and Safety Plan (HASP) is to provide a written assessment of potential health and safety hazards associated with the performance of work at Consumers Energy (CE) Big Rock Point (BRP) Restoration Project in Charlevoix, Michigan. This HASP and the corresponding BRP Restoration Project policies, procedures and guidelines specify the minimum acceptable engineering controls, administrative limits and Personal Protective Equipment (PPE) that will be used during the performance of the work. The HASP is a Aliving≅ document and will be amended as necessary to reflect changes in site conditions. The requirements of this plan are applicable to all CE personnel. Contractors working at the BRP plant are responsible to implement their own HASP in compliance with applicable Michigan OSHA, Federal OSHA, and CE Policy requirements. This HASP describes the minimum acceptable engineering controls, administrative limits and PPE to be implemented by all CE departments and Contractors.

All work performed at BRP shall be performed in a safe and orderly manner that will not create a hazard to health, property and/or the environment. The implementation of safe working practices and the safety of equipment and facilities by contractors shall be subject to the review by CE. However, a review by CE does not constitute direction to employ specific safety practices nor does it relieve the contractor from its responsibility for the safety of the contractor's employees. Failure of the contractor to comply with safety regulations and/or to conduct activities in a safe manner shall constitute cause for issuance of a safety violation.

All site personnel are responsible for full compliance with all applicable standards of OSHA (29CFR1910 and 1926), Michigan OSHA (Rule 408, Construction Standards and Rule 325, General Industry), US EPA, Nuclear Regulatory Commission (10CFR20 and 10CFR50) and BRP Restoration Project procedures. Site personnel may conduct inspections using an OSHA format and require corrective actions for all deficiencies discovered.

Consumers Energy has developed a variety of policies, procedures and guidelines to describe the requirements to protect the health and safety of personnel working at BRP. The site Accident Prevention Manual (APM) describes the safe work practices and safety requirements for many of the tasks to be performed at BRP. Additional information regarding the APM is provided in Section 6.0. The CE Corporate Safety Department has developed a series of corporate safety procedures which should be implemented during the decommissioning activities at BRP. This HASP is intended to summarize the applicable standards and action levels in a concise manner and refer to the policy or procedure where the details for implementation are described.

All employees are encouraged to report environmental, health and safety concerns to their supervision. Supervisors shall not reprimand or otherwise take disciplinary action against employees for reporting such concerns. If environmental, health and safety concerns are not resolved by the employee's direct supervision, they may be brought to management's attention either through verbal communication or formally by filing a Condition Report [CR (BRP Form 156)] or a Near Miss Accident Prevention Notice.

1.2 SITE HISTORY

Consumers Energy has operated the BRP Nuclear Power Plant since 1962. The commercial power reactor was a boiling water reactor, rated for 67 MW electric. Operation ceased in August of 1997. Decommissioning activities started immediately after the shutdown and complete demolition and site restoration activities are scheduled to require approximately seven years.

1.3 SITE DESCRIPTIONS

Controlled areas are those portions of the site and surrounding properties where special worker protection against chemical and radioactive contaminates is necessary. The term, controlled area, generally refers to locations where activities require engineering controls, limited accessibility and PPE. The Radiation Protection (RP) Department is responsible for establishing the Radiological Controlled Areas (RCAs) in the plant where there is a potential for personnel exposure to radiation and radioactive materials. Controlled areas include the containment sphere, the turbine building, and associated equipment inside the fenced in industrial area. The RadWaste Building and associated equipment are also considered to be controlled areas.

Restricted areas exist within the controlled areas and may require additional controls, engineering controls and/or PPE. These controls are necessary to limit personnel exposures to hazardous and radioactive materials via dermal or inhalation pathways.

Uncontrolled areas are those areas of the site and surrounding properties where special controls are not needed to protect workers from potential chemical and radioactive contaminants. Uncontrolled areas are all areas outside of a fenced in area, safety area, or radiological boundaried-off area.

During the course of work, hazards may be created in uncontrolled areas that warrant worker protection as identified in the HASP. These hazards include, but are not limited to, the use of heavy equipment, chemicals, electrical power, and the performance of activities such as excavation or confined space entry.

Work inside of the controlled areas involves the potential for worker exposure to contaminates remaining from plant operations, as well as hazards introduced by demolition activities. Portions of the controlled area are identified with special postings to designate the boundaries of specific substances and hazards. The special postings include the following:

a. Airborne Radioactivity Area

An area, room, or enclosure where the airborne radioactivity is present in concentrations in excess of 0.30 of the Derived Air Concentration (DAC). The DAC is the concentration of a radionuclide (or a combination of isotopes) which if inhaled for 40 hours per week, 50 weeks per year would result in a committed worker dose that equals the worker's annual limit. The NRC publishes the DAC in 10CFR20, Appendix B for each isotope of interest. Respiratory protection may be required inside an Airborne Radioactivity Area.

b. Asbestos-containing Materials Present in this Area

This sign is posted in all areas where friable asbestos-containing materials are suspected to be present. When loose asbestos containing materials are present in such a condition that airborne fibers could be generated, an additional sign is posted that reads: Danger Asbestos, Cancer and Lung Disease Hazard, Authorized Personnel Only, Respirators and Protective Clothing are required in this Area.

c. Chemical Contamination

Areas where chemical contamination is present above clean-up criteria and are posted with the requirements for entry. A Health and Safety (H&S) Checklist is completed for each applicable Work Order (WO) which specifies the engineering controls, administrative controls and PPE for chemical contamination areas.

d. Contamination Areas

An area, room, or enclosure with loose radioactive contamination levels that may be high enough to require protective clothing to prevent contamination.

e. Polychlorinated Biphenyl (PCB) Contaminated Area

All solid surfaces where PCB contamination levels exceed 10 $\mu g/100cm^2$ and all soil areas where PCB concentrations exceed 50 mg/kg (ppm) are posted as PCB Contaminated Areas.

f. Radioactive Materials Area (RMA)

This sign indicates that radioactive materials (quantity of 10 times the activity in Appendix C of 10CFR20) are used or stored inside of the posted area. When the sign is posted without a radiation area or contamination area sign, loose contamination is low, the potential for personnel contamination is low, and penetrating (gamma) radiation levels are low. This sign together with the Controlled Area sign is posted for areas meeting the criteria for RMA.

g. Restricted Area

An area where there is a potential for hazardous worker exposure to chemical or radioactive contaminates is posted as a Restricted Area.

h. Soils Contamination Area

This sign indicates the presence of radioactive materials in soils, that are above the clean-up criteria. When covered with sod and dirt, they present very little potential for exposure or contamination.

1.4 WORK PLANNING

Engineering Work Packages or Work Orders (WO) are used to describe each demolition activity. Instructions are provided to remove major components and associated equipment. Each package describes the hazards likely to be encountered and the controls that should be implemented during the activity. The Planning Department is responsible to identify the sequence to safely perform the work and document each task. Consumers Energy reviews the work plan and provides oversight and periodic inspections. Engineering controls as well as administrative controls are described. Field implementation of these controls is the responsibility of the maintenance and/or construction supervisors and trained staff.

The packages are sufficient to document:

a. The preventive measures for safety, health and environmental hazards;

b. An approach that is well planned and adequate to complete the task;

c. The quantity and type of resources required to complete the task;

d. The interfaces required with other subcontractors and CE; and

e. The task specific hazards that employees are likely to encounter.

1.5 HEALTH AND SAFETY CHECKLIST

Work packages and/or WOs are reviewed for potential safety hazards which are documented using an H&S Checklist. The purpose of the H&S Checklist is to identify the specific chemical and physical hazards likely to be encountered by the personnel completing the activity. The checklist specifies the controls necessary to complete the task safely, including the requirements for personnel protective equipment. Radiation Controls are described on the applicable Radiation Work Permit (RWP). The completed checklist becomes part of the WO package.

1.6 NON-CONFORMING PRACTICES

All site personnel have the authority to stop activities when violations of safety, health, or environmental requirements are observed. Work shall cease until such violations are corrected. A CR should be written to document the conditions and the corrective actions that should be implemented. Such violations may include, but are not limited to, the following examples:

a. Lack of proper PPE as specified in this plan (i.e., hard hats, safety glasses with side shields, hearing protection, respirators, coveralls, gloves, and taped interfaces).

b. Lack of fire watch during torch cutting operations.

c. Unavailability of specified emergency equipment (fire extinguishers, emergency eyewash, spill absorbent, and first-aid supplies).

d. Doffing PPE incorrectly or leaving an RCA without doffing PPE.

e. Unsecured ladders.

f. Lack of GFCI protection, when such equipment is required.

g. Inadequate dust control (as evidenced by visible dust emissions or instrument readings above specified action levels).

h. Inadequate packaging of wastes (i.e., torn asbestos bags).

I. Inadequate posting or barricades (i.e., asbestos-regulated areas, flagging of open trenches, or the swing radius of cranes).

j. Wearing torn coveralls or gloves in contaminated areas.

k. Inadequate lighting (as evidenced by instrument readings).

l. Scaffolding without locked wheels or guard rails.

m. Climbing scaffolds without an approved access ladder or inspection tag.

n. Extension cords with missing ground prongs.

o. Unlabeled or improperly labeled containers.

p. Failure to report a spill of an unidentified substance or reportable quantity of a hazardous material.

q. Flagrant violations of HASP requirements and applicable MIOSHA or OSHA regulatory requirements.

1.7 INCIDENT REPORTING AND INVESTIGATION

All site personnel are responsible for immediately reporting activities that may adversely impact personnel or the environment or result in equipment damage, regardless of the severity. Reports should be made to the work supervisor immediately and initiating a CR should be considered. All Anear-misses≅ must also be reported. A Anear-miss≅ is an event that did not, but had the potential to, cause injury or damage. After any injury, including those requiring only minor first-aid, the employee should immediately notify their supervisor or site H&S Personnel.

All injuries, property damage, environmental events, and near-misses should be investigated by the supervisor as they are reported. The accident/incident scene should be preserved so as to allow an accurate investigation as to what occurred, the causes, and corrective measures to prevent recurrence, except as may be necessary to protect personnel and to minimize environmental or equipment damage.

1.8 RESOLUTION OF CONFLICTING REQUIREMENTS

Situations may arise where the documented health and safety requirements to limit personnel exposures to hazardous chemicals may conflict with the RP requirements specific for the task. In such an instance, it is expected that the Maintenance, Construction or Operations supervisor be responsible for identifying the conflict and meeting with the appropriate technical personnel to discuss options and resolve the conflicting requirements. Radiation Protection and H&S control elements must be reviewed to ensure that the likelihood of exposure is not increased because of a particular control. Work shall not proceed until all technical resources can provide input to resolve the conflicting requirements. It is important that safety against radiation, chemical and other physical hazards be managed to provide a safe work environment.

1.9 APPROVAL TO CHANGE THE HEALTH AND SAFETY PLAN

Changes to the HASP must be approved by Employee Services. Recommendations for changes should be submitted to H&S Personnel for review. Revisions will be distributed via a controlled distribution list.

2.0 CONTAMINANT AND HAZARD DESCRIPTION

Potential hazards associated with work at the BRP Restoration Project include potential construction safety hazards as well as radiological and chemical exposure hazards. This section summarizes the hazard and the consequences of exposure.

2.1 PHYSICAL HAZARDS

The BRP Site APM describes many of the physical hazards that may be encountered and the work practice that should be employed to minimize the hazard. Examples of potential construction hazards in Controlled Areas and Uncontrolled Areas may include, but are not limited to the following:

a. Slips, trips, or falls from working on wet surfaces or in poorly illuminated areas;

b. Improperly secured loads during lifting or rigging activities;

c. Operation of power tools or equipment;

d. Energized systems, (i.e., electrical, pressurized, thermal, etc.);

e. Building construction;

f. Falling or flying objects;

g. Falls from ladders or elevated work platforms;

h. Confined spaces;

I. Heavy equipment operation;

j. Motor vehicle operation;

k. Road grading and paving;

l. Excavations;

m. Falls from unstable roofs;

n. Structural failure during building dismantlement and demolition operations;

o. Off-loading/on-loading mobile equipment;

p. Hot Work;

q. Temperature Extremes; and/or

r. Noise.

2.2 RADIOLOGICAL HAZARDS

The BRP site has implemented a complete RP program to protect personnel from exposure to ionizing radiation. The RP program is described in site procedures and is beyond the scope of this document. Specific elements of the RP program are contained in the BRP Administrative Procedures, Section 5.0 and associated working level procedures.

2.3 CHEMICAL CONTAMINATION HAZARDS

NOTE: Additional chemical and physical hazards may exist from materials brought on site by CE or other Subcontractors.

The health effects and potential chemical hazards associated with the non-radiological contaminants are included in this section. The contaminants are classified into the following categories: "Chemical Contaminants", "Metals and Metalloids", "Asbestos Containing Materials", "Man-made Fibers≅, and Physical Hazards. Separate tables address each of these categories.

Table 2-1 lists some of the chemical contaminants likely to be encountered during the construction activities at the site. The action level for each chemical contaminant is based on the lower of the Michigan Occupational Safety and Health Administration (MIOSHA) Maximum Allowable Concentration (MAC) or the American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (TLV). The goal of CE management is to utilize engineering controls as the primary means to maintain employee exposures below the action levels listed in the tables. If this cannot be accomplished, these controls should be supplemented with other controls listed in Sections 4 and 5.

Routes of exposure are listed for PPE selection purposes. Routes of exposure are the pathways by which the chemical liquid, vapor, mist, dust, or fume may enter the human body. Chemical contaminants which cause injury from interacting with moisture on the surface of the skin are also identified. While certain contaminants do not absorb into the body, injury to unprotected skin is still possible.

Personal Protective Equipment and decontamination procedures in effect at BRP are implemented to protect employees from these potential exposures. If PPE is properly worn and decontamination procedures are followed, resultant exposures will be maintained at safe work levels.

Table 2-2 lists metals and metalloids. Metalloids are solids like metals, but can give off poisonous gases in the presence of strong acids. An example is arsine gas generated by interaction of arsenic compounds with strong acids.

Table 2-3 lists health effects associated with asbestos containing materials. Table 2-4 describes the health effects associated with other man-made fibers, including fibrous glass and mineral wool.

In addition to the above, workers may be exposed to physical hazards such as temperature extremes and noise. Table 2-5 lists the potential health effects related to heat stress, cold stress, and noise.

Table 2-1 Chemical Contaminants

Contaminants	Action Level 8-hour TWA IDLH	Health Effects/Potential Chemical Hazard	Chemical or Physical Properties	Routes of Exposure
Phosporic acid	AL: 1.0 mg/m^3 IDLH 1,000 mg/m^3	**Acute response:** Mild irritant to the eyes, nose, throat, and skin; the dust is irritating to the skin in the presence of moisture. Reportedly, the risk of excess lung fluid as a result of inhalation of dust or mist is remote. **Chronic response:** Extensive studies of exposures to workers in the phosphate industries have revealed no significant phosphoric acid related health problems	Colorless thick liquid or crystals; readily mixes with water. VP 0.03mm	Inhalation, ingestion.
Polychlorinated biphenyl (PCB)	AL: 0.5 mg/m^3 (skin) IDLH 5 mg/m^3	**Acute response:** Vapor pressure is low; at standard temperature, hazardous vapor levels are not expected. Eye or skin contact - moderately irritating to the eye or skin. Removes natural oils and fats from skin with subsequent skin drying, cracking, and dermatitis. **Chronic response:** Substance is readily absorbed, poorly metabolized, and accumulates in tissue. Prolonged contact causes dermatitis Achloracne.≅ Liver ailments have been reported. IARC confirms PCBs as animal liver carcinogens; while unconfirmed in humans, it is listed as a suspect human carcinogen.	Oily liquid; Insoluble in water. VP 0.00006 mm	Inhalation, ingestion, absorption through intact skin.

TABLE 2-1 Chemical Contaminants (continued)

Contaminants	Action Level 8-Hour TWA IDLH	Health Effects/Potential Chemical Hazard	Chemical or Physical Properties	Routes of Exposure
Sodium hydroxide	AL: 2.0 mg/m^3 ceiling; IDLH 10 mg/m^3	**Acute response:** Strong corrosive. Severe caustic irritant to the eyes, nose, throat, esophagus, and skin. Inhalation - Since vapor pressure is so low, harmful vapors are not expected at room temperatures. Heated solutions or spraying may produce harmful vapors or mists, however. Eye or skin - dusts or strong concentration solutions cause rapid destruction of the tissue of the eye or skin. Solution can penetrate the eyeball within 1 to 10 minutes and cause a chemical change of the fluid in the eye. Tissue damage and ulceration may result in permanent damage to the eye. On skin, solutions of 25-0% cause sensation of irritation within about 3 minutes; with a 4% solution this does not occur until after several hours. Ingestion - severe abdominal pain, corrosion of the lips, mouth, tongue, throat, and esophagus. Cases of skin tissue cancers of the esophagus have occurred after a latency period of 12 to 42 years probably due to tissue damage and scar tissue formation. **Chronic response:** No reports of chronic conditions.	Colorless to white solid flakes; Sol. 100% in water. Violent high heat release when mixed with water or acids. VP 0 mm (Solid)	Inhalation, ingestion, and direct contact with unprotected skin.
Sulfates & sulfites	Unique for each sulfate or sulfite compound.	**Acute or chronic response:** Toxicity depends on specific sulfate or sulfite compound. Ingested sulfites cause irritation of the stomach by liberating sulfurous acid. If heated to decomposition, toxic sulphur oxide gases are liberated.	Solids or liquids; varying degrees of solubility in water.	Ingestion

TABLE 2-1 Chemical Contaminants (continued)

Contaminants	Action Level 8-Hour TWA IDLH	Health Effects/Potential Chemical Hazard	Chemical or Physical Properties	Routes of Exposure
Carbon Monoxide	AL: 25 ppm IDLH 1200 ppm	**Acute response:** Severity dependent on air contaminant levels. 200 - 400 ppm may cause headache and nausea within 24 hours. 500 - 1000 ppm may cause headache, rapid breathing, nausea, weakness, dizziness and mental confusion in less than 1 hour and potential unconsciousness in 2 hours. 3000 - 4000 ppm usually causes transient weakness and headache in 5 minutes; coma may occur within 30 minutes. Recovery from exposures which resulted in coma may not be complete. Reports of impairment have included permanent mental disorder, paralysis, cardiac disturbances, or impaired vision. Recovery from carbon monoxide poisoning is slow. Without medical intervention, biological half-life in blood is 4 to 5 hours. **Chronic response:** 50 ppm from 6-8 hours may cause temporary visual disturbances which could cause secondary transportation safety problems at the end of the workday. Individuals with heart disease or individuals doing physical labor are at increased risk due to blood carrying decreased levels of oxygen to tissue.	Odorless, colorless, tasteless gas. Soluble 2% in water. IP 14.01 eV	Inhalation

TABLE 2-2 Metals and Metalloids

Contaminants	Action Level 8-Hour TWA; IDLH	Health Effects/Potential Chemical Hazard	Chemical or Physical Properties	Routes of Exposure
Antimony	AL: 0.5 mg/m^3 IDLH 50 mg/m^3	**Acute response - dusts or fume:** Eye, nose, and throat irritant; nosebleed; abdominal cramps, upper and lower GI tract irritation. Dust on warm moist skin may cause dermatitis AAntimony Spots≅ which causes intense itching and skin ulceration. **Chronic response - dusts or fume:** Indigestion, loss of appetite, anemia; sores in throat and mouth, nosebleed, conjunctivitis; headache; chronic cough; small growths in lining of lung. Evidence of gynecological disorders and spontaneous late abortions.	Silver-white soft metal or dark gray powder. Insoluble in water. VP 0 mm	Inhalation, ingestion
Cadmium Dust (as Cd) Cadmium Fume (as CdO/Cd)	AL: 0.01 mg/m^3 Total Dust IDLH 9 mg/m^3 AL: 0.002 mg/m^3 Respirable Frac. IDLH 9 mg/m^3	**Acute response - dust or fume:** Metallic taste, respiratory tract irritation, constriction of throat, cough. After latency period of 1 to 8 hours, rapidly progressing shortness of breath, chest pain, flu-like symptoms; acute pneumonia-like symptoms with 24 hours reaches maximum in 7 days. Fatalities have occurred. **Chronic response - dust or fume:** Pulmonary emphysema; kidney dysfunction; suspect lung or prostate cancer agent. Cadmium is classified as a suspect or confirmed human carcinogen.	Dust: Silver-white, soft metal. Fume: Yellow-brown finely divided particles evenly dispersed in air. Insoluble in water. VP 0 mm	Inhalation, ingestion
Chromium III	AL: 0.50 mg/m^3 IDLH: 25 mg/M^3	**Chronic response:** Skin sensitization dermatitis has been reported.	Brittle gray-white hard metal. Insoluble in water. VP 0 mm	Inhalation, ingestion
Chromium VI (Soluble) Chromium VI (Insoluble)	AL: 0.05 mg/m^3 IDLH 30 mg/m^3 AL: 0.01 mg/m^3 IDLH 30 mg/m^3	**Acute response:** Severe irritant to nasal passages, throat, and lungs; excessive fluid in lung and asthma. Skin contact - irritation, allergic contact dermatitis, and subsequent slow-healing skin ulcers. **Chronic response:** Evidence of kidney damage; Insoluble forms are human lung carcinogens. Chromium VI is classified as a suspect or confirmed human carcinogen.	Red crystals. Soluble and Insoluble forms. VP 0 mm	Inhalation, ingestion, absorption for soluble forms
Cobalt	AL: 0.02 mg/m^3 IDLH 20 mg/m^3	**Acute response:** Loss of appetite, upper and lower GI tract disturbances; muscle ache and fever; allergic dermatitis in areas subject to friction (sides of neck, elbows, ankle). **Chronic response:** Loss of sense of smell; allergic response in lung tissue characterized by labored breathing, coughing, wheezing, asthma. Lower GI tract disturbances, weight loss. AHard metal Disease≅ lung ailment manifested by spreading fiber-like scarring of lung tissue. Cobalt is classified as a suspect or human carcinogen.	Silver-gray to black metal. Insoluble in water. Soluble in protein-containing blood plasma and lung fluids. VP 0 mm	Inhalation, ingestion

TABLE 2-2 Metals and Metalloids (continued)

Contaminants	Action Level 8-Hour TWA; IDLH	Health Effects/Potential Chemical Hazard	Chemical or Physical Properties	Routes of Exposure
Copper Dust & Fume (as Cu/CuO)	AL: 0.1 mg/m^3 (fume) AL: 1.0 mg/m^3 (dust, and mist) IDLH 100 mg/m^3	**Acute response - dusts:** Respiratory tract irritant; ulceration of nasal passages from inhalation of dusts; green discoloration of skin, hair, and teeth. **Acute response - fume:** ACopper fume fever≅ characterized by headache, alternating fever and chills, upper and lower GI tract disturbances; eye damage from fine particles entering eyes. **Chronic response - dusts and fume:** Upper and lower GI tract disturbances; allergic skin reactions in some workers.	Reddish metal. Insoluble in water. VP 0 mm	Inhalation, ingestion
Lead	AL: 0.03 mg/m^3 IDLH 100 mg/m^3	**Acute response:** Rare condition because lead is a cumulative poison. Symptoms, if they occur, include fatigue, sleep disturbance, constipation, colic, anemia, or nervous condition. **Chronic response:** Lead poisoning is a result of cumulative exposures. Symptoms are weakness, weight loss, inability to sleep, headache, nervous irritability, muscle and joint pain, loss of appetite, lower GI tract disturbances and abdominal pain. Advanced cases include muscle weakness seen as Awrist drop≅ or Afoot drop.≅ Cure is slow: Lead is a bone seeker; biological half-life in bone is approximately 20 years. Being a bone seeker, lead is harmful to a fetus and is a mutagen in both male and female.	Soft gray metal. Insoluble in water Slightly soluble in acids including stomach acids. VP 0 mm	Inhalation, ingestion
Magnesium Fume (as Mn/MnO)	AL: 10.0 mg/m^3 IDLH: 500 mg/m^3	**Acute response:** Eye and nasal passage irritant; metal fume fever: alternating fever and chills, chest pain, cough, flu-like symptoms. Magnesium in presence of water releases hydrogen. Embedded particles cause slow healing wounds which may contain gas fill pockets. No reports of chronic response.	Finely divided white particulate evenly divided in air. Soluble 0.009% in water. VP 0 mm	Inhalation

TABLE 2-2 Metals and Metalloids (continued)

Contaminants	Action Level 8-Hour TWA; IDLH	Health Effects/Potential Chemical Hazard	Chemical or Physical Properties	Routes of Exposure
Nickel	AL: Insol. 0.2mg/m^3; AL: Sol. 0.1 mg/m^3 IDLH: 10 mg/m^3	**Acute response - dusts:** ANickel itch≅ contact dermatitis in sensitized individuals characterized by burning and itching skin progressing to small skin ulcers. Syndrome reportedly more common in female workers. Dusts have no other significant toxic properties. **Chronic response:** Nickel fume is a human lung carcinogen.	Shiny solid metal. Insoluble in water. VP 0 mm	Dusts: Skin contact Fume: Inhalation
Selenium	AL: 0.2 mg/m^3 (skin) IDLH 1.0 mg/m^3	**Acute response - dust or fume:** Skin, eye, nose, and throat irritant. **Chronic response:** Central nervous system disturbance, lower GI tract disturbance; upper respiratory tract and eye irritant; metal fume fever characterized by alternating fever and chills, headache, bronchitis, pneumonia-like symptoms; garlic breath; loss of hair and fingernails.	Red or gray solid non-metal used in some metal alloys. Insoluble in water. VP 0 mm	Inhalation, ingestion, absorption
Zinc: Dust (as ZnO) Fume (as ZnO)	AL: 10 mg/m^3 IDLH: 500 mg/m^3 AL: 5.0 mg/m^3 IDLH: 500 mg/m^3	Zinc dusts are inherently non-toxic. A response would essentially be that of a non-toxic nuisance dust. **Acute response - fume:** Metal fume fever delayed about two hours after exposure. Alternating fever and chills, flu-like symptoms, nausea, muscle ache, GI tract disturbances.	Fine white metal particles dispersed in air. VP 0 mm	Inhalation

TABLE 2-3 Asbestos-containing Materials

Contaminants	Action Level 8-Hour TWA IDLH	Health Effects/Potential Chemical Hazard	Chemical or Physical Properties	Routes of Exposure
Asbestos	AL: 0.1 fiber/cubic centimeter air (f/cc); 30-minute excursion of 1.0 f/cc. IDLH: None listed	**Chronic response:** Asbestosis - non cancerous lung disease characterized by slow developing fiber-like scarring of the lung. Symptoms are dry cough; shortness of breath due to reduced capacity of the lung; Arales≅ or unusual lung sounds upon inhalation or exhalation. Latency period may be 15-30 years. Lung cancer - potentially induced by asbestos bodies in the lung. Tobacco smoking asbestos workers may be 10 times more likely to develop lung cancer than non-smoking asbestos workers. Latency period may be similar to asbestosis. Mesothelioma - Rare but rapidly fatal cancer of the lining of the chest cavity or abdominal cavity. Latency period may be 20-30 years; however, cases in children under 19 years of age are reported. Other Effects - Potentially causes cancers of the larynx, esophagus, stomach, or colon.	Natural occurring crystalline mineral fibers Insoluble in water VP 0 mm	Inhalation

TABLE 2-4 Inorganic Man-made Fibers

Contaminants	Action Level 8-Hour TWA[1] ; IDLH	Health Effects/Potential Chemical Hazard	Chemical or Physical Properties	Routes of Exposure
Man-Made Mineral Fibers (MMF): Fibrous glass; Mineral wool. NOTE: Refractory ceramic fibers (RCF) should be treated as asbestos fibers, based on manufacturer recommendations	AL: 0.3 fiber/cubic centimeter air (f/cc); 30-minute excursion of 3.0 f/cc. IDLH: None listed.	**Acute response:** Mechanical irritants to skin, eyes, and respiratory tract. Skin is most sensitive organ. Pneumonia-like diseases have not been confirmed from exposure to MMF. Based on animal studies, MMF is classified at a possible human carcinogen by International Agency for Research on Cancer (IARC); however, no evidence of cancer effects have been associated with inhalation of fibrous glass in animals or humans. Embedded fiber glass fibers may cause prolonged itching due to implanted splinters of fiber glass. These embedded Afiber glass bodies≅ splinters may need surgical removal.	Man-made fibers Insoluble in water. VP 0 mm	Inhalation

(1) AMan-made Mineral Fibers Insulation Program,≅ CE Proc. No. 1.11

TABLE 2-5 Physical Hazards

Physical Hazard	Action Level	Health Effects
Cold Stress	None	**Acute response:** Hypothermia - Acute problem resulting from prolonged cold exposure and heat loss. If fatigued during physical activity, an employee will be more prone to heat loss. As exhaustion approaches, the blood circulatory system which helps maintains body warmth is overcome. Shivering is one of the body mechanisms to produce heat for body heat maintenance. If body temperature continues to fall, shivering ceases. Rapid loss of heat then occurs and critical cooling begins. Frostbite - Without proper cold weather attire, exposed skin in the presence of temperature or wind chill temperatures below freezing may result in sharp tingling sensations of exposed skin, numbness, and partial or complete loss of sensation to exposed skin areas. Continued exposure without preventive action may result in permanently damaged skin tissue. **Chronic response:** Trench foot - Without proper foot protection, swelling, tingling, itching, and painful foot tissue may occur due to a combination of cold temperatures and persistent dampness or wet feet. Small areas of skin may blister or skin tissue may be damaged due to the cold and wet condition.
Heat Stress	Oral temperature of 38NC (100.4NF) and/or pulse rate of ≥ 110 bpm.	**Chronic response:** Physical disability caused by excessive heat exposure - in order of severity: Heat rash - itching skin. Caused by the opening of sweat ducts become clogged due to swelling of the surface of the skin which leads to inflammation of the sweat glands. Heat cramps - muscle spasm and pain in muscles of the abdomen and extremities. Caused by replacement of water without adequate replacement of salts (sodium, potassium, calcium). Heat exhaustion - fatigue, exhaustion, headache, nausea, cool clammy skin, and appearance which may be pale or flushed. Caused by extreme loss of fluids and salts. The supply of blood plasma and cardiac output are rapidly becoming inadequate to meet continuing demand to regulate body heat. Heat stroke - flushed skin, high body temperature (usually above 105NF), cessation of sweating, headache, numbness, fast pulse, rapid breathing rate, confusion, convulsions, and loss of consciousness. Complete breakdown of body heat regulatory system due to lack of fluids necessary for sweat production.
Hearing loss	85 dBA: Suitable hearing protection. And posting of area as noise hazard	**Acute loss:** Sudden loss due to damage to the ear drum or the middle ear noise conductive network. May occur as a result of a severe head injury. Extremely loud noises or sudden intense pressure waves could cause acute loss; however, these are highly unlikely at this site. **Chronic loss:** Gradual loss as a result of some medications such as mycins, aspirin, and some diabetic medication, from some diseases such as mumps or diabetes, from aging, or from nerve deafness due to continuous and long-term exposure to high noise levels without use of hearing protection both at work and off work. Hearing loss due to nerve deafness is gradual and usually unrecognized. Initial symptoms may include ringing of the ears at the end of the workday or a temporary decrease in ability to hear sound. The ringing and temporary decrease is a result of inner ear nerve fatigue; recovery is usually complete after a 14-hour quiet period. Without hearing protection, repeated noise exposures may damage the inner ear and permanent loss may occur.

3.0 WORK PRACTICES AND ENGINEERING CONTROLS

Personnel exposure to hazardous materials can be minimized by comprehensive work controls and effective engineering controls. The controls may vary according to the physical form of the contaminant and the potential for exposure to the employee. Procedures and guidelines have been developed for many of these topics which provide specific controls to be implemented. A summary of the controls that are effective at BRP are provided below, discussing the following topics:

General requirements and work controls for:

a. Hearing Conservation,

b. Hazard Communication,

c. Hot Work,

d. Lead Abatement,

e. Control of Airborne Silica,

f. Portable Air Filtration Systems, and

g. Asbestos.

3.1 GENERAL REQUIREMENTS AND WORK CONTROLS FOR HAZARDOUS MATERIALS

General Requirements for work inside Restricted Areas include:

a. Training: Training requirements for hands-on work inside Restricted Areas are detailed in Section 8 and typically include, at a minimum, general employee training, general employee radiological training, and safety block training.

b. Monitoring: Workers are monitored for chemical exposures as detailed in Section 5.

c. Personal protective equipment: Workers are required to wear protective clothing and equipment for activities performed in active work areas and as detailed in Section 4.

d. Medical surveillance: Initial and periodic medical surveillance are required for workers and supervisors required to wear respirators while working inside Restricted Areas, as detailed in Section 7.

e. Contamination Control: Work inside Controlled Areas must be performed in a manner that prevents track-out of contaminants on equipment and personnel, minimizes worker exposures, and protects the environment, as detailed in Section 10.

The AWork Control for Hazardous Materials≅ guidance document describes industrial hygiene controls designed to protect workers and building occupants from occupational exposure to hazardous materials and is found in Chapter 2. This document summarizes known Site Hazardous materials and is intended to be used in conjunction with applicable programs contained in the HASP and with the H&S Checklist.

3.2 HEARING CONSERVATION

The site hearing conservation program is developed in accordance with the MIOSHA Occupational Health Standard, Part 680, *Noise Exposure* for construction. A copy of the program is provided in Chapter 3, Hearing Conservation. The BRP Restoration Project has established the American Congress of Governmental Industrial Hygienist (ACGIH) TLV of 85 decibels A-weighted (dBA) eight-hour Time Weighted Average (TWA) as the project exposure level (based on 5 dB exchange rate). No unprotected exposures to noise levels above 115 dB(A) will be permitted.

Whenever feasible, engineering controls should be instituted to attenuate noise at the source to attain acceptable low noise levels, preferably below the 85 dB(A). All equipment brought on site should be equipped with proper noise control devices (mufflers, pads, etc.) to limit both worker exposure and ambient noise levels. Equipment should also be maintained to limit excessive noise resulting from poor maintenance or lubrication practices.

All hearing protection devices (HPDs) should have a minimum Noise Reduction Rating (NRR) of 24 dB. Field attenuation and hearing protector efficiency will be evaluated by the guidelines in Appendix A of MIOSHA Part 380, *Occupational Noise Exposure* using the 7 dB reduction method.

Posting requirements for noise hazards should be instituted for those areas routinely exhibiting noise levels at or above 85 dBA. Hearing Protection Devices will generally be worn for noise levels exceeding 85 dB(A). As a rule of thumb, hearing protection should be worn when normal speech levels are interrupted between individuals standing two to three feet apart. Typical situations using equipment where noise levels may exceed 85 dB(A) include, but are not limited to, the following:

a. Compressor use,

b. Drill rig operation,

c. Electrically powered hand tool use,

d. Gas-powered hand tool and equipment use,

e. Generator use,

f. Heavy equipment operations,

g. Man lift operation,

h. Vacuum use, and

i. Wood chippers.

3.3 HAZARD COMMUNICATION

The site hazard communication program is developed in accordance with the requirements of the OSHA Hazard Communication Standard (29CFR1926.59). Each employee will be trained as prescribed by the Hazard Communication Program. A copy of the program is provided in Chapter 4. Subcontractors are responsible for adherence to all the rules and regulations of this site especially as they pertain to the storage, labeling, and placarding of chemical products as written in, but not limited to, National Fire Protection Association (NFPA) and Code of Federal Regulations (CFR).

A copy of the Material Safety Data Sheets (MSDSs) for each hazardous material as deemed in the OSHA Hazard Communication Standard shall be submitted to the Radiation Protection and Environmental Services (RP&ES) department prior to the materials being brought on-site. Material Safety Data Sheets should be accompanied by a description of the intended use of the substance, container size, and number of containers to be brought on-site. Consumable color coded labels will be provided and should be placed on all primary containers. Any primary container without an appropriate CE approved label will be removed from use. Secondary containers should be labeled in accordance with the CE Hazard Communication Program.

Subcontractors should develop an inventory for all hazardous materials used in their operations. Copies of MSDSs should be maintained at the work site for each of the products. Hazards should be properly labeled and posted as required by 29CFR1926.59. Subcontractors must submit MSDSs to CE for approval prior to bringing any chemicals or materials on-site that are not on the approved consumables list, (Q-List, Chapter 11).

3.4 HOT AND COLD ENVIRONMENTS

Heat stress and cold stress prevention programs should be implemented during periods of warm and cold weather. The Site Heat Stress Management Policy is found in Chapter 5. The heat stress prevention program should include provisions for worker acclimatization and implementation of heat stress prevention measures as described below and in Table 5-1. Monitoring should be performed to measure ambient temperature, humidity and individual's heart rates as detailed in Table 5-1. For cold stress prevention, personnel should use properly insulated clothing for the head, hands, feet, and body.

During periods of hot weather or when workers may be affected by heat stress, an adequate supply of cool drinking water and a shaded rest area should be made available. Drinking stations and rest areas inside the RCA must be approved by the RP Manager. During cold weather periods, heated shelter areas should be readily available near the work site.

Responsibilities for providing drinking water, cold weather clothing, ice vests and any other equipment, supplies. and facilities necessary to ensure an effective program for temperature extremes are contained in the H&S Checklist.

3.5 HOT WORK

Hot work is defined as any activity that may generate a spark or otherwise uses an open flame as part of a routine activity. A hot work permit must be approved by the Shift Supervisor before conducting an activity where hot work may be involved. A fire watch must be assigned during the activity and at least 30 minutes after the task is completed. The requirements for hot work are defined in the APM, Section 400. The H&S Checklist may provide additional requirements for specific work tasks.

3.6 LEAD ABATEMENT

All work activities involving lead should be performed in compliance with 29CFR1926.62, Lead, and the elements of the BRP policy, Lead Safety Program, Chapter 6. Proposed revisions to work practices must be reviewed by H&S Personnel prior to the commencement of work involving lead or debris containing lead.

3.7 CONTROL OF SILICA

All work activities involving silica, including intrusive work with finished concrete, cinder block bricks, mortar or other construction materials containing at least 1% silica should be performed in compliance with Management and Control of Silica Dust, Chapter 7. Elements to protect employees from airborne silica are documented in the H&S Checklist, developed during the planning phase and reviewed with the employees during the pre-job briefing. Proposed revisions to work practices must be reviewed by H&S Personnel prior to the commencement of work involving debris containing silica.

3.8 PORTABLE AIR FILTRATION SYSTEMS

All vacuum cleaners and portable air-handling equipment to be used for radiological materials, asbestos or Man-made Mineral Fibers (MMF) in Controlled Areas should be equipped with HEPA filters that meet the requirements of ANSI/UL 586.

Ventilation systems and/or vacuum cleaners used for radiological, asbestos or MMF work should be:

a. Labeled;

b. Controlled by a H&S Checklist or RWP;

c. Controlled to prevent unauthorized use;

d. Designed to ensure HEPA filter integrity under conditions of use; and

e. Designed and controlled to prevent unauthorized or accidental access to the inner surfaces of the vacuum.

3.9 ASBESTOS

All asbestos operations, including preparatory activities, Asbestos-Containing Materials (ACM) waste handling activities, and personnel requirements should be performed in accordance with all applicable OSHA standards 1926.1101, MIOSHA and applicable U.S. Environmental Protection Agency (EPA) regulations.

3.10 POLYCHLORINATED BIPHENYL (PCBs)

Big Rock Point developed a control program for PCBs found in paints and other non-liquid materials. Controls to protect personnel during decommissioning activities are found in Chapter 8. To the extent practical, paint containing PCBs in excess of 50 ppm should be removed before hot work is performed. Engineering controls and administrative controls should be implemented to limit personnel exposures below the OSHA PEL of 0.5 mg/m^3 (8hr, TWA). Skin contact should be minimized with the use of PPE. Air sampling may be performed to monitor personnel potential exposures to PCBs.

4.0 PERSONAL PROTECTIVE EQUIPMENT (PPE)

The use of appropriate PPE shall be required for personnel involved in operations where exposure to hazardous conditions exists or where such equipment is needed to reduce hazards. Personal Protective Equipment should be selected and utilized in accordance with OSHA standards and the site HASP, and the APM. All modifications to PPE requirements require authorization prior to implementation as described in the APM, Section 300.

4.1 SAFETY APPAREL

The requirements for PPE is described in the BRP APM, Section 300. Personnel performing work at the BRP site should, at a minimum, be required to wear the standard safety apparel as described in the APM.

4.2 SAFETY APPAREL FOR WORK IN RESTRICTED AREAS

The requirements for PPE are documented in the H&S Checklist and/or the RWP.

In addition, inner work clothing, consisting of surgical scrubs, should be worn underneath cotton coveralls for work activities which require personnel showering upon completion of work. Inner work clothing may also be used in place of work clothes under cotton coveralls to reduce the potential for heat-related illness during the warmer work periods of the year. Cotton hoods should be worn in all areas where there is potential for contamination of the head or neck.

4.3 ADDITIONAL PERSONAL PROTECTIVE EQUIPMENT REQUIREMENTS FOR CONTROLLED AND UNCONTROLLED AREAS

Additional PPE requirements for specific tasks are described in the RWP and/or the H&S Checklist. A summary is provided in Table 4-1.

4.4 DONNING AND DOFFING

Instructions for donning and doffing protective clothing should be posted at the dress-out and exit points for the controlled work area when required. Potentially contaminated protective clothing must be removed without spreading contamination and in particular without contaminating the skin or inner garments. Workers should exercise care to avoid touching the skin or inner garments with contaminated clothing, and should not place anything in the mouth during the removal of protective clothing.

4.5 RESPIRATORY PROTECTION

The use of respirators is described in the Respiratory Protection Program, Chapter 9. Respirators may be used to limit personnel exposures to airborne hazardous chemicals if engineering controls are not adequate to limit exposures. Respirators may be used to limit personnel exposures to airborne radioactive material if the evaluation of external and internal radiation exposure is determined to be As Low As is Reasonably Achievable (ALARA). The use of positive pressure respiratory protection devices is recommended as appropriate to provide additional protection from airborne hazardous and radioactive materials.

Respirator fit-testing shall be performed for all site employees required to wear such equipment after the employee has successfully completed the medical examination. Employees required to wear respirators should inspect their respirators before and after each use. Routine inspection, cleaning, and storage of respirators shall be conducted in accordance with OSHA 1910.134. Respirators should be cleaned before each use.

All site personnel should ensure that adequate corrective actions are implemented to abate any deficiencies discovered during routine inspection and maintenance of respiratory protection equipment. Any deficiencies and corresponding corrective actions should be documented via the Condition Reporting system.

TABLE 4-1 Additional Personal Protective Equipment Guidelines for Specific Tasks

Task Description	Additional Personal Protective Equipment	Respiratory Upgrade if Required Based on Monitoring Results
Clearing and grubbing, (chain saw operations; brush saw operations).	Chain saw chaps/full-length leg protectors and long sleeved shirts. Safety-toed boots or toe guards. Hearing protection devices. Face shields	Full-face piece APRs with HEPA cartridge.
Hot Work: Welding & Cutting Operations	Proper eye and face protection consistent with OSHA 1910.133, *Filter Lenses Protection Against Radiant Energy*: fire resistant coveralls, leather gloves. Air purifying respirator may be required depending on the concentration of airborne hazardous materials.	Full-face piece powered air purifying respirators (PAPRs) with HEPA cartridges.
Heavy equipment operation.	No cotton coveralls are necessary for operators who do not perform work on the ground and only enter and exit the work zones to access their equipment. They would be required where respirator usage is required.	Full-face piece APRs with HEPA cartridges.
Removal of loose radioactive contamination using HEPA vac or wet wiping methods.	Taped interfaces at wrists. Boot covers, in accordance with the RWP.	Full-face piece APRs with HEPA cartridges.
Use of pressure washing equipment for cleaning/decontamination of equipment.	Face shield, waterproof gloves, and coveralls (or rain suit). Boot covers or chemical resistant boots.	N/A
Handling of uncontaminated filter media.	No additional requirements.	N/A
Handling of small quantities of chemicals in the laboratory.	Face shield or chemical splash goggles and chemical resistant surgical gloves. Laboratory coat or plastic apron.	N/A

4.5.1 Supplied Air Systems Requirements

Couplings for breathing air connections shall be incompatible with outlets for non-respirable plant air or other gas systems. This will prevent inadvertent servicing of air line respirators with non-respirable gasses or oxygen.

[1]PPE Specified in this Column is Required in Addition to Standard Safety Apparel

5.0 MONITORING

Air sampling in the workplace should be documented in the H&S Checklist, provided in the Work Package. Monitoring for personnel exposures is done to verify the adequacy of engineering controls and PPE/respirator selection. The following sections summarize the monitoring program, exposure limits, and action levels which require additional engineering control measures and PPE. Table 5-1 summarizes specific monitoring requirements.

Where feasible, engineering controls should be used to maintain personnel exposures to hazardous chemicals below the Threshold Limit Values (TLVs) adopted by the American Conference of Governmental Industrial Hygienists (ACGIH) or the Permissible Exposure Limits (PELs) adopted by OSHA, whichever is more stringent.

Tampering with monitoring devices will not be tolerated and may result in removal of the culpable individual from the site.

Air samples should be collected by a qualified individual. Evaluations of potential airborne hazards are made by H&S Personnel. Supervisors should review monitoring results with employees and should notify and supply employees with the results of any exposure monitoring in accordance with any OSHA standard requiring such written notification.

This section addresses air monitoring for non-radiological hazards only. Radiological air monitoring shall be performed in accordance with relevant procedures and Radiological Work Permits (RWPs).

5.1 ASBESTOS

Representative personnel and area monitoring for asbestos exposure should be performed in according to the requirements of OSHA 29CFR1926.1101 and applicable State of Michigan regulations. In addition, potential exposure to MMF above specified action levels should be monitored to ensure the adequacy of PPE and work practices.

All airborne asbestos or MMF samples from Controlled Areas should be analyzed using the National Institute for Occupational Safety and Health (NIOSH) Method 7400. Samples may be submitted for analysis by an off-site laboratory which is accredited by the American Industrial Hygiene Association (AIHA) for asbestos air sample analysis.

5.2 POLYCHLORINATED BIPHENYL (PCB) MONITORING

Air samples should be collected to document the concentration of airborne PCB when working with liquid sources of PCBs or with paint containing PCBs in excess of 500 ppm. Representative personnel exposure monitoring should be performed for PCBs in accordance with NIOSH Method 5503 or an equivalent method. Monitoring frequency and sample quantity should be determined by H&S personnel to characterize exposures to all employees potentially exposed. As required, clearance sampling will be performed in accordance with US EPA 40CFR761, Subpart G to document that a room or area is free of contamination.

5.3 LEAD AND HEAVY METALS

Representative personnel exposure monitoring for airborne lead may be performed in accordance with 29CFR1926.62, Lead, during torch/plasma arc cutting, abrasive cutting or grinding and/or other operations having the potential to generate airborne lead contamination. Monitoring frequency and sample quantity should be sufficient to provide a representative assessment of the exposures of all employees potentially exposed. After initially characterizing exposures to lead according to 29CFR1926.62, a minimum of 25% of all employees involved in activities which may generate airborne lead above the action level should be monitored. In addition, one area sample should be collected at the perimeter of the designated work area, downwind of the operation.

Other heavy metals may be encountered in the paint or primer applied to surfaces. Additional air sampling may be required for specific metals to document personnel exposures. Samples should be collected for tasks where personnel exposures may be greater than 50% of the Michigan Maximum Allowable Concentrations established by MIOSHA or the ACGIH TLV, which ever is lower. Monitoring frequency and sample quantity should be sufficient to provide a representative assessment of the exposures of all employees potentially exposed. The sampling method should be approved by NIOSH and analyzed by an accredited laboratory.

5.4 MERCURY VAPOR MONITORING

Representative personnel exposure monitoring will be performed for elemental mercury using colorimetric detector tubes, direct-reading mercury vapor instruments, or use of quantitative collection techniques (active sampling or passive using a collection media) during the performance of operations having the potential to generate airborne mercury vapor. Monitoring frequency and sample quantity should be determined by H&S Personnel and specified on the H&S Checklist, to characterize exposures to all employees potentially exposed.

5.5 SILICA

Air samples should be collected for tasks requiring more than four hours in duration where there is a potential to generate airborne dust containing more than 1% (wt/wt) of crystalline silica. In accordance with MIOSHA standards, air samples shall assess the presence of respirable silica and should be assessed for tasks where intrusive work may pulverize or otherwise generate respirable particles. Samples must be analyzed for the presence of crystalline silica using approved NIOSH methods such as x-ray diffraction.

5.6 NOISE MONITORING

Sound pressure levels will be monitored to delineate hearing protection areas. Monitoring frequency and sample quantity should be determined by H&S Personnel. The frequency will be sufficient to adequately monitor areas where workers may be exposed to noise levels in excess of 85 dB(A) TWA (5 dB exchange rate). Suitable hearing protection should be worn in areas with continuous noise levels greater than 85 dB(A), or 90 dB(A) instantaneous.

5.7 CONFINED SPACE ENTRY MONITORING

Entry into a confined space requires air monitoring to verify that a hazardous environment does not exist. The requirements for monitoring and working inside of a confined space are described in the APM, Section 212. A competent individual should perform the atmospheric monitoring as described on the confined space entry permit to determine if a hazardous atmosphere exists. Typical contaminants that must be characterized include oxygen, total combustible gas, carbon monoxide, hydrogen sulfide, photo ionizable substances, and any other hazardous atmospheric contaminants. The monitoring strategy may be adjusted according to information available on previous use of the confined space. If a hazardous atmosphere exists, as specified in Table 5-1, ventilation or ventilation in conjunction with respiratory upgrade will be required before entry. Continuous monitoring in the space should be required for confined spaces that cannot be isolated.

In no case shall a confined space be entered where the atmosphere exhibits greater than 10% of the lower explosive limit.

5.8 TORCH/PLASMA ARC CUTTING MONITORING

A competent individual may conduct air monitoring to verify that torch/plasma arc cutting operations may safely be performed. Monitoring should be performed before cutting operations are conducted on piping, or equipment where the potential for fires and/or explosions exists. Monitoring may include, but is not limited to, LEL and O_2.

5.9 OXYGEN

Oxygen levels will be monitored by a qualified individual, as deemed appropriate by H&S Personnel. Such monitoring includes, but is not limited to, excavation, confined space entry, material handling, welding, etc.

5.10 EXPLOSIVE ATMOSPHERE

Explosive atmospheres will be monitored by a qualified individual, as deemed appropriate by H&S Personnel. Such monitoring includes, but is not limited to, excavations, material handling, welding, etc.

TABLE 5-1 Monitoring Program Summary

Hazard/Sample Type	Action Level	Precaution if Action Level is Exceeded	Monitoring Frequency
CONFINED SPACE ENTRY[1]:			
Explosive gas	>5% of the lower explosive limit (LEL)[2]	Ventilation. If determined to be greater than 10%, the space will be immediately evacuated. The entrants will be notified immediately and the permit will be canceled.	Prior to confined space entry and as designated on the confined space entry permit
Oxygen	<19.5% or >23.5%	Ventilation/upgrade to air supplied respirators (ASRs) pressure demand SCBA or airline respirator with 5 minute escape bottle[3]. If exceeded during entry operations, the space will be immediately evacuated. The H&S Department should be notified immediately and the permit will be canceled.	Prior to confined space entry and as designated on the confined space entry permit, or more frequently as determined by H&S Personnel
Carbon monoxide	25 ppm 8-hour TWA	Ventilation/upgrade to ASRs	Prior to confined space entry and as designated on the confined space entry permit, or more frequently as determined by H&S Personnel
Hydrogen sulfide	10 ppm 8-hour TWA	Ventilation/upgrade to ASRs	Prior to confined space entry and as designated on the confined space entry permit, or more frequently as determined by H&S Personnel

[1] If action levels are exceeded, ventilation should first be used to obtain acceptable conditions. If ventilation does not provide acceptable conditions, suitable protective clothing and respirators should be worn for entry, in conjunction with ventilation.

[2] In no case should confined spaces be entered with an atmosphere exhibiting greater than 10% LEL.

[3] Supplied Air Respirators (SARs) include full face-piece pressure demand self-contained breathing apparatus (SCBA) or full face-piece pressure demand airline respirators with escape SCBA.

TABLE 5-1 Monitoring Program Summary (continued)

Hazard/Sample Type	Action Level	Precaution if Action Level is Exceeded	Monitoring Frequency
Any other toxic atmospheric contaminant that may be present based on available information on previous use of the confined space.	PEL or TLV for the contaminant, or 20% for carcinogens whichever is more stringent.	Ventilation/appropriate respiratory and dermal protection.	Prior to confined space entry and as designated on the confined space entry permit, or more frequently as determined by H&S Personnel.
ASBESTOS:			
Personnel 8-hr (inside work area).	0.1 f/cc of air for an 8-hr time-weighted average (TWA).	Complete corrective action form, upgrade respiratory protection, and improve effectiveness of removal procedures and fiber control.	Representative sampling in accordance with MIOSHA requirements
Personnel 30-min. (Excursion).	1.0 f/cc of air as averaged over a sampling period of 30 minutes.	Complete corrective action form, upgrade respiratory protection, and improve effectiveness of removal procedures and fiber control.	Representative sampling in accordance with MIOSHA requirements
Environmental (outside work area).	0.01 f/cc.	Complete corrective action form, improve effectiveness of removal procedures and fiber control, inspect barriers and enclosures, change HEPA filters on negative air machines where required, and/or perform confirmatory TEM[1] analysis.	Representative sampling in accordance with MIOSHA requirements
Clearance.	<0.01 f/cc. 0.05 f/cc (glovebag)	Reclean work area.	
MAN-MADE MINERAL FIBERS:			
Personal 8-hour.	0.3 f/cc - 1.0 f/cc. >1.0 f/cc.	Establish regulated area, don PPE (see Table 4-1). Implement appropriate work practices (see Section 3). Establish carcinogen control area inside regulated area, negative pressure enclosures, respirators, shower decontamination (see Section 3).	Representative sampling in accordance with MIOSHA requirements
Personnel 30 minutes (Excursion).	3.0 f/cc of air over a sampling period of 30 minutes.	Ensure proper level of respiratory protection and improve effectiveness of removal or installation procedures and fiber control.	Representative sampling in accordance with MIOSHA requirements

[1] Transmission Electron Microscopy - Analytical Method capable of determining asbestos from non-asbestos fibers.

TABLE 5-1 Monitoring Program Summary (continued)

Hazard/Sample Type	Action Level	Precaution if Action Level is Exceeded	Monitoring Frequency
TORCH/PLASMA ARC:			
Explosive gas.	>10% LEL.	No torch/plasma arc or abrasive saw cutting.	Prior to and during cutting.
Oxygen for processes where inerting is required.	>10%	No torch/plasma arc or abrasive saw cutting.	Prior to and during cutting.
RADIATION:			
Personnel contamination.	Background	Personnel decontamination.	Prior to existing access control.
PCB:			
Personnel.	0.05 mg/m^3 (8-hour TWA).	Upgrade to supplied air respirator (SARs).	For paint with greater than 500 ppm.
Clearance.	10 µg/100 cm^2 (surface contamination).	Reclean work area.	In accordance with EPA 40 CFR 761.125.
LEAD:			
Personnel.	0.03 mg/m^3 (8-hour TWA).	Local exhaust ventilation in conjunction with particulate collection systems.	Hot work or intrusive work with Lead base metal.
MERCURY VAPOR:			
Personnel.	0.025 mg/m^3 (8-hour TWA).	Full face-piece APRs with mercury cartridges.	Direct reading instrument near source.
EXPLOSIVE GAS (Other than Confined Space):			
Area.	>10%	Ventilate the area. Stop work activities. Only permit the qualified personnel necessary to reduce the LEL below the action level. A plan should be developed describing techniques, PPE, and engineering controls to be used. This should be included in the Safe Work Plan.	As directed by H&S Personnel.
CARBON MONOXIDE:			
Area.	25 ppm	Ventilate the area. Stop work until levels fall below action level.	As directed by H&S Personnel.

TABLE 5-1 Monitoring Program Summary (continued)

Hazard/Sample Type	Action Level	Precaution if Action Level is Exceeded	Monitoring Frequency
NOISE:			
Area/Personnel.	85 dB(A) TWA. 90 dB(A).	Suitable hearing protection. Posting of area as noise hazard.	As directed by H&S Personnel.
HEAT STRESS:			
Oral temperature and heart rate monitoring[2].	Oral temperature of 38/C (100.4/F) and/or a heart rate of 110 bpm.	Use of ice vests, reduction in work cycle duration, or other approved measures.	Monitoring frequency will be dependent on work area temperature.
AIRBORNE DUST:			
Personnel and area.	1 mg/m^3 total instantaneous at work zone perimeters.	Improve effectiveness of dust control measures or upgrade to full-face piece APRs with HEPA cartridges.	As directed by H&S Personnel.
OTHER CONTAMINANTS:			
Any other toxic atmospheric contaminant that may be present based on available information.	PEL or TLV for the contaminant or 10% for carcinogens, whichever is more stringent.	Upgrade to an appropriate respirator and dermal protection as determined by the H&S department.	At the discretion of H&S Personnel.

[2] Monitoring will be performed when work area temperature exceeds 32NC (90NF), 29NC (85NF) when chemical protective clothing is required.

6.0 GENERAL SAFETY

The BRP APM addresses the general safety elements to be implemented at the site during decommissioning. The manual discusses many topics, including:

References	Section 100
General Rules	Section 200
Personal Protective Equipment	Section 300
Welding/Cutting	Section 400
Tools	Section 500
Scaffolds and Work Platforms	Section 600
Ropes, Ribbons, Chains and Signs	Section 700
Motor Vehicles	Section 800
Fire Prevention	Section 900
Rigging & Hoisting	Section 1000
Heavy Equipment	Section 1100
Lift Trucks - Powered Industrial	Section 1200
Lift Equipment - Mobile Hydraulic	Section 1300
Shock Protection	Section 1400
Substations	Section 1500
Nuclear Plant	Section 1600
Fall Protection	Section 1700
Excavations	Section 1800

Each section provides information and specific requirements to complete the task in a safe manner. The requirements in this manual shall be implemented at the BRP Site.

Additionally, BRP has developed a site-specific Excavation and Trenching Policy; this document is contained in Chapter 10.

7.0 MEDICAL SURVEILLANCE PROGRAM

7.1 PROGRAM ELEMENTS

Employees are required to participate in a medical evaluation program as described in the CE Corporate Medical Practices and Procedures. The program describes the frequency of monitoring and the type of examinations to be performed. The physical is intended to verify that they are medically fit to work in an occupational environment. The examination consists of both a physical examination and biological monitoring of various body functions, such as:

a. Medical and occupational history questionnaire,

b. Physical Examination,

c. Pulmonary function test,

d. Audiogram, and

e. Visual acuity.

f. Follow-up examinations, at the discretion of the examining physician or the Employee Services Manager

The examining physician provides the employer with a letter confirming the worker's fitness for work and the ability to wear a respirator. The examinations are described in the CE Corporate Medial Practices and Procedures and equivalent to applicable OSHA standards.

7.2 RESPIRATOR MEDICAL MONITORING REQUIREMENTS

Employees wearing respirators shall participate in a medical surveillance program which meets the requirements of 29CFR1910.134, Respiratory Protection. At a minimum, this requires the initial completion of a medical questionnaire to enable the physician to generate a medical report; at the discretion of the physician, a follow up medical exam may also be required. The medical examination report shall be signed by a physician and shall include a written opinion that the employee is medically qualified to wear respiratory protection and other PPE. The report should also include a description of any recommended work limitations placed on the employee as a result of medical conditions detected from the examination. Medical examination reports should be submitted to and reviewed by the CE Human Resources department prior to the start of work.

Additional examinations may be required under the following circumstances:

a. If determined necessary by the examining physician;

b. If an employee is injured or becomes ill, or develops signs or symptoms possibly due to an overexposure; and/or

c. As soon as possible following an emergency incident.

7.3 AUDIOMETRIC TESTING

Employees who may be exposed to noise levels at or above 85 dBA 8-hour time-weighted average, without regard to hearing protection devices, are required to participate in an audiometric testing program. The test is administered by the Occupational Physician, as described in the CE Corporate Medical Practices and Procedures.

7.4 ADDITIONAL OSHA SPECIFIC MEDICAL MONITORING REQUIREMENTS

As applicable to a particular work activity, medical monitoring requirements specified in Occupational Safety and Health Administration (OSHA) 29 CFR 1910 Subpart Z Toxic and Hazardous Substances and OSHA 29 CFR 1926 shall be adhered to. It has been necessary to institute medical monitoring programs for torch cutting where cadmium and/or lead exposure levels may exist. There may be additional work practices that require implementation of the above referenced medical monitoring requirements.

7.5 ASBESTOS MEDICAL MONITORING REQUIREMENTS

Employees required to work in an asbestos regulated area shall participate in a medical surveillance program which meets the requirements of 29CFR1926.1101 for asbestos and the Asbestos Abatement program requirements (Section 12.4). This requires that a physical examination, including a pulmonary function test, be performed prior to assignment, at least annually thereafter, and upon termination of employment.

8.0 TRAINING AND QUALIFICATIONS

The following training requirements apply to all personnel performing work at the BRP Restoration Project Site.

8.1 GENERAL REQUIREMENTS

8.1.1 General Employee Training

Prior to working for the site, all employees should attend a site-specific H&S orientation provided by CE. This training, known as General Employee Training (GET), Radiation Worker and Safety Block, is generally available bi-weekly. All employees must pass a series of examinations as part of the training program. Those employees failing the initial testing may be offered the opportunity to retake the failed examinations. If the retesting is not successfully completed, repeat training and testing may be offered at the option of CE.

Exceptions to this requirement are made for temporary visitors, delivery personnel, and personnel on site for less than eight hours per week, when under direct oversight by a site employee.

8.1.2 Respirator Training and Fit-testing

The procedures for quantitative fit-testing and training outlined in the Respiratory Protection Program should be at least as stringent as those outlined in American National Standards Institute (ANSI) Z88.2-1992 and governing OSHA (i.e., 29CFR1910.134) standards.

8.2 PRE-JOB SAFETY BRIEFING

All site personnel performing work on site should receive task-specific hazard recognition and safety briefings. Such briefings should be conducted for each discrete task identified in the WO/work plan. The briefing should be documented on the form as signified by the signatures of the work crew and supervisor.

8.3 HAZARD COMMUNICATION PROGRAM

All personnel exposed to materials should be trained in the use or handling of the materials, the PPE required, and the emergency procedures associated with the materials they will use. The requirements for the hazard communication program is provided in Chapter 4. All personnel should be trained and should know the location of their company's written Hazard Communication Program and have access to the Material Safety Data Sheets (MSDSs) and the site MSDS for all materials to which they may be exposed.

8.4 HEARING CONSERVATION PROGRAM

As necessary, employees should have received appropriate hearing conservation training as specified in 29CFR1910.95 and the site Hearing Conservation Program Plan (Chapter 3). Training should include, at a minimum, a description of the effects of noise on hearing, and the purposes, advantages, disadvantages, and attenuation of various types of Hearing Protective Devices (HPDs). Instructions should also include selection, fitting, use, and care of HPDs. Finally, training should address the purpose of audiometric testing and an explanation of the test procedures.

8.5 ASBESTOS

Each employee engaged in asbestos handling activities should have completed a training program under OSHA 29CFR1926.1101, Asbestos, in compliance with the Asbestos Hazard Emergency Response Act (AHERA), and meet the requirements and submit proof of compliance with Michigan Regulations, R325.5130, Asbestos Standards for Construction. All Contractors engaged in work involving asbestos should submit documentation that each of his asbestos abatement workers and supervisor are currently up-to-date with regard to the initial training and the eight-hour annual asbestos training under AHERA, and Michigan Regulations.

9.0 SITE CONTROL

9.1 ACCESS CONTROL

Access to the work site will be controlled by CE at all times during the course of the project. All personnel working in Controlled Areas will not be permitted access to Restricted Areas, other than those included in the scope of their project, unless specifically authorized.

Access to the restricted area is controlled by security personnel on a 24-hour basis. Work performed in the Controlled Areas outside established work hours should require approval and coordination with site management.

9.2 BUDDY SYSTEM

In general, work in Controlled Areas should be performed by crews of at least two persons (the "buddy system") where there is potential for injury, illness, or emergency conditions, based on the nature of work. On occasions where there is minimal potential for such conditions, an individual may work alone.

10.0 DECONTAMINATION (NON-RADIOLOGICAL)

All PPE (i.e., coveralls, gloves, and boots) should be wet-wiped, washed, HEPA vacuumed, or removed as appropriate, to remove gross contamination that may have adhered to them. Additional PPE such as hard hats and respirators should be cleaned of visible dirt and debris. All site personnel will be required to perform a whole body survey for radioactive contamination after removing outer PPE at the boundary of the controlled area. Each employee should also survey personal articles that will be removed from the work area. Such items may not be removed from the controlled area unless decontaminated.

Table 10-1 and Table 10-2 are provided to summarize the techniques available to decontaminate personnel and equipment. Radiological monitoring is required to verify that articles are free of radioactive contamination before leaving the controlled area.

TABLE 1--1 Personnel Decontamination Methods

PERSONNEL DECONTAMINATION						
Step	Method	Surface	Action	Technique	Advantages	Disadvantages
1 & 2	1. Wet wipes 2. Soap & water	Skin & hands	Emulsifies & dissolves contaminant	Wash & monitor. Do not wash more than 3-4 times	Readily available and effective for most radioactive contamination.	Continued washing will defat the skin. Indiscriminate washing of other than affected parts may spread contamination. Never allow contamination to flow into eyes, ears, nose or mouth.
3	Lava soap, soft brush and water	Skin & hands	Emulsifies, dissolves, & erodes	Use light pressure with heavy lather. Wash for 2 minutes three times. Rinse and monitor. Use care not to scratch or erode skin. Apply lanolin or hand cream to prevent chapping.	Readily available & effective for most radioactive contamination.	Continued washing will abrade the skin.
4	Laundry detergent (plain)	Skin & hands	Emulsifies, dissolves, & erodes	Make into a paste. Use with additional water with a mild scrubbing action. Use care not to erode the skin.	Slightly more effective than washing with soap.	Will defat and abrade skin and must be used with care.
5	Sweating	Skin of hands & feet	Physical removal by sweating	Place hand or foot in plastic glove or booty. Tape shut. Suggest some form of exercise exertion to stimulate sweating. Remove glove and then wash using standard techniques. Gloves can be worn for several hours using only body heat.	Cleansing action is from inside out. Hand does not dry out.	If glove or booty is not removed shortly after profuse sweating starts and part washed with soap & water immediately, contamination may seep into the pores.
1	Soap & water	Hair	Emulsifies & dissolves contaminant	Shampoo hair in sink (not shower)	Readily available & effective	

TABLE 1--1 Personnel Decontamination Methods (continued)

Step	Method	Surface	Action	Technique	Advantages	Disadvantages
1	Flushing	Eyes, ears, nose & mouth	Physical removal by flushing	Roll back the eyelid as far as possible, flush with large amounts of water. If isotonic irrigants are available, apply to eye continually and then flush with large amounts of water. (Isotonic irrigant [0.9% NaCl solution]: 9 grams NaCl in beaker, fill to 1000cc with water). Can be purchased from drug supplier, etc. Further decontamination must be done under medical supervision.	If used immediately will remove contamination. May also be used for ears, nose, and throat	When using for nose and mouth, contaminated individual should be warned not to swallow the rinses.
1	Flushing	Wounds	Physical removal by flushing	Wash wound with large amounts of water and spread edges gently to stimulate bleeding, if not profuse. Further decontamination must be done under medical supervision.	Quick & efficient if wound is not severe.	May spread contamination to other areas of the body if it is not done carefully.

TABLE 1--2 Area and Material Decontamination Methods

Method	Surface	Action	Technique	Advantages	Disadvantages
METHOD 1 Vacuum cleaning	Dry surfaces	Removes contaminated dust by suction.	Use conventional vacuum technique with HEPA filter.	Good on dry, porous surfaces. Avoids water reactions.	All dust must be filtered out of exhaust. Machine is contaminated.
METHOD 2 Water	All nonporous surfaces (metal, painted, plastic, etc.)	Dissolved & erodes	For large surfaces: Hose with high-pressure water at an optimum distance of 15 ft to 20 ft, Spray vertical surfaces at an angle of incidence of 30N to 40N; work from top to bottom to avoid recontamination. Work upwind to avoid spray. Determine cleaning rate experimentally if possible; otherwise, use a rate of 4 sq ft per minute.	All water equipment may be utilized. Allows operation to be carried out from a distance. Contamination may be reduced by 50%. Water equipment may be used for solutions of other decontaminating agents.	Drainage must be controlled. Not suitable for porous materials. Oiled surfaces cannot be decontaminated. Not applicable on dry contaminated surfaces (use vacuum); not applicable on porous surfaces such as wood, concrete, canvas, etc. Spray will be contaminated.
Water	All surfaces	Dissolves & erodes.	For small surface: Blot up liquid and hand wipe with water and appropriate commercial detergent.	Extremely effective if done immediately after spill and on nonporous surfaces.	Of little value in the decontamination of large areas, longstanding contaminants and porous surfaces.

11.0 EMERGENCY RESPONSE

11.1 TRAINING

All personnel should be instructed in basic site emergency notification and response procedures, including the capabilities and limitations of CE resources. This training will be included as part of the site health and safety orientation described in Section 8 of Chapter 1 of this plan. Training should be provided before field work begins.

11.2 FIRST AID/MEDICAL CARE FOR INJURIES

At least one employee on the job site, per shift, has current first-aid and cardiopulmonary resuscitation (CPR) training as required by 29CFR1926.50(c), Medical Services and First Aid. In the event of an accident involving personal injury, first aid and primary care should be administered, as required.

In most circumstances, an injured person will be taken to the nearest emergency room. However, the ambulance staff may determine that another medical facility may be better suited to treat the individual based on the nature of the injury.

All minor injuries occurring during normal working hours should be reported to the individual's supervisor. The injury should be evaluated and treated as necessary.

11.3 HEAT/COLD STRESS

In the event of a heat-related illness, protective clothing should be removed and the worker relocated to a cool location for administration of first aid. Off-site medical assistance should be requested immediately if heat stroke is suspected or if symptoms persist after first aid is administered.

Cold related injuries range from frostbite to hypothermia. Victims should be moved to a warm place and affected parts should be gently warmed by submersing them in warm water.

11.4 FIRE

If a fire occurs in an area where combustible or flammable materials are present, the first action should be evacuation of all personnel from the area to a remote location upwind of the fire. Report fires immediately at (x8200). Only those personnel trained in the use of fire extinguishers should fight fires and then only in limited situations, such as small fires in uncontaminated areas where flammable liquids are not present.

11.5 SEVERE WEATHER

In the event of tornado or severe thunderstorm warnings or the threat of other severe weather conditions, tasks necessary to stabilize the work site should be performed then all site personnel should follow instructions regarding shelter and evacuation.

11.6 NOTIFICATION

For any emergency conditions, personal injuries, or other unusual events which result in or could have resulted in personal injury, environmental releases, or property damage dial (x8200).

In order to ensure immediate notification for reporting of emergencies, radio, telephone, or other reliable means of contact for all personnel working on site is available.

11.7 UNUSUAL OCCURRENCE

If any unusual materials or substances are uncovered during operations, work should cease in the affected work area and H&S personnel should be notified immediately. The site should be evaluated to determine if additional PPE or other protective measures are required.

11.8 CONTINGENCY PLAN FOR SPILLS

If unidentified or unanticipated substances are released during demolition, construction or excavation operations, call (x8200) immediately. Spill response and outside emergency agency notification should be conducted in accordance with the Site Spill Prevention Plan (SPCC/PIPP).

12.0 REFERENCES

12.1 Personnel Safety, Volume 1, Procedure D.1.5

12.2 Respiratory Fit Test, RP-40

12.3 Consumers Energy Corporate H&S Manual

12.4 Spill Prevention Countermeasure Control/Pollution Incident Prevention Plan

12.5 Consumers Energy Lead Abatement Program

12.6 Consumers Energy Confined Space Program

12.7 Big Rock Point Accident Prevention Manual

1.0 PURPOSE

The purpose of this polychlorinated biphenyl (PCB) control program is to specify the requirements for working safely with PCBs. The Work Order process will be used for controlling the generation of PCB aerosols and vapors during cutting, burning, scabbling and welding and removal of paint containing PCBs and any other work involving potential exposure to non-liquid PCBs.

2.0 SCOPE

These guidelines apply only to construction materials, substances and coatings with PCB concentrations greater than or equal to 50 ppm.

3.0 REFERENCES

3.1 Big Rock Point Sampling and Analysis Program for Painted Surfaces, April 1998

3.2 Consumers Energy Environmental Manual; Section RR-200

3.3 40CFR761, Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions

4.0 PREREQUISITES

4.1 The Health and Safety (H&S) Planner will evaluate PCB exposure potential prior to workers removing paint and welding or cutting on PCB coatings. Any requirements for engineering controls, work practices and personal protective equipment (PPE), including respirators, will be included in the Health and Safety Checklist.

4.2 Prior to work in areas where PCB exposure is expected, all workers must be respiratory protection qualified and have hazardous chemical training and/or a pre-job briefing that includes the requirements for PCBs.

5.0 DISCUSSION

5.1 GENERAL

Polychlorinated Biphenyls (PCBs) - a mixture of chlorinated organic chemical compounds marketed under the name AAroclor≅ and used to enhance the properties of paints for specific applications.

Polychlorinated Biphenyls are extremely stable and chemically inert compounds that are resistant to heat, and attack by acid and alkali. These properties have made PCBs useful constituents of transformer fluids, plastics, paints, adhesives, insulating materials(cables) and hydraulic fluids.

Polychlorinated Biphenyls are present in paints located throughout the plant. These materials do not pose a problem as long as they remain undisturbed. Decommissioning activities may result in the removal of paint and painted components from plant areas.

Workers may be exposed to airborne PCBs by inhalation. Polychlorinated Biphenyls in liquid and vapor may be absorbed through intact skin. Polychlorinated Biphenyls may also be ingested in food and beverages and through hand to mouth contact. Polychlorinated Biphenyls present in paints may be liberated from the paint matrix by high temperatures (700EF to 1000EF). Therefore, work activities such as burning and welding PCB coatings may create PCB air concentrations. In addition, PCB will oxidize at high temperatures and produce hydrogen chloride, carbon monoxide, carbon dioxide and a variety of trace organic chemicals including phenolics, aldehydes, polychlorinated dibenzofurans and polychlorinated dibenzodioxins.

Both wet and dry paint removal techniques may produce wastes that contain PCBs and skin contact may result in dermal uptake. The potential for inhalation exposure exists when dry removal techniques generate airborne particles containing PCBs.

5.2 IDENTIFICATION OF PCBS IN SURFACE COATINGS

An extensive survey was conducted at BRP to characterize the PCB concentrations in paints. Concentrations of PCBs above the 50 ppm threshold were found in paint throughout the plant. Generally, the PCB concentrations in paint exceeded 50 ppm in cream colored paint used on the shell inside containment; in silver paints used on tanks, piping and structural steel; and in red paints used in the fire protection system. The Environmental Services Department is responsible for determining the presence of applicable PCB concentrations and when additional sampling and analysis are required.

5.3 PCB WORK PRACTICES

Exposure prevention measures will be implemented in areas where there is the potential for dermal contact, ingestion and inhalation exposure to PCBs. These measures include the use of engineering controls, work practices and PPE.

Engineering controls include the use of local exhaust ventilation to remove airborne contaminants from the work area to prevent them from being inhaled. This includes, for example, the products generated during burning and welding and the paint chips from mechanical paint removal.

Work practices include removal of PCB coatings by mechanical means prior to cutting, burning and welding.

NOTE: Coatings are to be removed a minimum of four inches from point of hot work.

Personal protective equipment (PPE) for burning and welding may include respiratory protection, chemical resistant clothing and gloves. Personal protective equipment will be used to prevent dermal exposure by covering skin exposed to airborne PCBs. Respirators with the appropriate combination cartridges (HEPA/acid gas/organic vapor) will be worn when controls and work practices are not adequate to reduce airborne concentrations of contaminants.

6.0 RESPONSIBILITIES

6.1 All workers shall:

Wash exposed skin after contact with PCB contaminated surfaces.

6.2 Healthy and Safety personnel will:

a. Determine PCB exposure potential through a review of sampling results and air sampling for PCB;

b. Provide health related advice on PCB topics;

c. When requested, review and approve alternate work practices;

d. Determine appropriate respiratory protection and PPE for the work;

e. Arrange with the Environmental Section for sampling and lab analysis for PCBs in air samples, paint, concrete and wipes; and

f. Coordinate PCB monitoring of the workplace.

7.0 PCB WORK PRACTICES

NOTE: Chemical removal (Chemical stripping) of PCBs is not permitted.

7.1 COLD CUTTING AND MACHINING

a. Mechanical cutting and machining of materials with PCB coatings has a low potential for generation of small particles and inhalation exposure. It is preferred to torch cutting. Polychlorinated Biphenyl-containing particles of paint and debris from mechanical cutting should be relatively large and non-respirable. Ingestion and dermal contact are concerns that can be prevented by appropriate work practices.

b. Debris and dust from the cutting operation must be collected into proper storage containers and labeled in accordance with waste management requirements.

7.2 TORCH CUTTING, BURNING, GRINDING OR WELDING ON PCB COATINGS

a. The exposure potential to PCBs, decomposition products and combustion products is high. Polychlorinated Biphenyl coatings should be removed four inches from work surfaces prior to cutting, burning and welding, if practical.

b. If cutting, burning, grinding or welding is performed on PCB coatings, the following PPE should be worn:

1. Respiratory Protection (as assigned by Industrial Safety), and

2. Coveralls, hoods, gloves and shoe covers.

c. Use engineering controls to collect and remove airborne contaminants from the work area when cutting, grinding, burning or welding is performed on PCB coatings.

d. Debris and dust from the cutting operation must be collected into proper storage containers and labeled in accordance with waste management requirements.

7.3 BLASTING PCB COATINGS

a. Mechanical paint removal methods such as grit blasting may have a high potential for inhalation exposure. Ingestion of paint chips may result from poor hygiene, housekeeping and work practices.

b. Ensure that containment is used and properly ventilated.

NOTE: There may be exceptions to this requirement if there have been technological innovations in methods and equipment, such as vacuum blasting units. If a glove box blaster is used, respiratory protection is not required.

c. During blasting, an approved powered air purifying respirator (PAPR) with a sand blast or shot blast type hood will be worn. Coveralls, hoods, gloves and shoe covers will be worn.

7.4 PREVENTING SPREAD OF CONTAMINATION FROM PCB COATINGS

a. Appropriate measures will be implemented to ensure that any PCB wastes (i.e., paint chips, filing, slag, dross) generated during paint removal activities, cutting, burning and welding are not released to floor drains, storm drains or the soil.

b. Acceptable methods include, but are not limited, to the following:

1. Install berms around drains and work areas.

2. Cover drains and any openings that lead to the environment. Use drop cloths and catch basins as appropriate.

3. Use good housekeeping practices to keep the waste in the work area to a minimum. Do not dry sweep. Use a HEPA vacuum.

8.0 PCB COATING REMOVAL METHODS

Polychlorinated Biphenyl coatings may be removed by the same mechanical methods used for lead paint removal. Mechanical means include a ventilated needle gun; ventilated flapper wheel; ventilated flapper disk; and vacuum blast machine. Ventilated tools must use HEPA vacuums. All methods must be approved by H&S personnel through the Work Order process.

NOTE: Tools used in glove bags must be wiped down or vacuumed off when job is complete.

8.1 When using mechanical methods for removing paint, perform one of the following:

a. Install glove bag and remove paint with any necessary tool, observing proper technique.

b. Remove paint using wet sanding, wet Scotchbrite pads or wet scrapers.

c. Remove paint using specialized removal tools such as ventilated tools mentioned previously.

8.2 After paint has been removed, perform the following:

a. Clean work area using HEPA vacuum or wet rags.

b. If rags are used, place in plastic bag and label in accordance with waste management requirements.

c. Place PCB debris in a separate plastic bag and label in accordance with waste management requirements.

9.0 AIR MONITORING

In accordance with Chapter 1, Section 5.2 of the Health and Safety Plan, air monitoring will be conducted for disturbance of PCB-containing materials in excess of 500 ppm in the event there is risk for personal exposures above the action level of 0.05 mg/M^3.

1.0 PURPOSE

The purpose of this procedure is to provide information and guidelines for the selection, use, and care of respiratory protective equipment for all Big Rock Point (BRP) Restoration Project personnel and contractor personnel for use in hazardous or radiological environments.

This procedure complies with the requirements of 29CFR1910.134, Respiratory Protection, as amended January 8, 1998 and 10CFR20, Subpart H, Respiratory Protection and Controls to Restrict Internal Exposure, effective February 4, 2000.

2.0 DEFINITIONS

Action Level - Generally defined by OSHA as concentrations at one-half of the permissible exposure limit (PEL) (lead is an exception). Contaminant concentrations measured at this level trigger additional requirements such as medical surveillance and air monitoring.

Airborne Radioactivity Area - An area, room, or enclosure in which airborne radioactive materials exist in concentrations greater than one derived air concentration (DAC) or greater than 0.3 DAC when averaged over 40 hours in one week.

Annual Limit of Intake (ALI) - The derived limit for the amount of radioactive material taken into the body of an adult worker by inhalation or ingestion in a year.

Assigned Protection Factor - The expected workplace level of respiratory protection that would be provided by a properly functioning respirator or class of respirators to properly fitted and trained users.

Bioassay Program - Procedures which define and implement the measurement of a given material inside the body.

Derived Air Concentration (DAC) -in air which, if breathed by reference man for a working year of 2,000 hours under conditions of light work (inhalation rate of 1.2m^3/hour) results in an inhalation of one ALI (q.v.).

Emergencies - Unplanned events characterized by risks sufficient to require immediate action. Process and other engineering controls are usually impractical.

Employee Exposure - Exposure to a concentration of airborne contaminants which would occur if the employee were not using respiratory protection.

End-of-Service-Life Indicator (ESLI) - a system which warns the respirator user of the approach of the end of adequate respiratory protection (i.e., sorbent is approaching saturation or no longer effective).

Fit Factor - A quantitative estimate of the fit of a particular respirator to a specific wearer, typically estimating the ratio of the concentration of a substance in ambient air to its concentration inside the respirator when worn.

High Efficiency Particulate Air (HEPA) - A filter capable of removing 99.97% of particles of 0.3 microns in diameter.

IDLH - Immediately dangerous to life and health. A condition or atmosphere posing immediate threat to life or causing irreversible adverse health effects, or impairing an individual's ability to escape from a dangerous atmosphere.

Maximum Contaminant Level (MCL) - The maximum level of airborne contamination under OSHA for which a given level of respiratory protection shall be prescribed. The levels are usually expressed as multiples of the PEL/TLV.

Medical Evaluation - A medical evaluation of physical and psychological factors to determine an individual's capability to wear respiratory protective equipment.

N-Series Respirator Filters - A designation given under the NIOSH/DHHS approval certification regulation 42CFR84, which indicates the resistance to filter efficiency degradation to oil based aerosols. An N-series filter is not resistant to oil. The three levels of filter efficiency are 95%, 99% and 99.97 (100%). This certification applies only to non-powered, air-purifying particulate-filter respirators.

Negative Pressure Respirator - A respirator in which the air pressure inside the face piece is negative during inhalation with respect to ambient air pressure outside the respirator.

Negative Pressure Seal Check - A user check performed to assess the face piece-to-face fit by blocking the inhalation valve and gently inhaling.

NIOSH/DHHS - National Institute for Occupational Safety and Health/ Department of Health and Human Services Administration.

Non-routine Tasks - Activities that are either non-repetitive or occur so infrequently that limitation of exposure by process and other engineering controls is usually impractical.

Oxygen-deficient Atmosphere - An atmosphere with an oxygen concentration less than 19.5% by volume.

P-Series Respirator Filters - A designation given under the NIOSH/DHHS approval certification regulation 42CFR84, which indicates the resistance to filter efficiency degradation to oil based aerosols. A P-series filter is considered oil-proof. The three levels of filter efficiency are 95%, 99% and 99.97 (100%). This certification applies only to non-powered, air-purifying particulate-filter respirators.

Permissible Exposure Limit (PEL) - The employees eight hour time-weighted average (TWA) exposure limit as permitted under MIOSHA guidelines to any material over a 40-hour work week. Applicable materials of regulatory concern are listed in MIOSHA 325.511108, Table G1A.

Physician or Other Licensed Health Care Professional (PLHCP) - An individual whose legally permitted scope of practice allows him or her to independently provide, or be delegated the responsibility to provide, some or all of the health care services as required by Section 8 of this chapter.

Positive Pressure Seal Check - A user check performed to assess the face piece-to-face fit by blocking the exhalation valve and gently exhaling.

Powered Air-Purifying Respirator (PAPR) - An air-purifying respirator that uses a blower to force the ambient air through air-purifying elements to the inlet covering.

Pressure Demand Respirator - A positive pressure atmosphere-supplying respirator that admits breathing air to the face piece when the positive pressure is reduced in the face piece by inhalation.

Qualitative Fit Test - A pass/fail test for respirator fit using a challenge atmosphere, positive and negative pressure seal check, and requiring the respirator wearer to evaluate the adequacy of the respirator face piece-to-face seal.

Quantitative Fit Test - An assessment of the adequacy of a respirator fit using a challenge atmosphere and numerically measuring leakage past the respirator face piece-to-face seal during exercises simulating conditions of use.

R-Series Respirator Filters - A designation given under the NIOSH/DHHS approval certification regulation 42CFR84, which indicates the resistance to filter efficiency degradation to oil based aerosols. An R-series filter is considered oil-resistant. The three levels of filter efficiency are 95%, 99% and 99.97 (100%). This certification applies only to non-powered, air-purifying particulate-filter respirators.

Respiratory Protection Program - The procedures, policies, equipment and manuals used to ensure that exposure of personnel to airborne hazardous materials is minimized.

Routine Tasks - Planned activities that are generally repetitive and occur with various frequencies. Process and other engineering controls may be practical for routine work.

Self Contained Breathing Apparatus (SCBA) - An atmosphere-supplying respirator for which the breathing air source is designed to be carried by the user.

Threshold Limit Value (TLV-TWA) - The time-weighted average concentration for a normal eight hour work day and a 40-hour work week, to which nearly all workers may be repeatedly exposed, day after day, without adverse effects. These values are established by the American Conference of Governmental Hygienists (ACGIH).

3.0 PREREQUISITES

3.1 No individual will enter an area where the use of respiratory protective equipment is required unless the individual is current in the following qualification criteria:

a. The person has been trained in the selection, use, care and limitations of the respirators;

b. The proper respirator has been selected for the task, and the individual has achieved a current passing fit test for that respirator;

c. The individual is a participant in a medical surveillance program and has received approval from a company approved physician or other licensed health care professional (PLHCP) to wear respiratory protection; and

d. The individual has received a whole body count.

4.0 RESPONSIBILITIES

4.1 The Manager of Dismantlement, Maintenance and Planning (DMP), or designee, shall be responsible for the overall administration and direction of the respiratory protection program for BRP.

4.2 The Radiation Protection Superintendent (or designee) is responsible for:

a. Developing and implementing procedures for measurement of, and protection from, airborne radioactive contamination.

b. Developing, maintaining and implementing a bioassay program for evaluating intakes of radioactive materials.

c. Collecting air samples in order to evaluate the concentration of airborne radioactive materials.

d. Inspecting the work area to verify that appropriate respiratory protection measures are applied and implemented in order to ensure Total Effective Dose Equivalent (TEDE) is ALARA.

e. Assigning of respiratory protection equipment to provide protection against radioactive airborne hazards and to minimize total personnel exposure.

f. Ensuring that respirators are maintained, cleaned, and stored in accordance with this policy.

4.3 Site Safety Personnel are responsible for:

4.3.1 Developing and implementing procedures for:

a. Control of, and protection from, non-radioactive inhalation hazards such as:

1. Oxygen deficient, toxic and explosive atmospheres; and/or

2. Airborne particulate, mists, fumes, dusts, vapors, gases and aerosols.

b. Assignment of respiratory protection equipment to provide protection against non-radiological hazards.

c. Collecting air samples and evaluating the concentrations of non-radiological airborne hazardous materials to verify adequacy of respiratory protection.

d. Providing technical assistance for the administration of the industrial safety and hygiene aspects of the Respiratory Protection Program.

e. Performing assessments of the Respiratory Protection Program as necessary, to verify its effectiveness.

f. Preparing and maintaining records associated with the Respiratory Protection Program.

g. Issuing, maintaining and storing half-face respirators.

4.4 The Respiratory Protection Program Administrator (or designee) is responsible for:

a. Performing assessments of the Respiratory Protection Program as necessary, to verify its effectiveness.

b. Supervising quantitative respirator fit tests.

c. Requesting information for employee respirator spectacles.

d. Verifying the Respirator User Authorization Record (Attachment 1) is signed to indicate the quantitative fit testing, medical evaluation and training have been satisfactorily completed.

e. Verifying that a qualified Radiation Protection/Safety Representative signs and dates the appropriate sections of the Respirator User Authorization Record (Attachment 1) following documentation of completion of individual qualifications to wear respiratory protection equipment. Annual qualification dates for training and fit test will expire one year later on the last day of the month in which they were given. Initial bioassay or whole body count is valid until subsequent bioassay for facial contamination or for termination of assignment at BRP. Medical qualification requirements are specified in Section 8.0 of this chapter.

f. Verifying the proper maintenance and calibration of the quantitative respirator fit test system.

g. Verifying the proper maintenance, cleaning, inventorying, storage and inspecting of respiratory protection equipment.

h. Maintenance and calibration of respiratory protection support equipment.

i. Monitoring field usage of respirators to ensure equipment is used according to established procedures.

j. Verifying that supplied breathing air meets Compressed Gas Association specifications for Grade D air as a minimum. Grade E air is the preferred specification.

k. Verifying that periodic hydrostatic testing of SCBA bottles are performed along with monthly inspections of SCBA units used for emergency services.

l. Verifying that only NIOSH/DHHS-certified respiratory protection equipment and spare parts are procured for the respiratory protection program.

m. Verifying the performance of periodic calibrations of breathing air quality monitoring instrumentation and routine and non-routine maintenance of mechanical components of the station breathing air system.

n. Verifying that a copy of the Respirator Use Authorization Record (Attachment 1) is placed on file.

o. Ensuring that personnel information is accurately entered into the computer database to document that the individual has completed all the requirements for use of a respirator.

4.5 The Employee Services Manager (or designee) in conjunction with a licensed occupational physician or PLHCP is responsible for:

a. Implementing the requirements for Respirator Medical Evaluations pertaining to the medical fitness of an individual to use approved respiratory protection devices and equipment at BRP.

b. Verifying that medical evaluations provided for BRP employees to wear a respirator are in accordance with OSHA and NRC requirements for Respirator Medical Evaluations.

c. Verifying that a current medical approval form is received from all contract employees who are required to wear a respirator.

d. Maintaining all records pertaining to respirator medical evaluations performed for respirator users. Verifying the Respirator User Authorization Form is signed to indicate the medical evaluation has been satisfactorily completed.

4.6 The First-line (Employee) Supervisors are responsible for:

a. Identifying which employees require respirator qualification, scheduling initial employee medical evaluations, training, quantitative respirator fit tests and whole body counts, and maintaining annual/periodic requalifications as required.

b. Verifying employees obtain all required signatures on the Respirator User Authorization Form.

c. Verifying that personnel utilize respiratory protection equipment in accordance with established procedures and policies.

d. Verifying that qualitative user seal checks are performed by the wearers of respiratory equipment prior to field usage.

e. Assuring Radiation Protection or Industrial Hygiene (IH) air monitoring support for potentially hazardous atmospheres that require respiratory protection has been accomplished.

4.7 Respirator Issuers are responsible for:

a. Issuing respirators only to employees with current respirator qualifications (medical, training, fit testing).

b. Maintaining appropriate inventory of respirators and respirator parts.

c. Ensuring respirators are stored correctly.

4.8 Each individual employee (respirator wearer) is responsible for:

a. Being clean shaven in the sealing area of the respirator.

b. Conducting the appropriate inspection and user seal check of respirators prior to use.

c. Utilizing respiratory protection equipment in accordance with established procedures.

d. Returning used/unused respiratory protection equipment to a designated collection point.

e. Reporting any malfunction of the respirator to his/her supervisor immediately.

f. Leaving the respirator area immediately if a question arises as to the ability of the respirator to provide adequate protection.

g. Notifying his/her supervisor in the event of an unplanned usage of respirators such as during emergency situations for post evaluation.

4.9 Operations Department is responsible for:

a. Ensuring that SCBA bottles are filled.

b. Inspection, assembly and disassembly of suppled-air systems in accordance with T7-34, . An SCBA Equipment Inspection.

4.10 The Training Department is responsible for:

Developing and implementing a training program to support the BRP Respiratory Protection Program.

5.0 PROGRAM POLICY

5.1 GENERAL GUIDELINES

The use of engineering and work practice controls shall be the primary method to limit employee exposure to respiratory hazards.

5.2 Respirators shall only be worn against industrial hazards when such controls are unsuccessful or unverified as to their efficiency or effectiveness. Air monitoring data shall be collected to verify efficiency of controls and to subsequently adjust the level of respiratory protection accordingly.

a. As the established PEL, TLV for the particular material is approached or exceeded, as measured by direct reading and/or integrated air sampling applicable for the suspected contaminant, initial donning of respirators shall be triggered at the action level of the PEL/TLV (whichever is lower). Respiratory protection for industrial hazards may then be discontinued when follow up air sampling events indicate a statistical significance (minimum of three representative samples, preferably five) for airborne exposures at levels below the eight hour TWA PEL/TLV.

b. For radiological airborne contamination, determination of the need for respiratory protective equipment must maintain the Total Effective Dose Equivalent to be received by the worker as low as reasonably achievable (ALARA). This process is implemented during preparation of a radiation work permit in accordance with approved procedures. A single air sample may be used to determine the need, if any, for continued use of respiratory protection equipment against airborne radiological hazards.

NOTE: A respirator certification expires when either the employee's medical certification has lapsed, or when training or fit testing has surpassed one year in duration.

5.3 Respirators can only be issued to and worn by individuals who have been medically approved, trained (annually), fit-tested (annually) and are clean shaven in the respirator seal area.

5.4 Only respirators approved by the National Institute for Occupational Safety and Health (NIOSH) and the Department of Health and Human Services (DHHS) in accordance with 42CFR Part 84, which are appropriate for the potential hazard shall be worn when potential exposure involves a toxic material.

5.5 Employees shall not interchange parts such as cartridges, valves, nose cups, etc., between respirators from different manufacturers.

5.6 Issuing Respirators:

5.6.1 Full-face Respirators

a. Respirators are issued through Access Control. The employee requests a respirator in accordance with the Health and Safety checklist requirements. An Access Control representative will then verify eligibility of the requester via the Respiratory Qualification Printout. Once qualifications are ascertained, Access Control will then notify the appropriate RP&ES representative who will issue the respirator to the wearer.

b. Access Control verifies that the individual is qualified to wear a respirator by reviewing the computer database or the computer database printout.

A diagram outlining respirator issue logic is provided in Attachment 4.

c. The individual respirator wearer must be clean shaven in the respirator seal area and have completed and be current with the following requirements:

1. The fit test for the respirator requested;

2. The training to use the respirator requested;

3. The respirator medical evaluation; and

4. An entry whole body count.

d. The individual wearer is responsible for assuring receipt of the proper make and size of the respirator which was requested, inspecting the face piece and head straps, and conducting the positive and negative seal checks to ensure proper fit prior to field use. Defective respirators shall be returned to Access Control.

e. Employees shall leave the work area whenever they notice signs of contaminant breakthrough (taste or smell), increased breathing resistance, respirator malfunction, or discomfort associated with respirator use.

f. The individual returns the respirator to the respirator maintenance facility after the work is completed where the used respirator is placed in the appropriate receptacle.

g. The used respirators are cleaned and inspected by RP technicians in accordance with the Inspection Cleaning, Maintenance and Storage Guidelines Manual. Cleaned respirators are placed in plastic bags and returned to the storage shelf away from extremes of temperature, light, toxics or risk of mechanical damage. Respirators shall not be stacked and shall be stored in an upright position to prevent the face piece from becoming distorted.

h. Use of contact lenses with respirators is permitted, provided the wearer has demonstrated successful experience in wearing such lenses. Contact lens wearers should practice wearing the respirator while wearing the contact lenses, for example, during training or fit testing.

5.6.2 Half-face Respirators

a. Half-face respirators will be issued by site safety personnel. Safety personnel shall verify individuals are qualified and clean-shaven prior to issuing a respirator.

b. The wearing of any type of respirator in a radiologically controlled area must be approved by the RP Department to determine any ALARA considerations.

c. Employees shall return used respirators to site safety personnel. Respirators used inside the RCA that cannot be free-released shall be disposed of as Rad trash.

d. The used respirators shall be cleaned and inspected in accordance with the inspection, cleaning and maintenance guidelines in Section 10.0 of this procedure.

6.0 SELECTION OF RESPIRATORS

6.1 Engineering controls should always be the primary control method of employee exposure to airborne contaminants (i.e., elimination of contamination source, ventilation of area, barriers, remote handling methods, etc.).

6.2 Once the need for respiratory protection has been established, the respirators shall be selected on the basis of the hazards to which the worker is exposed.

6.3 Selection criteria shall include:

a. Identity of airborne hazard;

b. Physical form of contaminant;

c. The current concentration of the contaminant ;

d. Potential maximum concentration of the contaminant;

e. Whether the contaminant may be present in concentrations to be immediately dangerous to life or health (IDLH) ;

f. The possibility of oxygen deficiency;

g. The availability of a suitable cartridge;

h. The useful life of the respirator cartridge;

i. The escape routes available ;

j. Whether the respiratory devices are intended for emergency use, for periodic use, or for stand-by purposes;

k. Contaminant warning properties ;

l. Presence of oil-containing particulate;

m. NIOSH/DHHS approval (per 42CFR Part 84); and

n. Radiological conditions of working environment.

6.4 Other relevant information based on site conditions may be considered to determine type of respirator to be used.

NOTE: Due to the added physiological and physical stress, protection equipment should not be worn for more than three hours continuously, with a one hour interval of relief from respirator use before a subsequent period of use, nor more than 30 hours in any work week. Longer time periods shall be evaluated on a case by case basis by the Respiratory Protection Program Administrator (or designee).

6.5 Disposable dust masks are approved for limited use. The DMP Manager (or designee) must approve the use of either of these devices. The use of these devices must satisfy the requirements of BRP Dust Mask Guidelines (Attachment 5).

6.6 The following respiratory protection devices have been approved for use at BRP:

a. MSA (Mine Safety Appliance)
- Air Purifying Respirator (APR)
- Powered Air Purifying Respirator (PAPR)

b. Scott – Self-contained Breathing Apparatus (SCBA) Mark-2 low pressure 30 minute SCBA

c. 3M 6000 and 7000 series Half-face Air-purifying Respirator

Other types of respirators shall be approved by Radiation Protection - Operations, Respiratory Protection Program Administrator (or designee), and the DMP Manager (or designee).

Cartridges selected for use shall have end of service life indicators (ESLI) where practical. If appropriate ESLI are not available, then cartridges shall be disposed of in accordance with supervisory direction. All particulate cartridges shall comply with P100 specification unless approved otherwise by Radiation Protection - Operations Superintendent and Respiratory Protection Program Administrator.

6.7 Subcontractors may use any NIOSH/DHHS approved respiratory protection as long as it provides an equivalent level of protection as prescribed in the Radiation Work Permit (RWP) or Work Order Package.

6.8 Subcontractors must comply with the requirements of this procedure or otherwise receive approval for changes from the Manager of DM&P.

7.0 IDENTIFYING HAZARDOUS AIRBORNE MATERIAL ENVIRONMENTS

7.1 The employee's supervisor and safety personnel shall ensure that air samples for airborne hazardous contaminants are collected in the breathing zone of employee as well as the immediate work area to document the adequacy of respiratory protection. Levels of respiratory protection may be upgraded or downgraded based upon air monitoring results and comparison with the MCL for the prescribed level of protection (see Section 7.8). Collection and analysis of contaminants shall be conducted in accordance with established NIOSH protocol.

7.2 The RP Operations Department, shall ensure the sampling of the atmosphere for radioactive airborne hazards in the breathing zone of the employee and the immediate work area. Collection and analysis of samples shall be conducted in accordance with the appropriate procedures.

7.3 The supervisory and safety personnel will evaluate work being done in the hazardous environment during routine, non-routine and emergency situations. Evaluation of the job for implementation of engineering and work practice controls are preferable to use of respirators for routine and non-routine tasks. Atmospheres with contaminants of unknown concentration, or atmospheres that cannot be identified or assessed are regarded as IDLH atmospheres. Oxygen-deficient atmospheres shall be considered IDLH. The following respirators are approved for IDLH conditions:

a. Full face pressure-demand (PD) SCBA certified by NIOSH with at least 30 minutes of service life; or

b. A combination full face piece PD Supplied-Air Respirator (SAR) with an auxiliary self-contained air supply.

7.4 Once the identity of airborne contaminants is known, work planning personnel will first determine if process and/or engineering controls may be applied. If process/ engineering controls cannot be used or are inadequate, then the proper respiratory protective equipment, including respirators will be specified. Work planning and safety personnel will evaluate work being done in the hazardous environment during routine, non-routine and emergency situations.

7.5 The appropriate respiratory equipment for radioactive and non-radioactive hazards will be specified in work documents [i.e., RWPs, Work Orders (WOs)]. The type of respirator and the identification of the appropriate respirator cartridge will be described.

7.6 The selection of respirators shall be appropriate for the chemical state and physical form of the contaminant. When available, use of air-purifying respirators shall use cartridges with end-of-service-life-indicators (ESLI) certified by NIOSH for the contaminant. If there is no ESLI appropriate for the condition, then a change out schedule shall be implemented to assure cartridges are not used beyond their service life. Service life considerations shall include chemical hygiene, cartridge damage, breathing resistance or chemical breakthrough. All filters should be replaced when a chemical odor or taste becomes evident, there is a noticeable increase in breathing resistance, or if the cartridge becomes damaged or soiled. In general, the maximum service life of cartridges for use at BRP should not exceed full shift (eight to ten hours) applications. If use beyond this is necessary, safety personnel should be contacted for a workplace evaluation to determine whether extended cartridge use will not degrade filter efficiency below specified levels.

7.7 NIOSH recognizes the following standard color codes for respirator cartridges. The color codes can be used as a general guideline, however, personnel should refer to the NIOSH technical certification; TC-84A for particulate and TC-23C for vapor chemical cartridges to verify adequate protection.

Acid gases_____White
Organic vapors_____Black
Ammonia gas_____Green
Acid gases and organic vapors_____Yellow
High Efficiency Particulate Air (HEPA)___Magenta (Purple)
Dust, fumes, and mists (including asbestos and radioactive materials)
Particulate (dust, fumes, mists, fogs, or smoke in combination with any other of the above gases on vapors.----- Canister color for contaminant above, with two inch gray stripe completely surrounding the canister near the top.

7.8 MAXIMUM CONTAMINANT LEVELS (MCL)

Respirator Type	Assigned Protection Factor*	Max Contaminant Level
½ Mask APR	10	10 X PEL
Full Face APR	50	50 X PEL
PAPR	100	100 X PEL
Supplied Air (Pressure Demand)	1000	1000 X PEL
SCBA and/or Supplied Air Respirator (PD Mode) With Escape Capability	>1000	>1000 X PEL

*Assigned protection factors (APFs) conforming with OSHA guidance for use against industrial hazards. For radiological contaminants, APFs conforming with 10 CFR 20 are applied in accordance with applicable RP&ES administrative and working level procedures.

NOTE: The following NIOSH (42 CFR Part 84) certifications are relevant for respirator usage:

APRs: TC-84A (particulate) and TC-23C (organic vapors)

PAPR respirators carry a NIOSH certification (TC-84-A) for particulate filtration only

SARs carry the NIOSH Certification TC-19C

Scott Air Pak 2.2 SCBAs carry the NIOSH certification TC-13F

7.9 Air-purifying respirators with chemical cartridges shall not be selected for use against any of the listed chemicals in Attachment 6, due to their poor warning properties in the event of cartridge breakthrough.

7.10 Like chemical contamination, radioactivity can become airborne through such operations as grinding, welding, leakage from reactor systems and from disturbing contamination deposited on surfaces. Airborne activity in occupied areas shall be controlled by the application of engineering controls to the extent feasible, to reduce or contain the contamination. Air sampling is used to ensure appropriate control and tracking of internal exposures as well as for determination of respiratory protection required on that job and for individuals in adjacent areas.

7.11 The final determination as to the requirement to wear a respirator for radiological purposes when entering an Airborne Radioactivity Area, will be determined in accordance with RP-27, Issue and Control of Radiation Work Permits and Processing ALARA Reviews. Determination as to need and use of the appropriate respirator when entering these areas will take into account various factors such as ALARA issues, air sampling data, process or engineering controls, time in work area, specific task requirements and/or other considerations. When specified on an RWP that a respirator is not required (i.e., is not ALARA) a respirator is not to be worn.

7.12 In the event respirator use is required in environments immediately dangerous to life or health (IDLH), the following requirements shall apply:

a. At least two employees are located outside the atmosphere equipped with either a pressure demand SCBA, or pressure demand air line respirator with an auxiliary escape bottle.

b. Any appropriate retrieval equipment that may contribute to employee rescue is in place and ready to use.

c. Visual, voice or signal line communication is maintained with employees inside the contaminated atmosphere.

d. No one enters the contaminated atmosphere to perform a rescue without at least two employees located outside the contaminated atmosphere in communication with the rescuer.

8.0 MEDICAL EVALUATION

8.1 Prior to initial fitting of a face sealing respirator and assigning personnel to perform tasks requiring the use of respirators, the employee shall be medically qualified in compliance with requirements of 29CFR1910.134(e) and 10CFR20.1703(c)(6).

8.2 Employees not physically and psychologically capable of wearing respirators shall not be assigned to work requiring the use of respirators.

8.3 A confidential medical history questionnaire (Attachment 2) is completed by the prospective wearer. The medical information is then forwarded to the employer-designated physician or licensed health care professional (PLHCP) for review. The PLHCP evaluates the questionnaire and spirometry data, and either approves the employee for respirator usage directly via written recommendation, or may request a follow up exam with additional testing at his/her discretion. The PLHCP may impose medical or workplace restrictions on respirator usage.

8.4 Following the initial medical qualification, subsequent medical evaluations are required either every 36 months, or at a more frequent interval as determined by a physician. Additional medical evaluations however, may be triggered by several conditions, including but not limited to:

a. Report of medical symptoms that may affect employee's ability to wear a respirator;

b. Observation or judgement by the PLHCP, Supervisor, or Program Administrator that re-evaluation is necessary;

c. A change In workplace conditions

The Human Resources Director (or designee) will ensure all qualified respirator wearers receive follow up examinations as necessary in accordance with PLHCP determinations.

8.5 The PLHCP shall be provided the following information concerning the employee's ability to use a respirator:

a. Respirator type and weight;

b. Duration and frequency of use;

c. Expected physical work effort;

d. Additional protective clothing and equipment to be worn;

e. Potential temperature and humidity conditions encountered; and

f. A copy of the employer's respiratory protection program and the revised OSHA Standard.

8.6 The Human Resources Director or designee shall verify a Respirator User Authorization Record is signed for each individual whose medical evaluation has been satisfactorily completed.

8.7 A Bioassay Program may, at the discretion of management, be implemented to:

a. Establish baseline data for individual employees (initial and termination whole body counts).

b. Evaluate actual or suspected ingestion or inhalation of airborne materials.

c. Assess dose in the event of uptake or deposition of radioisotopes/ hazardous material.

d. Validate the effectiveness of the Respiratory Protection Program.

8.8 A Whole Body Count is required before an employee is allowed to wear a respirator. The Whole Body Count technician shall sign and date the Respirator User Authorization Record to indicate completion.

9.0 FIT TESTING

9.1 Fit testing will be conducted via the TSI Portacount system which evaluates facial fit using the quantitative method (RP-40, Respirator Fit Testing). This instrument shall be calibrated annually and maintained in accordance with manufacturer's instructions.

9.2 Fit-testing will take place at least annually or as required by other specific OSHA standards (i.e., 29CFR1926.62). Supplied air respirators and PAPRs shall be fit tested in the negative pressure mode regardless of their mode of operation.

9.3 Fit testing will be performed whenever a new respirator (make, model or size) has been issued; there is a change in facial features, for example, weight loss/gain, accident or dental changes; or difficulty in achieving a satisfactory positive/negative seal check.

9.4 When the fit factor as determined through quantitative fit testing protocol is equal to or greater than 100 for tight-fitting half face pieces, or equal to or greater than 1000 for tight-fitting full face pieces, the quantitative fit test has passed with that respirator.

Between individual fit tests, face pieces shall be disinfected with individually wrapped towelettes. At the end of each day, face pieces used for fit testing shall be cleaned in accordance with Section 10.0.

9.5 The fit test technician shall sign and date the Respirator User Authorization Record (Attachment 1) to indicate successful completion of respirator fit testing and mark the form to indicate the size of the device tested and if respirator spectacles are required.

9.6 In accordance with 29CFR1910.134, Appendix A(2), a mirror shall be made available to evaluate respirator fit.

10.0 INSPECTION, MAINTENANCE, CLEANING AND STORAGE

10.1 Respirators are returned to designated respirator drop off receptacle after each use. The respirator is then cleaned and inspected before being issued to a new user.

10.2 Inspection of respirators shall determine condition of:

a. Face piece Surfaces

b. Exhalation and Inhalation Valves

c. Cartridge Holders

d. Straps

e. Batteries (PAPR only)

f. Lenses

g. Hoses

h. Gaskets

i. Alarms (SCBA only)

j. Purification Units

k. Connection Devices

l. Valves

10.3 Special use respirators (when in site use) shall be inspected at least monthly (not to exceed 59 days) and the inspection documented. Special use respirators at BRP include:

a. SCBA (conduct in accordance with T7-34, SCBA Apparatus Equipment Inspection)

b. Supplied-Air Respirators

Findings and corrective actions from the inspection shall be documented on the form included as Attachment 3, Respirator Tracking Form. Defective parts shall be replaced (where possible) and defective respirators taken out of service.

10.4 Cleaning and inspection of APRs and PAPR respirators should be accomplished as follows after each use:

Remove filters or cartridges and wash the respirators in one of the following ways:

a. Mechanical Dishwashing (See Respiratory Protection Program - Field Inspection, Cleaning, Maintenance and Storage Guidelines, instructions located in the Respirator Maintenance room).

b. Manual Washing of equipment:

1. Wash with Special Respirator Cleaner Plus or equivalent (according to use instruction) and hot water solution (maximum temperature 110°F).

2. Rinse completely in clean hot water (maximum temperature 110°F).

10.5 Hand dry respirators with a lint free cloth or let air dry.

10.6 Clean face shield.

10.7 Re-assemble face piece replacing applicable filter or filters.

10.8 Seal respiratory equipment in a plastic bag (including yellow disposal/return bag) along with Respirator Tracking Form.

10.9 Store respiratory equipment upright in a locker.

10.10 Respirators shall be kept in a sanitary condition location when not in use. Respirator face pieces shall be stored in clean plastic bags. Respirators shall not be stored in any unsanitary locations (tool boxes) or hung by straps. Respirators shall never be stored inside radiologically or chemically contaminated areas. Respirators shall be stored or protected against:

a. Chemical and radiological contamination

b. Dust

c. Sunlight

d. Temperature extremes of heat and cold

e. Extreme moisture

f. Damaging chemicals

g. Mechanical damage

11.0 SUPPLIED AIR SYSTEMS, BREATHING AIR QUALITY CONTROL AND USE

11.1 Breathing air shall meet at least the requirements of the specification for Grade D breathing air or better (D, E, or G, not A, K, or L) as described in the American National Standard Commodity Specification for Air ANSI/CGA G-7.1-1989. Cylinders shall be tested and maintained in accordance with 49CFR 173 and 178.

11.2 Grade D breathing air, as per ANSI/CGA G-7.1-1989, shall contain between 19.5 and 23.5 percent oxygen with the balance predominantly nitrogen, a maximum of 5 mg/m^3 oil (condensed), a maximum of 10 ppm carbon monoxide, no pronounced odor, and a maximum of 1000 ppm carbon dioxide.

11.3 Grade E breathing air, as per ANSI/CGA G-7.1-1989, shall contain between 20 and 22 percent oxygen with the balance predominantly nitrogen, a maximum of 5 mg/m^3 oil (condensed), a maximum of 10 ppm carbon monoxide, no pronounced odor, a maximum of 500 ppm carbon dioxide, and 25 ppm total hydrocarbon content (as methane).

11.4 Quality Verification. Breathing air suppliers must provide certification of analysis stating conformance, as a minimum, to Grade D breathing air standards for each cylinder and/or air lot.

11.5 Recharging Breathing Air Cylinders shall be accomplished in accordance with O-FPS-6, Recharging of SCBA Air Bottles.

11.6 Use of Supplied Air Systems:

a. Air line couplings shall be incompatible with outlets for other gas systems to prevent inadvertent servicing of air line respirators with non-respirable gases or oxygen.

b. Other air line couplings fittings may be used with the approval of the Corporate Safety Director.

c. The hose line length shall not exceed 300 feet from the air bank regulator to the user.

d. No more than three connections, excluding the connection to the regulator and final connection to the respirator, shall be between the breathing air cylinders and the user.

e. The breathing air hose shall be protected from direct contact with chemical materials which may permeate the hose. Acceptable methods of protection include suspension of the hose from the surface or covering with a commercially available sleeve or visqueen. Breathing air hose which has become contaminated will be removed from service and disposed of properly.

f. The breathing air regulator shall be adjusted to provide between 50 to 125 psi pressure.

g. The installed system used to supply breathing air shall be independently tested semi-annually for conformance to Grade E (preferred) or D standards at a minimum.

h. The compressor outlet for filling SCBA bottles is independently tested semi-annually for conformance to Grade E (preferred) or D standards at a minimum.

i. The air line respirator inspection sheet (Attachment 8) shall be completed by a qualified individual prior to the start of work.

11.7 Maintenance Of Supplied Air Cylinders:

a. Self contained breathing apparatus bottles shall be returned to a vendor for periodic hydrostatic testing in accordance with the following Scott SCBA manual requirements:

1. Steel tanks - every five years

2. Aluminum tanks - every five years

3. Composite tanks (fiberglass and metal) - every three years

b. Self contained breathing apparatus bottles in use shall have a current hydrostatic test.

c. SCBA bottles shall be refilled with Grade E or D air as required.

d. Breathing air quality shall be monitored during use in conjunction with the following operations:

1. Filling SCBA bottles.

2. Providing air to personnel in supplied air respiratory protection equipment.

12.0 TRAINING/QUALIFICATIONS

12.1 A training program shall be developed based on hazards to be encountered at BRP, including the process and engineering controls, and respiratory protection devices used.

12.2 A representative from Safety shall provide information concerning non-radioactive hazards and industrial safety concerns.

12.3 A representative from RP shall provide information concerning radioactive hazards.

12.4 A representative from Property Protection shall provide information concerning Fire Protection.

12.5 Classroom and practical exercises for respiratory protection training shall be conducted annually and shall include at a minimum:

a. Purpose of the respirator

b. Types of cartridges and their limitations

c. Proper donning and doffing of respirators

d. Methods of determining facial leaks

e. Methods and techniques of cleaning and sanitizing the respirator

f. Inspection and maintenance criteria

g. Proper storage requirements

12.6 Prior to donning respiratory protection devices during practical exercises, the trainer shall first ascertain whether trainee has proper medical qualification.

12.7 The trainee's Respirator User Authorization Record (Attachment 1) shall be signed and dated by the training instructor to indicate successful completion of respirator training and to designate the type(s) of respirator(s) for which the training was conducted.

12.8 Annual respiratory requalification is mandatory.

12.9 The following worker qualification dates shall be tracked and requalification scheduled as stated below.

a. Medical evaluations (repeated every 36 months or as stated by reviewing physician)

b. Respiratory Protection Training (annually)

c. Quantitative Fit Test (annually)

d. Whole Body Count (repeated as necessary)

13.0 PROGRAM EVALUATION

13.1 The Respiratory Protection Program Administrator, or designee, will evaluate the effectiveness of the respirator program as necessary and denote deficiencies to the DM&P Manager.

13.2 The evaluation will include elements specified by the OSHA Standard, 29 CFR 1910.134(l) and shall include:

a. Technical information review

b. Compliance with regulations

c. Review of medical qualifications

d. Review of training qualifications

e. Review of fit test documentation

f. Review of respirator mishap reports (i.e., cartridge failures, etc.)

g. Maintenance and cleaning procedure review

h. Review of inspection procedures

i. Record keeping evaluation

j. Work place evaluation

k. Employee consultation

l. Respirator selection

14.0 RECORDKEEPING

14.1 Information from the Respirator User Authorization Record is entered into the SAIC database by the respiratory fit test technicians. Radiation Protection technicians in Access Control use the database to verify that the individual is qualified to be assigned a respirator. The names of persons authorized to use a respirator are available for inspection with the respective dates of training, fit test and medical evaluation.

14.2 The following records are completed by this procedure and submitted to Document Control:

a. Respirator User Authorization Record

b. Notification of Medical Evaluation and Pulmonary Function Test

c. Fit Test Report (PortaCount Printout)

d. Respirator Tracking Form

14.3 Records of fit testing shall be maintained by the Safety Department. These records will include the manufacturer, model, and size of respirator the employee used in the fit test and the procedures used to perform the fit test.

15.0 ATTACHMENTS

a. Attachment 1, User Authorization Record

b. Attachment 2, Consumers Energy Medical Evaluation Questionnaire and Pulmonary Function Test Records

c. Attachment 3, Respirator Tracking Form

d. Attachment 4, Flow Diagram-Respirator Issue Logic

e. Attachment 5, BRP Dust Masks Guidelines

f. Attachment 6, Chemical Species with Poor Warning Properties

g. Attachment 7, Air Line Respirator Unit Inspection Sheet

ATTACHMENT 1
USER AUTHORIZATION RECORD

BIG ROCK POINT
RESPIRATOR USER AUTHORIZATION RECORD

A. AUTHORIZATION REQUESTED FOR

NAME (Last, First, MI)	SS# / /	CO. OR WORK GROUP	MAIL STOP NO

B. MEDICAL EVALUATION

CERTIFICATION DATE

ف CERTIFIED TO WEAR RESPIRATORY EQUIPMENT
ف CERTIFIED TO WEAR RESPIRATORY EQUIPMENT WITH LIMITATIONS (SEE BELOW)
ف NOT CERTIFIED TO WEAR RESPIRATORY EQUIPMENT

COMMENTS (LIMITATIONS FOR USE)

MEDICAL EVALUATION SHOULD BE SIGNED PRIOR TO ATTENDING TRAINING	MEDICAL REP SIGNATURE	DATE

THE INDIVIDUAL IDENTIFIED IN SECTION A ABOVE IS AUTHORIZED TO WEAR THE FOLLOWING RESPIRATORY EQUIPMENT WITH RESTRICTIONS (IF APPLICABLE) LISTED IN SECTION B.

FIRST YEAR AUTHORIZATION

C. RESPIRATORY PROTECTION TRAINING

ف 1/2 MASK APR ف PAPR ف SUPPLIED AIR ف AIR LINE HOOD ف FULLFACE APR	TRAINING DEPT. SIGNATURE	DATE
ف SCBA TRAINING	TRAINING DEPT. SIGNATURE	DATE

D. RESPIRATORY FIT TEST ف QUANTITATIVE ف QUALITATIVE

FIT FACTOR		SIZE	MODEL / MODEL	FIT TEST TECH	DATE
_____	1/2 MASK APR	ف S ف M ف L ف XL			
_____	FULL Facepiece APR	ف S ف M ف L ف XL	MSA ULTRA TWIN		
_____	FULL Facepiece PAPR	ف S ف M ف L ف XL			
_____	FULL Facepiece SAR	ف S ف M ف L ف XL			
_____	FULL Facepiece SCBA	ف S ف M ف L ف XL	SCOTT AV2000		
_____	OTHER _____	ف S ف M ف L ف XL			

E. WHOLE BODY COUNT - N/A if not qualifying for radiological respirator use

ف N/A	WHOLE BODY COUNT DATE	RAD PRO SIGNATURE	DATE

F. USER AUTHORIZATION EXPIRES

EXP. DATE	AUTHORIZED BY	DATE	COMPUTER UPDATE BY	DATE

ATTACHMENT 1
USER AUTHORIZATION RECORD

SECOND YEAR AUTHORIZATION

RESPIRATORY PROTECTION TRAINING

ف 1/2 MASK APR ف PAPR ف SUPPLIED AIR ف AIR LINE HOOD ف FULL FACE APR	TRAINING DEPT. SIGNATURE	DATE
G SCBA TRAINING	TRAINING DEPT. SIGNATURE	DATE

RESPIRATORY FIT TEST ف QUANTITATIVE ف QUALITATIVE

FIT FACTOR		SIZE	MODEL / MODEL	FIT TEST TECH	DATE
_____	1/2 MASK APR	ف S ف M ف L ف XL	_____	_____	_____
_____	FULL Facepiece APR	ف S ف M ف L ف XL	MSA ULTRA TWIN	_____	_____
_____	FULL Facepiece PAPR	ف S ف M ف L ف XL	_____	_____	_____
_____	FULL Facepiece SAR	ف S ف M ف L ف XL	_____	_____	_____
_____	FULL Facepiece SCBA	ف S ف M ف L ف XL	SCOTT AV2000	_____	_____
_____	OTHER _____	ف S ف M ف L ف XL	_____	_____	_____

USER AUTHORIZATION EXPIRES

EXP. DATE	AUTHORIZED BY	DATE	COMPUTER UPDATE BY	DATE

THIRD YEAR AUTHORIZATION

RESPIRATORY PROTECTION TRAINING

ف 1/2 MASK APR ف PAPR ف SUPPLIED AIR ف AIR LINE HOOD ف FULL FACE APR	TRAINING DEPT. SIGNATURE	DATE
ف SCBA TRAINING	TRAINING DEPT. SIGNATURE	DATE

RESPIRATORY FIT TEST ف QUANTITATIVE ف QUALITATIVE

FIT FACTOR		SIZE	MODEL / MODEL	FIT TEST TECH	DATE
_____	1/2 MASK APR	ف S ف M ف L ف XL	_____	_____	_____
_____	FULL Facepiece APR	ف S ف M ف L ف XL	MSA ULTRA TWIN	_____	_____
_____	FULL Facepiece PAPR	ف S ف M ف L ف XL	_____	_____	_____
_____	FULL Facepiece SAR	ف S ف M ف L ف XL	_____	_____	_____
_____	FULL Facepiece SCBA	ف S ف M ف L ف XL	SCOTT AV2000	_____	_____
_____	OTHER _____	ف S ف M ف L ف XL	_____	_____	_____

USER AUTHORIZATION EXPIRES

EXP. DATE	AUTHORIZED BY	DATE	COMPUTER UPDATE BY	DATE

FORM REVISED MAY 1999

ATTACHMENT 2

CONSUMERS ENERGY RESPIRATOR MEDICAL EVALUATION QUESTIONNAIRE AND PULMONARY FUNCTION TEST RECORDS

Consumers Energy Respirator Medical Evaluation Questionnaire
(Appendix C to OSHA 1910.134)
(Page 1 of 10)

To the Employer: Answers to questions in **Section 1,** and to Question 9 in **Section 2 of Part A,** do not require a medical examination.

(Examiner should ask the employee the following question:)
To the Employee: Can you read? (check one): ____ Yes ____ No
Your employer must allow you to answer this questionnaire during normal working hours, or at a time and place that is convenient to you. To maintain your confidentiality, your employer or supervisor must not look at or review your answers, and your employer must tell you how to deliver this questionnaire to the health care professional who will review it.

Part A. Section 1. (Mandatory) The following information must be provided by every employee who has been selected to use any type of respirator (please print).

1. Today's Date: _____
2. Name: _____
3. Age (to nearest year):
4. Sex (circle one): Male / Female
5. Height: _____ _____ feet _____ inches
6. Weight: _____ Pounds _____
7. Your job title: _____
8. Phone number where you can be reached by the health care professional who reviews this questionnaire (include Area Code): _____
9. The best time to phone you at this number: _____
10. _____ Yes _____ No Has your employer told you to contact the health care professional who will review this questionnaire?
11. Check the type of respirator you will use (you can check more than one category):
    a. _____ N, R, or P disposable respirator (filter-mask, non-cartridge type only)
    b. _____ Other type (i.e., half- or full-face piece type, power-air purifying, supplied-air, self-contained breathing apparatus)
12. _____ Yes _____ No Have you worn a respirator?

    If yes, what type(s): _____

ATTACHMENT 2

CONSUMERS ENERGY RESPIRATOR MEDICAL EVALUATION QUESTIONNAIRE AND PULMONARY FUNCTION TEST RECORDS

Consumers Energy Respirator Medical Evaluation Questionnaire
(Appendix C to OSHA 1910.134)
(Page 2 of 10)

Part A. Section 2. (Mandatory) Questions 1 through 9 below must be answered by every employee who has been selected to use any type of respirator (please check yes or no).

1. __ Yes __ No Do you currently smoke tobacco, or have you smoked tobacco in the last month?

2. Have you ever had any of the following conditions?
   a. ___ Yes ___ No Seizures (fits)
   b. ___ Yes ___ No Diabetes (sugar disease)
   c. ___ Yes ___ No Allergic reactions that interfere with your breathing
   d. ___ Yes ___ No Claustrophobia (fear of closed-in places)
   e. ___ Yes ___ No Trouble smelling odors

3. Have you ever had any of the following pulmonary or lung problems?
   a. ___ Yes ___ No Asbestosis
   b. ___ Yes ___ No Asthma
   c. ___ Yes ___ No Chronic bronchitis
   d. ___ Yes ___ No Emphysema
   e. ___ Yes ___ No Pneumonia
   f. ___ Yes ___ No Tuberculosis
   g. ___ Yes ___ No Silicosis
   h. ___ Yes ___ No Pneumothorax (collapsed lung)
   i. ___ Yes ___ No Lung cancer
   j. ___ Yes ___ No Broken ribs
   k. ___ Yes ___ No Any chest injuries or surgeries
   l. ___ Yes ___ No Any other lung problem that you've been told about

4. Do you currently have any of the following symptoms of pulmonary or lung illness?
   a. ___ Yes ___ No Shortness of breath
   b. ___ Yes ___ No Shortness of breath when walking fast on level ground or walking up a slight hill or incline
   c. ___ Yes ___ No Shortness of breath when walking at your own pace on level ground
   d. ___ Yes ___ No Have to stop for breath when walking at your own pace on level ground
   e. ___ Yes ___ No Shortness of breath when washing or dressing yourself
   f. ___ Yes ___ No Shortness of breath that interferes with your job
   g. ___ Yes ___ No Coughing that produces phlegm (thick sputum)

ATTACHMENT 2

CONSUMERS ENERGY RESPIRATOR MEDICAL EVALUATION QUESTIONNAIRE AND PULMONARY FUNCTION TEST RECORDS

Consumers Energy Respirator Medical Evaluation Questionnaire
(Appendix C to OSHA 1910.134)
(Page 3 of 10)

h. __ Yes __ No Coughing that wakes you early in the morning
i. __ Yes __ No Coughing that occurs mostly when you are lying down
j. __ Yes __ No Coughing up blood in the last month
k. __ Yes __ No Wheezing
l. __ Yes __ No Wheezing that interferes with your job
m. __ Yes __ No Chest pain when you breath deeply
n. __ Yes __ No Any other symptoms that you think may be related to lung problems

5. Have you ever had any of the following cardiovascular or heart problems?
   a. ___ Yes ___ No Heart attack
   b. ___ Yes ___ No Stroke
   c. ___ Yes ___ No Angina
   d. ___ Yes ___ No Heart failure
   e. ___ Yes ___ No Swelling in your legs or feet (not caused by walking)
   f. ___ Yes ___ No Heart arrhythmia (heart beating irregularly)
   g. ___ Yes ___ No High blood pressure
   h. ___ Yes ___ No Any other heart problems that you've been told about

6. Have you ever had any of the following cardiovascular or heart symptoms?
   a. ___ Yes ___ No Frequent pain or tightness in your chest
   b. ___ Yes ___ No Pain or tightness in your chest during physical activity
   c. ___ Yes ___ No Pain or tightness in your chest that interferes with your job
   d. ___ Yes ___ No In the past two years, have you noticed your heart skipping or missing a beat
   e. ___ Yes ___ No Heartburn or indigestion that is not related to eating
   f. ___ Yes ___ No Any other symptoms that you think may be related to heart or circulation problems

7. Do you currently take medication for any of the following problems?
   a. ___ Yes ___ No Breathing or lung problems
   b. ___ Yes ___ No Heart trouble
   c. ___ Yes ___ No Blood pressure
   d. ___ Yes ___ No Seizures (fits)

ATTACHMENT 2

CONSUMERS ENERGY RESPIRATOR MEDICAL EVALUATION QUESTIONNAIRE AND PULMONARY FUNCTION TEST RECORDS

Consumers Energy Respirator Medical Evaluation Questionnaire
(Appendix C to OSHA 1910.134)
(Page 4 of 10)

8. If you've used a respirator, have you ever had any of the following problems?
(If you've never used a respirator, check the following space and go to Question 9.)
___ Never used
a. ___ Yes ___ No Eye irritation
b. ___ Yes ___ No Skin allergies or rashes
c. ___ Yes ___ No Anxiety
d. ___ Yes ___ No General weakness or fatigue
e. ___ Yes ___ No Any other problem that interferes with your use of a respirator

9. a. ___ Yes ___ No Would you like to talk to the health care professional who will review this questionnaire about your answers to this questionnaire?

Questions 10 to 15 below must be answered by every employee who has been selected to use either a full-face piece respirator or a self-contained breathing apparatus (SCBA). For employees who have been selected to use other types of respirators, answering these questions is voluntary.

10. a. ___ Yes ___ No Have you ever lost vision in either eye (temporarily or permanently)?

11. Do you currently have any of the following vision problems?
a. ___ Yes ___ No Wear contact lenses
b. ___ Yes ___ No Wear glasses
c. ___ Yes ___ No Color blind
d. ___ Yes ___ No Any other vision problem

12. ___ Yes ___ No Have you ever had an injury to your ears, including a broken ear drum?

13. Do you currently have any of the following hearing problems?
a. ___ Yes ___ No Difficulty hearing
b. ___ Yes ___ No Wearing a hearing aid
c. ___ Yes ___ No Any other hearing or ear problem

14. ___ Yes ___ No Have you ever had a back problem?

ATTACHMENT 2

CONSUMERS ENERGY RESPIRATOR MEDICAL EVALUATION QUESTIONNAIRE AND PULMONARY FUNCTION TEST RECORDS

Consumers Energy Respirator Medical Evaluation Questionnaire
(Appendix C to OSHA 1910.134)
(Page 5 of 10)

15. Do you currently have any of the following musculoskeletal problems?
    a. ___ Yes ___ No Weakness in any of your arms, hands, ;legs or feet
    b. ___ Yes ___ No Back pain
    c. ___ Yes ___ No Difficulty fully moving your arms and legs
    d. ___ Yes ___ No Pain or stiffness when you lean forward or backward at the waist
    e. ___ Yes ___ No Difficulty moving your head up or down
    f. ___ Yes ___ No Difficulty moving your head side to side
    g. ___ Yes ___ No Difficulty bending at your knees
    h. ___ Yes ___ No Difficulty squatting to the ground
    i. ___ Yes ___ No Climbing a flight of stairs or a ladder, carrying more than 25 pounds

Part B. Any of the following questions, and other questions not listed, may be added to the questionnaire at the discretion of the health care professional who will review the questionnaire.

1. ___ Yes ___ No In your present job, are you working at high altitudes (over 5,000 feet) or in a place that has lower-than-normal amounts of oxygen?
   ___ Yes ___ No If yes, do you have feelings of dizziness, shortness of breath, pounding in your chest, or other symptoms when you're working under these conditions?
2. ___ Yes ___ No At work or at home, have you ever been exposed to hazardous solvents, hazardous airborne chemicals (i.e., gases, fumes, or dust), or have you come into skin contact with hazardous chemicals?
   ___ Yes ___ No If yes, name the chemicals, if you know them:

   _____

   _____

3. Have you ever worked with any of the materials, or under any of the conditions, listed below?
    a. ___ Yes ___ No Asbestos
    b. ___ Yes ___ No Silica (i.e., sandblasting)
    c. ___ Yes ___ No Tungsten/cobalt (i.e., grinding or welding this material)
    d. ___ Yes ___ No Beryllium
    e. ___ Yes ___ No Aluminum
    f. ___ Yes ___ No Coal (i.e., mining)
    g. ___ Yes ___ No Iron

ATTACHMENT 2

CONSUMERS ENERGY RESPIRATOR MEDICAL EVALUATION QUESTIONNAIRE AND PULMONARY FUNCTION TEST RECORDS

Consumers Energy Respirator Medical Evaluation Questionnaire
(Appendix C to OSHA 1910.134)
(Page 6 of 10)

h. ___ Yes ___ No Tin
i. ___ Yes ___ No Dusty environments
j. ___ Yes ___ No Any other hazardous exposures
If yes, describe these exposures:
_____
_____

4. List any second jobs or side businesses you have: _____
_____
_____

5. List your previous occupations: _____
_____
_____

6. List your current and previous hobbies: _____
_____
_____

7. ___ Yes ___ No Have you been in the military services?
8. ___ Yes ___ No If yes, were you exposed to biological or chemical agents (either in training or combat)?
9. ___ Yes ___ No Other than medications for breathing and lung problems, heart trouble, blood pressure, and seizures mentioned earlier in this questionnaire, are you taking any other medications for any reason (including over-the-counter medications)?
If yes, name the medication(s) if you know them:
_____

10. Will you be using any of the following items with your respirator(s)?
a. ___ Yes ___ No HEPA filters
b. ___ Yes ___ No Canisters (i.e., gas masks)
c. ___ Yes ___ No Cartridges

ATTACHMENT 2
CONSUMERS ENERGY RESPIRATOR MEDICAL EVALUATION QUESTIONNAIRE AND PULMONARY FUNCTION TEST RECORDS
Consumers Energy Respirator Medical Evaluation Questionnaire
(Appendix C to OSHA 1910.134)
(Page 7 of 10)

11. How often are you expected to use the respirator(s)? Check yes or no for all answers that apply to you.
    a. ___ Yes ___ No Escape only (no rescue)
    b. ___ Yes ___ No Emergency rescue only
    c. ___ Yes ___ No Less than five hours per week
    d. ___ Yes ___ No Less than two hours per day
    e. ___ Yes ___ No Two to four hours per day
    f. ___ Yes ___ No Over four hours per day

12. During the period you are using the respirator(s), is your work effort:

    a. ___ Yes ___ No Light (less than 200 kcal per hour)
    If yes, how long does this period last during the average shift:
    _____ hours _____ minutes

    NOTE: Examples of a light work effort are: sitting while writing, typing, drafting, or performing light assembly work; or standing while operating a drill [press (1-3 pounds) or controlling machines.

    b. ___ Yes ___ No Moderate (200 to 350 kcal per hour)
    If yes, how long does this period last during the average shift:

    _____ hours _____ minutes

    NOTE: Examples of moderate work effort are: sitting while nailing or filing; driving a truck or bus in urban traffic; standing while drilling, nailing, performing assembly work, or transferring a moderate load (about 35 pounds) at trunk level; walking on a level surface about 2 mph or down a 5-degree grade about 3 mph; or pushing a wheelbarrow with a heavy load (about 100 pounds) on a level surface.

ATTACHMENT 2

CONSUMERS ENERGY RESPIRATOR MEDICAL EVALUATION QUESTIONNAIRE AND PULMONARY FUNCTION TEST RECORDS

Consumers Energy Respirator Medical Evaluation Questionnaire
(Appendix C to OSHA 1910.134)
(Page 8 of 10)

c. ___ Yes ___ No Heavy (about 350 kcal per hour)
If yes, how long does this period last during the average shift:
_____ hours _____ minutes

NOTE: Examples of a heavy work are: lifting a heavy load (about 50 pounds) from the floor to your waist or shoulder; working on a loading dock; shoveling; standing while bricklaying or chipping castings; walking up an eight-degree grade about two mph; climbing stairs with a heavy load (about 50 pounds).

13. ___ Yes ___ No Will you be wearing protective clothing and/or equipment (other than the respirator) when you're using your respirator?
If yes, describe this protective clothing and/or equipment:
_____

14. a. ___ Yes ___ No Will you be working under hot conditions (temperatures exceeding 77°F.)?

15. b. ___ Yes ___ No Will you be working under humid conditions?

16. Describe the work you'll be doing while using your respirator(s):
_____
_____

17. Describe any special or hazardous conditions you might encounter when you're using your respirator(s) (i.e., confined spaces, life-threatening gases):
_____
_____

18. Provide the following information, if you know it, for each toxic substance that you'll be exposed to when you're using your respirator(s): _____

a. Name of the first toxic substance: _____
Estimated maximum exposure level per shift: _____
Duration of exposure per shift: _____

ATTACHMENT 2

CONSUMERS ENERGY RESPIRATOR MEDICAL EVALUATION QUESTIONNAIRE AND PULMONARY FUNCTION TEST RECORDS

Consumers Energy Respirator Medical Evaluation Questionnaire
(Appendix C to OSHA 1910.134)
(Page 9 of 10)

b. Name of the second toxic substance: _____
Estimated maximum exposure level per shift: _____
Duration of exposure per shift: _____

c. Name of the third toxic substance: _____
Estimated maximum exposure level per shift: _____
Duration of exposure per shift: _____

d. The name of any other toxic substances that you'll be exposed to while using your respirator(s):

_____

_____

Describe any special responsibilities you'll have while using your respirator(s) that may affect the safety and well-being of others (i.e., rescue, security):

_____

_____

19. _____

FORM REVISED DECEMBER 1998

ATTACHMENT 2
CONSUMERS ENERGY RESPIRATOR MEDICAL EVALUATION QUESTIONNAIRE AND PULMONARY FUNCTION TEST RECORDS
Pulmonary Function Test Records
(Page 10 of 10)

THREE-YEAR PULMONARY FUNCTION TEST RECORD				
EMPLOYEE'S NAME	SOCIAL SECURITY NUMBER	AGE	HEIGHT	SEX
JOB TITLE	LOCATION	BIRTH DATE		

FIRST YEAR TEST RESULTS

	ACTUAL	% OF PREDICTED	COMPARATIVE NORM (KNUDSEN STD BTPS)
Forced Vital Capacity (FVC)	_____ liters	_____ %	_____ to _____ liters
Forced Expiratory Volume in one second (FEV1)	_____ L/1.0 Sec	_____ %	_____ to _____ L/1.0 Sec
FEV1/FVC (ratio)	_____ %	_____ %	Above 75%

ANALYSIS AND COMPARATIVE RESULTS:

☐ Baseline ☐ Within normal range ☐ Below normal range ☐ No significant change
☐ Loss @ FVC ☐ Loss @ FEV1 ☐ Recommended further professional consultation

Type of Testing Equipment _____ Model _____
Remarks _____
Technician Signature _____
First year – Date Reviewed _____ Physician's Signature _____
☐ PASS ☐ FAIL

SECOND YEAR TEST RESULTS

	ACTUAL	% OF PREDICTED	COMPARATIVE NORM (KNUDSEN STD BTPS)
Forced Vital Capacity (FVC)	_____ liters	_____ %	_____ to _____ liters
Forced Expiratory Volume in one second (FEV1)	_____ L/1.0 Sec	_____ %	_____ to _____ L/1.0 Sec
FEV1/FVC (ratio)	_____ %	_____ %	Above 75%

ANALYSIS AND COMPARATIVE RESULTS:

☐ Baseline ☐ Within normal range ☐ Below normal range ☐ No significant change
☐ Loss @ FVC ☐ Loss @ FEV1 ☐ Recommended further professional consultation

Type of Testing Equipment _____ Model _____
Remarks _____
Technician Signature _____
Second year – Date Reviewed _____ Physician's Signature _____
☐ PASS ☐ FAIL

THIRD YEAR TEST RESULTS

	ACTUAL	% OF PREDICTED	COMPARATIVE NORM (KNUDSEN STD BTPS)
Forced Vital Capacity (FVC)	_____ liters	_____ %	_____ to _____ liters
Forced Expiratory Volume in one second (FEV1)	_____ L/1.0 Sec	_____ %	_____ to _____ L/1.0 Sec
FEV1/FVC (ratio)	_____ %	_____ %	Above 75%

ANALYSIS AND COMPARATIVE RESULTS:

☐ Baseline ☐ Within normal range ☐ Below normal range ☐ No significant change
☐ Loss @ FVC ☐ Loss @ FEV1 ☐ Recommended further professional consultation

Type of Testing Equipment _____ Model _____
Remarks _____
Technician Signature _____
Third year – Date Reviewed _____ Physician's Signature _____
☐ PASS ☐ FAIL

ATTACHMENT 3
RESPIRATOR TRACKING FORM

This respirator number _____

Was cleaned by: _____ Date: _____

Was assembled, inspected and surveyed

by: _____ Date: _____

Was worn by: _____ Date: _____

SSN: _____ (Time) from: _____ to: _____

RWP Number: _____ Location: _____

Comments/corrective actions: _____

_____

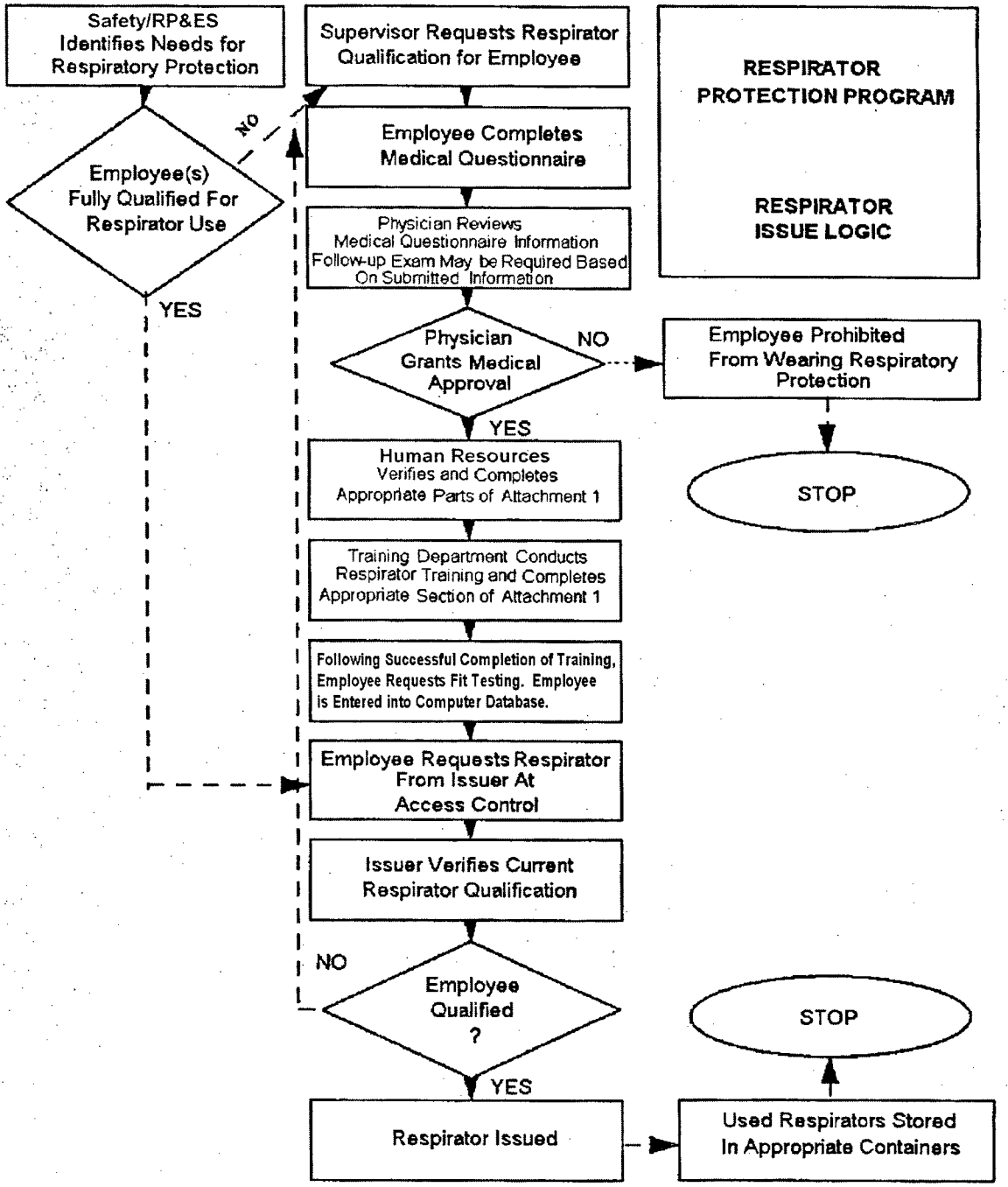
_____

Forward to Radiation Protection Supervisor, then to Respiratory Program Administrator for filing when complete.

ATTACHMENT 4

FLOW DIAGRAM – RESPIRATOR ISSUE LOGIC

(Diagram revised January 20, 2005)



ATTACHMENT 5
BRP DUST MASKS GUIDELINES
(Page 1 of 2)

GUIDELINES FOR: DUST MASKS

INTENT: To provide a policy defining when and where a dust mask is accepted in accordance with Corporate Health and Safety recommendations.

DEFINITION: A dust mask is a negative pressure filtering facepiece with a filter as an integral part of the facepiece or with the entire facepiece composed of the filtering medium.

GENERAL STATEMENT OF GUIDELINES:

Big Rock Point does not maintain a Dust Mask Fit Test Program. Dust masks shall not be required or recommended for use for any work at BRP. However, site employees are allowed to wear dust masks at their discretion when: 1) an assessment is performed to verify no radiological hazard exists; and 2) it can be shown that no hazard requiring the use of a respirator is present; and 3) the wearer has no physical or physiological condition that could interfere with the employee's ability to wear one (asthma, claustrophobia, or any other pre-existing lung condition). Approved respirators shall be worn when applicable hazards are present.

GENERAL REQUIREMENTS:

1. Engineering and process controls shall be used, to the extent practical, to minimize generation of airborne hazardous material. This may include, but is not limited to, wetting surfaces and using HEPA filtration systems.

2. Dust masks shall not be used for work with radioactive material without performing a radiological assessment.

   NOTE: Surgeon-style masks may be used as facial anti-Cs at the worker's discretion, in accordance with General Statement of Guidelines.

3. Dust masks shall not be used during work with asbestos.

4. The only dust masks accepted for use for non-asbestos insulation, dust and welding fumes are the 3M 8233 and 8293, Use of alternate dust masks may be used with the approval of the Respiratory Protection Program Administrator.

   Stock numbers for 3M models: Medium 27-62813
   Large 27-62821

ATTACHMENT 5
BRP DUST MASKS GUIDELINES
(Page 2 of 2)

5. Prior to use of a dust mask, sampling or other appropriate methods used to evaluate the hazard should be documented.

6. Each user shall be provided with, and shall read, a copy of the Appendix D of 29CFR1910.134, Voluntary Respirator Use Training, each time a dust mask is obtained.

Appendix D to OSHA 1910.134, Voluntary Respirator Use Training

Information for employees using respirators when NOT REQUIRED under the standard.

Respirators are an effective method of protection against designated hazards when properly selected and worn. Respirator use is encouraged, even when exposures are below the exposure limit, to provide an additional level of comfort and protection for workers. However, if a respirator is used improperly or not kept clean, the respirator itself can become a hazard to the worker. Sometimes, workers may wear respirators to avoid exposures to hazards, even if the amount of hazardous substances does not exceed the limits set by OSHA standards. If your employer provides respirators for your voluntary use, you need to take certain precautions to be sure that the respirator itself does not present a hazard.

You should do the following:

1. Read and heed all instructions provided by the manufacturer on use, maintenance, cleaning and care, and warnings regarding the respirator's limitations.

2. Choose respirators certified for use to protect against the contaminant of concern. The National Institute for Occupational Safety and Health of the U.S. Department of Health and Human Services (OSHA),certifies respirators. A label or statement of certification should appear on the respirator or respirator packaging. It will tell you what the respirator is designed for and how much it will protect you.

3. Do not wear your respirator into atmospheres containing contaminants for which your respirator is not designed to protect against. For example, a respirator designed to filter dust particles will not protect you against gases, vapors, or very small solid particles of fumes or smoke.

4. Keep track of your respirator so that you do not mistakenly use someone else's respirator.

ATTACHMENT 6
CHEMICAL SPECIES WITH POOR WARNING PROPERTIES

There are several gaseous materials for which chemical cartridge respirators should not be used for protection, regardless of concentration or time of exposure, due to poor warning properties, such as smell or irritation, therefore no indication of a breakthrough. A partial list of threes contaminants is identified below:

Acrolein
Acrylonitrile
Aniline
Arsine
Bromine
Carbon Disulfide
Carbon Monoxide
Dimethylaniline
Dimethylsulfate
Hydrogen Cyanide
Hydrogen Fluoride
Hydrogen Selenide
Hydrogen Sulfide (rapid olfactory fatigue)
Methyl Bromide
Methyl Carbonyl
Methyl Chloride
Nitro Compounds
Nitrobenzene
Nitrogen Oxides
Nitroglycerine
Nitromethane
Ozone
Phosgene
Phosphine
Phosphorous Trichloride
Stibine
Sulfur Chloride
Toluene Diisocyanate (TDI)
Vinyl Chloride

ATTACHMENT 7
AIR LINE RESPIRATOR UNIT INSPECTION SHEET

Unit Identification Number: _____

Installation Location: _____

Used to Support RWP Number: _____

Date Installed: _____ Removed: _____

Acceptance Inspection:

Item	SAT	UNSAT	N/A
1. No damage to breather box unit.	[ ]	[ ]	[ ]
2. Breather box gauges are in working order.	[ ]	[ ]	[ ]
3. All filters are present and secured by the canisters in the breather box.	[ ]	[ ]	[ ]
4. All air line hoses from the breather box to the supplied air respirator are properly connected with CEJN, Hansen, or other appropriate fittings secured.	[ ]	[ ]	[ ]
5. Proper air pressure for typo of respirator used.	[ ]	[ ]	[ ]
6. All air lines from air supply to breather box are connected with CEJN, Hansen, or other appropriate fittings secured.	[ ]	[ ]	[ ]

Reinspection Verification

To be performed prior to use and shiftly, while unit is in service.

Signature	Shift	Date/Time	Signature	Shift	Date/Time

APPENDIX C

Containment Shell Interior Screening Sample Laboratory Analyses

CONSUMERS ENERGY Memorandum

To: TAGoble, Big Rock

From: GLCattell, T-254, Jackson

Date: January 21, 2005

Subject: SAMPLES FOR DETERMINATION OF PCBs
- Paint Chips
- Containment Interior
- Sampling Dates of December 2004 & January 2005

CC: File Index: 510517-783-096

Twelve paint chip samples were received on January 14 for determination of polychlorinated biphenyls (PCBs). All determinations were performed by the Chemistry Section of Laboratory Services and the results are attached for your review.

Analytical Methods
Unless otherwise specified, all methods are from SW-846, Test Methods For Evaluating Solid Waste - Physical / Chemical Methods, USEPA.

Sample Extraction - Method 3545, Pressurized Fluid Extraction.

Extract Concentration – Nitrogen Evaporation Technique, Exhibit D, Aroclors, Section 10. Multi-Media, Multi-Concentration Organics Analysis; SOM01.X; USEPA.

Extract Cleanup – Method 3620, Florisil Cleanup & Method 3665, Sulfuric Acid/Permanganate Cleanup.

Percent Solids (Dry Weight) – Section 7.2 of Method 3545, Determination of Percent Dry Weight, Pressurized Fluid Extraction.

Polychlorinated Biphenyls - Method 8082, Polychlorinated Biphenyls by Gas Chromatography.

Analytical Remarks & Summary
a. All MDLs are listed as "<" for uniformity. The actual MDLs of individual Aroclors vary slightly amonst each other and detectors. All are well below the indicated limit, at times by a factor of 20.
b. The MDLs for samples 4, 8, 10 and 12 were elevated & the surrogate spikes reported as "diluted out" due to required dilutions.
c. All PCBs are identifed, calculated and reported as Aroclor 1254.
d. All samples are reported as containing PCBs, ranging from 9 to 26 mg/Kg on the dry-weight basis.

Report Package Contents
The report package consists of 8 pages: 1 cover page, 6 pages of Analytical Results,1 Chain of Custody

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Containment Interior Paint - Sampling Dates of December 2004 & January 2005	Our Project Number CHEM-05-0096

Sample Identification	# 1, N, 616' - off white with reddish brown	Sample Identification	# 2, NNE, 616' - off white with reddish brown
Sample Depth, ft	- -	Sample Depth, ft	- -
Sample Type	paint chips	Sample Type	paint chips
Sample Date	01-12-05	Sample Date	01-13-05
Received Date	01-14-05	Received Date	01-14-05
Report Date	01-21-05	Report Date	01-21-05
Percent Solids, % w/w	98	Percent Solids, % w/w	97
Preparation Date	01-17-05	Preparation Date	01-17-05
Analysis Date	01-20-05	Analysis Date	01-20-05
Analyst	sjn, glc	Analyst	sjn, glc
Control Number	050096-01	Control Number	050096-02

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	17	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	87	75-115

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	17	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	85	75-115

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	17	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	91	67-123

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	16	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	88	67-123

NOTES:
MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text.
nd = Parameter Not Detected At MDL
Results Are Reported On The Dry Weight Basis

Reviewed By [signature] Date 01/21/05

Sequence 011905A
1 # 2

PCBs

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Containment Interior Paint - Sampling Dates of December 2004 & January 2005	Our Project Number CHEM-05-0096

Sample Identification	# 3, ENE, 616' - off white with reddish brown	Sample Identification	# 4, E, 616' - off white with reddish brown
Sample Depth, ft	- -	Sample Depth, ft	- -
Sample Type	paint chips	Sample Type	paint chips
Sample Date	12-17-04	Sample Date	12-15-04
Received Date	01-14-05	Received Date	01-14-05
Report Date	01-21-05	Report Date	01-21-05
Percent Solids, % w/w	99	Percent Solids, % w/w	99
Preparation Date	01-17-05	Preparation Date	01-17-05
Analysis Date	01-20-05	Analysis Date	01-19-05
Analyst	sjn, glc	Analyst	sjn, glc
Control Number	050096-03	Control Number	050096-04

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	11	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	88	75-115

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<1.0
PCB-1221	nd	<1.0
PCB-1232	nd	<1.0
PCB-1242	nd	<1.0
PCB-1248	nd	<1.0
PCB-1254	26	<1.0
PCB-1260	nd	<1.0
PCB-1262	nd	<1.0
PCB-1268	nd	<1.0
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	diluted out	75-115

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	11	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	94	67-123

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<1.0
PCB-1221	nd	<1.0
PCB-1232	nd	<1.0
PCB-1242	nd	<1.0
PCB-1248	nd	<1.0
PCB-1254	26	<1.0
PCB-1260	nd	<1.0
PCB-1262	nd	<1.0
PCB-1268	nd	<1.0
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	diluted out	67-123

NOTES:
MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text.
nd = Parameter Not Detected At MDL
Results Are Reported On The Dry Weight Basis
Elevated MDL For #4 Due To Required Dilution; Surrogate Spike Was Diluted Out

Reviewed By Ale Date 01/25

Sequence 011905A	
# 3	# 4

PCBs

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Containment Interior Paint - Sampling Dates of December 2004 & January 2005	Our Project Number CHEM-05-0096

Sample Identification	# 5, ESE, 616' - off white with reddish brown	Sample Identification	# 6, SSE, 616' - off white with reddish brown
Sample Depth, ft	- -	Sample Depth, ft	- -
Sample Type	paint chips	Sample Type	paint chips
Sample Date	12-15-04	Sample Date	12-15-04
Received Date	01-14-05	Received Date	01-14-05
Report Date	01-21-05	Report Date	01-21-05
Percent Solids, % w/w	98	Percent Solids, % w/w	98
Preparation Date	01-17-05	Preparation Date	01-17-05
Analysis Date	01-20-05	Analysis Date	01-20-05
Analyst	sjn, glc	Analyst	sjn, glc
Control Number	050096-05	Control Number	050096-06

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	11	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	93	75-115

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	11	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	95	75-115

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	11	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	96	67-123

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	11	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	100	67-123

NOTES:
MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text.
nd = Parameter Not Detected At MDL
Results Are Reported On The Dry Weight Basis

Reviewed By JLP Date 012105

Sequence 011905A
5 # 6

PCBs

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Containment Interior Paint - Sampling Dates of December 2004 & January 2005	Our Project Number CHEM-05-0096

Sample Identification	# 7, S, 616' - off white with reddish brown
Sample Depth, ft	- -
Sample Type	paint chips
Sample Date	12-15-04
Received Date	01-14-05
Report Date	01-21-05
Percent Solids, % w/w	99
Preparation Date	01-17-05
Analysis Date	01-20-05
Analyst	sjn, glc
Control Number	050096-07

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	16	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	94	75-115

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	15	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	100	67-123

Sample Identification	# 8, SSW, 616' - off white with reddish brown
Sample Depth, ft	- -
Sample Type	paint chips
Sample Date	12-15-04
Received Date	01-14-05
Report Date	01-21-05
Percent Solids, % w/w	98
Preparation Date	01-17-05
Analysis Date	01-19-05
Analyst	sjn, glc
Control Number	050096-08

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<1.0
PCB-1221	nd	<1.0
PCB-1232	nd	<1.0
PCB-1242	nd	<1.0
PCB-1248	nd	<1.0
PCB-1254	24	<1.0
PCB-1260	nd	<1.0
PCB-1262	nd	<1.0
PCB-1268	nd	<1.0
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	diluted out	75-115

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<1.0
PCB-1221	nd	<1.0
PCB-1232	nd	<1.0
PCB-1242	nd	<1.0
PCB-1248	nd	<1.0
PCB-1254	24	<1.0
PCB-1260	nd	<1.0
PCB-1262	nd	<1.0
PCB-1268	nd	<1.0
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	diluted out	67-123

NOTES:
MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text.
nd = Parameter Not Detected At MDL
Results Are Reported On The Dry Weight Basis
Elevated MDL For #8 Due To Required Dilution; Surrogate Spike Was Diluted Out

Reviewed By [signature] Date 01-21-05

Sequence 011905A	
# 7	# 8

PCBs

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Containment Interior Paint - Sampling Dates of December 2004 & January 2005	Our Project Number CHEM-05-0096

Sample Identification	# 9, WSW, 616' - off white with reddish brown
Sample Depth, ft	- -
Sample Type	paint chips
Sample Date	12-16-04
Received Date	01-14-05
Report Date	01-21-05
Percent Solids, % w/w	98
Preparation Date	01-17-05
Analysis Date	01-20-05
Analyst	sjn, glc
Control Number	050096-09

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	14	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	90	75-115

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	14	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	97	67-123

Sample Identification	# 10, W, 616' - off white with reddish brown
Sample Depth, ft	- -
Sample Type	paint chips
Sample Date	01-04-05
Received Date	01-14-05
Report Date	01-21-05
Percent Solids, % w/w	99
Preparation Date	01-18-05
Analysis Date	01-19-05
Analyst	sjn, glc
Control Number	050096-10

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<1.0
PCB-1221	nd	<1.0
PCB-1232	nd	<1.0
PCB-1242	nd	<1.0
PCB-1248	nd	<1.0
PCB-1254	17	<1.0
PCB-1260	nd	<1.0
PCB-1262	nd	<1.0
PCB-1268	nd	<1.0
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	diluted out	75-115

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<1.0
PCB-1221	nd	<1.0
PCB-1232	nd	<1.0
PCB-1242	nd	<1.0
PCB-1248	nd	<1.0
PCB-1254	18	<1.0
PCB-1260	nd	<1.0
PCB-1262	nd	<1.0
PCB-1268	nd	<1.0
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	diluted out	67-123

NOTES:
MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text.
nd = Parameter Not Detected At MDL
Results Are Reported On The Dry Weight Basis
Elevated MDL For #10 Due To Required Dilution; Surrogate Spike Was Diluted Out

Reviewed By _____ Date 01/19/05

Sequence 011905A	
# 9	# 10

PCBs

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Containment Interior Paint - Sampling Dates of December 2004 & January 2005	Our Project Number CHEM-05-0096

Sample Identification	# 11, WNW, 616' - off white with reddish brown	Sample Identification	# 12, NNW, 616' - off white with reddish brown
Sample Depth, ft	- -	Sample Depth, ft	- -
Sample Type	paint chips	Sample Type	paint chips
Sample Date	01-12-05	Sample Date	01-12-05
Received Date	01-14-05	Received Date	01-14-05
Report Date	01-21-05	Report Date	01-21-05
Percent Solids, % w/w	97	Percent Solids, % w/w	98
Preparation Date	01-17-05	Preparation Date	01-18-05
Analysis Date	01-20-05	Analysis Date	01-20-05
Analyst	sjn, glc	Analyst	sjn, glc
Control Number	050096-11	Control Number	050096-12

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	9.0	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	90	75-115

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<1.0
PCB-1221	nd	<1.0
PCB-1232	nd	<1.0
PCB-1242	nd	<1.0
PCB-1248	nd	<1.0
PCB-1254	13	<1.0
PCB-1260	nd	<1.0
PCB-1262	nd	<1.0
PCB-1268	nd	<1.0
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	diluted out	75-115

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	9.2	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	95	67-123

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<1.0
PCB-1221	nd	<1.0
PCB-1232	nd	<1.0
PCB-1242	nd	<1.0
PCB-1248	nd	<1.0
PCB-1254	13	<1.0
PCB-1260	nd	<1.0
PCB-1262	nd	<1.0
PCB-1268	nd	<1.0
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	diluted out	67-123

NOTES:
MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text.
nd = Parameter Not Detected At MDL
Results Are Reported On The Dry Weight Basis
Elevated MDL For #12 Due To Required Dilution; Surrogate Spike Was Diluted Out

Reviewed By _____ Date 01-20-05

Sequence 011905A	
# 11	# 12

PCBs

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – LABORATORY SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: Big Rock Point

PROJECT NUMBER: CONTAINMENT INTERIOR PAINT

SAMPLING TEAM:

DATE SHIPPED: 01/13/05

SITE SKETCH ATTACHED? CIRCLE ONE: YES NO

ANALYSIS REQUESTED: PCB

PAGE 1 OF 1

SEND REPORT TO: TABOBLE

PHONE: 231-547-8389

CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	PCB	REMARKS
05-0016-01	1-12-05		PAINT	CONT. INTERIOR PAINT #1 - N - 616'	N/A	1 BAG	✓	
-02	1-13-05		PAINT	CONT. INTERIOR PAINT #2 - NNE - 616'			✓	
-03	12-17-04			#3 - ENE - 616'			✓	
-04	12-15-04			#4 - E - 616'			✓	
-05	12-15-04			#5 - ESE - 616'			✓	
-06	12-15-04			#6 - SSE - 616'			✓	
-07	12-15-04			#7 - S - 616'			✓	
-08	12-15-04			#8 - SSW - 616'			✓	
-09	12-16-04			#9 - WSW - 616'			✓	
-10	1-4-05			#10 - W - 616'			✓	
-11	1-12-05			#11 - WNW - 616'			✓	
-12	1-12-05			#12 - NNW - 616'			✓	

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
[signature]	1-13-04 1110	
RELINQUISHED BY: (SIGNATURE) FedEx	DATE / TIME 01/14/05 1050	RECEIVED BY: (SIGNATURE) [signature]
RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)

COMMENTS: SAVE UNUSED SAMPLE FOR REANALYSIS -- IF NECESSARY

ORIGINAL TO LAB COPY TO CUSTOMER

05 1 7 05

CONSUMERS ENERGY Memorandum

To: TGoble, Big Rock

From: GLCattell, T-254, Jackson

Date: March 17, 2005

Subject: SAMPLES FOR DETERMINATION OF PCBs
- Paint Chips
- Sampling Dates of March 04 – 09, 2005

CC: File Index: 510517-783-396

Twenty-one paint chip samples were received on March 11 for determination of polychlorinated biphenyls (PCBs). All determinations were performed by the Chemistry Section of Laboratory Services and the results are attached for your review.

Analytical Methods

Unless otherwise specified, all methods are from SW-846, Test Methods For Evaluating Solid Waste - Physical / Chemical Methods, USEPA.

Sample Extraction - Method 3545, Pressurized Fluid Extraction.

Extract Concentration – Nitrogen Evaporation Technique, Exhibit D, Aroclors, Section 10. Multi-Media, Multi-Concentration Organics Analysis; SOM01.X; USEPA.

Extract Cleanup – Method 3620, Florisil Cleanup & Method 3665, Sulfuric Acid/Permanganate Cleanup.

Percent Solids (Dry Weight) – Section 7.2 of Method 3545, Determination of Percent Dry Weight, Pressurized Fluid Extraction.

Polychlorinated Biphenyls - Method 8082, Polychlorinated Biphenyls by Gas Chromatography.

Analytical Remarks & Summary

a. All MDLs are listed as "<" for uniformity. The actual MDLs of individual Aroclors vary slightly amonst each other and detectors. All are well below the indicated limit, at times by a factor of 20.
b. The MDLs for several samples were elevated & the surrogate spikes reported as "diluted out" due to required dilutions.
c. All PCBs are identifed, calculated and reported as Aroclor 1254. No other Aroclors were indicated.
d. All samples are reported as containing PCBs, ranging from 6.7 to 56 mg/kg on the dry-weight basis.

Report Package Contents

The report package consists of 14 pages: 1 cover page, 11 pages of Analytical Results, 2 Chain of Custody pages.

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Sampling Dates of March 04-09, 2005	Our Project Number CHEM-05-0396

Sample Identification	#13 USE-1 - off-white & rust-red mix	Sample Identification	#14 USSE-1 - off-white & rust-red mix
Sample Depth, ft	- -	Sample Depth, ft	- -
Sample Type	paint chips	Sample Type	paint chips
Sample Date	03-09-05	Sample Date	03-09-05
Received Date	03-11-05	Received Date	03-11-05
Report Date	03-17-05	Report Date	03-17-05
Percent Solids, % w/w	99	Percent Solids, % w/w	98
Preparation Date	03-14-05	Preparation Date	03-14-05
Analysis Date	03-14-05	Analysis Date	03-15-05
Analyst	sjn, glc	Analyst	sjn, glc
Control Number	050396-01	Control Number	050396-02

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<1.0
PCB-1221	nd	<1.0
PCB-1232	nd	<1.0
PCB-1242	nd	<1.0
PCB-1248	nd	<1.0
PCB-1254	40	<1.0
PCB-1260	nd	<1.0
PCB-1262	nd	<1.0
PCB-1268	nd	<1.0
Sum of Aroclors	nd	<1.0
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	diluted out	73-134

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	11	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	79	73-134

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<1.0
PCB-1221	nd	<1.0
PCB-1232	nd	<1.0
PCB-1242	nd	<1.0
PCB-1248	nd	<1.0
PCB-1254	41	<1.0
PCB-1260	nd	<1.0
PCB-1262	nd	<1.0
PCB-1268	nd	<1.0
Sum of Aroclors	nd	<1.0
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	diluted out	67-123

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	12	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	76	67-123

NOTES:
MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text.
nd = Parameter Not Detected At MDL
Results Are Reported On The Dry Weight Basis
Elevated MDL Due To Required Dilution For 050396-01

Reviewed By AM Date 3/20/05

Sequence 022105A
#13 USE-1 #14 USSE-1

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Sampling Dates of March 04-09, 2005	Our Project Number CHEM-05-0396

Sample Identification	#15 US-1 - off-white & rust-red mix	**Sample Identification**	#16 USSW-1 - off-white & rust-red mix
Sample Depth, ft	- -	Sample Depth, ft	- -
Sample Type	paint chips	Sample Type	paint chips
Sample Date	03-09-05	Sample Date	03-09-05
Received Date	03-11-05	Received Date	03-11-05
Report Date	03-17-05	Report Date	03-17-05
Percent Solids, % w/w	98	Percent Solids, % w/w	99
Preparation Date	03-14-05	Preparation Date	03-14-05
Analysis Date	03-15-05	Analysis Date	03-15-05
Analyst	sjn, glc	Analyst	sjn, glc
Control Number	050396-03	Control Number	050396-04

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	mg/kg	MDL	TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	14	<0.1	PCB-1254	6.7	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	87	73-134	Decachlorobiphenyl	85	73-134

CONFIRMING ANALYTICAL COLUMN			**CONFIRMING ANALYTICAL COLUMN**		
TARGET PCBs, 8082	mg/kg	MDL	TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	15	<0.1	PCB-1254	7.7	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	84	67-123	Decachlorobiphenyl	82	67-123

NOTES:
MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text.
nd = Parameter Not Detected At MDL
Results Are Reported On The Dry Weight Basis

Reviewed By Ad Date 31705

Sequence 022105A
#15 US-1 #16 USSW-1

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Sampling Dates of March 04-09, 2005	Our Project Number CHEM-05-0396

Sample Identification	#17 SW-1 - off-white & rust-red mix
Sample Depth, ft	- -
Sample Type	paint chips
Sample Date	03-09-05
Received Date	03-11-05
Report Date	03-17-05
Percent Solids, % w/w	99
Preparation Date	03-14-05
Analysis Date	03-14-05
Analyst	sjn, glc
Control Number	050396-05

PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<1.0
PCB-1221	nd	<1.0
PCB-1232	nd	<1.0
PCB-1242	nd	<1.0
PCB-1248	nd	<1.0
PCB-1254	26	<1.0
PCB-1260	nd	<1.0
PCB-1262	nd	<1.0
PCB-1268	nd	<1.0
Sum of Aroclors	nd	<1.0
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	diluted out	73-134

CONFIRMING ANALYTICAL COLUMN		
TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<1.0
PCB-1221	nd	<1.0
PCB-1232	nd	<1.0
PCB-1242	nd	<1.0
PCB-1248	nd	<1.0
PCB-1254	26	<1.0
PCB-1260	nd	<1.0
PCB-1262	nd	<1.0
PCB-1268	nd	<1.0
Sum of Aroclors	nd	<1.0
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	diluted out	67-123

Sample Identification	#18 WSW-1 - off-white & rust-red mix
Sample Depth, ft	- -
Sample Type	paint chips
Sample Date	03-08-05
Received Date	03-11-05
Report Date	03-17-05
Percent Solids, % w/w	98
Preparation Date	03-15-05
Analysis Date	03-15-05
Analyst	sjn, glc
Control Number	050396-06

PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	15	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	87	73-134

CONFIRMING ANALYTICAL COLUMN		
TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	14	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	81	67-123

NOTES:
MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text.
nd = Parameter Not Detected At MDL
Results Are Reported On The Dry Weight Basis
Elevated MDL Due To Required Dilution For 050396-05

Reviewed By Ad Date 3/25

Sequence 022105A
#17 SW-1 #18 WSW-1

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Sampling Dates of March 04-09, 2005	Our Project Number CHEM-05-0396

Sample Identification	#19 UW-1 - off-white & rust-red mix
Sample Depth, ft	- -
Sample Type	paint chips
Sample Date	03-08-05
Received Date	03-11-05
Report Date	03-17-05
Percent Solids, % w/w	98
Preparation Date	03-14-05
Analysis Date	03-15-05
Analyst	sjn, glc
Control Number	050396-07

PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	12	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	87	73-134

CONFIRMING ANALYTICAL COLUMN		
TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	13	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	83	67-123

Sample Identification	#20 UWNW-1 - off-white & rust-red mix
Sample Depth, ft	- -
Sample Type	paint chips
Sample Date	03-08-05
Received Date	03-11-05
Report Date	03-17-05
Percent Solids, % w/w	98
Preparation Date	03-14-05
Analysis Date	03-15-05
Analyst	sjn, glc
Control Number	050396-08

PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	12	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	90	73-134

CONFIRMING ANALYTICAL COLUMN		
TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	13	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	86	67-123

NOTES:
MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text.
nd = Parameter Not Detected At MDL
Results Are Reported On The Dry Weight Basis

Reviewed By Sel Date 31705

Sequence 022105A
#19 UW-1 #20 UWNW-1

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Sampling Dates of March 04-09, 2005	Our Project Number CHEM-05-0396

Sample Identification	#21 UNW-1 - off-white & rust-red mix	**Sample Identification**	#22 UNNW-1 - off-white & rust-red mix
Sample Depth, ft	- -	Sample Depth, ft	- -
Sample Type	paint chips	Sample Type	paint chips
Sample Date	03-07-05	Sample Date	03-07-05
Received Date	03-11-05	Received Date	03-11-05
Report Date	03-17-05	Report Date	03-17-05
Percent Solids, % w/w	99	Percent Solids, % w/w	98
Preparation Date	03-14-05	Preparation Date	03-14-05
Analysis Date	03-14-05	Analysis Date	03-14-05
Analyst	sjn, glc	Analyst	sjn, glc
Control Number	050396-09	Control Number	050396-10

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	mg/kg	MDL	TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<1.0	PCB-1016	nd	<1.0
PCB-1221	nd	<1.0	PCB-1221	nd	<1.0
PCB-1232	nd	<1.0	PCB-1232	nd	<1.0
PCB-1242	nd	<1.0	PCB-1242	nd	<1.0
PCB-1248	nd	<1.0	PCB-1248	nd	<1.0
PCB-1254	23	<1.0	PCB-1254	25	<1.0
PCB-1260	nd	<1.0	PCB-1260	nd	<1.0
PCB-1262	nd	<1.0	PCB-1262	nd	<1.0
PCB-1268	nd	<1.0	PCB-1268	nd	<1.0
Sum of Aroclors	nd	<1.0	Sum of Aroclors	nd	<1.0
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	diluted out	73-134	Decachlorobiphenyl	diluted out	73-134

CONFIRMING ANALYTICAL COLUMN			**CONFIRMING ANALYTICAL COLUMN**		
TARGET PCBs, 8082	mg/kg	MDL	TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<1.0	PCB-1016	nd	<1.0
PCB-1221	nd	<1.0	PCB-1221	nd	<1.0
PCB-1232	nd	<1.0	PCB-1232	nd	<1.0
PCB-1242	nd	<1.0	PCB-1242	nd	<1.0
PCB-1248	nd	<1.0	PCB-1248	nd	<1.0
PCB-1254	25	<1.0	PCB-1254	27	<1.0
PCB-1260	nd	<1.0	PCB-1260	nd	<1.0
PCB-1262	nd	<1.0	PCB-1262	nd	<1.0
PCB-1268	nd	<1.0	PCB-1268	nd	<1.0
Sum of Aroclors	nd	<1.0	Sum of Aroclors	nd	<1.0
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	diluted out	67-123	Decachlorobiphenyl	diluted out	67-123

NOTES:
MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text.
nd = Parameter Not Detected At MDL
Results Are Reported On The Dry Weight Basis
Elevated MDL Due To Required Dilution For 050396-09 & 050396-10

Reviewed By _____ Date 3/2005

Sequence 022105A
#21 UNW-1 #22 UNNW-1

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Sampling Dates of March 04-09, 2005	Our Project Number CHEM-05-0396

Sample Identification	#23 UN-1 - off-white & rust-red mix	**Sample Identification**	#24 USE-2 - off-white & rust-red mix
Sample Depth, ft	- -	Sample Depth, ft	- -
Sample Type	paint chips	Sample Type	paint chips
Sample Date	03-07-05	Sample Date	03-09-05
Received Date	03-11-05	Received Date	03-11-05
Report Date	03-17-05	Report Date	03-17-05
Percent Solids, % w/w	99	Percent Solids, % w/w	98
Preparation Date	03-14-05	Preparation Date	03-15-05
Analysis Date	03-14-05	Analysis Date	03-16-05
Analyst	sjn, glc	Analyst	sjn, glc
Control Number	050396-11	Control Number	050396-12

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<1.0
PCB-1221	nd	<1.0
PCB-1232	nd	<1.0
PCB-1242	nd	<1.0
PCB-1248	nd	<1.0
PCB-1254	23	<1.0
PCB-1260	nd	<1.0
PCB-1262	nd	<1.0
PCB-1268	nd	<1.0
Sum of Aroclors	nd	<1.0
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	diluted out	73-134

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<1.0
PCB-1221	nd	<1.0
PCB-1232	nd	<1.0
PCB-1242	nd	<1.0
PCB-1248	nd	<1.0
PCB-1254	37	<1.0
PCB-1260	nd	<1.0
PCB-1262	nd	<1.0
PCB-1268	nd	<1.0
Sum of Aroclors	nd	<1.0
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	diluted out	73-134

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<1.0
PCB-1221	nd	<1.0
PCB-1232	nd	<1.0
PCB-1242	nd	<1.0
PCB-1248	nd	<1.0
PCB-1254	23	<1.0
PCB-1260	nd	<1.0
PCB-1262	nd	<1.0
PCB-1268	nd	<1.0
Sum of Aroclors	nd	<1.0
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	diluted out	67-123

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<1.0
PCB-1221	nd	<1.0
PCB-1232	nd	<1.0
PCB-1242	nd	<1.0
PCB-1248	nd	<1.0
PCB-1254	35	<1.0
PCB-1260	nd	<1.0
PCB-1262	nd	<1.0
PCB-1268	nd	<1.0
Sum of Aroclors	nd	<1.0
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	diluted out	67-123

NOTES:
MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text.
nd = Parameter Not Detected At MDL
Results Are Reported On The Dry Weight Basis
Elevated MDL Due To Required Dilution For 050396-11 & 050396-12

Reviewed By _____ Date 3/2/05

Sequence 022105A
#23 UN-1 #24 USE-2

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Sampling Dates of March 04-09, 2005	Our Project Number CHEM-05-0396

Sample Identification	#25 US-2 - off-white & rust-red mix	Sample Identification	#26 USW-2 - off-white & rust-red mix
Sample Depth, ft	- -	Sample Depth, ft	- -
Sample Type	paint chips	Sample Type	paint chips
Sample Date	03-04-05	Sample Date	03-04-05
Received Date	03-11-05	Received Date	03-11-05
Report Date	03-17-05	Report Date	03-17-05
Percent Solids, % w/w	98	Percent Solids, % w/w	98
Preparation Date	03-15-05	Preparation Date	03-15-05
Analysis Date	03-16-05	Analysis Date	03-15-05
Analyst	sjn, glc	Analyst	sjn, glc
Control Number	050396-13	Control Number	050396-14

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<1.0
PCB-1221	nd	<1.0
PCB-1232	nd	<1.0
PCB-1242	nd	<1.0
PCB-1248	nd	<1.0
PCB-1254	33	<1.0
PCB-1260	nd	<1.0
PCB-1262	nd	<1.0
PCB-1268	nd	<1.0
Sum of Aroclors	nd	<1.0
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	diluted out	73-134

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	9.3	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	78	73-134

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<1.0
PCB-1221	nd	<1.0
PCB-1232	nd	<1.0
PCB-1242	nd	<1.0
PCB-1248	nd	<1.0
PCB-1254	31	<1.0
PCB-1260	nd	<1.0
PCB-1262	nd	<1.0
PCB-1268	nd	<1.0
Sum of Aroclors	nd	<1.0
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	diluted out	67-123

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	9.7	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	74	67-123

NOTES:
MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text.
nd = Parameter Not Detected At MDL
Results Are Reported On The Dry Weight Basis
Elevated MDL Due To Required Dilution For 050396-13

Reviewed By Ad Date 3/7/05

Sequence 022105A
#25 US-2 #26 USW-2

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Sampling Dates of March 04-09, 2005	Our Project Number CHEM-05-0396

Sample Identification	#27 UW-2 - off-white & rust-red mix	**Sample Identification**	#28 UNW-2 - off-white & rust-red mix
Sample Depth, ft	- -	Sample Depth, ft	- -
Sample Type	paint chips	Sample Type	paint chips
Sample Date	03-09-05	Sample Date	03-07-05
Received Date	03-11-05	Received Date	03-11-05
Report Date	03-17-05	Report Date	03-17-05
Percent Solids, % w/w	98	Percent Solids, % w/w	98
Preparation Date	03-15-05	Preparation Date	03-15-05
Analysis Date	03-15-05	Analysis Date	03-16-05
Analyst	sjn, glc	Analyst	sjn, glc
Control Number	050396-15	Control Number	050396-16

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	19	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	82	73-134

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<1.0
PCB-1221	nd	<1.0
PCB-1232	nd	<1.0
PCB-1242	nd	<1.0
PCB-1248	nd	<1.0
PCB-1254	42	<1.0
PCB-1260	nd	<1.0
PCB-1262	nd	<1.0
PCB-1268	nd	<1.0
Sum of Aroclors	nd	<1.0
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	diluted out	73-134

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	19	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	78	67-123

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<1.0
PCB-1221	nd	<1.0
PCB-1232	nd	<1.0
PCB-1242	nd	<1.0
PCB-1248	nd	<1.0
PCB-1254	39	<1.0
PCB-1260	nd	<1.0
PCB-1262	nd	<1.0
PCB-1268	nd	<1.0
Sum of Aroclors	nd	<1.0
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	diluted out	67-123

NOTES:
MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text.
nd = Parameter Not Detected At MDL
Results Are Reported On The Dry Weight Basis
Elevated MDL Due To Required Dilution For 050396-16

Reviewed By _____ Date 3/7/05

Sequence 022105A
#27 UW-2 #28 UNW-2

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Sampling Dates of March 04-09, 2005	Our Project Number CHEM-05-0396

Sample Identification	#29 UN-2 - off-white & rust-red mix	Sample Identification	#30 UNNE-2 - off-white & rust-red mix
Sample Depth, ft	- -	Sample Depth, ft	- -
Sample Type	paint chips	Sample Type	paint chips
Sample Date	03-08-05	Sample Date	03-08-05
Received Date	03-11-05	Received Date	03-11-05
Report Date	03-17-05	Report Date	03-17-05
Percent Solids, % w/w	98	Percent Solids, % w/w	98
Preparation Date	03-15-05	Preparation Date	03-15-05
Analysis Date	03-16-05	Analysis Date	03-16-05
Analyst	sjn, glc	Analyst	sjn, glc
Control Number	050396-17	Control Number	050396-18

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<1.0
PCB-1221	nd	<1.0
PCB-1232	nd	<1.0
PCB-1242	nd	<1.0
PCB-1248	nd	<1.0
PCB-1254	44	<1.0
PCB-1260	nd	<1.0
PCB-1262	nd	<1.0
PCB-1268	nd	<1.0
Sum of Aroclors	nd	<1.0
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	diluted out	73-134

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<1.0
PCB-1221	nd	<1.0
PCB-1232	nd	<1.0
PCB-1242	nd	<1.0
PCB-1248	nd	<1.0
PCB-1254	54	<1.0
PCB-1260	nd	<1.0
PCB-1262	nd	<1.0
PCB-1268	nd	<1.0
Sum of Aroclors	nd	<1.0
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	diluted out	73-134

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<1.0
PCB-1221	nd	<1.0
PCB-1232	nd	<1.0
PCB-1242	nd	<1.0
PCB-1248	nd	<1.0
PCB-1254	41	<1.0
PCB-1260	nd	<1.0
PCB-1262	nd	<1.0
PCB-1268	nd	<1.0
Sum of Aroclors	nd	<1.0
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	diluted out	67-123

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<1.0
PCB-1221	nd	<1.0
PCB-1232	nd	<1.0
PCB-1242	nd	<1.0
PCB-1248	nd	<1.0
PCB-1254	52	<1.0
PCB-1260	nd	<1.0
PCB-1262	nd	<1.0
PCB-1268	nd	<1.0
Sum of Aroclors	nd	<1.0
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	diluted out	67-123

NOTES:
MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text.
nd = Parameter Not Detected At MDL
Results Are Reported On The Dry Weight Basis
Elevated MDL Due To Required Dilution For 050396-17 & 050396-18

Reviewed By _____ Date 3/29/05

Sequence 022105A
#29 UN-2 #30 UNNE-2

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Sampling Dates of March 04-09, 2005	Our Project Number CHEM-05-0396

Sample Identification	#31 UNE-2 - off-white & rust-red mix
Sample Depth, ft	- -
Sample Type	paint chips
Sample Date	03-08-05
Received Date	03-11-05
Report Date	03-17-05
Percent Solids, % w/w	98
Preparation Date	03-15-05
Analysis Date	03-16-05
Analyst	sjn, glc
Control Number	050396-19

Sample Identification	#32 UE-1 - off-white & rust-red mix
Sample Depth, ft	- -
Sample Type	paint chips
Sample Date	03-08-05
Received Date	03-11-05
Report Date	03-17-05
Percent Solids, % w/w	99
Preparation Date	03-15-05
Analysis Date	03-17-05
Analyst	sjn, glc
Control Number	050396-20

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<1.0
PCB-1221	nd	<1.0
PCB-1232	nd	<1.0
PCB-1242	nd	<1.0
PCB-1248	nd	<1.0
PCB-1254	56	<1.0
PCB-1260	nd	<1.0
PCB-1262	nd	<1.0
PCB-1268	nd	<1.0
Sum of Aroclors	nd	<1.0
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	diluted out	73-134

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<1.0
PCB-1221	nd	<1.0
PCB-1232	nd	<1.0
PCB-1242	nd	<1.0
PCB-1248	nd	<1.0
PCB-1254	52	<1.0
PCB-1260	nd	<1.0
PCB-1262	nd	<1.0
PCB-1268	nd	<1.0
Sum of Aroclors	nd	<1.0
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	diluted out	73-134

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<1.0
PCB-1221	nd	<1.0
PCB-1232	nd	<1.0
PCB-1242	nd	<1.0
PCB-1248	nd	<1.0
PCB-1254	53	<1.0
PCB-1260	nd	<1.0
PCB-1262	nd	<1.0
PCB-1268	nd	<1.0
Sum of Aroclors	nd	<1.0
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	diluted out	67-123

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<1.0
PCB-1221	nd	<1.0
PCB-1232	nd	<1.0
PCB-1242	nd	<1.0
PCB-1248	nd	<1.0
PCB-1254	48	<1.0
PCB-1260	nd	<1.0
PCB-1262	nd	<1.0
PCB-1268	nd	<1.0
Sum of Aroclors	nd	<1.0
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	diluted out	67-123

NOTES:
MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text.
nd = Parameter Not Detected At MDL
Results Are Reported On The Dry Weight Basis
Elevated MDL Due To Required Dilution For 050396-19 & 050396-20

Reviewed By _____ Date 3/20/05

Sequence 022105A
#31 UNE-2 #32 UE-1

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Sampling Dates of March 04-09, 2005	Our Project Number CHEM-05-0396

Sample Identification	#33 UE-2 - off-white & rust-red mix
Sample Depth, ft	- -
Sample Type	paint chips
Sample Date	03-07-05
Received Date	03-11-05
Report Date	03-17-05
Percent Solids, % w/w	99
Preparation Date	03-15-05
Analysis Date	03-17-05
Analyst	sjn, glc
Control Number	050396-21

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<1.0
PCB-1221	nd	<1.0
PCB-1232	nd	<1.0
PCB-1242	nd	<1.0
PCB-1248	nd	<1.0
PCB-1254	35	<1.0
PCB-1260	nd	<1.0
PCB-1262	nd	<1.0
PCB-1268	nd	<1.0
Sum of Aroclors	nd	<1.0
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	diluted out	73-134

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<1.0
PCB-1221	nd	<1.0
PCB-1232	nd	<1.0
PCB-1242	nd	<1.0
PCB-1248	nd	<1.0
PCB-1254	34	<1.0
PCB-1260	nd	<1.0
PCB-1262	nd	<1.0
PCB-1268	nd	<1.0
Sum of Aroclors	nd	<1.0
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	diluted out	67-123

NOTES:
MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text.
nd = Parameter Not Detected At MDL
Results Are Reported On The Dry Weight Basis
Elevated MDL Due To Required Dilution For 050396-21

Reviewed By Ad Date 3/7/05

Sequence 022105A
#33 UE-2

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – LABORATORY SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: BIG ROCK

PROJECT NUMBER: 9647-4976.6

SAMPLING TEAM:

DATE SHIPPED: 3/10/5

SITE SKETCH ATTACHED? CIRCLE ONE: YES / NO

PAGE 1 OF 1

SEND REPORT TO: TRACY GOBLE BIG ROCK FAX ~~PHONE~~ 231-237-2594

ANALYSIS REQUESTED: CVOC

CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	CVOC	REMARKS
05-0396-01	3-9-5			#13 USE-1		1	X	
-02	3/9/5			#14 USSE-1		1	X	
-03	3/19/5	9 AM		#15 US-1		1	X	
-04	3/7/5			#16 USSW-1		1	X	
-05	3/9/5			#17 SW-1		1	X	
-06	3/8/5			#18 WSW-1		1	X	
-07	3/8/5			#19 UW-1		1	X	
-08	3/8/5			#20 UWNW-1		1	X	
-09	3/7/5			#21 UNW-1		1	X	
-10	3/7/5			#22 UNNW-1		1	X	
-11	3/7/5			#23 UN-1		1	X	
-12	3/9/5			#24 USE-2		1	X	

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
[signature]	3/10/5	
FedEx	3/11/05 1345	[signature]

COMMENTS: RUSH — NEW FAX 6.0°C

ORIGINAL TO LAB COPY TO CUSTOMER

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – LABORATORY SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: Big Rock

PROJECT NUMBER: 9647-4976.6

SAMPLING TEAM:

DATE SHIPPED: 3/10/5

SITE SKETCH ATTACHED? CIRCLE ONE: YES NO

PAGE 1 OF 1

SEND REPORT TO: TRACY GOBLE BIG ROCK FAX ~~PHONE~~ 231-237-2594

ANALYSIS REQUESTED: RCM

CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	RCM	REMARKS
050396-13	3/4/5			#25 US-2		1	X	
-14	3/4/5			#26 USW-2		1	X	
-15	3/4/5			#27 UW-2		1	X	
-16	3/7/5			#28 UNW-2		1	X	
-17	3/8/5			#29 UN-2		1	X	
-18	3/8/5			#30 UNNE-2		1	X	
-19	3/8/5			#31 UNE-2		1	X	
-20	3/8/5			#32 UE-1		1	X	
-21	3/7/5			#33 UE-2		1	X	

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
[signature]	3/10/5 1500	
[signature] Fed Ex	3/11/05 1345	[signature]

COMMENTS: RUSH - NEW FAX #

ORIGINAL TO LAB COPY TO CUSTOMER

APPENDIX D

Post-Dismantlement Containment Shell Section Sampling Laboratory Analyses

CONSUMERS ENERGY Memorandum

To: TGoble, Big Rock

From: GLCattell, T-254, Jackson

Date: October 24, 2005

Subject: SAMPLES FOR DETERMINATION OF PCBs
- Paint Chips
- Containment Sphere; Row 5/6
- Sampling Date of October 21, 2005

CC: File Index: 520517-783-751

Twenty-one paint chip samples were received on October 22 for determination of polychlorinated biphenyls (PCBs). All determinations were performed by the Chemistry Section of Laboratory Services and the results are attached for your review.

Analytical Methods
Unless otherwise specified, all methods are from SW-846, Test Methods For Evaluating Solid Waste - Physical / Chemical Methods, USEPA.

Sample Extraction - Method 3545, Pressurized Fluid Extraction.

Extract Concentration – Nitrogen Evaporation Technique, Exhibit D, Aroclors, Section 10. Multi-Media, Multi-Concentration Organics Analysis; SOM01.X; USEPA.

Extract Cleanup – Method 3620, Florisil Cleanup & Method 3665, Sulfuric Acid/Permanganate Cleanup.

Percent Solids (Dry Weight) – Section 7.2 of Method 3545, Determination of Percent Dry Weight, Pressurized Fluid Extraction.

Polychlorinated Biphenyls - Method 8082, Polychlorinated Biphenyls by Gas Chromatography.

Analytical Remarks & Summary
a. All MDLs are listed as "<" for uniformity. The actual MDLs of individual Aroclors vary slightly amonst each other and detectors.
b. All PCBs are identifed, calculated and reported as Aroclor 1254. No other Aroclors were indicated.
c. All samples are reported as containing PCBs, ranging from 21 to 73 mg/kg on the dry-weight basis.

Report Package Contents
The report package consists of 14 pages: 1 cover page, 11 pages of Analytical Results, 2 Chain of Custody pages.

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Sphere; Row 5/6 - Sampling Date of October 21, 2005	Our Project Number CHEM-05-1751

Sample Identification	13.1	Sample Identification	13.2
Sample Type	paint chips	Sample Type	paint chips
Sample Date	10-21-05	Sample Date	10-21-05
Received Date	10-22-05	Received Date	10-22-05
Report Date	10-24-05	Report Date	10-24-05
Percent Solids, % w/w	98	Percent Solids, % w/w	98
Preparation Date	10-22-05	Preparation Date	10-22-05
Analysis Date	10-23-05	Analysis Date	10-23-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051751-01	Control Number	051751-02

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	mg/kg	MDL	TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	57	<0.1	PCB-1254	44	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	83	67-123	Decachlorobiphenyl	95	67-123

NOTES:
MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text.
nd = Parameter Not Detected At MDL
Results Are Reported On The Dry Weight Basis
Aroclor Type Was Confirmed On A 2nd Column

Reviewed By Ad Date 10/28/05

Sequence 102305A	
13.1	13.2

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Sphere; Row 5/6 - Sampling Date of October 21, 2005	Our Project Number CHEM-05-1751

Sample Identification	13.3	Sample Identification	13.4
Sample Type	paint chips	Sample Type	paint chips
Sample Date	10-21-05	Sample Date	10-21-05
Received Date	10-22-05	Received Date	10-22-05
Report Date	10-24-05	Report Date	10-24-05
Percent Solids, % w/w	98	Percent Solids, % w/w	98
Preparation Date	10-22-05	Preparation Date	10-22-05
Analysis Date	10-23-05	Analysis Date	10-23-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051751-03	Control Number	051751-04

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	mg/kg	MDL	TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	36	<0.1	PCB-1254	51	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	103	67-123	Decachlorobiphenyl	92	67-123

NOTES:
MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text.
nd = Parameter Not Detected At MDL
Results Are Reported On The Dry Weight Basis
Aroclor Type Was Confirmed On A 2nd Column

Reviewed By AU Date 10/28/05

Sequence 102305A	
13.3	13.4

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Sphere; Row 5/6 - Sampling Date of October 21, 2005	Our Project Number CHEM-05-1751

Sample Identification	28.1	**Sample Identification**	28.2
Sample Type	paint chips	Sample Type	paint chips
Sample Date	10-21-05	Sample Date	10-21-05
Received Date	10-22-05	Received Date	10-22-05
Report Date	10-24-05	Report Date	10-24-05
Percent Solids, % w/w	98	Percent Solids, % w/w	98
Preparation Date	10-22-05	Preparation Date	10-22-05
Analysis Date	10-23-05	Analysis Date	10-23-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051751-05	Control Number	051751-06

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	mg/kg	MDL	TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	55	<0.1	PCB-1254	73	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	105	67-123	Decachlorobiphenyl	112	67-123

NOTES:	MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text. nd = Parameter Not Detected At MDL Results Are Reported On The Dry Weight Basis Aroclor Type Was Confirmed On A 2nd Column

Reviewed By SU Date 10/24/05

Sequence 102305A	
28.1	28.2

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Sphere; Row 5/6 - Sampling Date of October 21, 2005	Our Project Number CHEM-05-1751

Sample Identification	28.3	**Sample Identification**	14.1
Sample Type	paint chips	Sample Type	paint chips
Sample Date	10-21-05	Sample Date	10-21-05
Received Date	10-22-05	Received Date	10-22-05
Report Date	10-24-05	Report Date	10-24-05
Percent Solids, % w/w	98	Percent Solids, % w/w	98
Preparation Date	10-22-05	Preparation Date	10-22-05
Analysis Date	10-23-05	Analysis Date	10-23-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051751-07	Control Number	051751-08

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	mg/kg	MDL	TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	36	<0.1	PCB-1254	48	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	109	67-123	Decachlorobiphenyl	111	67-123

NOTES:	MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text. nd = Parameter Not Detected At MDL Results Are Reported On The Dry Weight Basis Aroclor Type Was Confirmed On A 2nd Column

Reviewed By AU Date 10/28/05

Sequence 102305A	
28.3	14.1

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Sphere; Row 5/6 - Sampling Date of October 21, 2005	Our Project Number CHEM-05-1751

Sample Identification	14.2	**Sample Identification**	14.3
Sample Type	paint chips	Sample Type	paint chips
Sample Date	10-21-05	Sample Date	10-21-05
Received Date	10-22-05	Received Date	10-22-05
Report Date	10-24-05	Report Date	10-24-05
Percent Solids, % w/w	99	Percent Solids, % w/w	98
Preparation Date	10-22-05	Preparation Date	10-22-05
Analysis Date	10-23-05	Analysis Date	10-24-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051751-09	Control Number	051751-10

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	mg/kg	MDL	TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	36	<0.1	PCB-1254	39	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	102	67-123	Decachlorobiphenyl	101	67-123

NOTES:	MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text. nd = Parameter Not Detected At MDL Results Are Reported On The Dry Weight Basis Aroclor Type Was Confirmed On A 2nd Column

Reviewed By AU Date 10/24/05

Sequence 102305A	
14.2	14.3

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Sphere; Row 5/6 - Sampling Date of October 21, 2005	Our Project Number CHEM-05-1751

Sample Identification	14.4	**Sample Identification**	29.1
Sample Type	paint chips	Sample Type	paint chips
Sample Date	10-21-05	Sample Date	10-21-05
Received Date	10-22-05	Received Date	10-22-05
Report Date	10-24-05	Report Date	10-24-05
Percent Solids, % w/w	98	Percent Solids, % w/w	98
Preparation Date	10-22-05	Preparation Date	10-22-05
Analysis Date	10-24-05	Analysis Date	10-24-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051751-11	Control Number	051751-12

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	mg/kg	MDL	TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	34	<0.1	PCB-1254	33	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	91	75-117	Decachlorobiphenyl	92	75-117

NOTES:	MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text. nd = Parameter Not Detected At MDL Results Are Reported On The Dry Weight Basis Aroclor Type Was Confirmed On A 2nd Column

Reviewed By AH Date 10/24/05

Sequence 102305A	
14.4	29.1

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Sphere; Row 5/6 - Sampling Date of October 21, 2005	Our Project Number CHEM-05-1751

Sample Identification	29.2	**Sample Identification**	29.3
Sample Type	paint chips	Sample Type	paint chips
Sample Date	10-21-05	Sample Date	10-21-05
Received Date	10-22-05	Received Date	10-22-05
Report Date	10-24-05	Report Date	10-24-05
Percent Solids, % w/w	98	Percent Solids, % w/w	99
Preparation Date	10-22-05	Preparation Date	10-22-05
Analysis Date	10-24-05	Analysis Date	10-24-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051751-13	Control Number	051751-14

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	mg/kg	MDL	TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	29	<0.1	PCB-1254	25	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	94	75-117	Decachlorobiphenyl	88	75-117

NOTES:
MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text.
nd = Parameter Not Detected At MDL
Results Are Reported On The Dry Weight Basis
Aroclor Type Was Confirmed On A 2nd Column

Reviewed By AU Date 10/24/05

Sequence 102305A	
29.2	29.3

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Sphere; Row 5/6 - Sampling Date of October 21, 2005	Our Project Number CHEM-05-1751

Sample Identification	15.1	**Sample Identification**	15.2
Sample Type	paint chips	Sample Type	paint chips
Sample Date	10-21-05	Sample Date	10-21-05
Received Date	10-22-05	Received Date	10-22-05
Report Date	10-24-05	Report Date	10-24-05
Percent Solids, % w/w	98	Percent Solids, % w/w	99
Preparation Date	10-22-05	Preparation Date	10-22-05
Analysis Date	10-24-05	Analysis Date	10-24-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051751-15	Control Number	051751-16

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	mg/kg	MDL	TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	48	<0.1	PCB-1254	21	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	88	67-123	Decachlorobiphenyl	88	75-117

NOTES:	MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text. nd = Parameter Not Detected At MDL Results Are Reported On The Dry Weight Basis Aroclor Type Was Confirmed On A 2nd Column

Reviewed By AU Date 10/24/05

Sequence 102305A	
15.1	15.2

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Sphere; Row 5/6 - Sampling Date of October 21, 2005	Our Project Number CHEM-05-1751

Sample Identification	15.3	**Sample Identification**	15.4
Sample Type	paint chips	Sample Type	paint chips
Sample Date	10-21-05	Sample Date	10-21-05
Received Date	10-22-05	Received Date	10-22-05
Report Date	10-24-05	Report Date	10-24-05
Percent Solids, % w/w	98	Percent Solids, % w/w	98
Preparation Date	10-22-05	Preparation Date	10-22-05
Analysis Date	10-24-05	Analysis Date	10-24-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051751-17	Control Number	051751-18

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	mg/kg	MDL	TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	49	<0.1	PCB-1254	36	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	70	67-123	Decachlorobiphenyl	91	75-117

NOTES:	MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text. nd = Parameter Not Detected At MDL Results Are Reported On The Dry Weight Basis Aroclor Type Was Confirmed On A 2nd Column

Reviewed By _____ Date 10/24/05

Sequence 102305A	
15.3	15.4

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Sphere; Row 5/6 - Sampling Date of October 21, 2005	Our Project Number CHEM-05-1751

Sample Identification	30.1	**Sample Identification**	30.2
Sample Type	paint chips	Sample Type	paint chips
Sample Date	10-21-05	Sample Date	10-21-05
Received Date	10-22-05	Received Date	10-22-05
Report Date	10-24-05	Report Date	10-24-05
Percent Solids, % w/w	98	Percent Solids, % w/w	98
Preparation Date	10-22-05	Preparation Date	10-22-05
Analysis Date	10-24-05	Analysis Date	10-24-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051751-19	Control Number	051751-20

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	mg/kg	MDL	TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	42	<0.1	PCB-1254	47	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	103	67-123	Decachlorobiphenyl	105	67-123

NOTES:
MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text.
nd = Parameter Not Detected At MDL
Results Are Reported On The Dry Weight Basis
Aroclor Type Was Confirmed On A 2nd Column

Reviewed By AU Date 10/24/05

Sequence 102305A	
30.1	30.2

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Sphere; Row 5/6 - Sampling Date of October 21, 2005	Our Project Number CHEM-05-1751

Sample Identification	30.3	
Sample Type	paint chips	
Sample Date	10-21-05	
Received Date	10-22-05	
Report Date	10-24-05	
Percent Solids, % w/w	99	
Preparation Date	10-22-05	
Analysis Date	10-24-05	
Analyst	bek, glc	
Control Number	051751-21	

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	41	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	90	67-123

NOTES:
MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text.
nd = Parameter Not Detected At MDL
Results Are Reported On The Dry Weight Basis
Aroclor Type Was Confirmed On A 2nd Column

Reviewed By [signature] Date 10/24/05

Sequence 102305A
30.3

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – LABORATORY SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: Big Rock Point Restoration Project

PROJECT NUMBER:

SAMPLING TEAM:

DATE SHIPPED: 10-21-05

SITE SKETCH ATTACHED? CIRCLE ONE: YES NO

ANALYSIS REQUESTED: PCB

PAGE 1 OF 2

SEND REPORT TO: TA Gable, Wm Groogland

PHONE: 231 547-8259

CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	PCB	REMARKS
13.1	10-21-05	1100		CONTAINMENT SPHERE ROW 5/6		1	✓	05-1751-01
13.2	10-21-05	1105		CONTAINMENT SPHERE ROW 5/6		1	✓	-02
13.3	10-21-05	1110		CONTAINMENT SPHERE ROW 5/6		1	✓	-03
13.4	10-21-05	1115		CONTAINMENT SPHERE ROW 5/6		1	✓	-04
28.1	10-21-05	1120		CONTAINMENT SPHERE ROW 5/6		1	✓	-05
28.2	10-21-05	1125		CONTAINMENT SPHERE ROW 5/6		1	✓	-06
28.3	10-21-05	1130		CONTAINMENT SPHERE ROW 5/6		1	✓	-07
14.1	10-21-05	1530		CONTAINMENT SPHERE ROW 5/6		1	✓	-08
14.2	10-21-05	1535		CONTAINMENT SPHERE ROW 5/6		1	✓	-09
14.3	10-21-05	1540		CONTAINMENT SPHERE ROW 5/6		1	✓	-10
14.4	10-21-05	1545		CONTAINMENT SPHERE ROW 5/6		1	✓	-11
29.1	10-21-05	1550		CONTAINMENT SPHERE ROW 5/6		1	✓	-12

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
[signature]	10-21-05 @ 1735	[signature]
RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
	10.22.05 @ 730	[signature]
RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)

COMMENTS

METHOD- 8082

ORIGINAL TO LAB COPY TO CUSTOMER

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – LABORATORY SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: Big Rock Point Restoration Project

PROJECT NUMBER:

SAMPLING TEAM:

DATE SHIPPED: 10-21-05

SITE SKETCH ATTACHED? CIRCLE ONE: YES NO

ANALYSIS REQUESTED

PAGE 2 OF 2

SEND REPORT TO: TA GOBLE, WM HOAGLUND

PHONE: 231 547-8259

CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	PCB							REMARKS
29.2	10-21-05	1555		CONTAINMENT SPHERE ROW 5/6		1	✓							05-1751-13
29.3	10-21-05	1600		CONTAINMENT SPHERE ROW 5/6		1	✓							-14
15.1	10-21-05	1700		CONTAINMENT SPHERE ROW 5/6		1	✓							-15
15.2	10-21-05	1705		CONTAINMENT SPHERE ROW 5/6		1	✓							-16
15.3	10-21-05	1710		CONTAINMENT SPHERE ROW 5/6		1	✓							-17
15.4	10-21-05	1715		CONTAINMENT SPHERE ROW 5/6		1	✓							-18
30.1	10-21-05	1720		CONTAINMENT SPHERE ROW 5/6		1	✓							-19
30.2	10-21-05	1725		CONTAINMENT SPHERE ROW 5/6		1	✓							-20
30.3	10-21-05	1730		CONTAINMENT SPHERE ROW 5/6		1	✓							-21

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
[signature]	10-21-05 @ 1735	[signature]
RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
	10-22-05 @ 730	[signature]
RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)

COMMENTS

METHOD 8082

ORIGINAL TO LAB COPY TO CUSTOMER

CONSUMERS ENERGY Memorandum

To: TGoble, Big Rock

From: GLCattell, T-254, Jackson

Date: October 28, 2005

Subject: SAMPLES FOR DETERMINATION OF PCBs
- Paint Chips & Surface Wipe
- Containment Sphere; Row 5/6
- Sampling Dates of October 25 & 26, 2005

CC: WMHoaglund, Big Rock

File Index: 520517-783-772

Twenty-two paint chip samples and one surface wipe sample were received on October 27 for determination of polychlorinated biphenyls (PCBs). All determinations were performed by the Chemistry Section of Laboratory Services and the results are attached for your review.

Analytical Methods

Unless otherwise specified, all methods are from SW-846, Test Methods For Evaluating Solid Waste - Physical / Chemical Methods, USEPA.

Sample Extraction (Paint Chips) - Method 3545, Pressurized Fluid Extraction.
Sample Extraction (Surface Wipe) - Method 3550, Ultrasonic Extraction.
Extract Concentration – Nitrogen Evaporation Technique, Exhibit D, Aroclors, Section 10. Multi-Media, Multi-Concentration Organics Analysis; SOM01.X; USEPA.
Extract Cleanup – Method 3620, Florisil Cleanup & Method 3665, Sulfuric Acid/Permanganate Cleanup.
Percent Solids (Dry Weight) – Section 7.2 of Method 3545, Determination of Percent Dry Weight, Pressurized Fluid Extraction.
Polychlorinated Biphenyls - Method 8082, Polychlorinated Biphenyls by Gas Chromatography.

Analytical Remarks & Summary

a. All MDLs are listed as "<" for uniformity. The actual MDLs of individual Aroclors vary slightly amonst each other and detectors.
b. All PCBs are identifed, calculated and reported as Aroclor 1254. No other Aroclors were indicated.
c. All paint chip samples are reported as containing PCBs, ranging from 27 to 73 mg/kg on the dry-weight basis. The surface wipe sample did not contain any detectable PCBs.

Report Package Contents

The report package consists of 15 pages: 1 cover page, 12 pages of Analytical Results, 2 Chain of Custody pages.

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Sphere; Row 5/6 - Sampling Dates of October 25 & 26, 2005	Our Project Number CHEM-05-1772

Sample Identification	9.1	Sample Identification	9.2
Sample Type	paint chips	Sample Type	paint chips
Sample Date	10-26-05	Sample Date	10-26-05
Received Date	10-27-05	Received Date	10-27-05
Report Date	10-28-05	Report Date	10-28-05
Percent Solids, % w/w	99	Percent Solids, % w/w	98
Preparation Date	10-27-05	Preparation Date	10-27-05
Analysis Date	10-27-05	Analysis Date	10-27-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051772-01	Control Number	051772-02

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	mg/kg	MDL	TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	31	<0.1	PCB-1254	29	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	90	75-117	Decachlorobiphenyl	91	75-117

NOTES:
MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text.
nd = Parameter Not Detected At MDL
Results Are Reported On The Dry Weight Basis
Aroclor Type Was Confirmed On A 2nd Column

Reviewed By [signature] Date 10/28/05

Sequence 102705A	
9.1	9.2

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Sphere; Row 5/6 - Sampling Dates of October 25 & 26, 2005	Our Project Number CHEM-05-1772

Sample Identification	9.3	**Sample Identification**	9.4
Sample Type	paint chips	Sample Type	paint chips
Sample Date	10-26-05	Sample Date	10-26-05
Received Date	10-27-05	Received Date	10-27-05
Report Date	10-28-05	Report Date	10-28-05
Percent Solids, % w/w	98	Percent Solids, % w/w	99
Preparation Date	10-27-05	Preparation Date	10-27-05
Analysis Date	10-27-05	Analysis Date	10-27-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051772-03	Control Number	051772-04

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	mg/kg	MDL	TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	36	<0.1	PCB-1254	32	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	98	75-117	Decachlorobiphenyl	100	75-117

NOTES:
MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text.
nd = Parameter Not Detected At MDL
Results Are Reported On The Dry Weight Basis
Aroclor Type Was Confirmed On A 2nd Column

Reviewed By [signature] Date 10/28/05

Sequence 102705A	
9.3	9.4

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Sphere; Row 5/6 - Sampling Dates of October 25 & 26, 2005	Our Project Number CHEM-05-1772

Sample Identification	10.1	**Sample Identification**	10.2
Sample Type	paint chips	Sample Type	paint chips
Sample Date	10-26-05	Sample Date	10-26-05
Received Date	10-27-05	Received Date	10-27-05
Report Date	10-28-05	Report Date	10-28-05
Percent Solids, % w/w	99	Percent Solids, % w/w	99
Preparation Date	10-27-05	Preparation Date	10-27-05
Analysis Date	10-27-05	Analysis Date	10-27-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051772-05	Control Number	051772-06

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	mg/kg	MDL	TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	32	<0.1	PCB-1254	27	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	99	75-117	Decachlorobiphenyl	101	75-117

NOTES:	MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text. nd = Parameter Not Detected At MDL Results Are Reported On The Dry Weight Basis Aroclor Type Was Confirmed On A 2nd Column

Reviewed By AM Date 10/28/05

Sequence 102705A	
10.1	10.2

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Sphere; Row 5/6 - Sampling Dates of October 25 & 26, 2005	Our Project Number CHEM-05-1772

Sample Identification	10.3	**Sample Identification**	10.4
Sample Type	paint chips	Sample Type	paint chips
Sample Date	10-26-05	Sample Date	10-26-05
Received Date	10-27-05	Received Date	10-27-05
Report Date	10-28-05	Report Date	10-28-05
Percent Solids, % w/w	99	Percent Solids, % w/w	99
Preparation Date	10-27-05	Preparation Date	10-27-05
Analysis Date	10-27-05	Analysis Date	10-27-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051772-07	Control Number	051772-08

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	mg/kg	MDL	TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	54	<0.1	PCB-1254	46	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	98	75-117	Decachlorobiphenyl	92	75-117

NOTES:	MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text. nd = Parameter Not Detected At MDL Results Are Reported On The Dry Weight Basis Aroclor Type Was Confirmed On A 2nd Column

Reviewed By _____ Date 10/28/05

Sequence 102705A	
10.3	10.4

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Sphere; Row 5/6 - Sampling Dates of October 25 & 26, 2005	Our Project Number CHEM-05-1772

Sample Identification	11.1		**Sample Identification**	11.2	
Sample Type	paint chips		Sample Type	paint chips	
Sample Date	10-26-05		Sample Date	10-26-05	
Received Date	10-27-05		Received Date	10-27-05	
Report Date	10-28-05		Report Date	10-28-05	
Percent Solids, % w/w	99		Percent Solids, % w/w	99	
Preparation Date	10-27-05		Preparation Date	10-27-05	
Analysis Date	10-27-05		Analysis Date	10-27-05	
Analyst	bek, glc		Analyst	bek, glc	
Control Number	051772-09		Control Number	051772-10	
PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	mg/kg	MDL	TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	46	<0.1	PCB-1254	45	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	96	75-117	Decachlorobiphenyl	99	75-117

NOTES:	MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text. nd = Parameter Not Detected At MDL Results Are Reported On The Dry Weight Basis Aroclor Type Was Confirmed On A 2nd Column

Reviewed By _____ Date _____

Sequence 102705A	
11.1	11.2

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Sphere; Row 5/6 - Sampling Dates of October 25 & 26, 2005	Our Project Number CHEM-05-1772

Sample Identification	11.3	**Sample Identification**	11.4
Sample Type	paint chips	Sample Type	paint chips
Sample Date	10-26-05	Sample Date	10-26-05
Received Date	10-27-05	Received Date	10-27-05
Report Date	10-28-05	Report Date	10-28-05
Percent Solids, % w/w	99	Percent Solids, % w/w	99
Preparation Date	10-27-05	Preparation Date	10-27-05
Analysis Date	10-27-05	Analysis Date	10-27-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051772-11	Control Number	051772-12

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	mg/kg	MDL	TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	45	<0.1	PCB-1254	73	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	104	75-117	Decachlorobiphenyl	112	67-123

NOTES:	MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text. nd = Parameter Not Detected At MDL Results Are Reported On The Dry Weight Basis Aroclor Type Was Confirmed On A 2nd Column

Reviewed By AY Date 10/28/05

Sequence 102705A	
11.3	11.4

PCBs.

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Sphere; Row 5/6 - Sampling Dates of October 25 & 26, 2005	Our Project Number CHEM-05-1772

Sample Identification	12.1	**Sample Identification**	12.2
Sample Type	paint chips	Sample Type	paint chips
Sample Date	10-26-05	Sample Date	10-26-05
Received Date	10-27-05	Received Date	10-27-05
Report Date	10-28-05	Report Date	10-28-05
Percent Solids, % w/w	98	Percent Solids, % w/w	98
Preparation Date	10-27-05	Preparation Date	10-27-05
Analysis Date	10-28-05	Analysis Date	10-28-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051772-13	Control Number	051772-14

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	49	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	98	75-117

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	41	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	99	75-117

NOTES:
MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text.
nd = Parameter Not Detected At MDL
Results Are Reported On The Dry Weight Basis
Aroclor Type Was Confirmed On A 2nd Column

Reviewed By _____ Date 10/28/05

Sequence 102705A	
12.1	12.2

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Sphere; Row 5/6 - Sampling Dates of October 25 & 26, 2005	Our Project Number CHEM-05-1772

Sample Identification	12.3	**Sample Identification**	12.4
Sample Type	paint chips	Sample Type	paint chips
Sample Date	10-26-05	Sample Date	10-26-05
Received Date	10-27-05	Received Date	10-27-05
Report Date	10-28-05	Report Date	10-28-05
Percent Solids, % w/w	98	Percent Solids, % w/w	98
Preparation Date	10-27-05	Preparation Date	10-27-05
Analysis Date	10-28-05	Analysis Date	10-28-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051772-15	Control Number	051772-16

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	mg/kg	MDL	TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	38	<0.1	PCB-1254	54	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	95	75-117	Decachlorobiphenyl	108	67-123

NOTES:
MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text.
nd = Parameter Not Detected At MDL
Results Are Reported On The Dry Weight Basis
Aroclor Type Was Confirmed On A 2nd Column

Reviewed By JU Date 10/28/05

Sequence 102705A	
12.3	12.4

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Sphere; Row 5/6 - Sampling Dates of October 25 & 26, 2005	Our Project Number CHEM-05-1772

Sample Identification	26.1	**Sample Identification**	26.2
Sample Type	paint chips	Sample Type	paint chips
Sample Date	10-26-05	Sample Date	10-26-05
Received Date	10-27-05	Received Date	10-27-05
Report Date	10-28-05	Report Date	10-28-05
Percent Solids, % w/w	98	Percent Solids, % w/w	98
Preparation Date	10-27-05	Preparation Date	10-27-05
Analysis Date	10-28-05	Analysis Date	10-28-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051772-17	Control Number	051772-18

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	mg/kg	MDL	TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	48	<0.1	PCB-1254	42	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	107	67-123	Decachlorobiphenyl	96	75-117

NOTES:
MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text.
nd = Parameter Not Detected At MDL
Results Are Reported On The Dry Weight Basis
Aroclor Type Was Confirmed On A 2nd Column

Reviewed By Ad Date 10/28/05

Sequence 102705A	
26.1	26.2

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Sphere; Row 5/6 - Sampling Dates of October 25 & 26, 2005	Our Project Number CHEM-05-1772

Sample Identification	26.3	**Sample Identification**	27.1
Sample Type	paint chips	Sample Type	paint chips
Sample Date	10-26-05	Sample Date	10-26-05
Received Date	10-27-05	Received Date	10-27-05
Report Date	10-28-05	Report Date	10-28-05
Percent Solids, % w/w	98	Percent Solids, % w/w	98
Preparation Date	10-27-05	Preparation Date	10-27-05
Analysis Date	10-28-05	Analysis Date	10-28-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051772-19	Control Number	051772-20

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	mg/kg	MDL	TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	47	<0.1	PCB-1254	49	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	97	75-117	Decachlorobiphenyl	98	75-117

NOTES:	MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text. nd = Parameter Not Detected At MDL Results Are Reported On The Dry Weight Basis Aroclor Type Was Confirmed On A 2nd Column

Reviewed By _____ Date 10/28/05

Sequence 102705A	
26.3	27.1

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Sphere; Row 5/6 - Sampling Dates of October 25 & 26, 2005	Our Project Number CHEM-05-1772

Sample Identification	27.2	**Sample Identification**	27.3
Sample Type	paint chips	Sample Type	paint chips
Sample Date	10-26-05	Sample Date	10-26-05
Received Date	10-27-05	Received Date	10-27-05
Report Date	10-28-05	Report Date	10-28-05
Percent Solids, % w/w	99	Percent Solids, % w/w	99
Preparation Date	10-27-05	Preparation Date	10-27-05
Analysis Date	10-28-05	Analysis Date	10-28-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051772-21	Control Number	051772-22

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	mg/kg	MDL	TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	52	<0.1	PCB-1254	42	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	110	67-123	Decachlorobiphenyl	116	67-123

NOTES:	MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text. nd = Parameter Not Detected At MDL Results Are Reported On The Dry Weight Basis Aroclor Type Was Confirmed On A 2nd Column

Reviewed By _____ Date 10/28/05

Sequence 102705A	
27.2	27.3

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Sphere; Row 5/6 - Sampling Dates of October 25 & 26, 2005	Our Project Number CHEM-05-1772

Sample Identification	H-1
Sample Type	surface wipe
Sample Date	10-25-05
Received Date	10-27-05
Report Date	10-28-05
Percent Solids, % w/w	- -
Preparation Date	10-27-05
Analysis Date	10-28-05
Analyst	bek, glc
Control Number	051772-23

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.2
PCB-1221	nd	<0.2
PCB-1232	nd	<0.2
PCB-1242	nd	<0.2
PCB-1248	nd	<0.2
PCB-1254	nd	<0.2
PCB-1260	nd	<0.2
PCB-1262	nd	<0.2
PCB-1268	nd	<0.2
Sum of Aroclors	nd	<0.2
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	99	59-109

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Was Not Detected At The MDL
MDL Was Raised Due To Matrix Interference

Reviewed By AU Date 10/28/05

Sequence 102705A
H-1

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – LABORATORY SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: Big Rock Point

PROJECT NUMBER:

SAMPLING TEAM:

DATE SHIPPED: 10-27-05

SITE SKETCH ATTACHED? CIRCLE ONE: YES NO

ANALYSIS REQUESTED

PAGE 1 OF 2

SEND REPORT TO: TA Gogle, Wm Woodford

PHONE: 231 547-8259

CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	PCB							REMARKS
9.1	10-26-05	1500		Containment Row 5/6		1	✓							05-1772-01
9.2	10-26-05	1505		Containment Row 5/6		1	✓							-02
9.3	10-26-05	1510		Containment Row 5/6		1	✓							-03
9.4	10-26-05	1515		Containment Row 5/6		1	✓							-04
10.1	10-26-05	1345		Containment Row 5/6		1	✓							-05
10.2	10-26-05	1350		Containment Row 5/6		1	✓							-06
10.3	10-26-05	1355		Containment Row 5/6		1	✓							-07
10.4	10-26-05	1400		Containment Row 5/6		1	✓							-08
11.1	10-26-05	1230		Containment Row 5/6		1	✓							-09
11.2	10-26-05	1235		Containment Row 5/6		1	✓							-10
11.3	10-26-05	1240		Containment Row 5/6		1	✓							-11
11.4	10-26-05	1245		Containment Row 5/6		1	✓							-12

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
[signature]	10-26-05 1600	[signature] 10-26-05 1600
[signature]	10/27/05 0735	[signature]

COMMENTS

-7°C

ORIGINAL TO LAB COPY TO CUSTOMER

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – LABORATORY SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: Big Rock Point

PROJECT NUMBER:

SAMPLING TEAM:

DATE SHIPPED: 10-27-05

SITE SKETCH ATTACHED? CIRCLE ONE: YES NO

PAGE 2 OF 2

SEND REPORT TO: TA Gable, WM Woodford

PHONE: 231 547-8259

ANALYSIS REQUESTED: PCB

CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	PCB							REMARKS
12.1	10-26-05	0945		Containment Row 5/6		1	✓							05-17728-13
12.2	10-26-05	0950		Containment Row 5/6		1	✓							-14
12.3	10-26-05	0955		Containment Row 5/6		1	✓							-15
12.4	10-26-05	1000		Containment Row 5/6		1	✓							-16
26.1	10-26-05	1250		Containment Row 5/6		1	✓							-17
26.2	10-26-05	1255		Containment Row 5/6		1	✓							-18
26.3	10-26-05	1300		Containment Row 5/6		1	✓							-19
27.1	10-26-05	1005		Containment Row 5/6		1	✓							-20
27.2	10-26-05	1010		Containment Row 5/6		1	✓							-21
27.3	10-26-05	1015		Containment Row 5/6		1	✓							-22
H-1	10-25-05	1630		Hydraulic Cutter		1	✓							-23
							✓							

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
B Woodford	10-26-05 1600	[illegible] 10-26-05 1600
Brandy [illegible]	10/27/05 0735	[illegible]

COMMENTS

ORIGINAL TO LAB COPY TO CUSTOMER

CONSUMERS ENERGY Memorandum

To: TGoble, Big Rock

From: GLCattell, T-254, Jackson

Date: November 01, 2005

Subject: SAMPLES FOR DETERMINATION OF PCBs
- Paint Chips & Surface Wipe
- Containment Sphere; Row 5/6
- Sampling Date of October 28, 2005

CC: WMHoaglund, Big Rock

File Index: 520517-783-794

Six paint chip samples and one surface wipe sample were received on October 31 for determination of polychlorinated biphenyls (PCBs). All determinations were performed by the Chemistry Section of Laboratory Services and the results are attached for your review.

Analytical Methods

Unless otherwise specified, all methods are from SW-846, Test Methods For Evaluating Solid Waste - Physical / Chemical Methods, USEPA.

Sample Extraction (Paint Chips) - Method 3545, Pressurized Fluid Extraction.
Sample Extraction (Surface Wipe) - Method 3550, Ultrasonic Extraction.
Extract Concentration – Nitrogen Evaporation Technique, Exhibit D, Aroclors, Section 10. Multi-Media, Multi-Concentration Organics Analysis; SOM01.X; USEPA.
Extract Cleanup – Method 3620, Florisil Cleanup & Method 3665, Sulfuric Acid/Permanganate Cleanup.
Percent Solids (Dry Weight) – Section 7.2 of Method 3545, Determination of Percent Dry Weight, Pressurized Fluid Extraction.
Polychlorinated Biphenyls - Method 8082, Polychlorinated Biphenyls by Gas Chromatography.

Analytical Remarks & Summary

a. All MDLs are listed as "<" for uniformity. The actual MDLs of individual Aroclors vary slightly amonst each other and detectors.
b. All PCBs are identifed, calculated and reported as Aroclor 1254. No other Aroclors were indicated.
c. All paint chip samples are reported as containing PCBs, ranging from 33 to 52 mg/kg on the dry-weight basis. The surface wipe sample is reported as containing 0.5 ug/100cm^2 of Aroclor 1254 (100cm^2 was assumed).

Report Package Contents

The report package consists of 6 pages: 1 cover page, 4 pages of Analytical Results & 1 Chain of Custody page.

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Sphere; Row 5/6 - Sampling Date of October 28, 2005	Our Project Number CHEM-05-1794

Sample Identification	25.1	Sample Identification	25.2
Sample Type	paint chips	Sample Type	paint chips
Sample Date	10-28-05	Sample Date	10-28-05
Received Date	10-31-05	Received Date	10-31-05
Report Date	11-01-05	Report Date	11-01-05
Percent Solids, % w/w	97	Percent Solids, % w/w	98
Preparation Date	10-31-05	Preparation Date	10-31-05
Analysis Date	10-31-05	Analysis Date	10-31-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051794-01	Control Number	051794-02

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	mg/kg	MDL	TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	33	<0.1	PCB-1254	34	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	96	75-117	Decachlorobiphenyl	99	75-117

NOTES:
MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text.
nd = Parameter Not Detected At MDL
Results Are Reported On The Dry Weight Basis
Aroclor Type Was Confirmed On A 2nd Column

Reviewed By MC Date 11/01/05

Sequence 103105A	
25.1	25.2

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Sphere; Row 5/6 - Sampling Date of October 28, 2005	Our Project Number CHEM-05-1794

Sample Identification	25.3	Sample Identification	24.1
Sample Type	paint chips	Sample Type	paint chips
Sample Date	10-28-05	Sample Date	10-28-05
Received Date	10-31-05	Received Date	10-31-05
Report Date	11-01-05	Report Date	11-01-05
Percent Solids, % w/w	98	Percent Solids, % w/w	98
Preparation Date	10-31-05	Preparation Date	10-31-05
Analysis Date	10-31-05	Analysis Date	10-31-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051794-03	Control Number	051794-04

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	mg/kg	MDL	TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	37	<0.1	PCB-1254	36	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	101	75-117	Decachlorobiphenyl	97	75-117

NOTES:
MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text.
nd = Parameter Not Detected At MDL
Results Are Reported On The Dry Weight Basis
Aroclor Type Was Confirmed On A 2nd Column

Reviewed By _____ Date 11/01/05

Sequence 103105A	
25.3	24.1

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Sphere; Row 5/6 - Sampling Date of October 28, 2005	Our Project Number CHEM-05-1794

Sample Identification	24.2	Sample Identification	24.3
Sample Type	paint chips	Sample Type	paint chips
Sample Date	10-28-05	Sample Date	10-28-05
Received Date	10-31-05	Received Date	10-31-05
Report Date	11-01-05	Report Date	11-01-05
Percent Solids, % w/w	98	Percent Solids, % w/w	98
Preparation Date	10-31-05	Preparation Date	10-31-05
Analysis Date	10-31-05	Analysis Date	10-31-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051794-05	Control Number	051794-06

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	52	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	115	67-123

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	42	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	101	75-117

NOTES:
MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text.
nd = Parameter Not Detected At MDL
Results Are Reported On The Dry Weight Basis
Aroclor Type Was Confirmed On A 2nd Column

Reviewed By AU Date 110105

Sequence 103105A	
24.2	24.3

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Sphere; Row 5/6 - Sampling Date of October 28, 2005	Our Project Number CHEM-05-1794

Sample Identification	H-2 Hydraulic Cutter	
Sample Type	surface wipe	
Sample Date	10-28-05	
Received Date	10-31-05	
Report Date	11-01-05	
Percent Solids, % w/w	- -	
Preparation Date	10-31-05	
Analysis Date	10-31-05	
Analyst	bek, glc	
Control Number	051794-07	

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.2
PCB-1221	nd	<0.2
PCB-1232	nd	<0.2
PCB-1242	nd	<0.2
PCB-1248	nd	<0.2
PCB-1254	0.5	<0.2
PCB-1260	nd	<0.2
PCB-1262	nd	<0.2
PCB-1268	nd	<0.2
Sum of Aroclors	nd	<0.2

Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	108	59-109

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Was Not Detected At The MDL
MDL Was Raised Due To Matrix Interference

Reviewed By _____ Date 11/01/05

Sequence 103105A
H-2

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – LABORATORY SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: Big Rock Point

PROJECT NUMBER:

SAMPLING TEAM:

DATE SHIPPED: 10-28-05

SITE SKETCH ATTACHED? CIRCLE ONE: YES NO

PAGE 1 OF 1

SEND REPORT TO: TA Goble, Wm Cloughland

PHONE: 231 547-8259

ANALYSIS REQUESTED: PCB

CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	PCB	REMARKS
25.1	10-28-05	1030		Containment Row 5/6		1	✓	05-1794-01
25.2	10-28-05	1035		Containment Row 5/6		1	✓	.02
25.3	10-28-05	1040		Containment Row 5/6		1	✓	.03
24.1	10-28-05	1345		Containment Row 5/6		1	✓	.04
24.2	10-28-05	1350		Containment Row 5/6		1	✓	.05
24.3	10-28-05	1355		Containment Row 5/6		1	✓	.06
H-2	10-28-05	1390		Hydraulic Cutter Swipe		1	✓	.07

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
[signature]	10-28-05 1410	[signature]
[signature]	10-28-05 1500	FedEx [signature]
	10-31-05 10∞	

COMMENTS: PLEASE RETURN COOLER TO BIG ROCK

ORIGINAL TO LAB COPY TO CUSTOMER

CONSUMERS ENERGY Memorandum

To: TGoble, Big Rock

From: GLCattell, T-254, Jackson

Date: November 04, 2005

Subject: SAMPLES FOR DETERMINATION OF PCBs
- Paint Chips
- Containment Sphere; Row 4
- Sampling Date of November 02, 2005

CC: WMHoaglund, Big Rock

File Index: 520517-783-826

Ten paint chip samples were received on November 03 for determination of polychlorinated biphenyls (PCBs). All determinations were performed by the Chemistry Section of Laboratory Services and the results are attached for your review.

Analytical Methods

Unless otherwise specified, all methods are from SW-846, Test Methods For Evaluating Solid Waste - Physical / Chemical Methods, USEPA.

Sample Extraction - Method 3545, Pressurized Fluid Extraction.
Extract Concentration – Nitrogen Evaporation Technique, Exhibit D, Aroclors, Section 10. Multi-Media, Multi-Concentration Organics Analysis; SOM01.X; USEPA.
Extract Cleanup – Method 3620, Florisil Cleanup & Method 3665, Sulfuric Acid/Permanganate Cleanup.
Percent Solids (Dry Weight) – Section 7.2 of Method 3545, Determination of Percent Dry Weight, Pressurized Fluid Extraction.
Polychlorinated Biphenyls - Method 8082, Polychlorinated Biphenyls by Gas Chromatography.

Analytical Remarks & Summary

a. All MDLs are listed as "<" for uniformity. The actual MDLs of individual Aroclors vary slightly amonst each other and detectors.
b. All PCBs are identifed, calculated and reported as Aroclor 1254. No other Aroclors were indicated.
c. All paint chip samples are reported as containing PCBs, ranging from 24 to 94 mg/kg on the dry-weight basis.

Report Package Contents

The report package consists of 7 pages: 1 cover page, 5 pages of Analytical Results & 1 Chain of Custody page.

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Sphere; Row 4 - Sampling Date of November 02, 2005	Our Project Number CHEM-05-1826

Sample Identification	45.1	Sample Identification	45.2
Sample Type	paint chips	Sample Type	paint chips
Sample Date	11-02-05	Sample Date	11-02-05
Received Date	11-03-05	Received Date	11-03-05
Report Date	11-04-05	Report Date	11-04-05
Percent Solids, % w/w	98	Percent Solids, % w/w	98
Preparation Date	11-03-05	Preparation Date	11-03-05
Analysis Date	11-03-05	Analysis Date	11-03-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051826-01	Control Number	051826-02

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	mg/kg	MDL	TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	24	<0.1	PCB-1254	35	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	97	75-117	Decachlorobiphenyl	103	75-117

NOTES:
MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text.
nd = Parameter Not Detected At MDL
Results Are Reported On The Dry Weight Basis
Aroclor Type Was Confirmed On A 2nd Column

Reviewed By AU Date 110405

Sequence 110205A	
45.1	45.2

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Sphere; Row 4 - Sampling Date of November 02, 2005	Our Project Number CHEM-05-1826

Sample Identification	45.3	Sample Identification	45.4
Sample Type	paint chips	Sample Type	paint chips
Sample Date	11-02-05	Sample Date	11-02-05
Received Date	11-03-05	Received Date	11-03-05
Report Date	11-04-05	Report Date	11-04-05
Percent Solids, % w/w	98	Percent Solids, % w/w	98
Preparation Date	11-03-05	Preparation Date	11-03-05
Analysis Date	11-03-05	Analysis Date	11-03-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051826-03	Control Number	051826-04

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	mg/kg	MDL	TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	35	<0.1	PCB-1254	37	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	107	75-117	Decachlorobiphenyl	102	75-117

NOTES:
MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text.
nd = Parameter Not Detected At MDL
Results Are Reported On The Dry Weight Basis
Aroclor Type Was Confirmed On A 2nd Column

Reviewed By Sel Date 110405

Sequence 110205A	
45.3	45.4

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Sphere; Row 4 - Sampling Date of November 02, 2005	Our Project Number CHEM-05-1826

Sample Identification	45.5	**Sample Identification**	46.1
Sample Type	paint chips	Sample Type	paint chips
Sample Date	11-02-05	Sample Date	11-02-05
Received Date	11-03-05	Received Date	11-03-05
Report Date	11-04-05	Report Date	11-04-05
Percent Solids, % w/w	98	Percent Solids, % w/w	98
Preparation Date	11-03-05	Preparation Date	11-03-05
Analysis Date	11-03-05	Analysis Date	11-03-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051826-05	Control Number	051826-06

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	mg/kg	MDL	TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	94	<0.1	PCB-1254	37	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	113	67-123	Decachlorobiphenyl	106	75-117

NOTES:	MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text. nd = Parameter Not Detected At MDL Results Are Reported On The Dry Weight Basis Aroclor Type Was Confirmed On A 2nd Column

Reviewed By _____ Date 110905

Sequence 110205A	
45.5	46.1

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Sphere; Row 4 - Sampling Date of November 02, 2005	Our Project Number CHEM-05-1826

Sample Identification	46.2	Sample Identification	46.3
Sample Type	paint chips	Sample Type	paint chips
Sample Date	11-02-05	Sample Date	11-02-05
Received Date	11-03-05	Received Date	11-03-05
Report Date	11-04-05	Report Date	11-04-05
Percent Solids, % w/w	98	Percent Solids, % w/w	98
Preparation Date	11-03-05	Preparation Date	11-03-05
Analysis Date	11-03-05	Analysis Date	11-03-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051826-07	Control Number	051826-08

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	mg/kg	MDL	TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	27	<0.1	PCB-1254	51	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	106	75-117	Decachlorobiphenyl	114	67-123

NOTES:
MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text.
nd = Parameter Not Detected At MDL
Results Are Reported On The Dry Weight Basis
Aroclor Type Was Confirmed On A 2nd Column

Reviewed By [signature] Date 110405

Sequence 110205A	
46.2	46.3

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Sphere; Row 4 - Sampling Date of November 02, 2005	Our Project Number CHEM-05-1826

Sample Identification	46.4	**Sample Identification**	46.5
Sample Type	paint chips	Sample Type	paint chips
Sample Date	11-02-05	Sample Date	11-02-05
Received Date	11-03-05	Received Date	11-03-05
Report Date	11-04-05	Report Date	11-04-05
Percent Solids, % w/w	98	Percent Solids, % w/w	98
Preparation Date	11-03-05	Preparation Date	11-03-05
Analysis Date	11-04-05	Analysis Date	11-04-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051826-09	Control Number	051826-10

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	mg/kg	MDL	TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	37	<0.1	PCB-1254	62	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	103	75-117	Decachlorobiphenyl	118	67-123

NOTES:	MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text. nd = Parameter Not Detected At MDL Results Are Reported On The Dry Weight Basis Aroclor Type Was Confirmed On A 2nd Column

Reviewed By AU Date 110405

Sequence 110205A	
46.4	46.5

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – LABORATORY SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: Big Rock Point

PROJECT NUMBER:

ANALYSIS REQUESTED

PAGE 1 OF 1

SEND REPORT TO: TA Goble

PHONE 231 547-8389

SAMPLING TEAM:

DATE SHIPPED: 11-2-05

SITE SKETCH ATTACHED? CIRCLE ONE: YES NO

CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	PCB							REMARKS
45.1	11-2-05	0915		Containment Row 4		1	✓							05-1826-1
45.2	11-2-05	0920		Containment Row 4		1	✓							-2
45.3	11-2-05	0925		Containment Row 4		1	✓							-3
45.4	11-2-05	0930		Containment Row 4		1	✓							-4
45.5	11-2-05	0935		Containment Row 4		1	✓							-5
46.1	11-2-05	1120		Containment Row 4		1	✓							-6
46.2	11-2-05	1125		Containment Row 4		1	✓							-7
46.3	11-2-05	1130		Containment Row 4		1	✓							-8
46.4	11-2-05	1135		Containment Row 4		1	✓							-9
46.5	11-2-05	1140		Containment Row 4		1	✓							-10

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
[signature]	11-2-05 1300	
RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
	11.3.05 10⁰⁰	(FEDEX) [signature]
RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)

COMMENTS

ORIGINAL TO LAB COPY TO CUSTOMER

CONSUMERS ENERGY Memorandum

To: TGoble, Big Rock

From: GLCattell, T-254, Jackson

Date: November 09, 2005

Subject: SAMPLES FOR DETERMINATION OF PCBs
- Paint Chips
- Containment Sphere; Row 3
- Sampling Date of November 04, 2005

CC: WMHoaglund, Big Rock

File Index: 520517-783-856

Twenty paint chip samples were received on November 08 for determination of polychlorinated biphenyls (PCBs). All determinations were performed by the Chemistry Section of Laboratory Services and the results are attached for your review.

Analytical Methods

Unless otherwise specified, all methods are from SW-846, Test Methods For Evaluating Solid Waste - Physical / Chemical Methods, USEPA.

Sample Extraction - Method 3545, Pressurized Fluid Extraction.
Extract Concentration – Nitrogen Evaporation Technique, Exhibit D, Aroclors, Section 10.
Multi-Media, Multi-Concentration Organics Analysis; SOM01.X; USEPA.
Extract Cleanup – Method 3620, Florisil Cleanup & Method 3665, Sulfuric Acid/Permanganate Cleanup.
Percent Solids (Dry Weight) – Section 7.2 of Method 3545, Determination of Percent Dry Weight, Pressurized Fluid Extraction.
Polychlorinated Biphenyls - Method 8082, Polychlorinated Biphenyls by Gas Chromatography.

Analytical Remarks & Summary

a. All MDLs are listed as "<" for uniformity. The actual MDLs of individual Aroclors vary slightly amonst each other and detectors.
b. All PCBs are identifed, calculated and reported as Aroclor 1254. No other Aroclors were indicated.
c. All paint chip samples are reported as containing PCBs, ranging from 14 to 34 mg/kg on the dry-weight basis.

Report Package Contents

The report package consists of 13 pages: 1 cover page, 10 pages of Analytical Results & 2 Chain of Custody pages.

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Sphere; Row 3 - Sampling Date of November 04, 2005	Our Project Number CHEM-05-1856

Sample Identification	58.1	**Sample Identification**	58.2
Sample Type	paint chips	Sample Type	paint chips
Sample Date	11-04-05	Sample Date	11-04-05
Received Date	11-08-05	Received Date	11-08-05
Report Date	11-09-05	Report Date	11-09-05
Percent Solids, % w/w	98	Percent Solids, % w/w	98
Preparation Date	11-08-05	Preparation Date	11-08-05
Analysis Date	11-08-05	Analysis Date	11-08-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051856-01	Control Number	051856-02

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	mg/kg	MDL	TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	30	<0.1	PCB-1254	34	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	94	75-117	Decachlorobiphenyl	102	75-117

NOTES:	MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text. nd = Parameter Not Detected At MDL Results Are Reported On The Dry Weight Basis Aroclor Type Was Confirmed On A 2nd Column

Reviewed By _____ Date 110805

Sequence 110805A	
58.1	58.2

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Sphere; Row 4 - Sampling Date of November 02, 2005	Our Project Number CHEM-05-1826

Sample Identification	58.3	**Sample Identification**	58.4
Sample Type	paint chips	Sample Type	paint chips
Sample Date	11-04-05	Sample Date	11-04-05
Received Date	11-08-05	Received Date	11-08-05
Report Date	11-09-05	Report Date	11-09-05
Percent Solids, % w/w	98	Percent Solids, % w/w	99
Preparation Date	11-08-05	Preparation Date	11-08-05
Analysis Date	11-08-05	Analysis Date	11-08-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051856-03	Control Number	051856-04

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	mg/kg	MDL	TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	29	<0.1	PCB-1254	32	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	101	75-117	Decachlorobiphenyl	102	75-117

NOTES:	MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text. nd = Parameter Not Detected At MDL Results Are Reported On The Dry Weight Basis Aroclor Type Was Confirmed On A 2nd Column

Reviewed By _____ Date _____

Sequence 110805A	
58.3	58.4

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Sphere; Row 4 - Sampling Date of November 02, 2005	Our Project Number CHEM-05-1826

Sample Identification	58.5	**Sample Identification**	59.1
Sample Type	paint chips	Sample Type	paint chips
Sample Date	11-04-05	Sample Date	11-04-05
Received Date	11-08-05	Received Date	11-08-05
Report Date	11-09-05	Report Date	11-09-05
Percent Solids, % w/w	99	Percent Solids, % w/w	98
Preparation Date	11-08-05	Preparation Date	11-08-05
Analysis Date	11-08-05	Analysis Date	11-09-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051856-05	Control Number	051856-06

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	mg/kg	MDL	TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	29	<0.1	PCB-1254	24	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	102	75-117	Decachlorobiphenyl	100	75-117

NOTES:	MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text. nd = Parameter Not Detected At MDL Results Are Reported On The Dry Weight Basis Aroclor Type Was Confirmed On A 2nd Column

Reviewed By Del Date 110805

Sequence 110805A	
58.5	59.1

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Sphere; Row 4 - Sampling Date of November 02, 2005	Our Project Number CHEM-05-1826

Sample Identification	59.2	**Sample Identification**	59.3
Sample Type	paint chips	Sample Type	paint chips
Sample Date	11-04-05	Sample Date	11-04-05
Received Date	11-08-05	Received Date	11-08-05
Report Date	11-09-05	Report Date	11-09-05
Percent Solids, % w/w	98	Percent Solids, % w/w	98
Preparation Date	11-08-05	Preparation Date	11-08-05
Analysis Date	11-09-05	Analysis Date	11-09-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051856-07	Control Number	051856-08

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	mg/kg	MDL	TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	19	<0.1	PCB-1254	16	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	102	75-117	Decachlorobiphenyl	92	75-117

NOTES:	MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text. nd = Parameter Not Detected At MDL Results Are Reported On The Dry Weight Basis Aroclor Type Was Confirmed On A 2nd Column

Reviewed By _____ Date 110705

Sequence 110805A	
59.2	59.3

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Sphere; Row 4 - Sampling Date of November 02, 2005	Our Project Number CHEM-05-1826

Sample Identification	59.4	**Sample Identification**	59.5
Sample Type	paint chips	Sample Type	paint chips
Sample Date	11-04-05	Sample Date	11-04-05
Received Date	11-08-05	Received Date	11-08-05
Report Date	11-09-05	Report Date	11-09-05
Percent Solids, % w/w	98	Percent Solids, % w/w	98
Preparation Date	11-08-05	Preparation Date	11-08-05
Analysis Date	11-09-05	Analysis Date	11-09-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051856-09	Control Number	051856-10

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	mg/kg	MDL	TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	20	<0.1	PCB-1254	27	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	102	75-117	Decachlorobiphenyl	105	75-117

NOTES:
MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text.
nd = Parameter Not Detected At MDL
Results Are Reported On The Dry Weight Basis
Aroclor Type Was Confirmed On A 2nd Column

Reviewed By AU Date 110805

Sequence 110805A	
59.4	59.5

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Sphere; Row 4 - Sampling Date of November 02, 2005	Our Project Number CHEM-05-1826

Sample Identification	60.1	Sample Identification	60.2
Sample Type	paint chips	Sample Type	paint chips
Sample Date	11-04-05	Sample Date	11-04-05
Received Date	11-08-05	Received Date	11-08-05
Report Date	11-09-05	Report Date	11-09-05
Percent Solids, % w/w	99	Percent Solids, % w/w	98
Preparation Date	11-08-05	Preparation Date	11-08-05
Analysis Date	11-09-05	Analysis Date	11-09-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051856-11	Control Number	051856-12

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	mg/kg	MDL	TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	22	<0.1	PCB-1254	14	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	104	75-117	Decachlorobiphenyl	107	75-117

NOTES:
MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text.
nd = Parameter Not Detected At MDL
Results Are Reported On The Dry Weight Basis
Aroclor Type Was Confirmed On A 2nd Column

Reviewed By Ell Date 110905

Sequence 110805A	
60.1	60.2

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Sphere; Row 4 - Sampling Date of November 02, 2005	Our Project Number CHEM-05-1826

Sample Identification	60.3	**Sample Identification**	60.4
Sample Type	paint chips	Sample Type	paint chips
Sample Date	11-04-05	Sample Date	11-04-05
Received Date	11-08-05	Received Date	11-08-05
Report Date	11-09-05	Report Date	11-09-05
Percent Solids, % w/w	98	Percent Solids, % w/w	98
Preparation Date	11-08-05	Preparation Date	11-08-05
Analysis Date	11-09-05	Analysis Date	11-09-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051856-13	Control Number	051856-14

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	mg/kg	MDL	TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	17	<0.1	PCB-1254	14	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	108	75-117	Decachlorobiphenyl	106	75-117

NOTES:	MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text. nd = Parameter Not Detected At MDL Results Are Reported On The Dry Weight Basis Aroclor Type Was Confirmed On A 2nd Column

Reviewed By _____ Date 110905

Sequence 110805A	
60.3	60.4

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Sphere; Row 4 - Sampling Date of November 02, 2005	Our Project Number CHEM-05-1826

Sample Identification	60.5	Sample Identification	61.1
Sample Type	paint chips	Sample Type	paint chips
Sample Date	11-04-05	Sample Date	11-04-05
Received Date	11-08-05	Received Date	11-08-05
Report Date	11-09-05	Report Date	11-09-05
Percent Solids, % w/w	98	Percent Solids, % w/w	98
Preparation Date	11-08-05	Preparation Date	11-08-05
Analysis Date	11-09-05	Analysis Date	11-09-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051856-15	Control Number	051856-16

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	mg/kg	MDL	TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	16	<0.1	PCB-1254	14	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	106	75-117	Decachlorobiphenyl	104	75-117

NOTES:
MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text.
nd = Parameter Not Detected At MDL
Results Are Reported On The Dry Weight Basis
Aroclor Type Was Confirmed On A 2nd Column

Reviewed By _____ Date 11/9/05

Sequence 110805A	
60.5	61.1

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Sphere; Row 4 - Sampling Date of November 02, 2005	Our Project Number CHEM-05-1826

Sample Identification	61.2	Sample Identification	61.3
Sample Type	paint chips	Sample Type	paint chips
Sample Date	11-04-05	Sample Date	11-04-05
Received Date	11-08-05	Received Date	11-08-05
Report Date	11-09-05	Report Date	11-09-05
Percent Solids, % w/w	99	Percent Solids, % w/w	98
Preparation Date	11-08-05	Preparation Date	11-08-05
Analysis Date	11-09-05	Analysis Date	11-09-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051856-17	Control Number	051856-18

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	mg/kg	MDL	TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	14	<0.1	PCB-1254	26	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	79	75-117	Decachlorobiphenyl	107	75-117

NOTES:
MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text.
nd = Parameter Not Detected At MDL
Results Are Reported On The Dry Weight Basis
Aroclor Type Was Confirmed On A 2nd Column

Reviewed By Dee Date 11/09/05

Sequence 110805A	
61.2	61.3

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Sphere; Row 4 - Sampling Date of November 02, 2005	Our Project Number CHEM-05-1826

Sample Identification	61.4	Sample Identification	61.5
Sample Type	paint chips	Sample Type	paint chips
Sample Date	11-04-05	Sample Date	11-04-05
Received Date	11-08-05	Received Date	11-08-05
Report Date	11-09-05	Report Date	11-09-05
Percent Solids, % w/w	98	Percent Solids, % w/w	98
Preparation Date	11-08-05	Preparation Date	11-08-05
Analysis Date	11-09-05	Analysis Date	11-09-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051856-19	Control Number	051856-20

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	mg/kg	MDL	TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	19	<0.1	PCB-1254	19	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	104	75-117	Decachlorobiphenyl	106	75-117

NOTES:
MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text.
nd = Parameter Not Detected At MDL
Results Are Reported On The Dry Weight Basis
Aroclor Type Was Confirmed On A 2nd Column

Reviewed By _____ Date 110805

Sequence 110805A	
61.4	61.5

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – LABORATORY SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: Big Rock Point

PROJECT NUMBER:

SAMPLING TEAM:

DATE SHIPPED: 11-4-05

SITE SKETCH ATTACHED? CIRCLE ONE: YES NO

ANALYSIS REQUESTED: PCB

PAGE 1 OF 2

SEND REPORT TO: TA Gable

PHONE: 231 547-8389

CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	PCB	REMARKS
58.1	11-4-05	1220		Containment Row 3		1	✓	05-1856 .01
58.2	11-4-05	1225		Containment Row 3		1	✓	.02
58.3	11-4-05	1230		Containment Row 3		1	✓	.03
58.4	11-4-05	1235		Containment Row 3		1	✓	.04
58.5	11-4-05	1240		Containment Row 3		1	✓	.05
59.1	11-4-05	1430		Containment Row 3		1	✓	.06
59.2	11-4-05	1435		Containment Row 3		1	✓	.07
59.3	11-4-05	1440		Containment Row 3		1	✓	.08
59.4	11-4-05	1445		Containment Row 3		1	✓	.09
59.5	11-4-05	1450		Containment Row 3		1	✓	.10

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
[signature]	11-4-05 1615	
RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
	11.8.05 1030	(FEDEX) [signature]
RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)

COMMENTS

ORIGINAL TO LAB COPY TO CUSTOMER

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – LABORATORY SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: Big Rock Point

PROJECT NUMBER:

SAMPLING TEAM:

DATE SHIPPED: 11-4-05

SITE SKETCH ATTACHED? CIRCLE ONE: YES NO

PAGE 2 OF 2

SEND REPORT TO: TA Goble

PHONE: 231 547-8389

ANALYSIS REQUESTED: PCB

CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	PCB							REMARKS
60.1	11-4-05	1520		Containment Row 3		1	✓							05-1856-11
60.2	11-4-05	1525		Containment Row 3		1	✓							-12
60.3	11-4-05	1530		Containment Row 3		1	✓							-13
60.4	11-4-05	1535		Containment Row 3		1	✓							-14
60.5	11-4-05	1540		Containment Row 3		1	✓							-15
61.1	11-4-05	1600		Containment Row 3		1	✓							-16
61.2	11-4-05	1605		Containment Row 3		1	✓							-17
61.3	11-4-05	1610		Containment Row 3		1	✓							-18
61.4	11-4-05	1615		Containment Row 3		1	✓							-19
61.5	11-4-05	1620		Containment Row 3		1	✓							-20

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
[signature]	11-4-05 1615	
RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
	11-8-05 1030	(FED EX) [signature]
RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)

COMMENTS

ORIGINAL TO LAB COPY TO CUSTOMER

CONSUMERS ENERGY Memorandum

To: TGoble, Big Rock

From: GLCattell, T-254, Jackson

Date: November 03, 2005

Subject: SAMPLES FOR DETERMINATION OF PCBs
- Paint Chips & Surface Wipes
- Containment Sphere
- Sampling Dates of October 31 & November 01, 2005

CC: WMHoaglund, Big Rock File Index: 520517-783-815

Fifteen paint chip samples and two surface wipe samples were received on November 02 for determination of polychlorinated biphenyls (PCBs). All determinations were performed by the Chemistry Section of Laboratory Services and the results are attached for your review.

Analytical Methods

Unless otherwise specified, all methods are from SW-846, Test Methods For Evaluating Solid Waste - Physical / Chemical Methods, USEPA.

Sample Extraction (Paint Chips) - Method 3545, Pressurized Fluid Extraction.
Sample Extraction (Surface Wipes) - Method 3550, Ultrasonic Extraction.
Extract Concentration – Nitrogen Evaporation Technique, Exhibit D, Aroclors, Section 10. Multi-Media, Multi-Concentration Organics Analysis; SOM01.X; USEPA.
Extract Cleanup – Method 3620, Florisil Cleanup & Method 3665, Sulfuric Acid/Permanganate Cleanup.
Percent Solids (Dry Weight) – Section 7.2 of Method 3545, Determination of Percent Dry Weight, Pressurized Fluid Extraction.
Polychlorinated Biphenyls - Method 8082, Polychlorinated Biphenyls by Gas Chromatography.

Analytical Remarks & Summary

a. All MDLs are listed as "<" for uniformity. The actual MDLs of individual Aroclors vary slightly amonst each other and detectors.
b. All PCBs are identifed, calculated and reported as Aroclor 1254. No other Aroclors were indicated.
c. All paint chip samples are reported as containing PCBs, ranging from 26 to 60 mg/kg on the dry-weight basis. No PCBs were detected in the surface wipe samples (100cm^2 was assumed).
d. The surface wipe MDLs were raised due to matrix interferences.
e. Surrogate spike recoveries for both surface wipes are over-recoved but this does not effect the results since no PCBs were found.

Report Package Contents

The report package consists of 12 pages: 1 cover page, 9 pages of Analytical Results & 2 Chain of Custody pages.

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Sphere - Sampling Dates of October 31 & November 01, 2005	Our Project Number CHEM-05-1815

Sample Identification	42.1	Sample Identification	42.2
Sample Type	paint chips	Sample Type	paint chips
Sample Date	10-31-05	Sample Date	10-31-05
Received Date	11-02-05	Received Date	11-02-05
Report Date	11-03-05	Report Date	11-03-05
Percent Solids, % w/w	98	Percent Solids, % w/w	98
Preparation Date	11-02-05	Preparation Date	11-02-05
Analysis Date	11-02-05	Analysis Date	11-02-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051815-01	Control Number	051815-02

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	mg/kg	MDL	TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	35	<0.1	PCB-1254	30	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	97	75-117	Decachlorobiphenyl	101	75-117

NOTES:
MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text.
nd = Parameter Not Detected At MDL
Results Are Reported On The Dry Weight Basis
Aroclor Type Was Confirmed On A 2nd Column

Reviewed By AU Date 110305

Sequence 110205A	
42.1	42.2

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Sphere - Sampling Dates of October 31 & November 01, 2005	Our Project Number CHEM-05-1815

Sample Identification	42.3	Sample Identification	42.4
Sample Type	paint chips	Sample Type	paint chips
Sample Date	10-31-05	Sample Date	10-31-05
Received Date	11-02-05	Received Date	11-02-05
Report Date	11-03-05	Report Date	11-03-05
Percent Solids, % w/w	98	Percent Solids, % w/w	99
Preparation Date	11-02-05	Preparation Date	11-02-05
Analysis Date	11-02-05	Analysis Date	11-02-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051815-03	Control Number	051815-04

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	mg/kg	MDL	TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	41	<0.1	PCB-1254	42	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	98	75-117	Decachlorobiphenyl	97	75-117

NOTES:
MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text.
nd = Parameter Not Detected At MDL
Results Are Reported On The Dry Weight Basis
Aroclor Type Was Confirmed On A 2nd Column

Reviewed By _____ Date 11/03/05

Sequence 110205A	
42.3	42.4

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Sphere - Sampling Dates of October 31 & November 01, 2005	Our Project Number CHEM-05-1815

Sample Identification	42.5	Sample Identification	43.1
Sample Type	paint chips	Sample Type	paint chips
Sample Date	10-31-05	Sample Date	10-31-05
Received Date	11-02-05	Received Date	11-02-05
Report Date	11-03-05	Report Date	11-03-05
Percent Solids, % w/w	98	Percent Solids, % w/w	98
Preparation Date	11-02-05	Preparation Date	11-02-05
Analysis Date	11-02-05	Analysis Date	11-02-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051815-05	Control Number	051815-06

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	mg/kg	MDL	TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	58	<0.1	PCB-1254	45	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	113	67-123	Decachlorobiphenyl	118	67-123

NOTES:
MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text.
nd = Parameter Not Detected At MDL
Results Are Reported On The Dry Weight Basis
Aroclor Type Was Confirmed On A 2nd Column

Reviewed By _____ Date 110305

Sequence 110205A	
42.5	43.1

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Sphere - Sampling Dates of October 31 & November 01, 2005	Our Project Number CHEM-05-1815

Sample Identification	43.2	Sample Identification	43.3
Sample Type	paint chips	Sample Type	paint chips
Sample Date	10-31-05	Sample Date	10-31-05
Received Date	11-02-05	Received Date	11-02-05
Report Date	11-03-05	Report Date	11-03-05
Percent Solids, % w/w	98	Percent Solids, % w/w	98
Preparation Date	11-02-05	Preparation Date	11-02-05
Analysis Date	11-02-05	Analysis Date	11-02-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051815-07	Control Number	051815-08

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	mg/kg	MDL	TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	60	<0.1	PCB-1254	48	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	118	67-123	Decachlorobiphenyl	104	75-117

NOTES:	MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text. nd = Parameter Not Detected At MDL Results Are Reported On The Dry Weight Basis Aroclor Type Was Confirmed On A 2nd Column

Reviewed By AU Date 110305

Sequence 110205A	
43.2	43.3

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Sphere - Sampling Dates of October 31 & November 01, 2005	Our Project Number CHEM-05-1815

Sample Identification	43.4	Sample Identification	43.5
Sample Type	paint chips	Sample Type	paint chips
Sample Date	10-31-05	Sample Date	10-31-05
Received Date	11-02-05	Received Date	11-02-05
Report Date	11-03-05	Report Date	11-03-05
Percent Solids, % w/w	95	Percent Solids, % w/w	98
Preparation Date	11-02-05	Preparation Date	11-02-05
Analysis Date	11-02-05	Analysis Date	11-03-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051815-09	Control Number	051815-10

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	mg/kg	MDL	TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	39	<0.1	PCB-1254	37	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	103	75-117	Decachlorobiphenyl	102	75-117

NOTES:	MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text. nd = Parameter Not Detected At MDL Results Are Reported On The Dry Weight Basis Aroclor Type Was Confirmed On A 2nd Column

Reviewed By _____ Date 110305

Sequence 110205A	
43.4	43.5

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Sphere - Sampling Dates of October 31 & November 01, 2005	Our Project Number CHEM-05-1815

Sample Identification	44.1	**Sample Identification**	44.2
Sample Type	paint chips	Sample Type	paint chips
Sample Date	10-31-05	Sample Date	10-31-05
Received Date	11-02-05	Received Date	11-02-05
Report Date	11-03-05	Report Date	11-03-05
Percent Solids, % w/w	98	Percent Solids, % w/w	99
Preparation Date	11-02-05	Preparation Date	11-02-05
Analysis Date	11-03-05	Analysis Date	11-03-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051815-11	Control Number	051815-12

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	mg/kg	MDL	TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	26	<0.1	PCB-1254	27	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	101	75-117	Decachlorobiphenyl	104	75-117

NOTES:	MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text. nd = Parameter Not Detected At MDL Results Are Reported On The Dry Weight Basis Aroclor Type Was Confirmed On A 2nd Column

Reviewed By _____ Date 110305

Sequence 110205A	
44.1	44.2

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Sphere - Sampling Dates of October 31 & November 01, 2005	Our Project Number CHEM-05-1815

Sample Identification	44.3	Sample Identification	44.4
Sample Type	paint chips	Sample Type	paint chips
Sample Date	10-31-05	Sample Date	10-31-05
Received Date	11-02-05	Received Date	11-02-05
Report Date	11-03-05	Report Date	11-03-05
Percent Solids, % w/w	99	Percent Solids, % w/w	99
Preparation Date	11-02-05	Preparation Date	11-02-05
Analysis Date	11-03-05	Analysis Date	11-03-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051815-13	Control Number	051815-14

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	mg/kg	MDL	TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	30	<0.1	PCB-1254	31	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	109	75-117	Decachlorobiphenyl	102	75-117

NOTES:
MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text.
nd = Parameter Not Detected At MDL
Results Are Reported On The Dry Weight Basis
Aroclor Type Was Confirmed On A 2nd Column

Reviewed By _____ Date 11 03 05

Sequence 110205A	
44.3	44.4

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Sphere - Sampling Dates of October 31 & November 01, 2005	Our Project Number CHEM-05-1815

Sample Identification	44.5
Sample Type	paint chips
Sample Date	10-31-05
Received Date	11-02-05
Report Date	11-03-05
Percent Solids, % w/w	99
Preparation Date	11-02-05
Analysis Date	11-03-05
Analyst	bek, glc
Control Number	051815-15

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	39	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1

Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	103	75-117

NOTES:
MDL = Method Detection Limit, mg/kg, parts-per-million. See Report Text.
nd = Parameter Not Detected At MDL
Results Are Reported On The Dry Weight Basis
Aroclor Type Was Confirmed On A 2nd Column

Reviewed By _____ Date 110305

Sequence 110205A
44.5

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Sphere; Row 5/6 - Sampling Date of October 28, 2005	Our Project Number CHEM-05-1794

Sample Identification	H-4 Hydraulic Cutter	Sample Identification	H-3 Hydraulic Cutter
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	11-01-05	Sample Date	10-31-05
Received Date	11-02-05	Received Date	11-02-05
Report Date	11-03-05	Report Date	11-03-05
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	11-02-05	Preparation Date	11-02-05
Analysis Date	11-03-05	Analysis Date	11-03-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051794-16	Control Number	051794-17

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.3	PCB-1016	nd	<0.3
PCB-1221	nd	<0.3	PCB-1221	nd	<0.3
PCB-1232	nd	<0.3	PCB-1232	nd	<0.3
PCB-1242	nd	<0.3	PCB-1242	nd	<0.3
PCB-1248	nd	<0.3	PCB-1248	nd	<0.3
PCB-1254	nd	<0.3	PCB-1254	nd	<0.3
PCB-1260	nd	<0.3	PCB-1260	nd	<0.3
PCB-1262	nd	<0.3	PCB-1262	nd	<0.3
PCB-1268	nd	<0.3	PCB-1268	nd	<0.3
Sum of Aroclors	nd	<0.3	Sum of Aroclors	nd	<0.3
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	113 *	58-104	Decachlorobiphenyl	107 *	58-104

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Was Not Detected At The MDL
MDL Was Raised Due To Matrix Interference
* = Surrogate Spike Recovery Is Over-Range

Reviewed By _____ Date 11/03/05

Sequence 103105A	
H-4	H-3

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – LABORATORY SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: BIG ROCK SPHERE

PROJECT NUMBER:

PAGE 1 OF 2

SAMPLING TEAM:

DATE SHIPPED: 11/1/05

SITE SKETCH ATTACHED? CIRCLE ONE: YES NO

SEND REPORT TO: TRACY GOBLE, BIG ROCK, ~~PHONE~~ FAX 231-237-2594

ANALYSIS REQUESTED: PCB

CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	PCB							REMARKS
05-1815-01	10/31			42.1		1	X							RUSH
.02	10/31			42.2		1	X							
.03	10/31			42.3		1	X							
.04	10/31			42.4		1	X							
.05	10/31			42.5		1	X							
.06	10/31			43.1		1	X							
.07	10/31			43.2		1	X							
.08	10/31			43.3		1	X							
.09	10/31			43.4		1	X							
.10	10/31			43.5		1	X							

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
C N Bansy	10/31/05 1630	[signature]
[signature]	11-1-05 1430	
	11-2-05 10:00	(FED EX) [signature]

COMMENTS: A/F # 9647-4976.6

ORIGINAL TO LAB COPY TO CUSTOMER

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – LABORATORY SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: Big Rock Sphere

PROJECT NUMBER:

SAMPLING TEAM:

DATE SHIPPED: 11/1/05

SITE SKETCH ATTACHED? CIRCLE ONE: YES (NO)

PAGE 2 OF 2

SEND REPORT TO: Tracy Goble, Big Rock, FAX ~~PHONE~~ 231-237-2594

CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	ANALYSIS REQUESTED: PCB							REMARKS
05-1815-11	10/31			44.1		1	X							RUSH
-12	10/31			44.2		1	X							
-13	10/31			44.3		1	X							
-14	10/31			44.4		1	X							
-15	10/31			44.5		1	X							
-16	11-1-05	0735		H-4 Hydraulic Cutter		1	✓							
-17	10-31-05	0957		H-3 Hydraulic Cutter		1	✓							

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
C M Barsy	10/31/05 1630	[signature]
[signature]	11-1-05 1430	
	11.2.05 1000	(FED EX) [signature]

COMMENTS

ORIGINAL TO LAB COPY TO CUSTOMER

APPENDIX E

Photographs and Field Notes from Containment Dismantlement

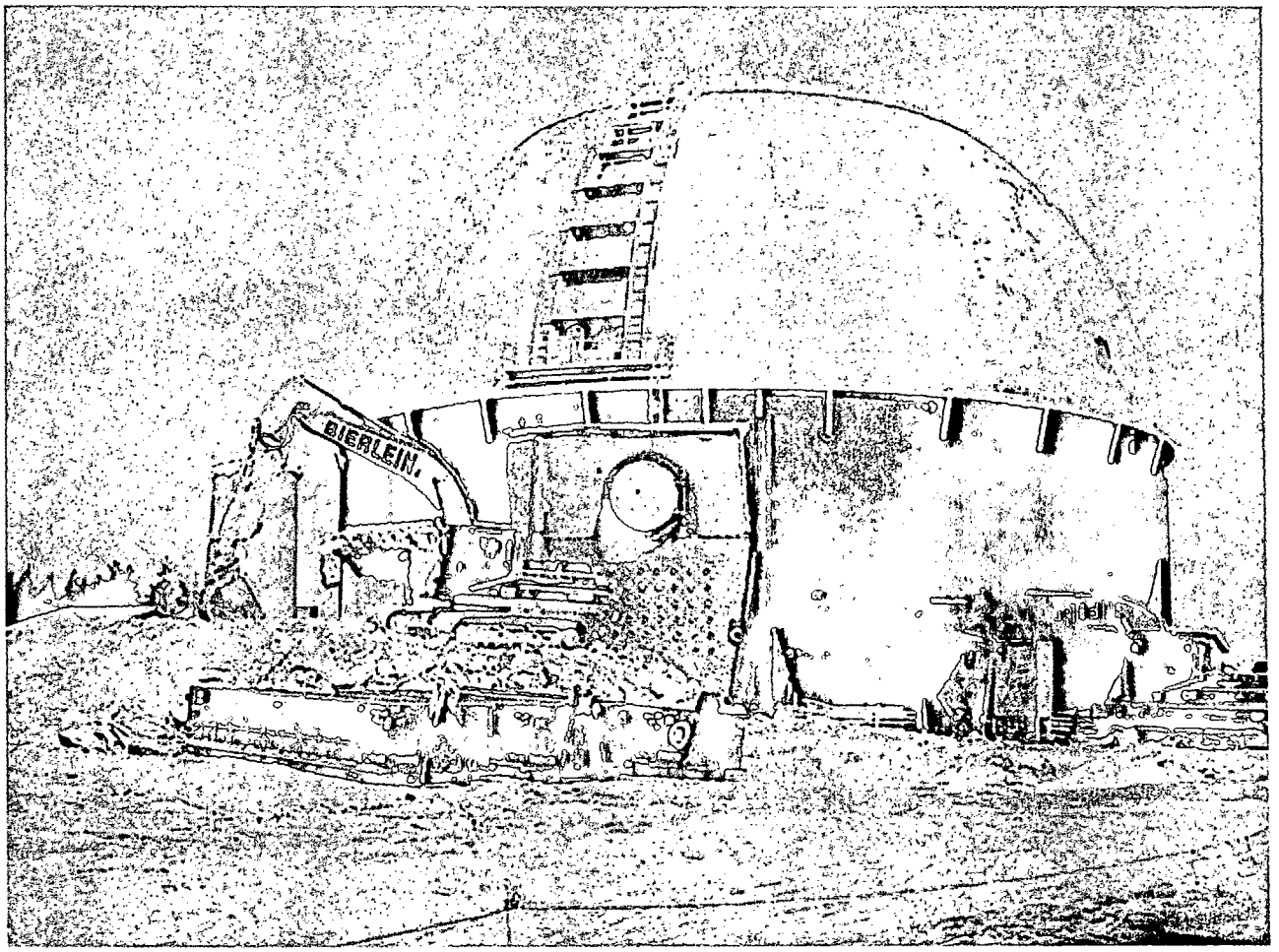


Photo 1: Containment prior to dismantlement

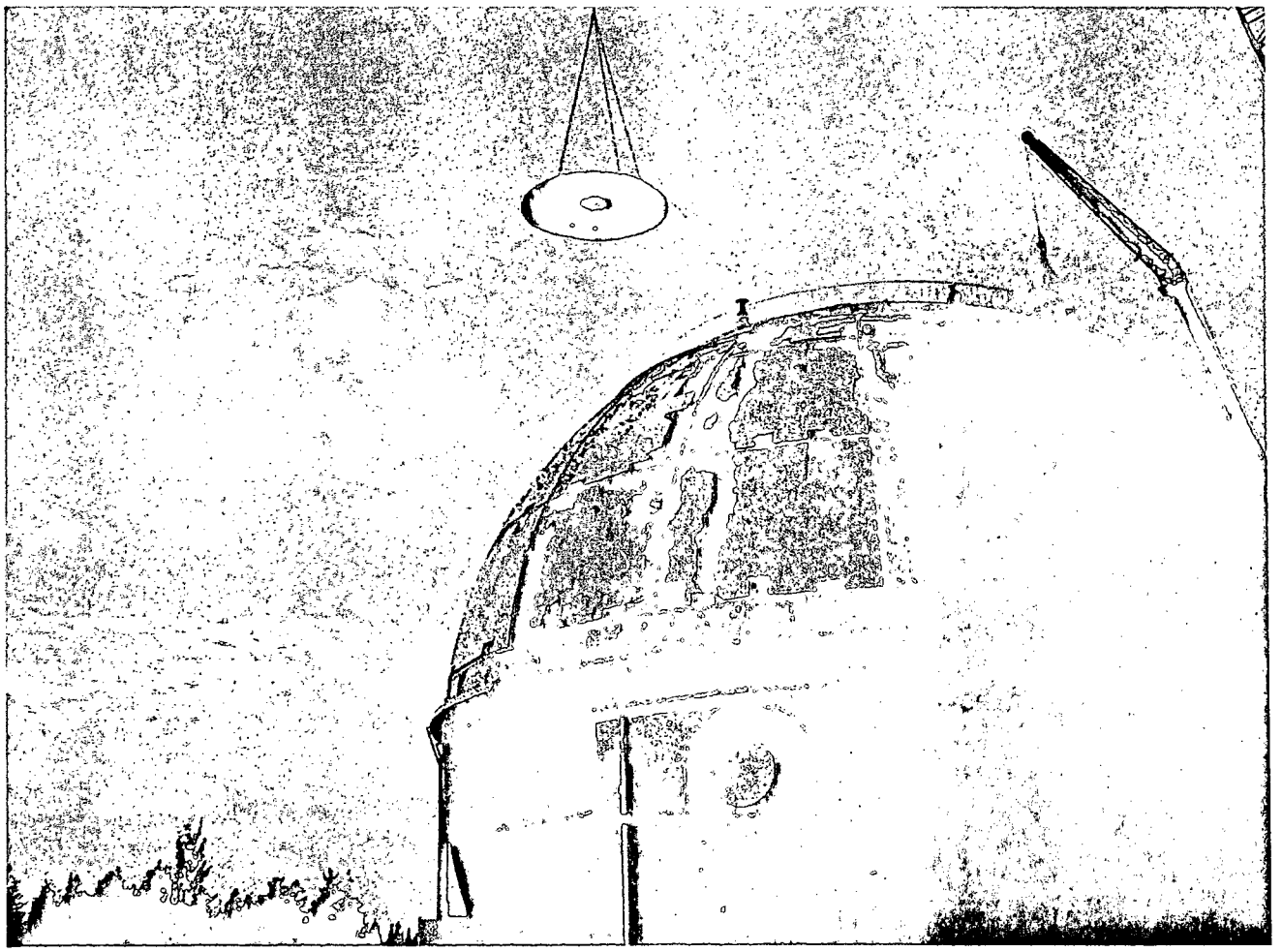


Photo 2: First piece of Containment as it was removed

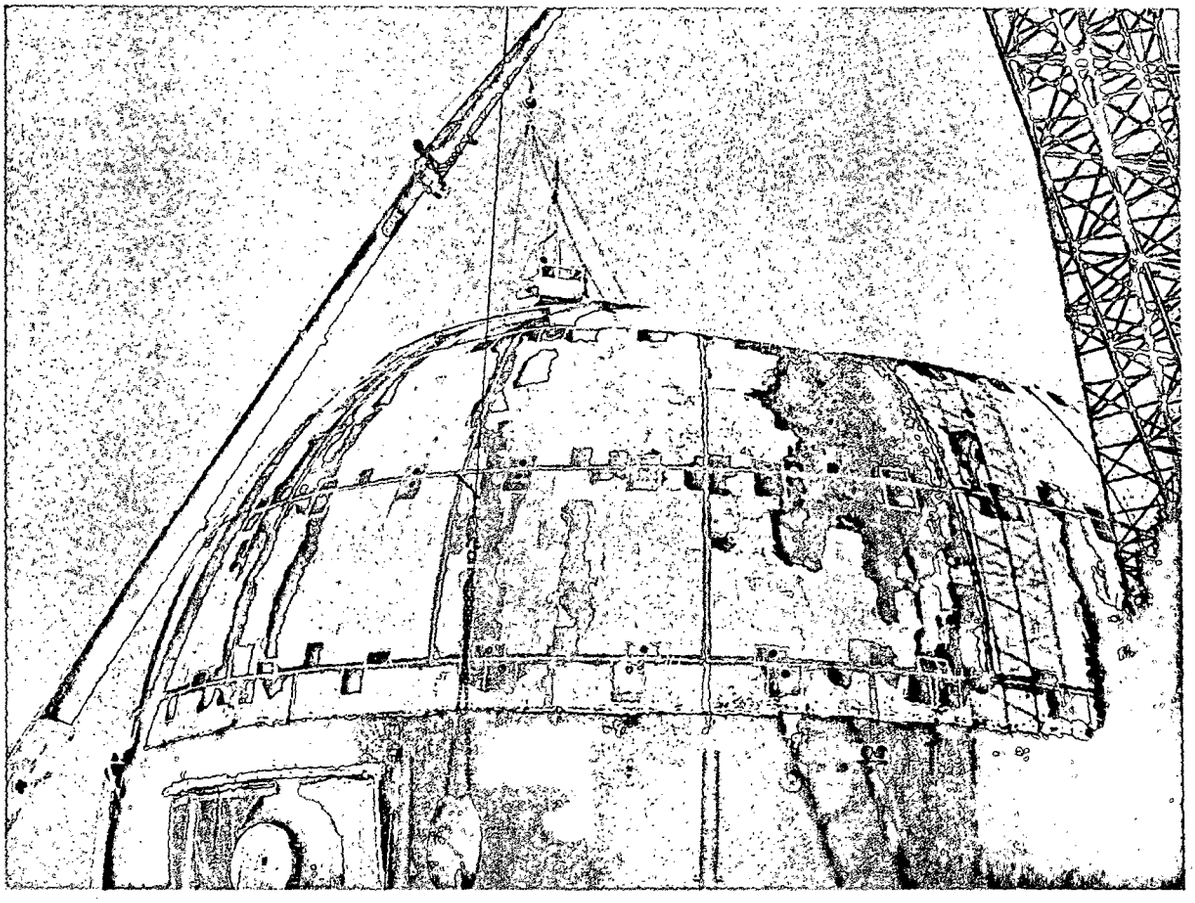


Photo 3: Containment partially dismantled (10/2005)

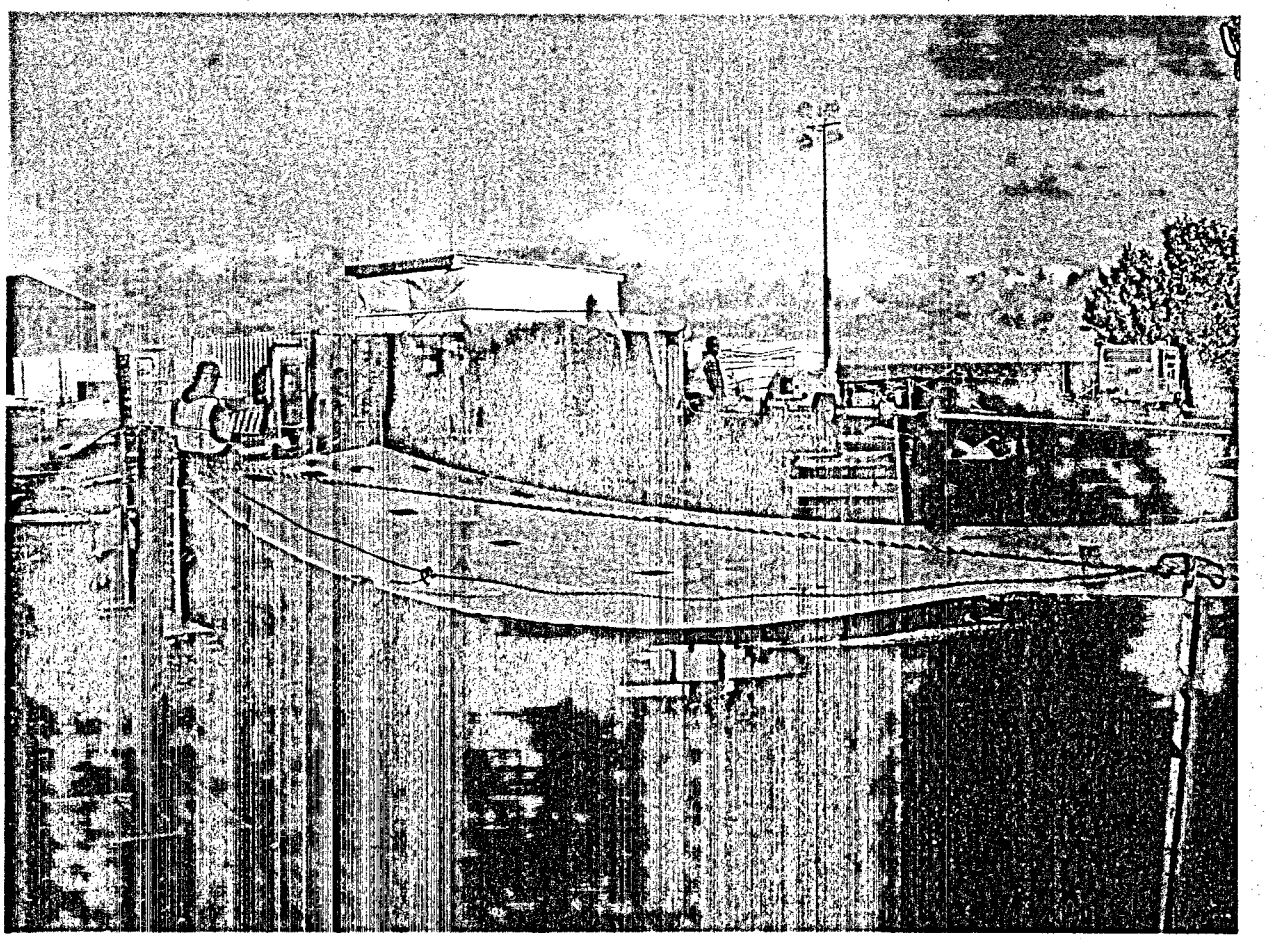


Photo 4: Potential PCB shell section prior to final sampling (10/2005)

UFI 740 22*30*03

NUCLEAR WORK ORDER
BRP

WORK REQUEST #	SYS	WORK ORD #	PF	PRIORITY
120897	BLS	12420104	7	3

PPAC SCHED DATE/EVENT	DATE PRINTED	WORK TYPE	OUTAGE MODE	RESP DEPT	WORK GROUP	ASSGN SUPV	UNIT
	12 / 14/ 04	PRED	5	C	PLT	CR	

EQUIPMENT NUMBER	EQUIPMENT DESCRIPTION
BLS	BUILDINGS & STRUCTURES

LOCATION P&ID:
MAJOR EQUIP ID:
BLDG: FLOOR: ROOM: ELEV: 0000 EDB LOC:
VARIOUS LOCATIONS ON INTERIOR OF SPHERE SHELL
RWP-0012/0216 IF REQUIRED.NOTIFY RP AND VERIFY AREA STATUS
BEFORE ENTRY.

PROBLEM DESCRIPTION

OBTAIN PAINT SAMPLES FROM CTMT INTERIOR SHELL 0012/216
OBTAIN PAINT SAMPLES FROM CONTAINMENT BLDG INTERIOR SHELL
FOR PCB WASTE CHARACTERIZATION.

EQUIP OPERABLE	CAUTION TAGGED	Q LISTED	WELDING	ISI	INSLN	TAGGING
NO	NO	NO	NO	NO	N	N

Q/AENPOCSX	OUTAGE NUMBER	OUTAGE ACTIVITY #	OUTAGE WORK AREA
/			

TECHNICAL SPECIFICATION INVOLVEMENT
N/A

EFFECT ON PLANT CONDITIONS
NONE
NO TAGGING REQUIRED

OPERABILITY TEST REQUIREMENTS
N/A

DETERMINED BY: CAA 12 / 6/ 04 TESTING COMPLETED BY: ____ ___/___/___

INITIATOR: TAGOBLE DATE: 10 / 20/ 04 DEPT: E
OPERATIONS SCHEDULER: CAA 12 / 6/ 04 PLANNED BY: AWF 12 / 7/ 04

RELEASED FOR REPAIR: ____ ___/___/___ ____:____

ADMIN REVIEW: ____ ___/___/___

RETURNED TO SERVICE: ____ ___/___/___ DECLARED OPERABLE: ____ ___/___/___ ____:____

INFORMATION COPY

UFI 740 22*30*03

NUCLEAR WORK ORDER
BRP

WORK REQUEST #	SYS	WORK ORD #	PF	PRIORITY
120897	BLS	12420104	7	3

ACCT ASSOC KEY	MMS CATALOG REF #	MFG SER NUMBER	MODIFICATION
BRP10001000			NO

SPECIAL SAFETY REQUIREMENTS ASBESTOS: NO ASBESTOS VOLUME:
FIRE: NO CONFINED SPACE: NO SAFETY BOUNDARY: NO RADIOLOGICAL: YES
FOLLOW REQUIREMENTS OF SAFETY & HEALTH CHECKLIST

JOB PLAN

STEP DESCRIPTION/PROCEDURES USED	STEP NO	DEPT	SKILL A	B	W	M	H
--- PREREQUISITE --	01	C	1				
PRIOR TO BEGINNING THE PRE-JOB BRIEF, CONTACT ENVIRONMENTAL SERVICES AND DMP ENGINEERING SO THEY MAY ATTEND.							
-- PRE-JOB BRIEF --	02	C	1				
THE ASSIGNED SUPERVISOR OR HIS DESIGNEE, SHALL HOLD A PRE-JOB BRIEF FOR THIS WORK ORDER AND COMPLETE A BIG ROCK PRE-JOB BRIEFING CHECKLIST.							
SUPV._____							
DATE:_____							
-- SAFETY --	03	C	1				
REVIEW AND UNDERSTAND THE REQUIREMENTS LISTED IN THE SAFETY AND HEALTH CHECKLIST.							
-- WORK ORDER SUMMARY --	04	C	1				
THE SUPERVISOR OR HIS DESIGNEE SHALL SUMMARIZE THE DAILY ACTIVITIES IN THE WORK ORDER SUMMARY.							
-- HOUSEKEEPING --	05	C	1				
MAINTAIN WORK AREA IN A CLEAN CONDITION.							
-- NOTES --	06	C	1				

UFI 740 22*30*03

NUCLEAR WORK ORDER

BRP

WORK REQUEST #	SYS	WORK ORD #	PF	PRIORITY
120897	BLS	12420104	7	3

JOB PLAN

STEP DESCRIPTION/PROCEDURES USED	STEP NO	DEPT	SKILL A	B	W	M	H
- *SAMPLE LOCATIONS* SKETCH NO. SK-W.O.12420104-1 SPECIFIES LOCATIONS AND SAMPLE ID NUMBERS FOR THE INITIAL SAMPLES TO BE TAKEN. DMP ENGINEERING WILL PROVIDE ADDITIONAL SKETCHES FOR SUBSEQUENT SAMPLES TO BE TAKEN, AS REQUIRED.							
-- WORK SCOPE --	07	C	2				

- A PAINT SAMPLE OF APPROX. 1 SQ. FT. WILL BE TAKEN AT EACH SPECIFIED LOCATION. ENVIRONMENTAL SERVICES MAY ADJUST THE SAMPLE AREA SIZE, AS REQUIRED.

- PRIOR TO OBTAINING THE PAINT SAMPLE, DECON THE SAMPLE SURFACE AS FOLLOWS:
  1. WIPE DOWN THE AREA WITH MASSLINN
  2. DECON THE AREA WITH RADCON & SCOTCHBRITE
  3. REWIPE THE AREA WITH NEW MASSLIN.

- SPRAY A SLIGHT MIST OF WATER ON THE AREA TO BE SAMPLED. DO NOT OVER-SATURATE.

- OBTAIN THE PAINT SAMPLE, BAG IT, AND LABEL THE BAG WITH THE APPLICABLE SAMPLE ID LABEL (LABELS ARE PROVIDED IN THE WORK PACKAGE).

- USING A BLACK SHARPIE MARKER (OR SIMILAR) MARK THE SAMPLE ID # ON THE SPHERE WALL ADJACENT TO THE SAMPLED AREA.

- SUBMIT THE SAMPLES TO ENVIRONMENTAL SERVICES FOR ANALYSIS.

UFI 740 22*30*03

NUCLEAR WORK ORDER
BRP

WORK REQUEST #	SYS	WORK ORD #	PF	PRIORITY
120897	BLS	12420104	7	3

PARTS

STOCK NO	ITEM NAME/DESCRIPTION	UNIT OF ISSUE	EST QTY

SPECIAL TOOLS

SERIAL NUMBER	DESCRIPTION

QC REQUIREMENTS
NONE

QC REVIEW: AWF 12 / 7/ 04

WORK REQUEST #	SYS	WORK ORD #	PF	PRIORITY
120897	BLS	12420104	7	3

SUMMARY OF
WORK PERFORMED:

COMPLETED AND RELEASED: ____ ___/___/___ ____:____

UFI 740 22*30*03

NUCLEAR WORK ORDER
BRP

WORK REQUEST #	SYS	WORK ORD #	PF	PRIORITY
120897	BLS	12420104	7	3

QUALIFIED WELDING

DATE	WELDER SYMBOL	WELDER NAME	PROCEDURE USED	INSPECTED BY	DATE
__/__/__	_____	_____	_____	_____	__/__/__
__/__/__	_____	_____	_____	_____	__/__/__
__/__/__	_____	_____	_____	_____	__/__/__

POST MAINTENANCE WORK ACTIVITIES
NONE

ACTIONS COMPLETED BY: ____ DATE: __/__/__

CROSS REFERENCE DOCUMENTS - ER, DR, SC, FC RELATED WORK ORDERS ETC

NUMBER	TITLE
_____	_____
_____	_____
_____	_____
_____	_____

BIERLEIN

Containment Sphere Demolition Work Plan

Revised 9/6/05

DESCRIPTION OF WORK

Bierlein will demolish the containment sphere at Big Rock Point Nuclear Power Plant in Charlevoix, Michigan as part of the overall demolition project. This work plan outlines the methodology Bierlein will employ to perform sphere demolition activities and safety concerns.

Demolition will be accomplished by cutting the sphere into 90 pre-specified sections ranging from approximately 6,000# to 20,000#. Sphere sections will be rigged, hoisted and landed onto cribbing supplied by Consumers Energy. Sections will then be wiped clean, tested and cut into pieces suitable for Waste Management containers. Sections with varying degrees of PCB contamination will be kept separate from non-contaminated sections.

In all cases, work will be preformed in accordance with Federal, State, and Local regulations and Bierlein and/or Consumers Energy safety requirements.

EQUIPMENT REQUIREMENTS

Major equipment to be mobilized for this project:

- Manitowoc M999 (Lifting Crane)
- Grove GMK 4085 Hydraulic Crane (Man Basket)
- Man Basket (crane suspended work platform)
- Hydraulic excavator with multi-processing shear
- Miscellaneous hand tools/jack hammers/rigging equipment
- Oxy/Fuel cutting torches

Work areas will be delineated with high visibility fence, barricades, or other barriers with applicable warning signs. Access will be limited to trained and authorized personnel only.

Electrical power required for demolition purposes will be provided by portable generator or by connecting to Owner supplied power distribution panel. All power will be protected with Ground Fault Circuit Interrupters.

DEMOLITION PROCESS

Sphere demolition will require two cranes. The Manitowoc will be used to hold and hoist sphere sections while the Grove is used for access to the work area via a man basket.

Crane operators, manbasket personnel, ground support personnel and the lift supervisor will be issued two-way radios for communication between all parties.

Sphere sections will be numbered, marked and cut as per the Sphere Demolition Cut Plan drawings. Weight calculations have been performed to determine that each section will stay well within the crane's charted lifting capacity.

BIERLEIN

The maintenance platform will be removed as follows: The brackets holding the lower rail system on the tracks will be torch cut followed by torch cutting a 3" diameter hole through the web of the upper channel of each outside rail. Holes will be cut at a point approximately 2/3 of the way up the arc. A ¾" pulling cable will be looped through each hole and clipped back to itself to form an eye around the flange of the channel. The lower eyes of the cables will be shackled to the excavator. Cables will be of a length sufficient to allow the 345 excavator to remain at a safe distance. After the pulling cables are connected to the excavator, the top rail locks will be torch cut. With the burner and manlift clear of the area, the platform will be pulled from the sphere with the excavator. The landing area for platform drop will be demarcated and signed to prevent personnel from entering the drop zone. Once on the ground the maintenance platform will be sheared and transported to designated laydown area for cleaning, testing and processing.

Trough removal will be performed after cleaning by others. Bierlein will torch cut the angle brackets on the trough and on the maintenance platform track from the basket of a hydraulic manlift. Brackets will be cut to allow the trough to be cut into 18' sections and dropped to the ground below. The landing area for trough drops will be demarcated and signed to prevent personnel from entering the drop zone. Trough sections will be transported to designated laydown area for cleaning, testing and loading.

Two sets of pre-engineered lifting pins are being fabricated as per the attached drawings. Each 24" lugged pin will be shackled to a 5/8" diameter chain leg. *(Each chain leg is rated and certified for 20,000#).* A bridle of four chain legs will be attached to a 3/4" A342 master link that will be hung in the crane's load hook. Chain legs of 3 different lengths are interchangeable and adjustable to satisfy balance and stability requirements of all sections to be removed.

The "cap" or top of the dome will be rigged and cut first. Burners will pre-cut the shell leaving minimum twelve inch (12") stickers at the quarters. Pre-engineered bridles with 4 equal legs will be shackled to the existing lugs. The operator will pull tension on, and plumb the load line. The operator will pull 100% of the load during the cutting of stickers. The burner will communicate progress to the operator during the cutting of each of these four final cuts.

With the cap suspended and stable the burner will direct the operator to lift then swing clear of the dome. At this point the burner will defer signals to the designated ground signal person to lower the piece to the cribbing below.

Ring seven will then be cut using the above process. Rigging will use pre-engineered bridles with 4 equal legs. Each leg will be shackled to the existing lugs of ring seven.

Four 8" holes will be torch cut in each remaining section to accommodate the engineered lifting devices (see attached drawings). Rigging holes will be laid out and cut to afford maximum balance and stability during lifting/lowering operations. The center of the rigging holes will not be less than 24" from the side of a section.

Burners will pre-cut the shell section to be removed leaving stickers not less than twelve inches (12") long at both ends of the vertical and horizontal runs remaining after the adjoining steel panel has been removed. After pre-cutting, a bridled lug pin will be pushed through each hole of a section and the crane operator will pull tension on the bridle assembly and plumb the load line. The operator will pull 100% of the load during cutting of the stickers. The burner will communicate progress to the operator during the cutting of each of these final cuts.

The above process will be repeated on each section of each ring down through the mid-point or equator of the sphere. Rigging for the lower half of the sphere will be inserted from the inside of the sphere. The handrail on ring five and six will be torch cut along with the sphere section that supports it. Handrail sections will remain with their associated sphere sections and lowered as a unit.

The personnel lock will be rigged and torch cut as a separate item and separate lift after sections #75 and #76 have been removed. Wire rope slings will be fitted around the outside and inside of the sphere wall in accordance with the engineers direction to be provided. The operator will pull 100% of the unit's weight prior to starting the torch cut. The bottom supporting structure will be torch cut horizontally.

A determination of the weather conditions will be made prior to cutting the final stickers of each section. Weather permitting each section will be lifted free and lowered to the cribbing. In the event that weather conditions will deteriorate, work will be terminated until the weather conditions improve.

Rigging used for suspension of the man basket shall remain on the manbasket and shall not be used for any other purpose.

SPECIFIC HAZARDS

Several hazards are associated with this operation including but not limited to:

- Working from elevated work platforms
- Wind and other inclement weather conditions
- Working with power tools
- Potential respirable lead fume
- Potential respirable PCB fume
- Potential radiological contaminants
- Rescue in the event of crane failure.

The work zone will be barricaded to prevent unauthorized personnel from entry. Work zone barricades will encompass the entire area around the cranes and lay-down area.

Workers will follow Bierlein man basket safety procedures as described in the Bierlein Health and Safety Plan.

When wind speeds reach 15mph manbasket work will be suspended until the wind subsides.

BIERLEIN

Lifting crane activity will be suspended if winds reach 25 mph. Wind speed will be continuously monitored using hand held monitoring equipment at the man basket elevation.

In the event of wind speed exceeding 50 mph the M-999 boom shall be lowered onto blocking at ground level. The RT-855 boom shall be retracted and lowered to a level position.

Personal protective equipment for burners will include hardhat, safety glasses, tinted face shield, hearing protection, fire retardant full body coveralls, steel-toed boots, and full body harness. Due to the unpredictability of the wind, workers will also be required to wear full face PAPR respirators with P-100/OV cartridges. Bierlein will provide all required personal protective equipment. Medical monitoring will be required for all personnel wearing respiratory protection.

Competent persons will perform documented crane inspections, manbasket inspections and test lifts on site.

BIERLEIN JOB SAFETY PROGRAM
PRE-DEMOLITION SURVEY

Job # 250002

Project Location/Address: *Big Rock Point* Date: *9/8/05*

Emergency Phone Number and Location: *Bierlein Job Trailier - 231-547-8245*

Type of Structure/Construction: *Steel Sphere*

Basement: *Yes* Stories/Height:

Wall Ties Required? *No* How Many? *Not Applicable (N/A)* Type: *N/A*

Wall or Floor Shoring Required? *No* Type and Location of Shoring: *N/A*

Protection of Adjacent Properties: *The sphere is isolated from adjacent properties, no protection required.*

Protection of Public: *Public does not have access to this site.*

Methods of Demolition: *Sphere will be torch cut into 90 pieces and lifted to the ground following the engineered workplan.*

Utility Disconnects Visible ?

	Yes	No	Disconnect Date	Utility Contact Person Person and Phone #
Electric	[X] or	[ ]		*By Consumer's*
Gas	[X] or	[ ]		*By Consumer's*
Water	[X] or	[ ]		*By Consumers's*
Sewer	[ ] or	[X]		*Not reguired for this operation as basement and below grade structures are to remain.*
	[ ] or	[ ]		

Location of Above and Below Grade Energized Power/Communication Lines: *Lines are not a factor.*

Miss Dig Staking Number for UG Utilities: *N/A (Consumer's site)*

Location of Above and Below Grade Tanks/Piping : *Locations are known and are not a factor.*

MSDS Available for All Existing and Previous Contents? *Yes*

Have Tanks/Piping Been Drained, purged, tested ? *N/A* Performed By: *N/A* Date: *N/A*

Does a radiation source remain the work area? *No** Removed by *Consumer's Energy* Removal Date: *On File*

Location of Elevators, Pits, Floor/Wall Openings: *Elevators, pits, floor/wall openings are located on the interior of the facility. Because the sphere is being removed from the outside, elevators pits floor/wall openings are not a factor.*

Potential Structural Hazards: *Structural hazards have been adressed in the engineered workplan. The workplan must be followed especially with regard to precutting and rigging of individual sections. If the engineered workplan is followed, the structure will not collapse.*

List All Other Known Hazards: *PCB coatings, lead coatings, asbestos coatings, slip, trip, fall,elevated work, torch cutting, and working around heavy equipment. The engineered workplan covers all known hazards and must be followed.*
(physical, chemical, biological, environmental)

Conducted By: W. Jeff Passeno, Senior Project Engineer *9/8/05* (Date)

1. Description of the Work Activity

A. Demolition of the Reactor Containment Sphere is to be performed in accordance with Reference 16.U - Work Order 12520028 – Dismantle the Containment Sphere Structure (Shell) and Process/Dispose of Waste Materials.

B. Reactor Containment Sphere coatings:

I. PCBs are present in the sphere interior cream-colored coating at a concentration slightly greater than 50 ppm as detailed in Reference 16.B - Big Rock Point Containment Shell Dismantlement Request for Approval of Alternative Method to Mitigate Risk, September 16, 2004.

II. Heavy metals are present in the sphere exterior and interior brown-colored primer coating as detailed in Reference 16.Y - Consumers Energy Memorandum of September 1, 2005 – Paint Chip Analysis – Big Rock Point.

III. Asbestos is present at a concentration of up to 5% chrysotile in a tightly bound, non-friable condition in the sphere exterior black mastic coating, which is underneath a cork coating.

C. The Reactor Containment Sphere is to be torch cut into 90 segments sized to allow for removal with a 250 Ton Lifting Crane. The segments shall be lowered to predetermined locations on the ground to perform processing for disposal.

D. Access to the elevated portions of the Reactor Containment Sphere:

I. Bierlein shall use a manbasket suspended by a crane to elevate a two-man work crew to the required height to perform the torch cutting of the upper Reactor Containment Sphere in accordance with Reference 16.Z - Bierlein Manbasket Procedure Sphere Demolition.

II. An aerial platform will be used to complete the torch cutting of the Reactor Containment Sphere after the upper portions of the Reactor Containment Sphere have been removed and are accessible from the aerial platform.

E. Responsibilities

I. Responsibilities of the two-man work crew elevated above ground level to perform this work activity will alternate throughout this work activity.

a. One worker shall operate the cutting torch (the Burner).

b. The other worker shall be the Firewatch.

II. A separate Firewatch shall be stationed on the ground outside of the Reactor Containment Sphere. This Firewatch shall be sufficiently distant from the torch cutting operation where it is not anticipated that this Firewatch will be exposed to lead. This shall be confirmed by performance of personal air monitoring.

III. A separate Firewatch shall not be stationed inside of the Reactor Containment Sphere during torch cutting of the upper portion of the Reactor Containment Sphere in accordance with Reference 16.E - Big Rock Point Variance for Firewatch Inside of the Reactor Containment Sphere.

2. General Information

A. For the purposes of this specific phase of the Reactor Containment Sphere Dismantlement (i.e., elevated working):

I. The only personnel associated with this work activity that may be exposed to lead are the Burner and Firewatch elevated in the manbasket/aerial platform.

II. All other personnel associated with this work activity will be sufficiently removed from the torch cutting where lead exposure is not credible. This shall be verified with random personal air monitoring.

III. Size reduction of the sphere segments once landed on the ground:

a. The use of a hydraulic shear attachment is planned to size reduce the sphere segments to the required size for disposal. This method is not anticipated to create an airborne lead hazard and no special controls are required.

b. If the hydraulic shear attachment is unable to size reduce any portions of the sphere segments, torch cutting will be used to size reduce the sphere segments. This work activity will be performed by PMC in accordance with Reference 16.V- Consumers Energy Lead Paint Abatement Program, Revision 2 dated 11/01/02.

B. An initial mockup involving torch cutting of a previously removed section of the sphere was performed on 01 September 2005. The conditions for this mockup were consistent with the conditions that Bierlein will experience torch cutting the sphere (with the exception that the mockup was performed on the ground as opposed to elevated in the air).

I. Air monitoring was performed for thirteen heavy metals and hexavalent chromium (please see section 4.A below) to develop an employee exposure assessment. The laboratory analysis confirmed that the engineering controls specified for this work activity (please see Section 6 below) are adequate to reduce exposure levels to below the OSHA Action Level (AL) of 30 micrograms per cubic meter ($u g/m^3$).

DRAFT

II. Please refer to References 16.X – BNG America Memo BNG-2005-09-01 (heavy metals) and 16.AA - BNG America Memo BNG-2005-09-02 (hexavalent chromium) for specific details of this mockup, including the laboratory analysis of the air monitoring.

C. Bierlein will perform an additional mockup under conditions consistent with what they will experience torch cutting the sphere (with the exception that the mockup will be performed on the ground as opposed to elevated in the air).

I. Air monitoring will be performed for heavy metals and hexavalent chromium to add to the knowledge base of the Employee Exposure Assessment.

II. It is anticipated that the air monitoring results will again confirm that the engineering controls are adequate to reduce exposure levels to below the OSHA Action Level (AL) of 30 ug/m^3.

D. The initial mockup and the planned second mockup have been determined to be an adequate employee exposure assessment to allow this work activity to be planned with the maximum lead exposure levels not to exceed 500 micrograms per cubic meter (ug/m^3), which is equivalent to ten times the OSHA Permissible Exposure Limit (PEL).

I. The appropriate lead controls for this expected maximum exposure are detailed in this Lead Compliance Plan.

II. If air monitoring performed during this work activity identifies airborne lead concentrations greater than 500 ug/m^3, work activities will be suspended to revise this Lead Compliance Plan accordingly.

E. This Lead Compliance Plan establishes the necessary controls to protect workers from the hazards associated with working with the sphere interior and exterior coatings.

I. These controls are also adequate for protecting the workers from the other heavy metals present in the sphere exterior and interior brown-colored primer coating.

II. These controls are also adequate for protecting the workers from the PCBs are present in the sphere interior cream-colored coating.

3. Administrative Controls

A. Bierlein will employ administrative controls for the Burner and the Firewatch in the elevated manbasket/aerial platform. This will provide adequate rest periods for the Burner and Firewatch as this work activity is planned to be performed during extended working hours, based on weather conditions.

B. The job rotation schedule shall be determined by the Bierlein Project Manager and will be disseminated to all personnel in the Daily Pre-Job Briefing.

C. The affected Bierlein employees are:

I. Gary Nye

II. TBD

III. TBD

IV. TBD

4. Air Monitoring

A. Air monitoring shall be performed for the following 13 analytes: antimony, beryllium, cadmium, chromium (including hexavalent chromium), cobalt, copper, iron, lead, manganese, molybdenum, nickel, vanadium, and zinc.

B. Personal air monitoring shall be performed as determined by BRP Safety for other personnel associated with this work activity as detailed in Section 2.A.II above.

C. Personal air monitoring shall be performed for the Burner and Firewatch in the elevated manbasket/aerial platform initially and then periodically as determined by BRP Safety to validate the adequacy of the Employee Exposure Assessment.

D. Personal air monitoring shall be performed for the Firewatch on the ground initially and then periodically as determined by BRP Safety as detailed in Section 1.E.II above.

E. Personal air monitoring shall be performed in accordance with Reference 16.T - OSHA Technical Manual, Section II: Chapter 1 – Personal Sampling For Air Contaminants.

F. Personal exposure shall not be allowed to exceed the BRP Exposure Limits Maximum as detailed in Reference 16.G - Health and Safety Checklist Summary – Dismantlement of Reactor Containment Sphere Shell While Working Aloft in a Personal Platform or Aerial Platform.

I. Personnel shall not be exposed to lead without regards to respiratory protection in excess of the OSHA 8-Hour Permissible Exposure Limit (PEL) of 50 micrograms per cubic meter (ug/m3).

II. This 8-Hour PEL shall be adjusted lower to 40 ug/m3, as the normal BRP workday is ten hours in duration.

III. This 8-Hour PEL shall be adjusted lower to 33 ug/m3 in the event that weather conditions allow for working a workday of twelve hours in duration.

G. Work area air monitoring on the ground shall be performed initially and then periodically as determined by BRP Safety.

H. Laboratory analysis of heavy metal air monitoring shall be performed in accordance Reference 16.R - OSHA Method Number ID-125G – Metal and Metalloid Particulates in Workplace Atmospheres (ICP Analysis).

I. Laboratory analysis of hexavalent chromium air monitoring shall be performed in accordance with Reference 16.S - OSHA Method Number ID-215 – Hexavalent Chromium in Workplace Atmospheres.

J. Copies of air monitoring shall be provided to the monitored individual and their employer. The employer is required to maintain all air monitoring records for at least thirty years.

K. Air monitoring results shall be posted in a prominent location in the workplace, i.e., the Bierlein Trailer.

5. Employee Information and Training

A. All personnel who wear respiratory protection shall be trained in accordance with the requirements of Reference 16.C - Big Rock Point Plant Manual Volume 29, Health And Safety Plan Chapter 9 – Respiratory Protection Program or equivalent, as approved by the BRP Training Department.

B. All personnel performing work activities involving lead (i.e., the Burner and the Firewatch in the elevated manbasket/aerial platform) shall be trained in accordance with Reference 16.V- Consumers Energy Lead Paint Abatement Program, Revision 2 dated 11/01/02 or equivalent, as approved by the BRP Training Department.

C. All personnel performing Firewatch duties shall be trained in accordance with Reference 16.CC - Big Rock Point Plant Manual Volume 1, Procedure D2.3.6 – Fire Prevention Activities.

6. Engineering Controls

A. Long-handled cutting torches (i.e., 3-foot and 6-foot lengths) should be used to maximize the distance between the Burner and the point of operation.

B. The manbasket/aerial platform should be positioned so that the Burner and the Firewatch are not directly above the point of operation (i.e., within the plume of the combustion byproducts).

C. The manbasket/aerial platform should be positioned such that the Burner can maximize his distance from the point of operation.

D. The manbasket/aerial platform should be positioned such that any prevailing wind does not blow the plume in the direction of the manbasket/aerial platform occupants, when feasible. It is desirable for the wind to direct the plume away from the manbasket/aerial platform occupants.

E. Torch cutting shall be performed with the Burner's arm extended, as feasible. The upper guardrail of the manbasket/aerial platform serves as a convenient rest for the Burner's arm, minimizing the fatigue from holding the arm extended for long periods of time.

7. Housekeeping

A. This work activity is not anticipated to accumulate significant quantities of lead dust.

B. A HEPA-filtered vacuum cleaner shall be available for housekeeping on an as-needed basis.

C. All sphere segments once lowered to the ground will be wiped down with Masslin wipes to remove any loose radioactive contamination. No specific controls are required for these Masslin wipes beyond Radiation Protection requirements, and they may be disposed of as non-lead contaminated waste.

D. Compressed air shall not be used to perform housekeeping.

E. Griffolyn will be placed on the ground below each sphere segment. BRP Environmental will specify any lead-handling (i.e., labeling and disposal) requirements for this griffolyn, as necessary, once all work activities are complete on that sphere segment.

8. Hygiene Facilities and Practices

A. Bierlein has a hand-washing facility in their trailer, in a separate area from the lunch room/break room. All personnel involved with lead work activities shall wash their hands and face prior to eating, drinking, smoking, chewing, or applying cosmetics.

B. All persons involved with lead work activities are encouraged to shower immediately once at home and wash their hair.

C. BRP Safety shall perform random swipe monitoring for heavy metal deposition in the Bierlein Trailer.

9. Medical Surveillance

A. Personnel involved with this work activity are not expected to be exposed to lead above the OSHA Action Level.

B. Personnel involved with lead work activities are not required to participate in any medical procedures, tests, etc., made available by their employer to them.

   I. Medical surveillance can, however, play a very important role in protecting the employee's health.

   II. Personnel are strongly encouraged, therefore, to participate in a meaningful fashion.

C. Bierlein (as company policy) will perform initial medical surveillance consisting of blood lead and zinc protoporphyrin (ZPP) determination for the Burners and Firewatches prior to commencing this work activity.

D. Additional medical surveillance, including biological monitoring, will be performed if required by the results of the air monitoring performed throughout this work activity (please see Section 4 above).

E. Bierlein will notify BRP Safety of any unexpected medical surveillance results.

F. A medical examination or consultation will be made available as soon as possible to any employee who notifies their employer:

   I. If the employee is experiencing signs or symptoms commonly associated with lead poisoning or,

   II. If the employee has difficulty breathing while wearing a respirator or during a respirator fit test or,

   III. If the employee desires medical advice concerning the effects of current or past exposure to lead on their ability to procreate a health child.

G. The employer shall retain medical surveillance records for the duration of employment plus thirty years.

10. Multiple Contractors

A. Consumers Energy is the client for this work activity and as such has the ultimate responsibility/authority for the performance of this work activity.

B. Multiple contractors will be required to support this work activity (i.e., Bartlett, Bierlein, BNG America, GTS Duratek, and PMC).

C. All contractor personnel involved in this work activity will attend the Daily Pre-Job Briefing and sign the Pre-Job Briefing Attendance Form.

D. All personnel working on site that are not associated with this work activity will be preventing from accessing the active work area by the use of safety barrier ropes and/or personnel. Appropriate signs will be posted to inform personnel of the hazard(s) associated with this work activity.

11. Personal Protective Equipment (PPE)

A. The specific PPE for this work activity is detailed in Reference 16.F- Health and Safety Checklist (typical) - Dismantlement of the Reactor Containment Sphere Shell While Working Aloft in a Personal Platform or Aerial Platform.

B. PPE will be donned either in the Mobile Access Center (MAC) or at the work area.

C. A HEPA-filtered vacuum cleaner will be available for Bierlein Burners and Firewatches to vacuum their PPE (i.e., work boots, coveralls, gloves) prior to exiting the work area.

D. Masslin and respirator wipes will be available for Bierlein Burners and Firewatches to clean their PPE (i.e., faceshields, hardhats, safety glasses, respirators) prior to exiting the work area.

E. PPE will be removed either in the Mobile Access Center (MAC) or at the work area.

NOTE: Bierlein Burners and Firewatches shall not don, remove, or store their gloves and coveralls in the Bierlein Trailer.

F. Additional controls (i.e., segregated handling, identification, labeling, disposal, etc.) are not required for PPE controlled in accordance with this section.

12. Respiratory Protection

A. The use of respiratory protection shall be in accordance with Reference 16.C - Big Rock Point Plant Manual Volume 29, Health And Safety Plan Chapter 9 – Respiratory Protection Program

B. The Burner and the Firewatch in the elevated manbasket/aerial platform shall wear respiratory protection any time that torch cutting of the sphere is in progress.

C. The specific respiratory protection and filter cartridges for this work activity is detailed in Reference 16.F - Health and Safety Checklist (typical) - Dismantlement of the Reactor Containment Sphere Shell While Working Aloft in a Personal Platform or Aerial Platform.

D. Respiratory protection shall not be worn for longer than three hours continuously without a one-hour interval of relief from respirator use before a subsequent period of respirator use, unless approved by BRP Safety.

E. Respiratory protection will be returned to BRP Safety at the end of each workday for inspection, cleaning, and sanitizing, once radiologically surveyed and released from the Radiologically Controlled Area by Radiation Protection.

13. Technology Considered (but not implemented) to Meet the PEL

A. Abatement of the lead and PCB paint at the Reactor Containment Sphere interior cut lines was determined to present an overall greater personal risk as detailed in Section 2.0 and 3.0 of Reference 16.B - Big Rock Point Containment Shell Dismantlement Request for Approval of Alternative Method to Mitigate Risk, September 16, 2004.

B. Abatement of the lead paint at the Reactor Containment Sphere exterior cut lines was determined to present an overall greater personal risk for the same reasons as detailed in Section 2.0 and 3.0 of Reference 16.B - Big Rock Point Containment Shell Dismantlement Request for Approval of Alternative Method to Mitigate Risk, September 16, 2004. Please note that the asbestos-containing mastic has been abated along the Reactor Containment Sphere exterior cut lines.

C. HEPA-filtered ventilation at the point of operation was determined not to be feasible as:

I. Size limitations of the manbasket/aerial platform precluded staging a HEPA filter of adequate capacity in the manbasket/aerial platform.

II. Staging the HEPA filter on the ground and routing the HEPA hose to the elevated work environment would decrease the capture velocity at the point of operation (due to the flow resistance inside of the HEPA hose) below what is believed would be effective.

III. The 500-pound load capacity of the aerial platform precluded staging a HEPA filter of adequate capacity in the aerial platform.

14. Work Schedule– please see Reference 16.D - Big Rock Point Schedule.

15. Workplace Inspections

A. Frequent and regular inspections of this work activity shall be made by the Consumers Energy Project Manager (Rob Sarki or designee) and by the management of all subcontractors identified in Section 10.B above.

B. BRP Safety personnel (Karl Ulbrich and Gregg W. Tulley) are the Lead Competent Persons for this work activity.

16. References

A. 2005 ACGIH Guide to Occupational Exposure Values

B. Big Rock Point Containment Shell Dismantlement Request for Approval of Alternative Method to Mitigate Risk, September 16, 2004

C. Big Rock Point Plant Manual Volume 29, Health And Safety Plan Chapter 9 – Respiratory Protection Program

D. Big Rock Point Schedule

E. Big Rock Point Variance for Firewatch Inside of the Reactor Containment Sphere

F. Health and Safety Checklist (typical) - Dismantlement of the Reactor Containment Sphere Shell While Working Aloft in a Personal Platform or Aerial Platform

G. Health and Safety Checklist Summary – Dismantlement of Reactor Containment Sphere Shell While Working Aloft in a Personal Platform or Aerial Platform

H. MIOSHA Construction Safety Standard Part 18. Fire Protection and Prevention

I. MIOSHA Construction Safety Standard Part 18. Overhead And Gantry Cranes

J. MIOSHA Construction Safety Standard Part 20. Demolition

K. MIOSHA Construction Safety Standard Part 22. Signals, Signs, Tags, And Barricades

L. MIOSHA Construction Safety Standard Part 32. Aerial Work Platforms

M. MIOSHA Construction Safety Standard Part 45. Fall Protection

N. MIOSHA Construction Safety Standard Part 7. Welding And Cutting

O. MIOSHA Occupational Health Standard Part 603. Lead Exposure In Construction

P. MIOSHA Occupational Health Standard Part 620. Ventilation Control For Construction

Q. MIOSHA Occupational Health Standards Part 601. Air Contaminants For Construction

R. OSHA Method Number ID-125G – Metal and Metalloid Particulates in Workplace Atmospheres (ICP Analysis)

DRAFT

S. OSHA Method Number ID-215 – Hexavalent Chromium in Workplace Atmospheres

T. OSHA Technical Manual, Section II: Chapter 1 – Personal Sampling For Air Contaminants

U. Work Order 12520028 – Dismantle the Containment Sphere Structure (Shell) and Process/Dispose of Waste Materials

V. Consumers Energy Lead Paint Abatement Program, Revision 2 dated 11/01/02

W. United States Environmental Protection Agency Letter of 21 March 2005 – Big Rock Point Containment Shell Dismantlement TSCA Approval – 40 CFR § 761.62(c)

X. BNG America Memo BNG-2005-09-01 (heavy metals)

Y. Consumers Energy Memorandum of September 1, 2005 – Paint Chip Analysis – Big Rock Point

Z. Bierlein Manbasket Procedure Sphere Demolition – Revised 9/2/05

AA. BNG America Memo BNG-2005-09-02 (hexavalent chromium)

BB. Bierlein Containment Sphere Demolition Work Plan – Revised 9/6/05

CC. Big Rock Point Plant Manual Volume 1, Procedure D2.3.6 – Fire Prevention Activities

HEALTH and SAFETY CHECKLIST SUMMARY

Dismantlement of the Reactor Containment Sphere Shell While Working Aloft in a Personal Platform or Aerial Platform

ADVERSE WEATHER CONDITIONS

Adverse weather conditions may affect this work activity, up to and including the cessation of the work activity until the adverse weather conditions subside.

Controls:
Follow the **Health and Safety Checklist**. The use of the manbasket shall not be permitted in the event of electrical storms, snow, ice, sleet, or other adverse weather conditions that could affect the safety of the employees on the personnel platform or the Crane Operator. The following wind speed limitations shall be the maximum allowed for the specific work activities:

- 15 mph – Manbasket (personal platform) operation
- 25 mph – Lifting / lowering sphere segments
- 30 mph – Aerial platform operation

BRP Safety and/or Bierlein shall perform wind speed monitoring prior to and during lifting of the sphere segments, operation of the manbasket, and operation of the aerial platform.

ASBESTOS

Asbestos is present at a concentration of up to 5% chrysotile in a tightly bound, non-friable condition in the sphere exterior black mastic coating, which is underneath a cork coating.

The State of Michigan (MI Act 154 Section 14) to limit employee exposures established occupational Health Standards to air contaminants and physical agents (MIOSHA Occupational Health Standards for Construction, Chapter VI, Part II, Rule 6201 – Gases, Vapors, Fumes, Dusts, and Mists).

Controls:
Consumers Energy will perform asbestos abatement. The mastic coating will be abated along the cut lines prior to torch cutting of the sphere segments.

A torch cutting mockup was performed on a representative sphere section to obtain representative air monitoring for heavy metals (including lead) and hexavalent chromium. A section of the sphere exterior coatings and the sphere exterior cork coating was positioned such that sparks and molten slag from the torch cutting dropped onto both coatings to determine if either was flammable and if either would sustain combustion once the sparks were secured. Both coatings were thoroughly wetted down with water prior to performing the mockup. The cork coating sustained localized charring from contact with the sparks and slag, but did not produce flame or sustain combustion, no damage was visible on the black mastic coating. Water will be used to wet any exterior sphere coating that may be impacted by sparks and/or molten slag, then covered with Fireblanket as an additional protective measure.

It is anticipated that portions of the sphere coating may separate from the sphere during this work activity. An individual who has received Class II Asbestos Training will pick up any black mastic that separates from the sphere segments during handling, and then dispose of the black mastic as asbestos waste. Special precautions, including air monitoring for asbestos fibers, are not required for handling this mastic.

Bierlein shall perform no work activities that involve handling and/or disturbing asbestos.

BAT and/or BIRD DROPPINGS

PMC is scheduled to abate any bat and/or bird droppings prior to sphere dismantlement. An accumulation of bat and/or bird droppings may be present on top of the horizontal surface at the equator due to the roosting of birds after this abatement is performed.

OSHA has not established hazard-specific regulations for bat and bird droppings, but has provided guidance in a Hazard Information Bulletin on Contracting Occupationally Related Psittacosis dated August 8, 1994. The Centers for Disease Control and Prevention has provided guidance in Publication Number 97-146, Histoplasmosis – Protecting Workers at Risk.

Controls:
Follow the **Bat and Bird Droppings Decontamination Contingency Plan.** No special controls are required for work activities that do not disturb bat and/or bird droppings, i.e., torch cutting in the vicinity of bat and/or bird droppings. Torch cutting surfaces where bat and/or bird droppings are present is prohibited.

If torch cutting is required on surfaces where bat and/or bird droppings are present, the bat and/or bird droppings shall be removed prior to torch cutting. Workers assigned to remove bat and/or bird droppings shall have received training on the BNG America Bat and Bird Droppings Decontamination Contingency Plan.

CARBON MONOXIDE

Carbon Monoxide (CO) will be produced as a byproduct of torch cutting of the sphere metal.

The State of Michigan (MI Act 154 Section 14) to limit employee exposures established occupational Health Standards to air contaminants and physical agents (MIOSHA Occupational Health Standards for Construction, Chapter VI, Part II, Rule 6201 – Gases, Vapors, Fumes, Dusts, and Mists).

Controls:
No specific controls are required for torch cutting, as it will all be performed outdoors. BRP Safety shall perform initial and periodic carbon monoxide air monitoring for this work activity to verify that workers are not exposed to carbon monoxide in excess of the MIOSHA Ceiling Limit of 200 ppm and the Big Rock Point 8-hour Time Weighted Average (TWA) of 20 ppm.

COLD STRESS / HEAT STRESS

Cold Stress and/or heat stress may be present depending on the weather conditions.

There are no specific regulatory requirements for cold stress or heat stress. Bierlein shall follow the guidelines promulgated in the OSHA Technical Manual, Section III, Chapter 4 – Heat Stress and in ACGIH Threshold Limit Values for Chemical Substances and Physical Agents – Thermal Stress.

Controls:
Follow the **Health and Safety Checklist**. The use of ice vests for heat stress should be discussed with BRP Safety prior to use.

CRYOGENIC LIQUIDS - OXYGEN

Liquid oxygen will be used as the oxygen supply for the oxygen-propane cutting torch. The liquid oxygen will be provided/stored in dewars. Liquid oxygen has a boiling point of -297.3^0 Fahrenheit.

Controls:
Follow the **Health and Safety Checklist**. The only intended work activity directly involved with liquid oxygen is connecting/disconnecting the liquid oxygen transfer line at the liquid oxygen Dewar. This specific work activity requires the following PPE to be used and free of organic material (i.e., oil, grease, etc.): faceshield, safety glasses, leather gloves, hardhat, and long-sleeved shirt.

1. Any clothing that has been splashed or soaked with liquid oxygen or exposed to high oxygen concentrations should be removed immediately and aired for at least an hour. Personnel should stay in a well-ventilated area and avoid any excess oxygen. Clothing saturated with oxygen is readily ignitable and will burn vigorously.
2. Cryogenic containers are equipped with pressure-relief devices to control internal pressure. Under normal conditions these containers will periodically vent product. Do not plug, remove, or tamper with any pressure-relief device.
3. Do not permit liquid oxygen or oxygen-enriched air to come in contact with organic materials or flammable combustible substances of any kind. Some of the organic materials that can react violently with oxygen when ignited by a spark or even a mechanical shock are oil, grease, asphalt, kerosene, cloth, tar, and dirt that may contain oil or grease.
4. If liquid oxygen spills on asphalt or other surfaces contaminated with combustibles, do not walk on or roll equipment over the spill area. Keep ignition sources away for 30 minutes after all frost or fog has disappeared.
5. Smoking and/or open flames are not permitted where liquid oxygen is stored or handled.
6. Store and use liquid oxygen with adequate ventilation. Do not store in a confined space. If outside storage is used, provide for protection against the extremes of weather.

HEAVY METAL FUME

Heavy Metals – Heavy metal fumes may be produced as a byproduct of torch cutting of the sphere metal and/or the sphere primer and paint coating.

A torch cutting mockup was performed on a representative sphere section to obtain representative air monitoring for heavy metals (including lead) and hexavalent chromium. The results of this initial air monitoring identified that the heavy metals airborne concentrations were either below detectable levels or well below the BRP Limits.

The State of Michigan (MI Act 154 Section 14) to limit employee exposures established occupational Health Standards to air contaminants and physical agents (MIOSHA Occupational Health Standards for Construction, Chapter VI, Part II, Rule 6201 – Gases, Vapors, Fumes, Dusts, and Mists).

Controls:
Follow the **Bierlein Lead Compliance Plan** (the controls established for lead are adequate for heavy metals). Respiratory protection will initially be required for torch cutting. Laboratory analysis of representative air monitoring may allow for the relaxation of respiratory protection.

BRP Safety shall perform personal air monitoring to obtain an employee exposure assessment for the Torch Operator and the Firewatch in the aerial platform/manbasket.

Heavy Metal	Concentration in Sphere Coating	BRP Exposure Limits (mg/m^3) *
Antimony	1.48	0.5[2]
Beryllium	Not Analyzed	0.002[2]
Cadmium	1.84	0.005[2]
Chromium	41,800	0.5[2]
Cobalt	Not Analyzed	0.1[2]
Copper	944	0.1[2]
Iron	Not Analyzed	10[2] (Iron Oxide)
Lead	15,300	See Lead Section
Manganese	Not Analyzed	0.2[1]
Molybdenum	29.5	5[2]
Nickel	430	1[2]
Vanadium	Not Analyzed	0.05[1] (Vanadium Pentoxide)
Zinc	56,000	5[2] (Zinc Oxide)

* mg/m^3 = milligrams per cubic meter

1. American Conference of Governmental Industrial Hygienist 2005 Guide to Occupational Exposure Values
2. OSHA Permissible Exposure Level (PEL)

Personal air monitoring shall be performed for the heavy metals identified above. Personnel shall not be exposed to heavy metals without regards to respiratory protection in excess of the Maximum Allowable Concentration (MAC) established for the specific heavy metal as detailed in MIOSHA Occupational Health Standards Part 601 – Air Contaminants For Construction, effective 23 January 2002, the OSHA Permissible Exposure Limit (PEL), or the Threshold Limit Value (TLV) as detailed in the 2005 ACGIH Guide to Occupational Exposure Values, whichever is lower.

Personal air monitoring shall be performed in accordance with the OSHA Technical Manual, Section II: Chapter 1 – Personal Sampling For Air Contaminants.

Laboratory analysis of heavy metal air monitoring shall be performed in accordance with L. OSHA Method Number ID-125G – Metal and Metalloid Particulates in Workplace Atmospheres (ICP Analysis).

HEXAVALENT CHROMIUM FUME

Chromium is present in the sphere interior and exterior primer at a concentration up to 41,800 ppm as determined by laboratory analysis. Torch cutting of the sphere may create hexavalent chromium fume.

A torch cutting mockup was performed on a representative sphere section to obtain representative air monitoring for heavy metals (including lead) and hexavalent chromium. The results of this initial air monitoring identified that the hexavalent chromium airborne concentrations was below BRP established limits.

HEALTH and SAFETY CHECKLIST SUMMARY
Dismantlement of the Reactor Containment Sphere Shell While Working Aloft in a Personal Platform or Aerial Platform

The State of Michigan (MI Act 154 Section 14) to limit employee exposures established occupational Health Standards to air contaminants and physical agents (MIOSHA Occupational Health Standards for Construction, Chapter VI, Part II, Rule 6201 – Gases, Vapors, Fumes, Dusts, and Mists).

Controls:
Follow the **Bierlein Lead Compliance Plan** (the controls established for lead are adequate for hexavalent chromium). Respiratory protection will initially be required for torch cutting. Laboratory analysis of representative air monitoring may allow for the relaxation of respiratory protection.

BRP Safety shall perform personal air monitoring to obtain an employee exposure assessment for the Torch Operator and the Firewatch in the aerial platform/manbasket. Personnel shall not be exposed to hexavalent chromium in excess of the Threshold Limit Value (TLV) of 0.05 milligrams per cubic meter (mg/m^3) without regards to respiratory protection as established by the American Conference of Governmental Industrial Hygienist 2005 Guide to Occupational Exposure Values

Personal air monitoring shall be performed for hexavalent chromium in accordance with the OSHA Technical Manual, Section II: Chapter 1 – Personal Sampling For Air Contaminants.

Laboratory analysis of hexavalent chromium air monitoring shall be performed in accordance with OSHA Method Number ID-215 – Hexavalent Chromium in Workplace Atmospheres.

LEAD

Lead is present in the sphere interior and exterior primer at a concentration up to 15,300 ppm as determined by laboratory analysis.

A torch cutting mockup was performed on a representative sphere section to obtain representative air monitoring for heavy metals (including lead) and hexavalent chromium. The results of this initial air monitoring identified that the airborne lead concentration was below detectable levels.

The State of Michigan (MI Act 154 Section 14) to limit employee exposures established occupational Health Standards to air contaminants and physical agents (MIOSHA Occupational Health Standards for Construction, Chapter VI, Part II, Rule 6201 – Gases, Vapors, Fumes, Dusts, and Mists).

Controls:
Follow the **Bierlein Lead Compliance Plan**. Respiratory protection will initially be required for torch cutting. Laboratory analysis of representative air monitoring may allow for the relaxation of respiratory protection.

BRP Safety shall perform personal air monitoring to obtain an employee exposure assessment for the Torch Operator and the Firewatch in the aerial platform/manbasket. Personnel shall not be exposed to lead without regards to respiratory protection in excess of the OSHA 8-Hour Permissible Exposure Limit (PEL) of 50 micrograms per cubic meter (ug/m^3). This 8-Hour PEL shall be adjusted lower to 40 ug/m^3, as the normal BRP workday is ten hours in duration. This 8-Hour PEL shall be adjusted lower to 33 ug/m^3 in the event that weather conditions allow for working a workday of twelve hours in duration.

Personal air monitoring shall be performed in accordance with the OSHA Technical Manual, Section II: Chapter 1 – Personal Sampling For Air Contaminants.

Laboratory analysis of lead air monitoring shall be performed in accordance with OSHA ID-125G.

NOISE

Elevated noise levels will be present in the vicinity of either of the two operating cranes or near the point of operation for the torch cutting. Elevated noise levels may be present during other work activities.

The State of Michigan (MI Act 154 Section 24) to limit employee exposures established occupational Health Standards to noise (MIOSHA Occupational Health Standards for Construction, Part 680, Noise Exposure For Construction).

Controls:
Follow the **Health and Safety Checklist**. Single and/or double hearing protection will be required depending on the noise levels.

BRP Safety should perform initial and periodic noise monitoring for this Work Order.

PCB's

PCBs – PCBs are present in the sphere interior coating at a concentration slightly greater than 50 ppm as determined by laboratory analysis. Torch cutting of the PCB coating above the sphere equator may produce hydrogen chloride, carbon monoxide, carbon dioxide, and a variety of trace organic chemicals including phenolics, aldehydes, polychlorinated dibenzofurans and polychlorinated dibenzodioxins.

1. The PCB coating above the equator will not be abated prior to torch cutting the sphere into segments for lowering to the ground in accordance with Tracy Goble's 29 March 2005 EPA PCB Approval Letter.
2. The PCB coating below the equator will be abated prior to torch cutting.
3. The PCB coating of any sphere segments that require torch cutting once landed on the ground will be abated prior to torch cutting. The preferred size-reduction method is use of the Bierlein shear once the sphere segments have been landed on the ground, which will not require abatement of the PCB coating.

The State of Michigan (MI Act 154 Section 14) to limit employee exposures established occupational Health Standards to air contaminants and physical agents (MIOSHA Occupational Health Standards for Construction, Chapter VI, Part II, Rule 6201 – Gases, Vapors, Fumes, Dusts, and Mists).

Controls:
Follow the **Big Rock Point Health and Safety Plan, Volume 29, Chapter 8 – Polychlorinated Biphenyl (PCBs) Control and the Bierlein Lead Compliance Plan** (the controls established for lead are adequate for PCBs). Respiratory protection with HEPA/Acid Gas/Organic Vapor filter cartridges will initially be required for torch cutting. Laboratory analysis of representative air monitoring may allow for the relaxation of respiratory protection.

BRP Safety shall perform personal air monitoring for PCBs to obtain an employee exposure assessment for the Torch Operator and the Firewatch in the aerial platform/manbasket.

Personal air monitoring shall be performed in accordance with the OSHA Technical Manual, Section II: Chapter 1 – Personal Sampling For Air Contaminants. . Personnel shall not be exposed to PCBs in excess of the MIOSHA 8-Hour Maximum Allowable Concentration (MAC) of 1 milligrams per cubic meter (mg/m^3) of Chlorodiphenyl (42% Chlorine) and 0.5 milligrams per cubic meter (mg/m^3) of Chlorodiphenyl (54% Chlorine).

Laboratory analysis of PCB air monitoring shall be performed in accordance with NIOSH Manual of Analytical Methods (NMAM), Fourth Edition, Polychlorobiphenyls- #5503.

SAFETY BARRIERS and SIGNS

Use safety barriers and signs for the following industrial hazards (personnel may be used in lieu of signs as appropriate):

- Compressed gas cylinder (specific name of gas, no smoking).
- Double hearing protection required (≥ 100 dBA).
- Gate (for access into a safety barrier area).
- Liquid Oxygen – No Smoking
- No Entry Into Sphere – Contact Stu Powrie if Access is Required
- Overhead lifting activities in progress.
- Personnel working above.
- Single hearing protection required (≥ 85 dBA).

The Monitoring Station shall be notified of all safety barriers and signs when posting and removing, and if they are to remain in place overnight.

WORKING AT HEIGHT (Fall Hazard): AERIAL PLATFORM

This Work Order will require working at height; fall prevention/fall protection measures will be required.

The State of Michigan (MI Act 154 Section 19 and 21) to provide for the safety of employee's who work at heights requiring the application of fall prevention (barriers) and/or fall prevention (restraining and/or arresting systems) established Construction Safety Standards, Part 45 – Fall Protection.

Controls:
Follow the **Health and Safety Checklist**. Fall prevention barriers are the preferred method of employee protection. Employees using fall protection (i.e. harnesses and lanyards) shall have received training on the proper use of the fall protection equipment and coordinate with BRP Safety to assist with fall protection compliance methods. Approved fall protection (including a four foot long non-shock absorbing rope lanyard) shall be used anytime that the aerial platform is in motion or elevated above ground elevation.

WORKING AT HEIGHT (Fall Hazard): MANBASKET (Personal Platform) USAGE

A Manbasket suspended by a crane will be used to perform a portion of this work activity.

OSHA states "using cranes or derricks to hoist personnel poses a significant risk to employees being lifted." The State of Michigan (MI Act 154, Sections 19 and 21) to provide for the safety of employee's who work in manbaskets established Construction Safety Standards, Part 10, Lifting and Digging Equipment.

Controls:
Follow the **Bierlein Manbasket Procedure Sphere Demolition dated 8/15/05**. BRP Safety and the Crane Vendor shall perform a pre-use inspection of the entire manbasket system (manbasket, rigging, crane, and any other associated equipment) to verify that it complies with all MIOSHA regulatory

requirements and the ANSI Standard for Personal Lifting Systems: ASME B30.23-1998. This pre-use inspection shall be documented and retained with this Work Order.

An anemometer shall be present in the manbasket anytime that it is elevated off of the ground to measure wind speed. The manbasket shall not be lifted if wind speed exceeds 15 mph. If the wind speed should exceed 15 mph once aloft, the manbasket shall be immediately landed after placing the work area in a safe condition.

Paul Ivan of the Charlevoix Fire Department has been briefed on this work activity and performed an inspection of the work area on 01 September 2005 in the event that a rescue of personnel suspended in the manbasket is required. The Charlevoix Fire Department shall be notified at (231) 547-3279 prior to elevating personnel in the manbasket and at the completion of elevating personnel for the day.

Lt. McWilliams of the U.S. Coast Guard Air Station Traverse City has been briefed on this work activity. Lt. McWilliams is familiar with our potential rescue needs in the event that a rescue of personnel suspended in the manbasket is required as he assisted with the rescue plan of the Off Gas Stack demolition in 2004. The U.S. Coast Guard shall be notified at (231) 922-8212 prior to elevating personnel in the manbasket and at the completion of elevating personnel for the day

Health and Safety Checklist (typical)

Dismantlement of the Reactor Containment Sphere Shell While Working Aloft in a Personal Platform or Aerial Platform

Job Description: Dismantlement of Containment Sphere Shell - Dismantlement of Reactor Containment Sphere Shell Working Aloft - Personal Platform or Aerial Platform

Work Order: 12520028

Note: The Accident Prevention Manual (APM) for Big Rock Point describes many of the controls that should be implemented during this task. The chapter numbers for specific controls are provided below. The guideline, Work Controls for Hazardous Materials, serves as a basis for personnel protection from chemical hazards. Additional BNFL Inc. procedures will apply for various activities, in addition to site procedures.

Potential Hazards / Monitoring Required (contact x8299 / 8316)

Hazardous Materials

- ☒ Asbestos
- ☒ Carbon Monoxide
- ☒ Heavy Metals
- ☒ Hexavalent Chromium
- ☒ Lead
- ☒ PCB's (including thermal decomposition byproducts)

Physical

- ☒ Bat and/or Bird Droppings
- ☒ Cold Stress
- ☒ Heat Stress
- ☒ Hot (temperature) Metal
- ☒ Noise
- ☒ Liquid Oxygen
- ☒ Sphere Entry
- ☒ Weather Conditions (adverse)
- ☒ Wind Speed > 15 mph
- ☒ Working at Heights / Fall Protection

Permits Required

	References
☒ Hot Work	APM Chapter 400, Admin. Proc, Vol. 1, Procedure D2.3.6

Inspections

	References
☒ Crane	Manufacturers Technical Manual
☒ Electrical Power Cords, Tools	APM Chapter 500 and 1400
☒ Fall Protection Anchorage Points	APM Chapter 1700
☒ Ladders	APM Chapter 600
☒ Manbasket	Personnel Platform Inspection and Operation Surveillance
☒ Rigging Equipment	APM Chapter 1000

Health and Safety Checklist (typical)

Dismantlement of the Reactor Containment Sphere Shell While Working Aloft in a Personal Platform or Aerial Platform

Equipment Required

- ☒ 55 Ton Hydraulic Crane for Elevating Manbasket
- ☒ Aerial Platform (120' JLG for rescue, if needed)
- ☒ Anemometer
- ☒ Bierlein Rigging Equipment
- ☒ Communication Radios – Dedicated Channel
- ☒ Cutting Torch, extended length where possible
- ☒ Fire extinguisher, A-B-C and Water
- ☒ Hand and Face Washing Facility
- ☒ Manbasket with Dedicated Rigging
- ☒ 250 Ton Crawler Crane For Lifting Sphere Segments
- ☒ Air Horns or Strobe Lights
- ☒ Auxiliary Lighting
- ☒ Charlevoix Fire Department (on call)
- ☒ Cribbing
- ☒ Fireblanket
- ☒ Griffolyn
- ☒ HEPA-Filtered Vacuum Cleaner
- ☒ Shower Facility

Personal Protective Equipment

- ☒ Coveralls – Disposable (bat and/or bird droppings abatement)
- ☒ Coveralls - Fire-Retardant (torch cutting, replaced daily unless otherwise directed by BRP Safety)
- ☒ Faceshield – Tinted (torch cutting)
- ☒ Faceshield (connecting/disconnecting the liquid oxygen transfer line at Dewar)
- ☒ Fall Protection (body harness)
- ☒ Gloves – Cotton (bat and/or bird droppings abatement)
- ☒ Gloves - Leather (material handling and connecting/disconnecting the liquid oxygen transfer line at Dewar)
- ☒ Gloves (torch cutting PCB coating, which entails all torch cutting above the equator)
- ☒ Hard Hat (brim facing forward)
- ☒ Hard Hat Liner (cold stress)
- ☒ Hearing Protection – Double (ear muffs & inserts)
- ☒ Hearing Protection – Single (ear muffs or inserts)
- ☒ Hood, Fire Resistant (torch cutting PCB coating, which entails all torch cutting above the equator)
- ☒ Ice Vests - Notify BRP Safety Prior to Usage
- ☒ Knee Pads (if desired)
- ☒ Pants without Cuffs (connecting/disconnecting the liquid oxygen transfer line at Dewar)
- ☒ Safety Glasses – with Side Shields
- ☒ Shirt – Long Sleeved (connecting/disconnecting the liquid oxygen transfer line at Dewar)
- ☒ Shoe Covers, Fire Retardant (torch cutting PCB coating, which entails all torch cutting above the equator)
- ☒ Work Boots (steel or composite toes)
- ☐ Other _____

Signs or Barricades Required

- ☒ Compressed Gas
- ☒ Liquid Oxygen
- ☒ Overhead Lift in Progress
- ☒ Gate
- ☒ No Entrance Into Sphere
- ☒ Personnel Working Above
- ☒ Hearing Protection Required
- ☒ No Smoking or Open Flames

Health and Safety Checklist (typical)

Dismantlement of the Reactor Containment Sphere Shell While Working Aloft in a Personal Platform or Aerial Platform

Respiratory Protection

Respirator Type

☒ Air Purifying Respirator – 3M 7500 Series Half Face: Bat and bird dropping cleanup (minor accumulation), torch cutting if approved by BRP Safety

☒ Powered Air Purifying Respirator - MSA OptimAir Full Face: Bat and bird dropping cleanup (significant accumulation) and torch cutting (may be relaxed by BRP Safety based on air monitoring results)

Respirator Cartridge Filter

☒ HEPA (P100) for:

- Bat and bird dropping cleanup
- Torch cutting of the sphere metal coated with the zinc chromate primer (where the cream-colored PCB coating is not present on the sphere interior metal, i.e. below the equator)

☒ HEPA (P100) / Acid Gas / Organic Vapor for torch cutting of the interior sphere metal where the cream-colored PCB coating is present (above the equator)

Key Safety Points

1. A locked physical barrier will prevent access into the Reactor Containment Sphere once sphere dismantlement has begun. If access is required once sphere dismantlement has begun, BRP Engineering shall perform an engineering analysis to ensure that the structural condition of the sphere is acceptable. Personnel will not be allowed access anytime that overhead work (i.e., torch cutting of the sphere) is in progress.
2. Bat and/or bird dropping abatement shall be performed in accordance with the **Bird and/or Bat Droppings Abatement Contingency Plan.**
3. BRP Safety, Radiation Protection, BRP Project Manager, and the Bierlein Project Manager shall perform a final inspection of the Reactor Containment Sphere prior to dismantlement for combustible materials, as a Firewatch will not be stationed inside of the Reactor Containment Sphere during dismantlement (torch cutting). Combustible material shall either be removed (preferable) or adequately protected from sparks and slag.
4. Lead controls shall be in accordance with the **Bierlein Lead Compliance Plan**. The controls specified in this Lead Compliance Plan are adequate for PCBs, heavy metals, and hexavalent chromium.
5. PCB controls shall be in accordance with **Tracy Goble's EPA PCB Approval Letter of 29 March 2005 and the Big Rock Point Health and Safety Plan, Volume 29, Chapter 8 – Polychlorinated Biphenyl (PCBs) Control**
6. The **Personnel Platform Inspection and Operation Surveillance (typical)** shall be completed daily by BRP Safety prior to elevating personnel in the manbasket.
7. The sphere metal along the torch cut lines will be hot after torch cutting. Extra care is required to prevent skin contact and/or contact with flammable/combustible material until the metal has cooled.

Prepared by:	Title	Date
Gregg W. Tulley	BNG America Safety Professional	

DRAFT

HEALTH and SAFETY CHECKLIST SUMMARY
Ground Processing Of Containment Sphere Shell

SHELL SECTION STAGING:

Prior to ground processing shell section, the sections shall be set in a stable configuration. Distance between sections staged on the ground shall be sufficient to allow personnel to move between each piece.

Controls:
Bierlein will be responsible for setting the sections on cribbing in a manner that allows movement of personnel and prevents unintentional rolling or movement during processing activities.

EDGE PROTECTION:
The torch cutting process leaves a jagged edge that poses a hazard to individuals working on or around the shell sections.

Controls:
Edge protection shall be installed along the entire perimeter of any shell section being processed. Sections of the edge protection may temporarily be removed if it interferes with processing. The edge protection shall be replaced as soon as practical.

WEATHER CONDITIONS:

Weather conditions (ice/snow/cold temperatures) may affect general work activities in addition to those that require personnel to access and work on top of the shell sections.

Controls:
Each employee is responsible for being prepared and dressing appropriately for cold weather conditions. Winter work gloves will be available.

Access and work on top of shell sections will not be permitted in the presence of ice/snow. As much work as possible should be accomplished with long handle tools. In wet conditions, individuals needing to access and work on the shell sections shall wear "SPIDERZ" over-the-shoe/boot high tractions footwear. Additionally, whenever possible, any work performed on top of the sections should be done in the kneeling position. Kneepads will be available and are recommended for this work.

ASBESTOS:

Asbestos is present at a concentration of up to 5% chrysotile in a tightly bound, non-friable condition in the sphere exterior black cork mastic coating.

The State of Michigan (MI Act 154 Section 14) to limit employee exposures established occupational Health Standards to air contaminants and physical agents (MIOSHA Occupational Health Standards for Construction, Chapter VI, Part II, Rule 6201 – Gases, Vapors, Fumes, Dusts, and Mists).

Controls:
The mastic coating will be abated along the cut lines prior to torch cutting of the sphere segments. An individual who has received Class II Asbestos Training will pick up any mastic that separates from the sphere segments during handling, and then dispose of the mastic as asbestos waste. Special precautions, including air monitoring for asbestos fibers, are not required for handling this mastic. If any additional material need to be removed, the work shall be performed only by those who have received training specific to the sphere mastic removal.

BAT and BIRD DROPPINGS:

Bat and/or Bird Droppings – May be present on the exterior of the sphere; a significant accumulation is possible on top of the horizontal surface at the equator. OSHA has not established hazard-specific regulations for bat and bird droppings, but has provided guidance in a Hazard Information Bulletin on Contracting Occupationally Related Psittacosis dated August 8, 1994. The Centers for Disease Control and Prevention has provided guidance in Publication Number 97-146, Histoplasmosis – Protecting Workers at Risk.

Controls:
Follow the **Bat and Bird Droppings Decontamination Contingency Plan.** No special controls are required for work activities that do not disturb bat and/or bird droppings, i.e., torch cutting in the vicinity of bat and/or bird droppings, Torch cutting surfaces where bat and/or bird droppings are present is not allowed.

If torch cutting is required on surfaces where bat and/or bird droppings are present, the bat and/or bird droppings shall be removed prior to torch cutting. Workers assigned to remove bat and/or bird droppings shall have received training on the BNG America Bat and Bird Droppings Decontamination Contingency Plan.

CARBON MONOXIDE:

Carbon Monoxide (CO) will be produced as a byproduct of torch cutting of the sphere metal.

The State of Michigan (MI Act 154 Section 14) to limit employee exposures established occupational Health Standards to air contaminants and physical agents (MIOSHA Occupational Health Standards for Construction, Chapter VI, Part II, Rule 6201 – Gases, Vapors, Fumes, Dusts, and Mists).

Controls:
No specific controls are required for torch cutting, as it will all be performed outdoors. BRP Safety shall perform initial and periodic carbon monoxide air monitoring for this work activity to verify that workers are not exposed to carbon monoxide in excess of the MIOSHA Ceiling Limit of 200 ppm and the Big Rock Point 8-hour Time Weighted Average (TWA) of 20 ppm. If it is necessary to perform torch cutting inside of an enclosure, continuous CO monitoring will be required.

HEAVY METAL FUME:

Heavy Metals – Heavy metal fumes may be produced as a byproduct of torch cutting of the sphere metal and/or the sphere primer and paint coating.

The State of Michigan (MI Act 154 Section 14) to limit employee exposures established occupational Health Standards to air contaminants and physical agents (MIOSHA Occupational Health Standards for Construction, Chapter VI, Part II, Rule 6201 – Gases, Vapors, Fumes, Dusts, and Mists).

Controls:
Follow the **Lead Compliance Plan** (the controls established for lead are adequate for heavy metals). Non-Beirlein personnel follow CE Lead Paint Abatement Program. Respiratory protection will initially be required for torch cutting. Laboratory analysis of representative air monitoring may allow for the relaxation of respiratory protection.

BRP Safety shall perform personal air monitoring to obtain an employee exposure assessment for the Torch Operator and the Firewatch in the aerial platform/manbasket.

Personal air monitoring shall be performed for the following 13 analytes: antimony, beryllium, cadmium, chromium, cobalt, copper, iron, lead, manganese, molybdenum, nickel, vanadium, and zinc. Personal exposure shall not be allowed to exceed the Maximum Allowable Concentration (MAC) established for the specific heavy metal as detailed in MIOSHA Occupational Health Standards Part 601 – Air Contaminants For Construction, effective 23 January 2002 or the OSHA Permissible Exposure Limit (PEL) as detailed in the 2005 ACGIG Guide to Occupational Exposure Values, whichever is lower.

Personal air monitoring shall be performed in accordance with the OSHA Technical Manual, Section II: Chapter 1 – Personal Sampling For Air Contaminants.

Laboratory analysis of heavy metal air monitoring shall be performed in accordance with *OSHA Method No. ID-125G Metal and Metalloid Particulates in Workplace Atmospheres (ICP analysis).*

HEXAVALENT CHROMIUM FUME:

Hexavalent chromium is present as a constituent of the zinc chromate primer on the interior and exterior of the sphere. Torch cutting of the sphere may create hexavalent chromium fume.

The State of Michigan (MI Act 154 Section 14) to limit employee exposures established occupational Health Standards to air contaminants and physical agents (MIOSHA Occupational Health Standards for Construction, Chapter VI, Part II, Rule 6201 – Gases, Vapors, Fumes, Dusts, and Mists).

Controls:
Follow the **Lead Compliance Plan** (the controls established for lead are adequate for hexavalent chromium). Non-Beirlein personnel follow CE Lead Paint Abatement Program. Respiratory protection will initially be required for torch cutting. Laboratory analysis of representative air monitoring may allow for the relaxation of respiratory protection.

BRP Safety shall perform personal air monitoring to obtain an employee exposure assessment for the Torch Operator and the Firewatch in the aerial platform/manbasket.

Personal air monitoring shall be performed for the following 13 analytes: antimony, beryllium, cadmium, chromium, cobalt, copper, iron, lead, manganese, molybdenum, nickel, vanadium, and zinc.

Personal air monitoring shall be performed in accordance with the OSHA Technical Manual, Section II: Chapter 1 – Personal Sampling For Air Contaminants.

Laboratory analysis of heavy metal air monitoring shall be performed in accordance with OSHA ID-215 method using Ion Chromatography.

LEAD:

Lead is present in the sphere interior and exterior primer at a concentration of xxx ppm as determined by laboratory analysis.

The State of Michigan (MI Act 154 Section 14) to limit employee exposures established occupational Health Standards to air contaminants and physical agents (MIOSHA Occupational Health Standards for Construction, Chapter VI, Part II, Rule 6201 – Gases, Vapors, Fumes, Dusts, and Mists).

Controls:
Follow the **Lead Compliance Plan**. Non-Beirlein personnel follow CE Lead Paint Abatement Program. Respiratory protection will initially be required for torch cutting. Laboratory analysis of representative air monitoring may allow for the relaxation of respiratory protection.

BRP Safety shall perform personal air monitoring to obtain an employee exposure assessment for the Torch Operator and the Firewatch in the aerial platform/manbasket. Personnel shall not be exposed to lead in excess of the MIOSHA 8-Hour Time Weighted Average (TWA) of 50 micrograms per cubic meter (ug/m^3). This 8-Hour TWA shall be adjusted lower to 40 ug/m^3, as the normal BRP workday is ten hours in duration. This 8-Hour TWA shall be adjusted lower to 33 ug/m^3 in the event that weather conditions allow for working a workday of twelve hours in duration.

Personal air monitoring shall be performed in accordance with the OSHA Technical Manual, Section II: Chapter 1 – Personal Sampling For Air Contaminants.

Laboratory analysis of lead air monitoring shall be performed in accordance with *OSHA Method No. ID-125G Metal and Metalloid Particulates in Workplace Atmospheres (ICP analysis).*

PCB's:

NO hot work is permitted on PCB painted shell sections that are on the ground. PCB paint **SHALL BE** scabbled prior to any hot work activities. PCB is present in the interior cream-colored paint and the silver paint around the personnel lock.

WORKING AT HEIGHT (Fall Hazard):

No work is expected during ground activities that would require fall protection equipment. If the need arises, verify adequacy and application of equipment with safety personnel.

NOISE:

Elevated noise levels will be present in the vicinity of either of the two operating cranes and the excavator using the shear attachment. Elevated noise levels may be present during other work activities.

The State of Michigan (MI Act 154 Section 24) to limit employee exposures established occupational Health Standards to noise (MIOSHA Occupational Health Standards for Construction, Part 680, Noise Exposure For Construction).

Controls:
Follow the **Health and Safety Checklist**. Single and/or double hearing protection will be required depending on the noise levels.

BRP Safety should perform initial and periodic noise monitoring for this Work Order.

SIGNS AND BARRICADES:

Barricades and signs are required around all ground processing activities. Barricades shall be constructed using 2" woven yellow/black barricade tape. When using hydraulic shear, entire swing radius of excavator counterweight must be within the barricaded area. If torch cutting, maintain 20 ft. distance between cutting operation and edge of barricade. Use signs and barricades for the following industrial hazards (personnel may be used in lieu of signs as appropriate):

- Compressed gas cylinder (specific name of gas, no smoking).
- Double hearing protection required (≥ 100 dBA).
- Caution / Danger Unauthorized Persons Keep Out
- Gate (for access into a safety barrier area).

- Single hearing protection required (≥ 85 dBA).
- Respiratory protection required

The Monitoring Station shall be notified of all signs or barricades when posting and removing, and if they are to remain in place overnight.

RESPIRATORY PROTECTION:

Several activities during ground processing will require respiratory protection. These include torch cutting on primer coated metal, scabbling, and abatement of bird droppings. The respiratory protection requirements for these activities are:

Torch Cutting – MSA Full Face PAPR with P-100 filters. Air monitoring data may relax the level of respiratory protection required.

Bird Dropping Removal – MSA Full Face PAPR with P-100 filters.

Scabbling – ½ Face APR with P-100 filters

Clean respirators (non-rad) will be used for these activities. Respirators will be picked up daily in the fit test room in the construction trailer. During breaks and lunch, wipe down exterior of respirator (wipes will be provided), tape over the filter opening, and place in a ziplock bag. At the end of each work day the respirators shall be cleared through the SAM and returned to the fit test room for cleaning, disinfecting and sanitizing.

ENGINEERING CONTROLS:

Torch Cutting

During torch cutting operations, HEPA ventilation is required at the point of torch operation. Spark arrestors shall be required on all ends of HEPA hoses used during torch cutting. The individual performing the cutting shall use long handle torches (3ft. or 6ft.) wherever practical and position their body up wind and out of the plum (area directly above the cut). If it becomes necessary to perform torch cutting activities inside of an enclosure, the primer coat **SHALL** be removed via scabbling prior to torch cutting. Cut lines shall be scabbled a minimum of four inches to each side of the cut.

Scabbling

All scabbling equipment shall be connected to a HEPA ventilated dust collection system (pentek, barrel or HEPA vacuum).

Safety and Health Checklist
Big Rock Restoration Project

Job Description

Work Order Number	12520028
Equipment In Use	See Below
Task	Ground processing of sphere shell sections

Note: The Accident Prevention Manual (APM) for Big Rock Point describes many of the controls that should be implemented during this task. The Chapter numbers (e.g. Ch) for specific controls are provided below. The guideline, Work Controls for Hazardous Materials, serves as a basis for personnel protection from chemical hazards.

Potential Hazards

Hazardous Materials: Asbestos, Lead, Carbon Monoxide, PCB's, Heavy Metals, Hexavalent Chromium

Physical:
- ■ Asbestos
- ■ Cold Environment
- ■ Slippery Surfaces
- ■ Noise
- ■ Bird Droppings

Permits Required

	References
■ Hot Work	APM Section 400 Admin. Proc, Vol 1, D2.3.6
☐ Confined Space Entry	CPE Confined Space
☐ Digging	WI-MBE-10

Inspection / Monitoring Required

	References
☐ Excavation	APM Section 1800
☐ Ladders	APM Section 600
☐ Scaffolding	APM Section 600

■ IH Monitoring Required, (contact x 8299/8316).Contaminates PCB's, Heavy Metals

Equipment Required

- ■ HEPA Ventilation
- ■ Excavator w/shear
- ■ Cutting torches
- ■ HEPA ventilation
- ■ Enclosure
- ■ Shower Facility
- ■ Cribbing
- ■ Hand/Face washing facility
- ■ Fire Extinguisher

Engineering Structure Review

Work to be performed will cause a degraded condition to existing structures

☐ **NO** ■ **YES** ☐ **N/A**

If yes, an engineering review is required before performing work.

Safety and Health Checklist
Big Rock Restoration Project

Signs or Barricades Required

- ☐ Men Working Above
- ☐ Men Working Below
- ■ Caution Tape/Rope
- ☐ Confined Space
- ■ Danger Signs
- ■ No smoking or open flames
- ■ Gate
- ■ Hazardous Materials (specify - ie Lead, Asbestos) Lead

Respiratory Protection – See checklist summary for respiratory protection requirements

Respirator Type:		**Respirator Cart:**	
■ APR		☐ HEPA	
■ PAPR	☐ SAR	☐ Organic Vapor	■ Other HEPA/OV/Acid Gas

Personal Protective Equipment

- ■ **Hard Hat** - bill facing forward
- ■ **Safety Glasses** - with side shields
- ■ **Work Boots** - safety toes (steel or composite)
- ■ **Hearing Protection**
- ■ **Goggles**
- ■ **Face Shield**
- ■ **Suits/Coveralls (torch cutting)**
  - ■ Fire Retardant
  - ☐ Tyvek
  - ☐ Chemical Suits
  - ☐ Welding Jackets
  - ☐ Leathers
- ■ **Gloves**
  - ☐ Cotton
  - ☐ Welding
  - ☐ Electrical
  - ☐ PVC
  - ☐ Latex
  - ■ Leather
  - ☐ Cut Resistant
- ☐ **Shoe Covers**
  - ☐ Rubber
- ☐ **Ice Vest**
- ☐ **Life Vests**

■ Other Full body coverall required for torch cutting until air monitoring results are obtained.
☐ Other

Key Safety Points (Attached)

- ■ Hot Work/Welding *APM Ch 400*
- ☐ Flammable/Combustible Liquids *APM Ch 404, 901*
- ☐ Chemicals *APM Ch 206, 207*
- ☐ Elevated Work Surfaces *Ch 600, 1300*
- ■ Asbestos
- ■ Ladders *Ch 601*
- ■ Hoisting/Rigging *Ch 1000, 1200*
- ☐ Excavation *Ch 1800*
- ■ Hand/Power Tools *Ch 500*

Prepared by: Karl J. Ulbrich	Title: Sr. Safety Engineer	Date:

WORKING CONTROLLED COPY

CONTAINMENT SHELL SECTION DEMO - PCB CHECKLIST

RING #	SECT. #	SECT. IN PCB STORAGE AREA	SUB-SECT. #	PAINT SAMPLES COLLECTED? (ES)	PCB BULK PRODUCT WASTE?* (ES)	RESIZE or REMEDIATE?** (ES)	WASTE IN PCB SHIPPING CONTAINER? (PMC)	COMMENTS
6	9		9.1	10-26-05	NO			
			9.2	10-26-05	NO			
	(+)	Y	9.3	10-26-05	NO			
	10		10.1	10-26-05	NO			
			10.2	10-26-05	NO			
	(+)(+)(+)	Y	10.3	10-26-05	YES			
	11		11.1	10-26-05	NO			
			11.2	10-26-05	NO			
	(+)(+)	Y	11.3	10-26-05	NO			
	12		12.1	10-26-05	NO			
			12.2	10-26-05	NO			
	(+)	Y	12.3	10-26-05	NO			
	13		13.1	10-21-05	YES			
			13.2	10-21-05	NO			
	(*)	Y	13.3	10-21-05	NO			
	14		14.1	10-21-05	NO			
			14.2	10-21-05	NO			
	(*)(*)	Y	14.3	10-21-05	NO			
	15		15.1	10-21-05	NO			
			15.2	10-21-05	NO			
	(*)(*)(*)	Y	15.3	10-21-05	NO			
5	24		24.1	10-28-05	NO			PIECE 24 CUT INTO ROLLOFF
			24.2	10-28-05	YES			SIZE DUE TO SPACE LIMITATIONS
		Y	24.3	10-28-05	NO			IN PCB STORAGE AREA - ALL PCS REMAIN IN AREA - 3 PCS
	25		25.1	10-28-05	NO			PC 25 CUT INTO ROLLOFF
			25.2	10-28-05	NO			SIZE AS SIMILAR TO PC 24
		Y	25.3	10-28-05	NO			ABOVE
	26		26.1	10-26-05	NO			
			26.2	10-26-05	NO			
		Y	26.3	10-26-05	NO			
	27		27.1	10-26-05	NO			
			27.2	10-26-05	YES			
		Y	27.3	10-26-05	NO			
	28		28.1	10-21-05	YES			
			28.2	10-21-05	YES			
		Y	28.3	10-21-05	NO			

(*)	13	13.4	10-21-05	YES	(+) 12.4	10-26-05	YES
					(+)(+) 11.4	10-26-05	YES
(*)(*)	14	14.4	10-21-05	NO	(+)(+)(+) 10.4	10-26-05	NO
(*)(*)(*)	15	15.4	10-21-05	NO	(+) 9.4	10-26-05	NO

* Paint sample results >=50 PPM PCB require designation as PCB Waste and resizing or remediation. If paint sample results <50 PPM, N/A all subsequent steps.

** If remediation is selected, N/A final "PCB Shipping Container" step.

WORKING CONTROLLED COPY

CONTAINMENT SHELL SECTION DEMO - PCB CHECKLIST

RING #	SECT. #	SECT. IN PCB STORAGE AREA	SUB-SECT. #	PAINT SAMPLES COLLECTED? (ES)	PCB BULK PRODUCT WASTE?* (ES)	RESIZE or REMEDIATE?** (ES)	WASTE IN PCB SHIPPING CONTAINER? (PMC)	COMMENTS
5	29	Y	29.1	10-21-05	NO			
			29.2	10-21-05	NO			
			29.3	10-21-05	NO			
	30	Y	30.1	10-21-05	NO			
			30.2	10-21-05	NO			
			30.3	10-21-05	NO			
4	42	Y 10-31-05	42.1	10-31-05	NO			
			42.2	10-31-05	NO			
			42.3	10-31-05	NO			
			42.4	10-31-05	NO			
			42.5	10-31-05	YES			
	43	Y 10-31-05	43.1	10-31-05	NO			
			43.2	10-31-05	YES			
			43.3	10-31-05	NO			
			43.4	10-31-05	NO			
			43.5	10-31-05	NO			
	44	Y 10-31-05	44.1	10-31-05	NO			
			44.2	10-31-05	NO			
			44.3	10-31-05	NO			
			44.4	10-31-05	NO			
			44.5	10-31-05	NO			
	45	Y 11-2-05	45.1	11-2-05	NO			
			45.2	11-2-05	NO			
			45.3	11-2-05	NO			
			45.4	11-2-05	NO			
			45.5	11-2-05	YES			
	46	Y 11-2-05	46.1	11-2-05	NO			
			46.2	11-2-05	NO			
			46.3	11-2-05	YES			
			46.4	11-2-05	NO			
			46.5	11-2-05	YES			
3	58	Y 11-4-05	58.1	11-4-05	NO			
			58.2	11-4-05	NO			
			58.3	11-4-05	NO			
			58.4	11-4-05	NO			
			58.5	11-4-05	NO			

* Paint sample results >=50 PPM PCB require designation as PCB Waste and resizing or remediation. If paint sample results <50 PPM, N/A all subsequent steps.

** If remediation is selected, N/A final "PCB Shipping Container" step.

CONTAINMENT SHELL SECTION DEMO - PCB CHECKLIST

RING #	SECT. #	SECT. IN PCB STORAGE AREA	SUB-SECT. #	PAINT SAMPLES COLLECTED? (ES)	PCB BULK PRODUCT WASTE?* (ES)	RESIZE or REMEDIATE?** (ES)	WASTE IN PCB SHIPPING CONTAINER? (PMC)	COMMENTS
3	59		59.1	11-4-05	NO			
			59.2	11-4-05	NO			
	(X)	Y	59.3	11-4-05	NO			
			59.4	11-4-05	NO			
	60		60.1	11-4-05	NO			
			60.2	11-4-05	NO			
	(XX)	Y	60.3	11-4-05	NO			
			60.4	11-4-05	NO			
	61		61.1	11-4-05	NO			
			61.2	11-4-05	NO			
	(XXX)	Y	61.3	11-4-05	NO			
			61.4	11-4-05	NO			

(X)	59.5	11-4-05	NO
(XX)	60.5	11-4-05	NO
(XXX)	61.5	11-4-05	NO

* Paint sample results >=50 PPM PCB require designation as PCB Waste and resizing or remediation. If paint sample results <50 PPM, N/A all subsequent steps.

** If remediation is selected, N/A final "PCB Shipping Container" step. CONTAINMENT SECTIONS W/ SILVER PAINT #75 L Moved to PCB Storage Area - 11-9-05

CONTAINMENT SHELL DEMOLITION - PCB CHECKLIST

Containment Pieces - Exterior Silver-Paint Below Equator (630.5ft)

Ring Number	Section Number	Subsection Number	Section in PCB Storage Area?	BMR? Yes / No	Disposal? RW EQ	Comments
2	66	66.5	Y		EQ	CCA / Equipment Lock
		66.6	Y		EQ	CCA / Equipment Lock
	67	67.11	Y		EQ	CCA / Equipment Lock
		67.12	Y		EQ	CCA / Equipment Lock
	75		N			Personnel Lock Area - South Laydown TO BE MOVED
						No subsection #
	76		N			Personnel Lock Area - South Laydown TO BE MOVED
						No subsection #
1	77		Y	N	RW	Pipe Tunne Penetrations - No Subsection #
	78				EQ	Vent Shed Area - Subsection Nos TBD TO BE MOVED
	79				EQ	Vent Line Penetrations - Subsection Nos TBD TO BE MOVE
				N	RW	Vent Line Penetrations - No Subsection #
	80	80.3	Y		EQ	CCA / Equipment Lock
	81	81.5	Y		EQ	CCA / Equipment Lock
	89	89.4	Y		EQ	Cable Penetration
			Y	N	RW	Cable Penetration - No Subsection #
	90	90.1	Y		EQ	Pipe Tunnel Area
		90.2	Y		EQ	Pipe Tunnel Area
			Y	N	RW	Pipe Tunne Penetrations - No Subsection #
			Y	N	RW	Cable Penetration - No Subsection #

Status as of 11/22/05 0945

CONTAINMENT SHELL DEMOLITION - PCB CHECKLIST

Containment Pieces - Exterior Silver-Paint Below Equator (630.5ft)

Ring Number	Section Number	Subsection Number	Section in PCB Storage Area?	BMR? Yes / No	Disposal? RW EQ	Comments
2	66	66.5	Y	Y	EQ	CCA / Equipment Lock
	67	67.12	Y	Y	EQ	CCA / Equipment Lock
	75		N			Personnel Lock - Temp. South Laydown?
	76		N			Personnel Lock - Temp. South Laydown?
1	77		Y	N	RW	Pipe Tunne Penetrations - Subsection Nos TBD
	78		Y	Y	EQ	Vent Shed Area - Subsection Nos TBD
	79			Y	EQ	Vent Line Penetrations - Subsection Nos TBD
				N	RW	
	80	80.3	Y	Y	EQ	CCA / Equipment Lock
	81	81.5	Y	Y	EQ	CCA / Equipment Lock
	89		Y	Y	EQ	Cable Penetration - Subsection Nos TBD
			Y	N	RW	
	90		Y	N	RW	Cable Penetration - Subsection Nos TBD
			Y	Y	EQ	Pipe Tunnel Area - Subsecton Nos TBD
			Y	N	RW	Pipe Tunne Penetrations - Subsection Nos TBD

Status as of 11/22/05 0945

11/23/05 (1)

COMMENTS

0700 - Verified no PCB on interior sections of sphere piece # 77, 89 and 90. All scabbling complete on interior. Pieces will be flipped to continue scabbling on exterior side.

- Moved sheared sections of sphere pieces to the southwest laydown area for BMR. All sections moved were verified to be non-PCB. The following sections #'s were moved to the southwest laydown area:

166.1
166.2
166.3
166.4
167.2
167.4
167.5
167.6
167.7
167.8
167.10

- Section 166.6 and 167.12 contain PCB paint and have been stored in the north PCB laydown area.

10:00 - Flipped sphere piece # 77, 89, & 90 for scabbling.

- Moved last two sections of sphere pieces

COMMENTS

into north laydown area. Satellite PCB storage area was deposited.

- Moved Personnel Lock section into the north laydown PCB storage area.

@ 1215 - Scabble PCB paint off of shell pieces.

JHReed

11/29/05

COMMENTS

0830 - Signed off paperwork for sphere pieces # 77, 78, 79, 89 and 90. All pieces were inspected and verified to be scabbled on both sides in preparation of torch cutting and shearing.

1030 - Started torch cutting on sphere metal pieces.

1300 - Torch cuts complete. Shearing process started.

1300 - Cut up sphere support columns using sawz-all.

11/22/05

COMMENTS

0700 Continued to scabble on sections of sphere steel in N. laydown area.

0700 RP decon of three sections of sphere steel in N. laydown area.

1200 ~~1400~~ - Sheared steel sections of shphere, # 66 and # 67.

1500 - Torch cut one four foot piece of stiffener off of sphere section # 67. Piece set aside for future disposal.

1545 - Torch cut one ten foot piece of stiffener and one twenty foot piece of stiffener off of sphere section # 66. Pieces set aside for future disposal.

1600 Containment shell demolition - PCB checklist updated. See attached.

J.L. Reed

Post BMR PCB Sphere Piece Processing Checklist

Piece Number: 27.2

(✓)

✓ Cut lines scabbled/coatings removed on both sides

✓ Cut lines correspond to final piece dimensions of 5ft x 5ft or less

✓ Cutting complete.
Final number of pieces: 8

✓ Sized pieces labeled with original piece number (if available)

Keith Mitchey — PMC Supv. — 12-20-05 Date

✓ Sized pieces loaded into rolloff and rolloff labeled with PCB label

OR

____ Sized pieces transported to PCB storage area (NE corner of site)

B Goodwin — Environmental Serv. — 12-14-05 Date

Post BMR PCB Sphere Piece Processing Checklist

Piece Number: 24.2

(✓)

✓ Cut lines scabbled/coatings removed on both sides

✓ Cut lines correspond to final piece dimensions of 5ft x 5ft or less

✓ Cutting complete.
Final number of pieces: 4

✓ Sized pieces labeled with original piece number (if available)

Kevin Dutchey — PMC Supv. — 12-20-05 Date

✓ Sized pieces loaded into rolloff and rolloff labeled with PCB label

OR

____ Sized pieces transported to PCB storage area (NE corner of site)

B Loafund — Environmental Serv. — 12-14-05 Date

Post BMR PCB Sphere Piece Processing Checklist

Piece Number: 10.3

(✓)

✓ Cut lines scabbled/coatings removed on both sides

✓ Cut lines correspond to final piece dimensions of 5ft x 5ft or less

✓ Cutting complete.
Final number of pieces: 5

✓ Sized pieces labeled with original piece number (if available)

Keith Petrohey — PMC Supv. — 12-20-05 Date

✓ Sized pieces loaded into rolloff and rolloff labeled with PCB label

OR

____ Sized pieces transported to PCB storage area (NE corner of site)

B Loughead — Environmental Serv. — 12-14-05 Date

Post BMR PCB Sphere Piece Processing Checklist

Piece Number: 12.4

(✓)

✓ Cut lines scabbled/coatings removed on both sides

✓ Cut lines correspond to final piece dimensions of 5ft x 5ft or less

✓ Cutting complete.
Final number of pieces: 6

✓ Sized pieces labeled with original piece number (if available)

Keith Metcalfe — PMC Supv. — 12-20-05 Date

✓ Sized pieces loaded into rolloff and rolloff labeled with PCB label

OR

____ Sized pieces transported to PCB storage area (NE corner of site)

B Hoagland — Environmental Serv. — 12-14-05 Date

Post BMR PCB Sphere Piece Processing Checklist

Piece Number: 13-4

(✓)

✓ Cut lines scabbled/coatings removed on both sides

✓ Cut lines correspond to final piece dimensions of 5ft x 5ft or less

✓ Cutting complete.
Final number of pieces: 3

✓ Sized pieces labeled with original piece number (if available)

Kevin Petoskey — PMC Supv. — 12-20-05 Date

✓ Sized pieces loaded into rolloff and rolloff labeled with PCB label

OR

____ Sized pieces transported to PCB storage area (NE corner of site)

B Lofquist — Environmental Serv. — 12-14-05 Date

Post BMR PCB Sphere Piece Processing Checklist

Piece Number: 13-1

(✓)

✓ Cut lines scabbled/coatings removed on both sides

✓ Cut lines correspond to final piece dimensions of 5ft x 5ft or less

✓ Cutting complete.
Final number of pieces: 3

✓ Sized pieces labeled with original piece number (if available)

Keith Petsohey — PMC Supv. — 12-20-05 Date

✓ Sized pieces loaded into rolloff and rolloff labeled with PCB label

OR

____ Sized pieces transported to PCB storage area (NE corner of site)

B Hoogland — Environmental Serv. — 12-14-05 Date

Post BMR PCB Sphere Piece Processing Checklist

Piece Number: 76-11

(✓)

✓ Cut lines scabbled/coatings removed on both sides

✓ Cut lines correspond to final piece dimensions of 5ft x 5ft or less

✓ Cutting complete.
Final number of pieces: 8

✓ Sized pieces labeled with original piece number (if available)

Kevin Dutchey — PMC Supv. — 12-20-05 Date

✓ Sized pieces loaded into rolloff and rolloff labeled with PCB label

OR

____ Sized pieces transported to PCB storage area (NE corner of site)

B Hoagland — Environmental Serv. — 12-14-05 Date

Post BMR PCB Sphere Piece Processing Checklist

Piece Number: 42-5

(✓)

✓ Cut lines scabbled/coatings removed on both sides

✓ Cut lines correspond to final piece dimensions of 5ft x 5ft or less

✓ Cutting complete.
Final number of pieces: 8

✓ Sized pieces labeled with original piece number (if available)

Keith Petosky — PMC Supv. — 12-20-05 Date

✓ Sized pieces loaded into rolloff and rolloff labeled with PCB label

OR

____ Sized pieces transported to PCB storage area (NE corner of site)

B Lofgren — Environmental Serv. — 12-14-05 Date

Post BMR PCB Sphere Piece Processing Checklist

Piece Number: 28-1

(✓)

✓ Cut lines scabbled/coatings removed on both sides

✓ Cut lines correspond to final piece dimensions of 5ft x 5ft or less

✓ Cutting complete.
Final number of pieces: 4

✓ Sized pieces labeled with original piece number (if available)

Keith Mutsey — PMC Supv. — 12-20-05 Date

✓ Sized pieces loaded into rolloff and rolloff labeled with PCB label

OR

____ Sized pieces transported to PCB storage area (NE corner of site)

[illegible] — Environmental Serv. — 12-14-05 Date

Post BMR PCB Sphere Piece Processing Checklist

Piece Number: 28.2

(✓)

✓ Cut lines scabbled/coatings removed on both sides

✓ Cut lines correspond to final piece dimensions of 5ft x 5ft or less

✓ Cutting complete.
Final number of pieces: 7

✓ Sized pieces labeled with original piece number (if available)

Keith Petsley — PMC Supv. — 12-20-05 Date

✓ Sized pieces loaded into rolloff and rolloff labeled with PCB label

OR

____ Sized pieces transported to PCB storage area (NE corner of site)

B Hoogland — Environmental Serv. — 12-14-05 Date

Post BMR PCB Sphere Piece Processing Checklist

Piece Number: 11-4

(✓)

✓ Cut lines scabbled/coatings removed on both sides

✓ Cut lines correspond to final piece dimensions of 5ft x 5ft or less

✓ Cutting complete.
Final number of pieces: 6

✓ Sized pieces labeled with original piece number (if available)

Keith Metcalfe — PMC Supv. — 12-20-05 Date

✓ Sized pieces loaded into rolloff and rolloff labeled with PCB label

OR

____ Sized pieces transported to PCB storage area (NE corner of site)

B Hoagland — Environmental Serv. — 12-14-05 Date

Post BMR PCB Sphere Piece Processing Checklist

Piece Number: 66-5

(✓)

✓ Cut lines scabbled/coatings removed on both sides

✓ Cut lines correspond to final piece dimensions of 5ft x 5ft or less

✓ Cutting complete.
Final number of pieces: 6

✓ Sized pieces labeled with original piece number (if available)

Kevin Petosky
PMC Supv.

12-20-05
Date

✓ Sized pieces loaded into rolloff and rolloff labeled with PCB label

OR

___ Sized pieces transported to PCB storage area (NE corner of site)

B Gloeckland
Environmental Serv.

12-14-05
Date

Post BMR PCB Sphere Piece Processing Checklist

Piece Number: 67.1

(✓)

✓ Cut lines scabbled/coatings removed on both sides

✓ Cut lines correspond to final piece dimensions of 5ft x 5ft or less

✓ Cutting complete.
Final number of pieces: 2

✓ Sized pieces labeled with original piece number (if available)

Keith Mutchey
PMC Supv.

12-20-05
Date

✓ Sized pieces loaded into rolloff and rolloff labeled with PCB label

OR

____ Sized pieces transported to PCB storage area (NE corner of site)

B. Hoagland
Environmental Serv.

12-14-05
Date

Post BMR PCB Sphere Piece Processing Checklist

Piece Number: 76-5

(✓)

✓ Cut lines scabbled/coatings removed on both sides

✓ Cut lines correspond to final piece dimensions of 5ft x 5ft or less

✓ Cutting complete.
Final number of pieces: 8

✓ Sized pieces labeled with original piece number (if available)

Kevin Petsaley — PMC Supv. — 12-20-05 Date

✓ Sized pieces loaded into rolloff and rolloff labeled with PCB label

OR

____ Sized pieces transported to PCB storage area (NE corner of site)

[illegible] — Environmental Serv. — 12-14-05 Date

APPENDIX F

Inspection Records and Logs

PCB Log

Date	Comments	Logged By
Screenhouse:		
Sept 7, 2004	Decided to cover Screenhouse floor with grifflon prior to demo of roof	TAG
Sept 8, 2004	Submitted letter to EPA on SH, TB, SB demo	TAG
Sept 14-16, 2004	Roof demo (PCB painted deck supports), all demo debris kept within walls of Screenhouse structure, no contact with soil, structural steel loaded in rolloffs and stored until approval of 10CFR 20.2002 Revision	TAG
Sept 16, 2004	Inspected grifflon covering for demo of SH roof, no significant tears or breaks observed, grifflon removed (PCB waste), floor swept, no visible paint chips	TAG
Sept 17, 2004	Collected PCB wipe samples of SH floor (WGHoaglind, TRSchlueter, TAGoble). Floor considered impervious surface to demolition dust/debris from PCB painted steel; floor also had sealant coating applied during original construction. Structural steel was not in contact with concrete floor due to grifflon barrier; judgmental samples collected for assurance purposes only.	TAG
Sept 20, 2004	Began demo of SH walls & floor, waste to be loaded into containers and stored in Radwaste yard pending results of PCB wipe samples.	TAG
Sept 22, 2004	Received informational wipe sample results, no results above 10μCi/100 cm^2.	TAG
Turbine/Service Buildings:		
Dec 21, 2004	Performed pre-demolition walkdown of Turbine and Service Buildings w/MJKupka. Many concrete floor areas are removed with the exception of track alley and portions of Service Building. Post demolition verification sampling will primarily consist of soil samples once demolition complete.	TAG
Jan 11, 2005 (10:00 am)	Observed Service building demolition, minimal painted SS once walls removed.	TAG
Jan 11-13, 2005	Steel placed away from building (east side), sized and placed in rolloffs or stored just west of former Screenhouse area to await sizing and loading into rolloffs (will need to sample soil west of Screenhouse locations when demo complete). Observed paint stripping of structural steel using mechanical means prior to torch cutting of pieces for disposal sizing. No painted structural steel was observed to contact floor area during this portion of building demo. Portion of building demo with painted structural steel not complete – awaiting removal of north bay and former control room only to be performed with remainder Turbine building. Sampled south 2 bays (samples collected by TRS, WGH and JLReed) of Service Building floor for informational /assurance purposes only. Surface wipe samples of area; floor considered impervious to demolition debris/dust potentially containing PCBs.	TAG
January 27, 2005	Received wipe sample results, all below 10μCi/100 cm^2. Shipped rolloffs containing concrete to WM landfill after results received. Determined that sampling of remaining areas would have to be performed once Turbine Building demo was complete. Footprint of ground areas impacted extends east, north and south of Turbine/Service Building corresponding to roped-off areas.	TAG
Jan 25, 2005	Discussion with Chris Cummin regarding not loading PCB wastes while	TAG

Date	Comments	Logged By
	snowing, accumulated snow on steel debris must be brushed off prior to rolloff container loading.	
Feb 2, 2005	Walkdown of demo area, SS rolloff loading in progress, waste material staged east and south sides of TB w/ RCSarki	TAG
Feb 4, 2005	Collected informational wipe samples from former Turbine Operating floor (elevation 616'; WGH, TRS, TAG). Silver-painted structural steel still remains in areas above 616' elevation, supporting north bay of Service Building and supporting Cond. Pump Room ceiling. Observed many pieces of steel and paint chips in debris areas, more sorting is necessary. Placed silt filter fabric beneath storm drain cover w/in demolition area due to warm temperatures and anticipated snow melt over weekend.	TAG
Feb 7, 2005 (0840)	Walkdown demolition area with RCSarki and Claus Halstrom, requested BNLF/MOTA to remove steel and paint chips from concrete rubble piles within demolition area. Determined that surface soil would have to be scrapped 2-3 inches to remove small paint chips and debris prior to performing final post-demoliton verification sampling of impacted soil areas.	TAG
Feb 7, 2005 (0345)	Received call from WGH that post-cleanup walkdown was performed and that areas with painted steel and visible paint chips mixed in with concrete rubble had been cleaned up.	TAG
March 17, 2005	Spoke with Al Simonti regarding specific schedule line items for sampling of various areas affected by TB demolition.	TAG
March 23, 2005	Learned that floor slab of north bay of Service Bldg had been removed prior to performing PCB verification sampling. A Condition Report was generated. Decided to place concrete debris into lined PCB rolloffs and store in designated area pending resolution. Recommendation is to dispose of this material at EQ facility as PCB waste.	TAG
March 24, 2005	Walked down Turbine Building demolition area with J Reed and M Kupka. Collected measurements for sampling. Survey design completed.	TAG
March 29, 2005	Began loading debris from north bay floor into PCB rolloffs – containers to be stored in designated area in East parking lot. Containers are not to be shipped yet. (estimate 10 – 12 rolloffs)	TAG
March 30, 2005	Performed final pre-sampling walkdown of Turbine Bldg demolition area with J Reed. The top 2-3 inches of soil had been removed and placed in PCB rolloff for disposal. Area looked acceptable for sampling. Some concrete debris (small pieces) noted and will be cleaned up. No paint chip debris observed during walkdown. Sampled concrete and soil. Asphalt need some additional cleaning prior to sampling.	TAG
Containment:		
Aug – Sept, 2005	Detailed planning for dismantlement of Containment structure internals and externals. Determined that floor area (599 ft elevation) would be sampled (wipe samples) once the upper sections of the Containment are removed prior to demolition of internal concrete; decision based on insuring safe access to the remaining structure is available.	TAG
Sept 29, 2005	Phone call with WJ Wilson (CE Envr. Dept.) regarding letter to EPA on minor modifications resulting from detailed Containment structure dismantlement planning.	TAG

Date	Comments	Logged By
Sept 30, 2005	WJ Wilson spoke with Tony Martig (EPA, Region 5) regarding minor modification notification. Mr. Martig wanted a letter submitted outlining these changes. Mr. Martig stated that he would be reviewing and granting concurrence with changes.	TAG
Oct 3, 2005	Sent (and faxed) letter to EPA on minor modifications requesting written concurrence by October 14, 2005.	
Oct 13, 2005	Contacted WJ Wilson to inquire if he had heard anything on written concurrence. Mr. Wilson contacted Tony Martig and left phone message.	
Oct 14, 2005	Received message from WJ Wilson that Tony Martig would have to obtain approval/concurrence from the EPA Branch Chief and that BRP should only work activities that are allowed by the original approval (i.e., no use of hydraulic shears for PCB pieces) and that concurrence was expected by late next week.	
Oct 17, 2005	Began preparatory work on Containment exterior; work limited by wind speeds above 15 mph. All work performed in accordance with (iaw) original EPA approval.	
Oct 18, 2005	Pieces 1 and 2 (cap and halo) cut and lowered grade level (non-PCB pieces). Work progress limited by wind speeds above 15 mph. All work performed in accordance with (iaw) original EPA approval.	
Oct 19, 2005	No work performed due to wind speeds above 15 mph.	
Oct 20, 2005	No work performed due to wind speeds above 15 mph. Contacted WJ Wilson and John Dickey regarding continued work activities and lack of EPA concurrence. John Dickey advised us to only use the hydraulic shears on the Containment pieces that are verified as non-PCB until written concurrence is received. Contacted Tony Martig at EPA and left a message inquiring of status of concurrence.	
Oct 21, 2005	Setup PCB piece storage area in location of former Screenhouse. Bierlien removed Containment pieces 13/28, 14/29 and 15/30 requiring further sampling for PCB paint content. All work performed in accordance with (iaw) original EPA approval. WG Hoaglund supervised piece traking and paint sample collection. Tools/sampling equipment decontaminated between each sample. TA Goble took 21 paint samples to Trail Street lab (delivered 10/22/05 at 0730). Received message from Tony Martig that he expected concurrence soon (Friday) depending on schedule of branch chief, i.e., letter was on her desk for signature.	
Oct 24, 2005	Spoke with Tony Martig on concurrence letter status. Letter not received as of 1400 today.	
Oct 25, 2005	Received results from paint samples. Subsections 13.1, 13.4, 28.1 and 28.2 had results above 50 ppm and are considered PCB bulk product waste. Removed other Containment sections from PCB laydown area. All work performed in accordance with (iaw) original EPA approval. No EPA concurrence letter as of 1100 hrs.	
Oct 25, 2005	Received EPA TSCA Approval letter – faxed early afternoon.	

RECEIVED
JAN 27 2005
DCC

December 2004

PCB Weekly Inspection Worksheet

DATE: 12/30/04

INSPECTOR: [illegible]

ID No.	Rad Waste Cont. ID	BRP Label Number	Weight of Contents (lbs.) on site	Shipped December 2004	A. Readable Labeling	B. Container Integrity	E. Storage Location	F. Rain Check	Comments
06-03-02-1	Q06745-970	648	2566		✓	✓	RW		PCB paint on plaster from Control Room
06-03-02-2		677	3242		✓	✓	RW		PCB paint on plaster from Control Room
06-03-02-3		680	2748		✓	✓	RW		PCB paint on plaster from Control Room
2-22-03-01		821	3266		✓	✓	RW		PCB paint on plaster from Control Room
02-18-04-01	DRUM	2/18/04			✓	✓	LLW		PCB Paint scabbled off concrete
02-19-04-01	DRUM	2/19/04			✓	✓	LLW		PCB Paint scabbled off concrete
03-03-04-01	DRUM	3/3/04			✓	✓	LLW		PCB Paint scabbled off concrete
03-09-04-01	DRUM	3/9/04			✓	✓	LLW		PCB Paint scabbled off concrete
10-04-04-01	B-12	1273			✓	✓	RW		SFP cask and painted lead
09-10-04-01		1779			✓	✓	RW		PCB paint on metal
09-15-04-01	Rolloff	66			✓	✓	Rw Yard		PCB paint on metal
09-15-04-02	Rolloff	61			✓	✓	Rw Yard		PCB paint on metal (Screenhouse)
09-15-04-03	Rolloff	36			✓	✓	Rw Yard		PCB paint on metal (Screenhouse)
09-16-04-01	Rolloff	43			✓	✓	Rw Yard		PCB paint on metal (Screenhouse)
09-20-04-01		1654			✓	✓	Screen Hse		PCB paint on metal
10-01-04-01	Rolloff	41			✓	✓	Rw Yard		PCB paint on metal (Screenhouse)
10-06-04-01		1675	2594		✓	✓	RW		PCB paint on metal
12-15-04-01		1831	3228		✓	✓	Stack		PCB paint on metal
TOTALS:		On Site =	14416	0	= Shipped in December				
		Generated in December		3228					

All containers are B-25 boxes unless indetified otherwise

NOTE: Weights of B-25's and other smaller containers must include the tare weight. Weights of Sealands do not include the tare weight because they are re-used.

C: Containment Integrity: ✓

D: Spill Kit: ✓

Inspection Requirements:

A: Inspect that all PCB labels are readable and in good shape.

B: Inspect for container integrity: Containers are closed and tight, intact, no signs of spillage/leaks.

C: Inspect containments for cracks, free liquid or waste both inside and outside containment (RW Bldg.)

D: Inspect that Emergency Response Equipment is in good condition and in adequate supply.

E: RW: Inside Rad Waste Bldg.; or Y: Yard outside Rad Waste.

F: All containers stored outside must be inspected for leakage after every significant rainfall.

BEST COPY AVAILABLE

12/22/04

December 2004

PCB Weekly Inspection Worksheet

DATE: 12/22/04

INSPECTOR: [illegible]

ID No.	Rad Waste Cont. ID	BRP Label Number	Weight of Contents (lbs.) on site	Shipped December 2004	A. Readable Labeling	B. Container Integrity	E. Storage Location	F. Rain Check	Comments
06-03-02-1	Q06745-970	648	2566		✓	✓	RW		PCB paint on plaster from Control Room
06-03-02-2		677	3242		✓	✓	RW		PCB paint on plaster from Control Room
06-03-02-3		680	2748		✓	✓	RW		PCB paint on plaster from Control Room
2-22-03-01		821	3266		✓	✓	RW		PCB paint on plaster from Control Room
02-18-04-01	DRUM	2/18/04			✓	✓	LLW		PCB Paint scabbled off concrete
02-19-04-01	DRUM	2/19/04			✓	✓	LLW		PCB Paint scabbled off concrete
03-03-04-01	DRUM	3/3/04			✓	✓	LLW		PCB Paint scabbled off concrete
03-09-04-01	DRUM	3/9/04			✓	✓	LLW		PCB Paint scabbled off concrete
10-04-04-01	B-12	1273			✓	✓	RW		SFP cask and painted lead
09-10-04-01		1779			✓	✓	RW		PCB paint on metal
09-15-04-01	Rolloff	66			✓	✓	Rw Yard		PCB paint on metal
09-15-04-02	Rolloff	61			✓	✓	Rw Yard		PCB paint on metal (Screenhouse)
09-15-04-03	Rolloff	36			✓	✓	Rw Yard		PCB paint on metal (Screenhouse)
09-16-04-01	Rolloff	43			✓	✓	Rw Yard		PCB paint on metal (Screenhouse)
09-20-04-01		1654			✓	✓	Screen Hse		PCB paint on metal
10-01-04-01	Rolloff	41			✓	✓	Rw Yard		PCB paint on metal (Screenhouse)
10-06-04-01		1675	2594		✓	✓	RW		PCB paint on metal
12-15-04-01		1831	3278		✓	✓	~~Stack~~ RW		PCB paint on metal
TOTALS:		On Site =	14416	0	= Shipped in December				
		Generated in December		0					

All containers are B-25 boxes unless indetified otherwise

NOTE: Weights of B-25's and other smaller containers must include the tare weight. Weights of Sealands do not include the tare weight because they are re-used.

C: Containment Integrity: ✓

D: Spill Kit: ✓

Inspection Requirements:

A: Inspect that all PCB labels are readable and in good shape.

B: Inspect for container integrity: Containers are closed and tight, intact, no signs of spillage/leaks.

C: Inspect containments for cracks, free liquid or waste both inside and outside containment (RW Bldg.)

D: Inspect that Emergency Response Equipment is in good condition and in adequate supply.

E: RW: Inside Rad Waste Bldg.; or Y: Yard outside Rad Waste.

F: All containers stored outside must be inspected for leakage after every significant rainfall.

	December 2004		PCB Weekly Inspection Worksheet						
			DATE:	12/14/04					
			INSPECTOR:						
ID No.	Rad Waste Cont. ID	BRP Label Number	Weight of Contents (lbs.) on site	Shipped December 2004	A. Readable Labeling	B. Container Integrity	E. Storage Location	F. Rain Check	Comments
06-03-02-1	Q06745-970	648	2566		✓	✓	RW		PCB paint on plaster from Control Room
06-03-02-2		677	3242		✓	✓	RW		PCB paint on plaster from Control Room
06-03-02-3		680	2748		✓	✓	RW		PCB paint on plaster from Control Room
2-22-03-01		821	3266		✓	✓	RW		PCB paint on plaster from Control Room
02-18-04-01	DRUM	2/18/04			✓	✓	LLW		PCB Paint scabbled off concrete
02-19-04-01	DRUM	2/19/04			✓	✓	LLW		PCB Paint scabbled off concrete
03-03-04-01	DRUM	3/3/04			✓	✓	LLW		PCB Paint scabbled off concrete
03-09-04-01	DRUM	3/9/04			✓	✓	LLW		PCB Paint scabbled off concrete
10-04-04-01	β-12	1273			✓	✓	RW		SFP cask and painted lead
09-10-04-01		1779			✓	✓	RW		PCB paint on metal
09-15-04-01	Rolloff	66			✓	✓	Rw Yard		PCB paint on metal
09-15-04-02	Rolloff	61			✓	✓	Rw Yard		PCB paint on metal (Screenhouse)
09-15-04-03	Rolloff	36			✓	✓	Rw Yard		PCB paint on metal (Screenhouse)
09-16-04-01	Rolloff	43			✓	✓	Rw Yard		PCB paint on metal (Screenhouse)
09-20-04-01		1654			✓	✓	Screen Hse		PCB paint on metal
10-01-04-01	Rolloff	41			✓	✓	Rw Yard		PCB paint on metal (Screenhouse)
10-06-04-01		1675	2594		✓	✓	RW		PCB paint on metal
TOTALS:		On Site =	14416	0	= Shipped in December				
		Generated in December		0					

All containers are B-25 boxes unless indetified otherwise

NOTE: Weights of B-25's and other smaller containers must include the tare weight. Weights of Sealands do not include the tare weight because they are re-used.

C: Containment Integrity: ✓

D: Spill Kit: ✓

Inspection Requirements:

A: Inspect that all PCB labels are readable and in good shape.

B: Inspect for container integrity: Containers are closed and tight, intact, no signs of spillage/leaks.

C: Inspect containments for cracks, free liquid or waste both inside and outside containment (RW Bldg.)

D: Inspect that Emergency Response Equipment is in good condition and in adequate supply.

E: RW: Inside Rad Waste Bldg.; or Y: Yard outside Rad Waste.

F: All containers stored outside must be inspected for leakage after every significant rainfall.

December 2004

PCB Weekly Inspection Worksheet

DATE: 12/8/04

INSPECTOR: [illegible]

ID No.	Rad Waste Cont. ID	BRP Label Number	Weight of Contents (lbs.) on site	Shipped December 2004	A. Readable Labeling	B. Container Integrity	E. Storage Location	F. Rain Check	Comments
06-03-02-1	Q06745-970	648	2566		✓	✓	RW		PCB paint on plaster from Control Room
06-03-02-2		677	3242		✓	✓	RW		PCB paint on plaster from Control Room
06-03-02-3		680	2748		✓	✓	RW		PCB paint on plaster from Control Room
2-22-03-01		821	3266		✓	✓	RW		PCB paint on plaster from Control Room
02-18-04-01	DRUM	2/18/04			✓	✓	LLW		PCB Paint scabbled off concrete
02-19-04-01	DRUM	2/19/04			✓	✓	LLW		PCB Paint scabbled off concrete
03-03-04-01	DRUM	3/3/04			✓	✓	LLW		PCB Paint scabbled off concrete
03-09-04-01	DRUM	3/9/04			✓	✓	LLW		PCB Paint scabbled off concrete
10-04-04-01	B-12	1273			✓	✓	RW		SFP cask and painted lead
09-10-04-01		1779			✓	✓	RW		PCB paint on metal
09-15-04-01	Rolloff	66			✓	✓	Rw Yard		PCB paint on metal
09-15-04-02	Rolloff	61			✓	✓	Rw Yard		PCB paint on metal (Screenhouse)
09-15-04-03	Rolloff	36			✓	✓	Rw Yard		PCB paint on metal (Screenhouse)
09-16-04-01	Rolloff	43			✓	✓	Rw Yard		PCB paint on metal (Screenhouse)
09-20-04-01		1654			✓	✓	Screen Hse		PCB paint on metal
10-01-04-01	Rolloff	41			✓	✓	Rw Yard		PCB paint on metal (Screenhouse)
10-06-04-01		1675	2594		✓	✓	RW		PCB paint on metal
TOTALS:		On Site =	14416	0	= Shipped in December				
		Generated in December		0					

All containers are B-25 boxes unless indetified otherwise

NOTE: Weights of B-25's and other smaller containers must include the tare weight. Weights of Sealands do not include the tare weight because they are re-used.

C: Containment Integrity: ✓

D: Spill Kit: ✓

Inspection Requirements:

A: Inspect that all PCB labels are readable and in good shape.

B: Inspect for container integrity: Containers are closed and tight, intact, no signs of spillage/leaks.

C: Inspect containments for cracks, free liquid or waste both inside and outside containment (RW Bldg.)

D: Inspect that Emergency Response Equipment is in good condition and in adequate supply.

E: RW: Inside Rad Waste Bldg.; or Y: Yard outside Rad Waste.

F: All containers stored outside must be inspected for leakage after every significant rainfall.

December 2004

PCB Weekly Inspection Worksheet

DATE: 12/3/04

INSPECTOR: [illegible]

ID No.	Rad Waste Cont. ID	BRP Label Number	Weight of Contents (lbs.) on site	Shipped December 2004	A. Readable Labeling	B. Container Integrity	E. Storage Location	F. Rain Check	Comments
06-03-02-1	Q06745-970	648	2566		✓	✓	RW		PCB paint on plaster from Control Room
06-03-02-2		677	3242		✓	✓	RW		PCB paint on plaster from Control Room
06-03-02-3		680	2748		✓	✓	RW		PCB paint on plaster from Control Room
2-22-03-01		821	3266		✓	✓	RW		PCB paint on plaster from Control Room
02-18-04-01	DRUM	2/18/04			✓	✓	LLW		PCB Paint scabbled off concrete
02-19-04-01	DRUM	2/19/04			✓	✓	LLW		PCB Paint scabbled off concrete
03-03-04-01	DRUM	3/3/04			✓	✓	LLW		PCB Paint scabbled off concrete
03-09-04-01	DRUM	3/9/04			✓	✓	LLW		PCB Paint scabbled off concrete
10-04-04-01	B-12	1273			✓	✓	RW		SFP cask and painted lead
09-10-04-01		1779			✓	✓	RW		PCB paint on metal
09-15-04-01	Rolloff	66			✓	✓	Rw Yard		PCB paint on metal
09-15-04-02	Rolloff	61			✓	✓	Rw Yard		PCB paint on metal (Screenhouse)
09-15-04-03	Rolloff	36			✓	✓	Rw Yard		PCB paint on metal (Screenhouse)
09-16-04-01	Rolloff	43			✓	✓	Rw Yard		PCB paint on metal (Screenhouse)
09-20-04-01		1654			✓	✓	Screen Hse		PCB paint on metal
10-01-04-01	Rolloff	41			✓	✓	Rw Yard		PCB paint on metal (Screenhouse)
10-06-04-01		1675	2594		✓	✓	RW		PCB paint on metal
TOTALS:		**On Site =**	14416	0	**= Shipped in December**				
		Generated in December		0					

All containers are B-25 boxes unless indetified otherwise

NOTE: **Weights of B-25's and other smaller containers must include the tare weight. Weights of Sealands do not include the tare weight because they are re-used.**

C: Containment Integrity: ✓

D: Spill Kit: ✓

Inspection Requirements:

A: Inspect that all PCB labels are readable and in good shape.

B: Inspect for container integrity: Containers are closed and tight, intact, no signs of spillage/leaks.

C: Inspect containments for cracks, free liquid or waste both inside and outside containment (RW Bldg.)

D: Inspect that Emergency Response Equipment is in good condition and in adequate supply.

E: RW: Inside Rad Waste Bldg.; or Y: Yard outside Rad Waste.

F: All containers stored outside must be inspected for leakage after every significant rainfall.

November 2004

PCB Weekly Inspection Worksheet

DATE: 11/23/04

INSPECTOR: G

ID No.	Rad Waste Cont. ID	BRP Label Number	Weight of Contents (lbs.) on site	Shipped November 2004	A. Readable Labeling	B. Container Integrity	E. Storage Location	F. Rain Check	Comments
06-03-02-1	Q06745-970	648	2566		✓	✓	RW		PCB paint on plaster from Control Room
06-03-02-2		677	3242		✓	✓	RW		PCB paint on plaster from Control Room
06-03-02-3		680	2748		✓	✓	RW		PCB paint on plaster from Control Room
2-22-03-01		821	3266		✓	✓	RW		PCB paint on plaster from Control Room
02-18-04-01	DRUM	2/18/04			✓	✓	LLW		PCB Paint scabbled off concrete
02-19-04-01	DRUM	2/19/04			✓	✓	LLW		PCB Paint scabbled off concrete
03-03-04-01	DRUM	3/3/04			✓	✓	LLW		PCB Paint scabbled off concrete
03-09-04-01	DRUM	3/9/04			✓	✓	LLW		PCB Paint scabbled off concrete
10-04-04-01	B-12	1273			✓	✓	RW		SFP cask and painted lead
09-10-04-01		1779			✓	✓	RW		PCB paint on metal
09-15-04-01	Rolloff	66			✓	✓	Rw Yard		PCB paint on metal
09-15-04-02	Rolloff	61			✓	✓	Rw Yard		PCB paint on metal (Screenhouse)
09-15-04-03	Rolloff	36			✓	✓	Rw Yard		PCB paint on metal (Screenhouse)
09-16-04-01	Rolloff	43			✓	✓	Rw Yard		PCB paint on metal (Screenhouse)
09-20-04-01		1654			✓	✓	Screen Hse		PCB paint on metal
10-01-04-01	Rolloff	41			✓	✓	Rw Yard		PCB paint on metal (Screenhouse)
10-06-04-01		1675	2594		✓	✓	RW		PCB paint on metal
TOTALS:		On Site =	14416	0	= Shipped in November				
		Generated In November		2594					

All containers are B-25 boxes unless indetified otherwise

NOTE: Weights of B-25's and other smaller containers must include the tare weight. Weights of Sealands do not include the tare weight because they are re-used.

C: Containment Integrity: ✓

D: Spill Kit: ✓

Inspection Requirements:

A: Inspect that all PCB labels are readable and in good shape.

B: Inspect for container integrity: Containers are closed and tight, intact, no signs of spillage/leaks.

C: Inspect containments for cracks, free liquid or waste both inside and outside containment (RW Bldg.)

D: Inspect that Emergency Response Equipment is in good condition and in adequate supply.

E: RW: Inside Rad Waste Bldg.; or Y: Yard outside Rad Waste.

F: All containers stored outside must be inspected for leakage after every significant rainfall.

PCB Post Demolition Survey Design - BMR Building

Survey Area Dimensions:

Xmax =	11.8 m	AK 6/14/06
Ymax =	30.3 m	
Area =	358.1 sq. m	

Randon Start Location:

X =	10.9 m	AK
Y =	27.6 m	6/19/06

Sample Spacing:

L=	(Area / No Samples) ^1/2
L=	3.0 m

Random X-Y start points	
X	0.923199045
Y	0.911074468

QC Samples
4
39
32
18
9
19

CONSUMERS ENERGY Memorandum

To: TGoble, Big Rock

From: GLCattell, T-254, Jackson

Date: June 16, 2006

Subject: SAMPLES FOR DETERMINATION OF PCBs
- Surface Wipes
- Post Demo Storage Sampling
- Sampling Date of June 08, 2006

CC: WMHoaglund, Big Rock

File Index: 520617-784-098

Forty four surface wipe samples were received on June 13 for determination of polychlorinated biphenyls (PCBs). All determinations were performed by the Chemistry Section of Laboratory Services and the results are attached for your review.

Analytical Methods
Unless otherwise specified, all methods are from SW-846, Test Methods For Evaluating Solid Waste - Physical / Chemical Methods, USEPA.

Polychlorinated Biphenyls
Sample Extraction: Method 3550, Ultrasonic Extraction.
Extract Concentration: Nitrogen Evaporation Technique, Exhibit D, Aroclors, Section 10. Multi-Media, Multi-Concentration Organics Analysis; SOM01.X; USEPA.
Extract Cleanup: Method 3620, Florisil Cleanup & Method 3665A, Sulfuric Acid/Permanganate Cleanup.
Analysis: Method 8082, Polychlorinated Biphenyls by Gas Chromatography.

Analytical Remarks & Summary
Three items are listed.

a. All samples are reported as 'nd' (not detected) for all Aroclors.
b. All surface wipe MDLs are listed as "<" for uniformity. The actual MDLs of individual Aroclors vary slightly amongst each other and detectors.
c. All surface wipe areas are assumed to be $100cm^2$.

Report Package Contents
The report package consists of 27 pages: 1 cover page, 22 pages of Analytical Results & 4 Chain of Custody pages.

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - Post Demo Storage Sampling - Sampling Date of June 08, 2006	Our Project Number CHEM-06-1098

Sample Identification	BMR-PCB-W1	**Sample Identification**	BMR-PCB-W2
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	06-08-06	Sample Date	06-08-06
Received Date	06-13-06	Received Date	06-13-06
Report Date	06-16-06	Report Date	06-16-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	06-13-06	Preparation Date	06-13-06
Analysis Date	06-14-06	Analysis Date	06-14-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061098-01	Control Number	061098-02

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	96	80-110	Decachlorobiphenyl	102	80-110

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Not Detected At The MDL

Reviewed By *All* Date 6/6/6

Sequence 061406B

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - Post Demo Storage Sampling - Sampling Date of June 08, 2006	Our Project Number CHEM-06-1098

Sample Identification	BMR-PCB-W3	**Sample Identification**	BMR-PCB-W4
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	06-08-06	Sample Date	06-08-06
Received Date	06-13-06	Received Date	06-13-06
Report Date	06-16-06	Report Date	06-16-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	06-13-06	Preparation Date	06-13-06
Analysis Date	06-14-06	Analysis Date	06-14-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061098-03	Control Number	061098-04

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	98	80-110	Decachlorobiphenyl	110	80-110

NOTES:	MDL = Method Detection Limit, ug/100cm^2 nd = Parameter Not Detected At The MDL

Reviewed By _____ Date 6/6/06 | Sequence 061406B

PCBs

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - Post Demo Storage Sampling - Sampling Date of June 08, 2006	Our Project Number CHEM-06-1098

Sample Identification	BMR-PCB-W5	**Sample Identification**	BMR-PCB-W6
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	06-08-06	Sample Date	06-08-06
Received Date	06-13-06	Received Date	06-13-06
Report Date	06-16-06	Report Date	06-16-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	06-13-06	Preparation Date	06-13-06
Analysis Date	06-14-06	Analysis Date	06-14-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061098-05	Control Number	061098-06

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	107	80-110	Decachlorobiphenyl	101	80-110

NOTES:	MDL = Method Detection Limit, ug/100cm^2 nd = Parameter Not Detected At The MDL

Reviewed By AU Date 6/16/06 Sequence 061406B

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - Post Demo Storage Sampling - Sampling Date of June 08, 2006	Our Project Number CHEM-06-1098

Sample Identification	BMR-PCB-W7	**Sample Identification**	BMR-PCB-W8
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	06-08-06	Sample Date	06-08-06
Received Date	06-13-06	Received Date	06-13-06
Report Date	06-16-06	Report Date	06-16-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	06-13-06	Preparation Date	06-13-06
Analysis Date	06-15-06	Analysis Date	06-15-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061098-07	Control Number	061098-08

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	93	80-110	Decachlorobiphenyl	91	80-110

NOTES:	MDL = Method Detection Limit, ug/100cm^2 nd = Parameter Not Detected At The MDL

Reviewed By _____ Date 6/16/06 | Sequence 061406B

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - Post Demo Storage Sampling - Sampling Date of June 08, 2006	Our Project Number CHEM-06-1098

Sample Identification	BMR-PCB-W9	**Sample Identification**	BMR-PCB-W10
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	06-08-06	Sample Date	06-08-06
Received Date	06-13-06	Received Date	06-13-06
Report Date	06-16-06	Report Date	06-16-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	06-13-06	Preparation Date	06-13-06
Analysis Date	06-15-06	Analysis Date	06-15-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061098-09	Control Number	061098-10

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	95	80-110	Decachlorobiphenyl	95	80-110

NOTES:	MDL = Method Detection Limit, ug/100cm^2 nd = Parameter Not Detected At The MDL

Reviewed By AU Date 6/16/06 Sequence 061406B

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - Post Demo Storage Sampling - Sampling Date of June 08, 2006	Our Project Number CHEM-06-1098

Sample Identification	BMR-PCB-W11	**Sample Identification**	BMR-PCB-W12
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	06-08-06	Sample Date	06-08-06
Received Date	06-13-06	Received Date	06-13-06
Report Date	06-16-06	Report Date	06-16-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	06-13-06	Preparation Date	06-13-06
Analysis Date	06-15-06	Analysis Date	06-15-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061098-11	Control Number	061098-12

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	105	80-110	Decachlorobiphenyl	103	80-110

NOTES:	MDL = Method Detection Limit, ug/100cm^2 nd = Parameter Not Detected At The MDL

Reviewed By _____ Date 6/16/06 | Sequence 061406B

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - Post Demo Storage Sampling - Sampling Date of June 08, 2006	Our Project Number CHEM-06-1098

Sample Identification	BMR-PCB-W13	**Sample Identification**	BMR-PCB-W14
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	06-08-06	Sample Date	06-08-06
Received Date	06-13-06	Received Date	06-13-06
Report Date	06-16-06	Report Date	06-16-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	06-13-06	Preparation Date	06-13-06
Analysis Date	06-15-06	Analysis Date	06-15-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061098-13	Control Number	061098-14

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	105	80-110	Decachlorobiphenyl	103	80-110

NOTES:	MDL = Method Detection Limit, ug/100cm^2 nd = Parameter Not Detected At The MDL

Reviewed By _____ Date 6/16/06 | Sequence 061406B

PCBs

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - Post Demo Storage Sampling - Sampling Date of June 08, 2006	Our Project Number CHEM-06-1098

Sample Identification	BMR-PCB-W15	**Sample Identification**	BMR-PCB-W16
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	06-08-06	Sample Date	06-08-06
Received Date	06-13-06	Received Date	06-13-06
Report Date	06-16-06	Report Date	06-16-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	06-13-06	Preparation Date	06-13-06
Analysis Date	06-15-06	Analysis Date	06-15-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061098-15	Control Number	061098-16

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	106	80-110	Decachlorobiphenyl	105	80-110

NOTES:	MDL = Method Detection Limit, ug/100cm^2 nd = Parameter Not Detected At The MDL

Reviewed By _____ Date 6/16/06 | Sequence 061406B

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - Post Demo Storage Sampling - Sampling Date of June 08, 2006	Our Project Number CHEM-06-1098

Sample Identification	BMR-PCB-W17	**Sample Identification**	BMR-PCB-W18
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	06-08-06	Sample Date	06-08-06
Received Date	06-13-06	Received Date	06-13-06
Report Date	06-16-06	Report Date	06-16-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	06-13-06	Preparation Date	06-13-06
Analysis Date	06-15-06	Analysis Date	06-15-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061098-17	Control Number	061098-18

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	102	80-110	Decachlorobiphenyl	102	80-110

NOTES:	MDL = Method Detection Limit, ug/100cm^2 nd = Parameter Not Detected At The MDL

Reviewed By SU Date 6/6/06 Sequence 061406B

PCBs

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - Post Demo Storage Sampling - Sampling Date of June 08, 2006	Our Project Number CHEM-06-1098

Sample Identification	BMR-PCB-W19	**Sample Identification**	BMR-PCB-W20
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	06-08-06	Sample Date	06-08-06
Received Date	06-13-06	Received Date	06-13-06
Report Date	06-16-06	Report Date	06-16-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	06-13-06	Preparation Date	06-13-06
Analysis Date	06-15-06	Analysis Date	06-15-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061098-19	Control Number	061098-20

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	89	80-110	Decachlorobiphenyl	101	80-110

NOTES:	MDL = Method Detection Limit, ug/100cm^2 nd = Parameter Not Detected At The MDL

Reviewed By _____ Date 6/26/06 | Sequence 061406B

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - Post Demo Storage Sampling - Sampling Date of June 08, 2006	Our Project Number CHEM-06-1098

Sample Identification	BMR-PCB-W21	Sample Identification	BMR-PCB-W22
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	06-08-06	Sample Date	06-08-06
Received Date	06-13-06	Received Date	06-13-06
Report Date	06-16-06	Report Date	06-16-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	06-13-06	Preparation Date	06-13-06
Analysis Date	06-15-06	Analysis Date	06-15-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061098-21	Control Number	061098-22

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	95	80-110	Decachlorobiphenyl	89	80-110

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Not Detected At The MDL

Reviewed By _____ Date 6/16-6

Sequence 061406B

PCBs

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - Post Demo Storage Sampling - Sampling Date of June 08, 2006	Our Project Number CHEM-06-1098

Sample Identification	BMR-PCB-W23	**Sample Identification**	BMR-PCB-W24
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	06-08-06	Sample Date	06-08-06
Received Date	06-13-06	Received Date	06-13-06
Report Date	06-16-06	Report Date	06-16-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	06-13-06	Preparation Date	06-13-06
Analysis Date	06-14-06	Analysis Date	06-14-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061098-23	Control Number	061098-24

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	99	78-111	Decachlorobiphenyl	96	78-111

NOTES:	MDL = Method Detection Limit, ug/100cm^2 nd = Parameter Not Detected At The MDL

Reviewed By _____ Date 6/6/06 | Sequence 061406B

PCBs

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - Post Demo Storage Sampling - Sampling Date of June 08, 2006	Our Project Number CHEM-06-1098

Sample Identification	BMR-PCB-W25	**Sample Identification**	BMR-PCB-W26
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	06-08-06	Sample Date	06-08-06
Received Date	06-13-06	Received Date	06-13-06
Report Date	06-16-06	Report Date	06-16-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	06-14-06	Preparation Date	06-14-06
Analysis Date	06-14-06	Analysis Date	06-14-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061098-25	Control Number	061098-26

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	95	78-111	Decachlorobiphenyl	102	78-111

NOTES:	MDL = Method Detection Limit, ug/100cm^2 nd = Parameter Not Detected At The MDL

Reviewed By _____ Date 6/6/06

Sequence 061406B	

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - Post Demo Storage Sampling - Sampling Date of June 08, 2006	Our Project Number CHEM-06-1098

Sample Identification	BMR-PCB-W27	Sample Identification	BMR-PCB-W28
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	06-08-06	Sample Date	06-08-06
Received Date	06-13-06	Received Date	06-13-06
Report Date	06-16-06	Report Date	06-16-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	06-14-06	Preparation Date	06-14-06
Analysis Date	06-14-06	Analysis Date	06-14-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061098-27	Control Number	061098-28

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	102	78-111	Decachlorobiphenyl	100	78-111

NOTES:	MDL = Method Detection Limit, ug/100cm^2 nd = Parameter Not Detected At The MDL

Reviewed By AU Date 6/16/06 Sequence 061406B

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - Post Demo Storage Sampling - Sampling Date of June 08, 2006	Our Project Number CHEM-06-1098

Sample Identification	BMR-PCB-W29	Sample Identification	BMR-PCB-W30
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	06-08-06	Sample Date	06-08-06
Received Date	06-13-06	Received Date	06-13-06
Report Date	06-16-06	Report Date	06-16-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	06-14-06	Preparation Date	06-14-06
Analysis Date	06-15-06	Analysis Date	06-15-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061098-29	Control Number	061098-30

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	101	78-111	Decachlorobiphenyl	101	78-111

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Not Detected At The MDL

Reviewed By _____ Date _____ Sequence 061406B

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - Post Demo Storage Sampling - Sampling Date of June 08, 2006	Our Project Number CHEM-06-1098

Sample Identification	BMR-PCB-W31	**Sample Identification**	BMR-PCB-W32
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	06-08-06	Sample Date	06-08-06
Received Date	06-13-06	Received Date	06-13-06
Report Date	06-16-06	Report Date	06-16-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	06-14-06	Preparation Date	06-14-06
Analysis Date	06-15-06	Analysis Date	06-15-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061098-31	Control Number	061098-32

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	105	78-111	Decachlorobiphenyl	101	78-111

NOTES:	MDL = Method Detection Limit, ug/100cm^2 nd = Parameter Not Detected At The MDL

Reviewed By _____ Date _____ Sequence 061406B

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - Post Demo Storage Sampling - Sampling Date of June 08, 2006	Our Project Number CHEM-06-1098

Sample Identification	BMR-PCB-W33	**Sample Identification**	BMR-PCB-W34
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	06-08-06	Sample Date	06-08-06
Received Date	06-13-06	Received Date	06-13-06
Report Date	06-16-06	Report Date	06-16-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	06-14-06	Preparation Date	06-14-06
Analysis Date	06-15-06	Analysis Date	06-15-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061098-33	Control Number	061098-34

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	100	78-111	Decachlorobiphenyl	100	78-111

NOTES:	MDL = Method Detection Limit, ug/100cm^2 nd = Parameter Not Detected At The MDL

Reviewed By AM Date 6/16/06 Sequence 061406B

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - Post Demo Storage Sampling - Sampling Date of June 08, 2006	Our Project Number CHEM-06-1098

Sample Identification	BMR-PCB-W35	**Sample Identification**	BMR-PCB-W36
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	06-08-06	Sample Date	06-08-06
Received Date	06-13-06	Received Date	06-13-06
Report Date	06-16-06	Report Date	06-16-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	06-14-06	Preparation Date	06-14-06
Analysis Date	06-15-06	Analysis Date	06-15-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061098-35	Control Number	061098-36

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	103	78-111	Decachlorobiphenyl	105	78-111

NOTES:	MDL = Method Detection Limit, ug/100cm^2 nd = Parameter Not Detected At The MDL

Reviewed By _____ Date 6/16/06

Sequence 061406B

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - Post Demo Storage Sampling - Sampling Date of June 08, 2006	Our Project Number CHEM-06-1098

Sample Identification	BMR-PCB-W37	**Sample Identification**	BMR-PCB-W38
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	06-08-06	Sample Date	06-08-06
Received Date	06-13-06	Received Date	06-13-06
Report Date	06-16-06	Report Date	06-16-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	06-14-06	Preparation Date	06-14-06
Analysis Date	06-15-06	Analysis Date	06-15-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061098-37	Control Number	061098-38

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	100	78-111	Decachlorobiphenyl	88	78-111

NOTES:	MDL = Method Detection Limit, ug/100cm^2 nd = Parameter Not Detected At The MDL

Reviewed By AU Date 6/16/06 Sequence 061406B

PCBs

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - Post Demo Storage Sampling - Sampling Date of June 08, 2006	Our Project Number CHEM-06-1098

Sample Identification	BMR-PCB-W39	**Sample Identification**	BMR-PCB-W40
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	06-08-06	Sample Date	06-08-06
Received Date	06-13-06	Received Date	06-13-06
Report Date	06-16-06	Report Date	06-16-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	06-14-06	Preparation Date	06-14-06
Analysis Date	06-15-06	Analysis Date	06-15-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061098-39	Control Number	061098-40

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	95	78-111	Decachlorobiphenyl	99	78-111

NOTES:	MDL = Method Detection Limit, ug/100cm^2 nd = Parameter Not Detected At The MDL

Reviewed By _____ Date 6/6/06

Sequence 061406B

PCBs

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - Post Demo Storage Sampling - Sampling Date of June 08, 2006	Our Project Number CHEM-06-1098

Sample Identification	BMR-PCB-W41	**Sample Identification**	BMR-PCB-W42
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	06-08-06	Sample Date	06-08-06
Received Date	06-13-06	Received Date	06-13-06
Report Date	06-16-06	Report Date	06-16-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	06-14-06	Preparation Date	06-14-06
Analysis Date	06-15-06	Analysis Date	06-15-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061098-41	Control Number	061098-42

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	99	78-111	Decachlorobiphenyl	103	78-111

NOTES:	MDL = Method Detection Limit, ug/100cm^2 nd = Parameter Not Detected At The MDL

Reviewed By AM Date 6/16/06 Sequence 061406B

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - Post Demo Storage Sampling - Sampling Date of June 08, 2006	Our Project Number CHEM-06-1098

Sample Identification	BMR-PCB-W43	**Sample Identification**	BMR-PCB-W44
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	06-08-06	Sample Date	06-08-06
Received Date	06-13-06	Received Date	06-13-06
Report Date	06-16-06	Report Date	06-16-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	06-14-06	Preparation Date	06-14-06
Analysis Date	06-15-06	Analysis Date	06-15-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061098-43	Control Number	061098-44

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	97	78-111	Decachlorobiphenyl	98	78-111

NOTES:	MDL = Method Detection Limit, ug/100cm^2 nd = Parameter Not Detected At The MDL

Reviewed By _____ Date 6/6/06

Sequence 061406B

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – ENVIRONMENTAL AND TECHNICAL SERVICES
LABORATORY COMMERCIAL SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: BIK ROCK POINT

PROJECT NUMBER: PCB POST-DEMO/STORAGE SAMPLING

SAMPLING TEAM:

DATE SHIPPED: 6/12/06

SITE SKETCH ATTACHED? CIRCLE ONE: YES NO

PAGE 1 OF 4

SEND REPORT TO: TAGOBLE, WG HOAGLUND

PHONE: 231-547-8389

CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	ANALYSIS REQUESTED: PCB WIPE	REMARKS
1098-1	6/8/06	0950	WIPE	BMR-PCB-W1	–	1	✓	
-2		0952		BMR-PCB-W2			✓	
-3		0954		BMR-PCB-W3			✓	
-4		0956		BMR-PCB-W4			✓	
-5		0958		BMR-PCB-W5			✓	
-6		1000		BMR-PCB-W6			✓	
-7		1002		BMR-PCB-W7			✓	
-8		1005		BMR-PCB-W8			✓	
-9		1007		BMR-PCB-W9			✓	
-10		1009		BMR-PCB-W10			✓	
-11		1011		BMR-PCB-W11			✓	
-12		1013		BMR-PCB-W12			✓	

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
RELINQUISHED BY: (SIGNATURE) FED EX	DATE / TIME 06/13/06 10:30	RECEIVED BY: (SIGNATURE) Brian E. [illegible]
RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)

COMMENTS: PLEASE RETURN COOLER AND ICE PACKS

ORIGINAL TO LAB COPY TO CUSTOMER

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – ENVIRONMENTAL AND TECHNICAL SERVICES
LABORATORY COMMERCIAL SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: BIG ROCK POINT

PROJECT NUMBER: PCB POST-DEMO/STORAGE SAMPLING

SAMPLING TEAM:

DATE SHIPPED: 6/12/06

SITE SKETCH ATTACHED? CIRCLE ONE: YES NO

PAGE 2 OF 4

SEND REPORT TO:

PHONE:

ANALYSIS REQUESTED: PCB WIPE

CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	PCB WIPE	REMARKS
1098.13	6/8/06	1015	WIPE	BMR-PCB-W13	-	1	✓	
.14		1020		BMR-PCB-W14	-		✓	
.15		1022		BMR-PCB-W15	-		✓	
.16		1024		BMR-PCB-W16	-		✓	
.17		1026		BMR-PCB-W17	-		✓	
.18		1028		BMR-PCB-W18	-		✓	
.19		1030		BMR-PCB-W19	-		✓	
.20		1032		BMR-PCB-W20	-		✓	
.21		1034		BMR-PCB-W21	-		✓	
.22		1036		BMR-PCB-W22	-		✓	
.23		1040		BMR-PCB-W23	-		✓	
.24		1043		BMR-PCB-W24	-		✓	

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
FED EX	06/13/06 10:30	[signature]
RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)

COMMENTS

ORIGINAL TO LAB COPY TO CUSTOMER

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – ENVIRONMENTAL AND TECHNICAL SERVICES
LABORATORY COMMERCIAL SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: Big Rock Point

PROJECT NUMBER: PCB Post-Demo/Storage Sampling

SAMPLING TEAM:

DATE SHIPPED: 6/12/06

SITE SKETCH ATTACHED? CIRCLE ONE: YES (NO)

PAGE 3 OF 4

SEND REPORT TO:

PHONE:

ANALYSIS REQUESTED: PCB WIPE

CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	PCB WIPE	REMARKS
06-1058-25	6/8/06	0959	WIPE	BMR-PCB-W25	–	1	✓	
.26		1002		BMR-PCB-W26	–		✓	
.27		1005		BMR-PCB-W27	–		✓	
.28		1007		BMR-PCB-W28	–		✓	
.29		1009		BMR-PCB-W29	–		✓	
.30		1012		BMR-PCB-W30	–		✓	
.31		1014		BMR-PCB-W31	–		✓	
.32		1016		BMR-PCB-W32	–		✓	
.33		1018		BMR-PCB-W33	–		✓	
.34		1022		BMR-PCB-W34	–		✓	
.35		1023		BMR-PCB-W35	–		✓	
.36		1025		BMR-PCB-W36	–		✓	

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
FED EX	06/13/06 10:30	[signature]

COMMENTS

ORIGINAL TO LAB COPY TO CUSTOMER

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – ENVIRONMENTAL AND TECHNICAL SERVICES
LABORATORY COMMERCIAL SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE:

PROJECT NUMBER:

SAMPLING TEAM:

DATE SHIPPED: 6/12/06

SITE SKETCH ATTACHED? CIRCLE ONE: YES NO

PAGE 4 OF 4

SEND REPORT TO:

PHONE:

ANALYSIS REQUESTED: PCB WIPE

CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	PCB WIPE							REMARKS
06-1098-37	6/8/06	1027	WIPE	BMR-PCB-W37	–	1	✓							
-38		1030		BMR-PCB-W38	–		✓							
-39		1032		BMR-PCB-W39	–		✓							
-40		1034		BMR-PCB-W40	–		✓							
-41		1036		BMR-PCB-W41	–		✓							
-42		1036		BMR-PCB-W42	–		✓							
-43		1038		BMR-PCB-W43	–		✓							
-44		1040		BMR-PCB-W44	–		✓							

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
RELINQUISHED BY: (SIGNATURE) FED EX	DATE / TIME 06/13/06 10:30	RECEIVED BY: (SIGNATURE) [signature]
RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)

COMMENTS

ORIGINAL TO LAB COPY TO CUSTOMER

PCB SURVEY PACKAGE CLOSE-OUT CHECKLIST

Package ID Number: 0013 Survey Area: NE Laydown Area-RESAMPLE

The survey package is legible and complete and the following necessary information is in the package:

1. ✓ Survey Package Cover Sheet
2. ✓ Survey design documentation
3. ✓ Random number generator sheet for sample start location and QC sample numbers.
4. ✓ Completed survey map/data sheet
5. ✓ Completed PCB Survey Data Record Sheet
6. ✓ Copy of the Chain of Custody
7. ✓ Copy of sample results
8. ✓ Other documentation:

Completed By: Jodie L Reed (Environmental Technician) Date: 05-16-06

Reviewed By: [illegible] (Environmental Supervisor) Date: 09-25-06

PCB SURVEY PACKAGE COVER SHEET

Package ID Number : 0013	Survey Area: NE Laydown Area-RESAMPLE	Size (m^2): 27.0

Random Samples

# of Field Samples: 9

# of QC samples: 1

Random Start Location: X (1.0), Y (1.0)

Sample Spacing: 1.5 meters

Isolation Controls implemented [1] List controls: Area posted as a PCB survey area.

Comments/specific directions[1]: -Sample #NE-PCB-S14 from survey # 10 exceeded acceptance criteria. This survey was conducted to resample the area around sample point #14.

-Random sample locations determined by random number generator.

-Sample analysis results acceptance criteria is <1 mg/Kg for soil samples.

([1] Address any inaccessible areas or sample points not included in survey).

SURVEY PACKAGE CLOSURE

Screening Survey Package is authorized for closure. All required reviews are completed and pertinent information is included in package (see Survey Package Close-Out Checklist).

ENV Technician Jodie L. Reed Date: 05-04-06

ENV Supervisor: Date: 09-25-06

'ackage ID Number: 0013

PCB SURVEY DATA RECORD SHEET

Survey Area: PCB Laydown Area- RESAMPLE	Size (m^2): 27.0	# of Samples: 9

Sample ID Number	Sample Location (X)(Y)	Sample Result (ppm)	Sample ID Number	Sample Location (X)(Y)	Sample Result (ppm)
NE-PCB-S1	(1.0)(1.0)	nda			
NE-PCB-S2	(2.5)(1.0)	nda			
NE-PCB-S3	(4.0)(1.0)	nda			
NE-PCB-S4	(4.0)(2.5)	nda			
NE-PCB-S5	(2.5)(2.5)	nda			
NE-PCB-S6	(1.0)(2.5)	nda			
NE-PCB-S7	(1.0)(4.0)	nda			
NE-PCB-S8	(2.5)(4.0)	nda			
NE-PCB-S9	(4.0)(4.0)	nda			
NE-PCB-S10	(1.0)(4.0)	nda			

Performed By: Jackie L. Reed (Survey Technician) Date: 05-04-06

Reviewed By: (Environmental Supervisor) Date: 09-25-06

PCB Post Demolition Survey Design - NE Laydown Area - RESAMPLE

Survey Area Dimensions:

Xmax =	5.2 m
Ymax =	5.2 m
Area =	27.0 sq. m

Start Location:

X =	1.0 m
Y =	1.0 m

Sample Spacing:

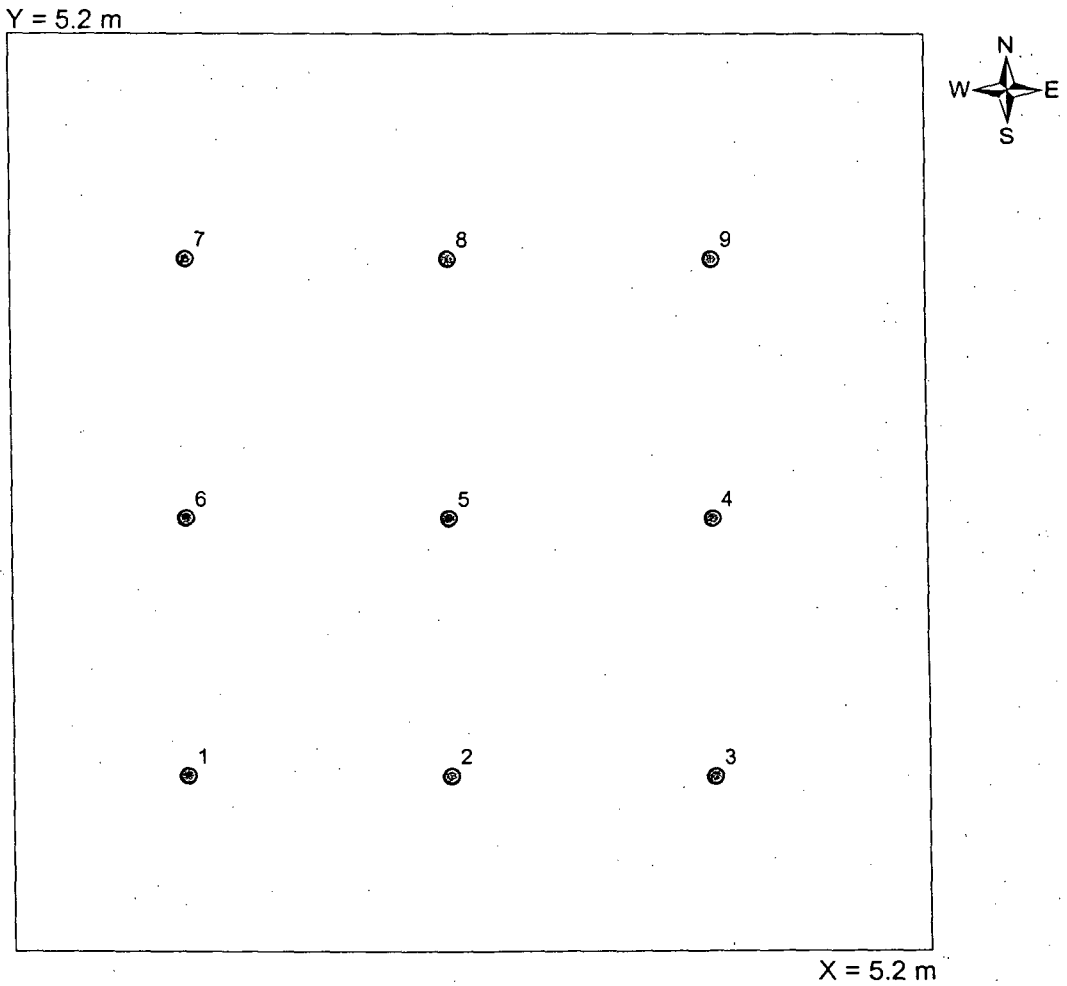
L= 1.5 m 9 Samples Ref 40CFR761 - SUBPART O

Random X-Y start points		QC Samples
X	0.625103742	7
		4
Y	0.718604396	8

Survey Design: [signature] Date: 5/4/06

Reviewd By: Jackie Reed Date: 5/4/06

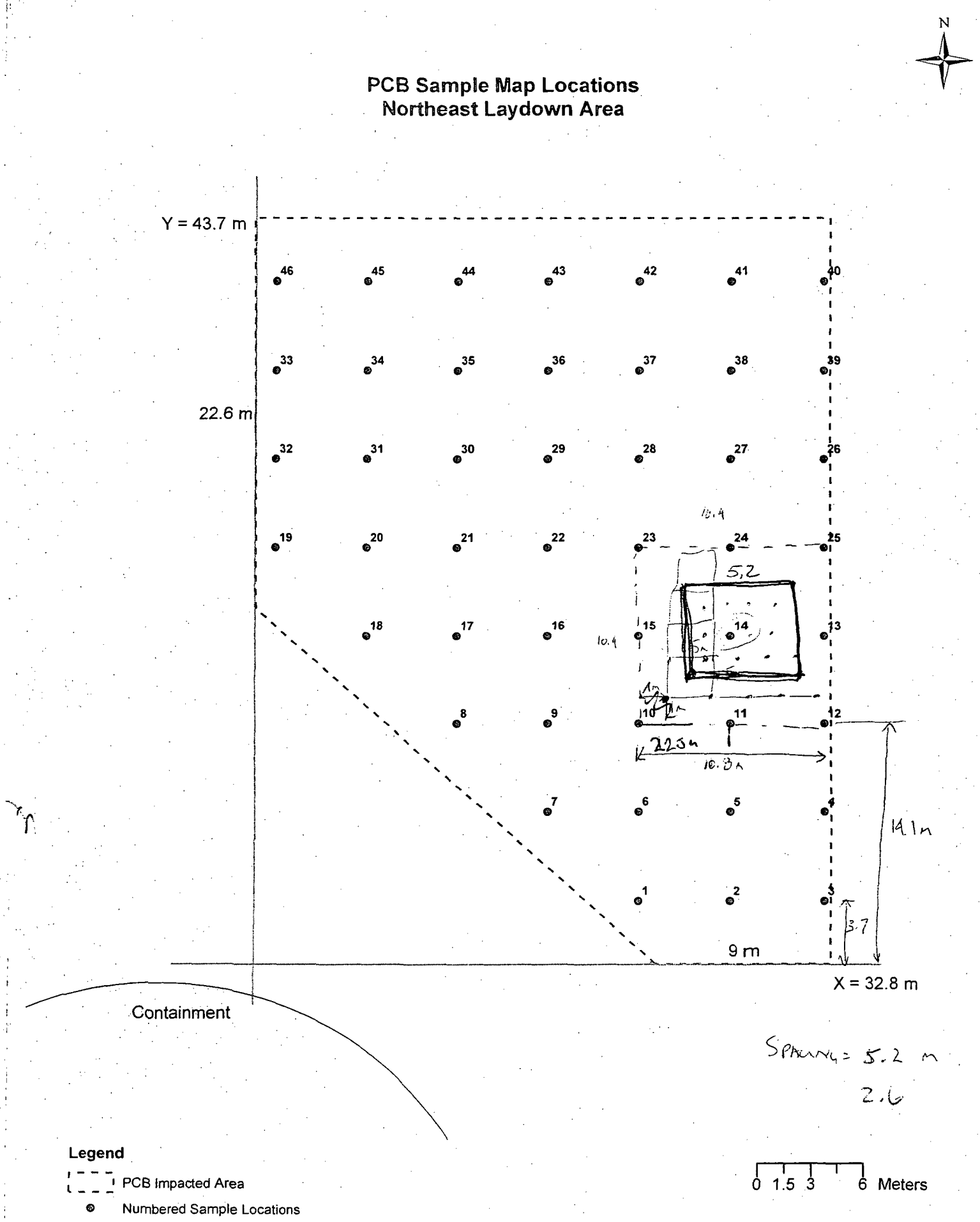
PCB Sample Locations
NE Laydown Area-RESAMPLE



Sample No.	X Coord.	Y Coord.
1	1.0	1.0
2	2.5	1.0
3	4.0	1.0
4	4.0	2.5
5	2.5	2.5
6	1.0	2.5
7	1.0	4.0
8	2.5	4.0
9	4.0	4.0

*Sample no. 1 is the random start location
*Sample spacing is 1.5 meters

PCB Sample Map Locations
Northeast Laydown Area



CONSUMERS ENERGY Memorandum

To: TGoble, Big Rock

From: GLCattell, T-254, Jackson

Date: May 16, 2006

Subject: SAMPLES FOR DETERMINATION OF PCBs
- Soils
- PCB Storage/Demo Area
- Sampling Date of May 04, 2006

CC: WMHoaglund, Big Rock

File Index: 510617-781-839

Ten soil samples were received on May 05 for determination of polychlorinated biphenyls (PCBs). All determinations were performed by the Chemistry Section of Laboratory Services and the results are attached for your review.

Analytical Methods
Unless otherwise specified, all methods are from SW-846, Test Methods For Evaluating Solid Waste - Physical / Chemical Methods, USEPA.

Polychlorinated Biphenyls
Sample Extraction: Method 3545, Pressurized Fluid Extraction.
Extract Concentration: Nitrogen Evaporation Technique, Exhibit D, Aroclors, Section 10. Multi-Media, Multi-Concentration Organics Analysis; SOM01.X; USEPA.
Extract Cleanup: Method 3620, Florisil Cleanup; Method 3665A, Sulfuric Acid/Permanganate Cleanup & Method 3660B, Sulfur Cleanup.
Analysis: Method 8082, Polychlorinated Biphenyls by Gas Chromatography.
Percent Solids (Dry Weight): Section 7.2 of Method 3545, Determination of Percent Dry Weight, Pressurized Fluid Extraction.

Analytical Remarks & Summary
All samples are reported as 'nd' (not detected) for all Aroclors.

Report Package Contents
The report package consists of 7 pages: 1 cover page, 5 pages of Analytical Results & 1 Chain of Custody page.

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - PCB Storage/Demo Area	Our Project Number CHEM-06-0839

Sample Identification	NE2-PCB-S1	**Sample Identification**	NE2-PCB-S2
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	05-04-06	Sample Date	05-04-06
Received Date	05-05-06	Received Date	05-05-06
Report Date	05-16-06	Report Date	05-16-06
Percent Solids, % w/w	96	Percent Solids, % w/w	97
Preparation Date	05-08-06	Preparation Date	05-08-06
Analysis Date	05-11-06	Analysis Date	05-11-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060839-01	Control Number	060839-02

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	93	82-121	Decachlorobiphenyl	91	82-121

NOTES:	TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1. nd = Parameter Not Detected At The TDL. Results Are Reported On The Dry Weight Basis. Confirming Analytical Column Was Not Required.

Reviewed By _____ Date 5/6/06 | Data File 051006A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - PCB Storage/Demo Area	Our Project Number CHEM-06-0839

Sample Identification	NE2-PCB-S3	**Sample Identification**	NE2-PCB-S4
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	05-04-06	Sample Date	05-04-06
Received Date	05-05-06	Received Date	05-05-06
Report Date	05-16-06	Report Date	05-16-06
Percent Solids, % w/w	97	Percent Solids, % w/w	97
Preparation Date	05-08-06	Preparation Date	05-08-06
Analysis Date	05-11-06	Analysis Date	05-11-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060839-03	Control Number	060839-04

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	91	82-121	Decachlorobiphenyl	96	82-121

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By AM Date 5/16/06 Data File 051006A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - PCB Storage/Demo Area	Our Project Number CHEM-06-0839

Sample Identification	NE2-PCB-S5	**Sample Identification**	NE2-PCB-S6
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	05-04-06	Sample Date	05-04-06
Received Date	05-05-06	Received Date	05-05-06
Report Date	05-16-06	Report Date	05-16-06
Percent Solids, % w/w	97	Percent Solids, % w/w	96
Preparation Date	05-08-06	Preparation Date	05-08-06
Analysis Date	05-11-06	Analysis Date	05-11-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060839-05	Control Number	060839-06

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	92	82-121	Decachlorobiphenyl	95	82-121

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date 5/6/06 Data File 051006A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - PCB Storage/Demo Area	Our Project Number CHEM-06-0839

Sample Identification	NE2-PCB-S7	**Sample Identification**	NE2-PCB-S8
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	05-04-06	Sample Date	05-04-06
Received Date	05-05-06	Received Date	05-05-06
Report Date	05-16-06	Report Date	05-16-06
Percent Solids, % w/w	96	Percent Solids, % w/w	96
Preparation Date	05-08-06	Preparation Date	05-08-06
Analysis Date	05-11-06	Analysis Date	05-11-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060839-07	Control Number	060839-08

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	92	82-121	Decachlorobiphenyl	91	82-121

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date 5/6/06 | Data File 051006A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - PCB Storage/Demo Area	Our Project Number CHEM-06-0839

Sample Identification	NE2-PCB-S9	**Sample Identification**	NE2-PCB-S10
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	05-04-06	Sample Date	05-04-06
Received Date	05-05-06	Received Date	05-05-06
Report Date	05-16-06	Report Date	05-16-06
Percent Solids, % w/w	96	Percent Solids, % w/w	96
Preparation Date	05-08-06	Preparation Date	05-08-06
Analysis Date	05-11-06	Analysis Date	05-11-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060839-09	Control Number	060839-10

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	95	82-121	Decachlorobiphenyl	96	82-121

NOTES:	TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1. nd = Parameter Not Detected At The TDL. Results Are Reported On The Dry Weight Basis. Confirming Analytical Column Was Not Required.

Reviewed By _____ Date 5/16/06 | Data File 051006A

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – LABORATORY SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: Big Rock Point

PROJECT NUMBER: PCB Storage/Demo Area

SAMPLING TEAM:

DATE SHIPPED: 5/4/06

SITE SKETCH ATTACHED? CIRCLE ONE: YES NO

PAGE 1 OF 1

SEND REPORT TO: TA Goble

PHONE: 547-8389

CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	ANALYSIS REQUESTED: PCB	REMARKS
0608384-01	5/4/06	0810	Soil	NE2-PCB-S1	3"	1	✓	
-02		0814		NE2-PCB-S2		1	✓	
-03		0817		NE2-PCB-S3		1	✓	
-04		0819		NE2-PCB-S4		1	✓	
-05		0821		NE2-PCB-S5		1	✓	
-06		0823		NE2-PCB-S6		1	✓	
-07		0826		NE2-PCB-S7		1	✓	
-08		0830		NE2-PCB-S8		1	✓	
-09		0832		NE2-PCB-S9		1	✓	
-10		0835		NE2-PCB-S10		1	✓	

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
[signature]	5/4/06 1330	
RELINQUISHED BY: (SIGNATURE) FedEx	DATE / TIME 5/5/06 1045	RECEIVED BY: (SIGNATURE) [signature]
RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)

COMMENTS

ORIGINAL TO LAB COPY TO CUSTOMER

PCB SURVEY PACKAGE CLOSE-OUT CHECKLIST

Package ID Number: 0014 Survey Area: RW Building Storage Area

The survey package is legible and complete and the following necessary information is in the package:

1. ✓ Survey Package Cover Sheet
2. ✓ Survey design documentation
3. ✓ Random number generator sheet for sample start location and QC sample numbers.
4. ✓ Completed survey map/data sheet
5. ✓ Completed PCB Survey Data Record Sheet
6. ✓ Copy of the Chain of Custody
7. ✓ Copy of sample results
8. N/A Other documentation:

Completed By: Jodie L. Reed Date: 08-15-06
(Environmental Technician)

Reviewed By: [illegible] Date: 09-27-06
(Environmental Supervisor)

PCB SURVEY PACKAGE COVER SHEET

Package ID Number : 0014	Survey Area: RW Building (PCB Bulk Product Waste Storage Area)	Size (m^2): 132.0

Random Samples

# of Field Samples: 40
# of QC samples: 4

Random Start Location: X, Y (2.9m, 0.79m)
Sample Spacing: 31.8 meters

Isolation Controls implemented ☐ List controls: Area posted as a PCB survey area. Area also posted as a BMR survey area.

Comments/Specific Directions:

This area was utilized to store Radioactive PCB Bulk Product Waste prior to shipment for disposal.

Random sample locations determined by random number generator. Sample analysis results acceptance criteria is <10 mg/100 cm2 for wipe samples of rubber surface. Building was equipped with a rubber liner over asphalt.

All results met acceptance criteria for PCB wipe samples.

SURVEY PACKAGE CLOSURE

Survey Package is authorized for closure. All required reviews are completed and pertinent information is included in package (see Survey Package Close-Out Checklist).

ENV Technician Jodie L. Reed Date: 08-15-06

ENV Supervisor: [signature] Date: 09/27/06

Package ID Number: 0014

PCB SURVEY DATA RECORD SHEET

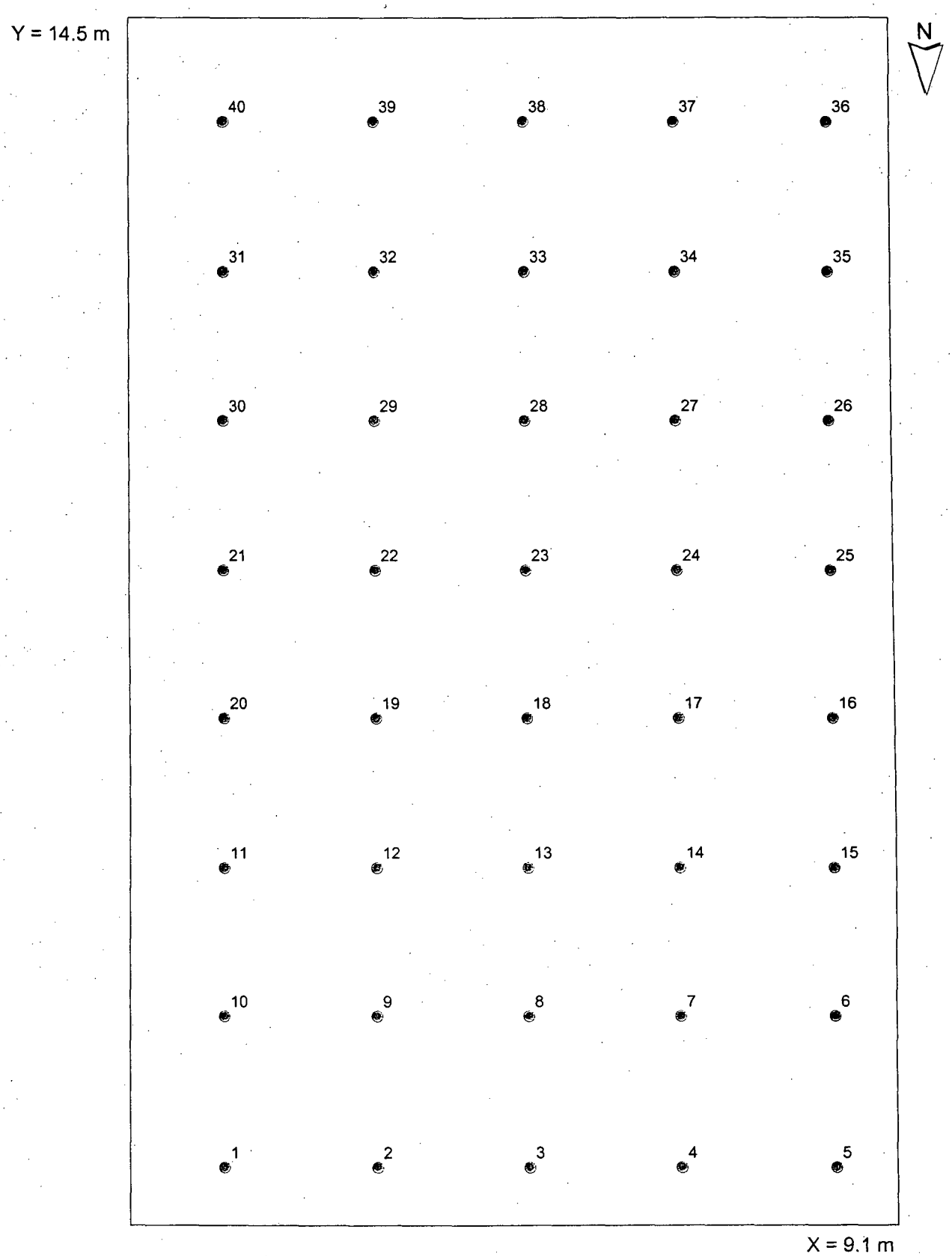
Survey Area: RW Storage Building (PCB Storage Area)	Size (m^2): 132.0	# of Samples: 44

Sample ID Number	Sample Location (X)(Y)	Sample Result (ppm)	Sample ID Number	Sample Location (X)(Y)	Sample Result (ppm)
RW-PCB-W1	(1.1, 0.7)	nd	RW-PCB-W27	(6.5, 9.7)	nd
RW-PCB-W2	(2.9, 0.7)	nd	RW-PCB-W28	(4.7, 9.7)	nd
RW-PCB-W3	(4.7, 0.7)	nd	RW-PCB-W29	(2.9, 9.7)	nd
RW-PCB-W4	(6.5, 0.7)	nd	RW-PCB-W30	(1.1, 9.7)	nd
RW-PCB-W5	(7.3, 0.7)	nd	RW-PCB-W31	(1.1, 11.5)	nd
RW-PCB-W6	(7.3, 2.5)	nd	RW-PCB-W32	(2.9, 11.5)	nd
RW-PCB-W7	(6.5, 2.5)	nd	RW-PCB-W33	(4.7, 11.5)	nd
RW-PCB-W8	(4.7, 2.5)	nd	RW-PCB-W34	(6.5, 11.5)	nd
RW-PCB-W9	(2.9, 2.5)	nd	RW-PCB-W35	(7.3, 11.5)	nd
RW-PCB-W10	(1.1, 2.5)	nd	RW-PCB-W36	(7.3, 13.3)	nd
RW-PCB-W11	(1.1, 4.3)	nd	RW-PCB-W37	(6.5, 13.3)	nd
RW-PCB-W12	(2.9, 4.3)	nd	RW-PCB-W38	(4.7, 13.3)	nd
RW-PCB-W13	(4.7, 4.3)	nd	RW-PCB-W39	(2.9, 13.3)	nd
RW-PCB-W14	(6.5, 4.3)	nd	RW-PCB-W40	(1.1, 13.3)	nd
RW-PCB-W15	(7.3, 4.3)	nd	RW-PCB-W41	(2.9, 4.3)	nd
RW-PCB-W16	(7.3, 6.1)	nd	RW-PCB-W42	(4.7, 13.3)	nd
RW-PCB-W17	(6.5, 6.1)	nd	RW-PCB-W43	Field blank	nd
RW-PCB-W18	(4.7, 6.1)	nd	RW-PCB-W44	Field blank	nd
RW-PCB-W19	(2.9, 6.1)	nd			
RW-PCB-W20	(1.1, 6.1)	nd			
RW-PCB-W21	(1.1, 7.9)	nd			
RW-PCB-W22	(2.9, 7.9)	nd			
RW-PCB-W23	(4.7, 7.9)	nd			
RW-PCB-W24	(6.5, 7.9)	nd			
RW-PCB-W25	(7.3, 7.9)	nd			
RW-PCB-W26	(7.3, 9.7)	nd			

Performed By: Jodie L. Reed (Survey Technician) Date: 08/16/06

Reviewed By: (Environmental Supervisor) Date: 09/27/06

PCB Sample Locations
Radwaste Building



* Random Start Location = Sample # 2
** Sample Spacing = 1.8 meters

PCB Survey Design - RW Building (PCB Storage Area)

Survey Area Dimensions:

Xmax =	9.1 m
Ymax =	14.5 m
Area =	132.0 sq. m

Randon Start Location:

X =	2.9 m
Y =	0.7 m

Sample Spacing:

L=	(Area / No Samples) ^1/2
L=	1.8 m

Random X-Y start points		**QC Samples**
X	0.316384594	12
		38
Y	0.04556284	19
		11
		20
		38

SURVEY DESIGN: _____ DATE: 6/30/06

REVIEWED BY: _____ DATE 6/30/06

CONSUMERS ENERGY Memorandum

To: TGoble, Big Rock

From: GLCattell, T-254, Jackson

Date: August 14, 2006

Subject: SAMPLES FOR DETERMINATION OF PCBs
- Surface Wipes
- RW Building
- Sampling Date of July 07, 2006 / Received on August 02, 2006

CC: WMHoaglund, Big Rock File Index: 520617-784-422

Forty four surface wipe samples were received on August 02 for determination of polychlorinated biphenyls (PCBs). All determinations were performed by the Chemistry Section of Laboratory Services and the results are attached for your review.

Analytical Methods
Unless otherwise specified, all methods are from SW-846, Test Methods For Evaluating Solid Waste - Physical / Chemical Methods, USEPA.

Polychlorinated Biphenyls
Sample Extraction: Method 3550, Ultrasonic Extraction.
Extract Concentration: Nitrogen Evaporation Technique, Exhibit D, Aroclors, Section 10. Multi-Media, Multi-Concentration Organics Analysis; SOM01.X; USEPA.
Extract Cleanup: Method 3620, Florisil Cleanup & Method 3665A, Sulfuric Acid/Permanganate Cleanup.
Analysis: Method 8082, Polychlorinated Biphenyls by Gas Chromatography.

Analytical Remarks & Summary
Three items are listed.

a. All samples are reported as 'nd' (not detected) for all Aroclors.
b. All surface wipe MDLs are listed as "<" for uniformity. The actual MDLs of individual Aroclors vary slightly amongst each other and detectors.
c. All surface wipe areas are assumed to be $100cm^2$.

Report Package Contents
The report package consists of 27 pages: 1 cover page, 22 pages of Analytical Results & 4 Chain of Custody pages.

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - RW Building - Sampling Date of July 07, 2006	Our Project Number CHEM-06-1422

Sample Identification	RWB-1	**Sample Identification**	RWB-2
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	07-07-06	Sample Date	07-07-06
Received Date	08-02-06	Received Date	08-02-06
Report Date	08-14-06	Report Date	08-14-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	08-04-06	Preparation Date	08-04-06
Analysis Date	08-09-06	Analysis Date	08-09-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061422-01	Control Number	061422-02

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	90	80-110	Decachlorobiphenyl	85	80-110

NOTES:	MDL = Method Detection Limit, ug/100cm^2 nd = Parameter Not Detected At The MDL

Reviewed By _____ Date 8/14/06

Sequence 080906A&B	
RWB-1	RWB-2

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - RW Building - Sampling Date of July 07, 2006	Our Project Number CHEM-06-1422

Sample Identification	RWB-3	**Sample Identification**	RWB-4
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	07-07-06	Sample Date	07-07-06
Received Date	08-02-06	Received Date	08-02-06
Report Date	08-14-06	Report Date	08-14-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	08-04-06	Preparation Date	08-04-06
Analysis Date	08-09-06	Analysis Date	08-09-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061422-03	Control Number	061422-04

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	84	80-110	Decachlorobiphenyl	92	80-110

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Not Detected At The MDL

Reviewed By AU Date 8/4/06

Sequence 080906A&B	
RWB-3	RWB-4

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - RW Building - Sampling Date of July 07, 2006	Our Project Number CHEM-06-1422

Sample Identification	RWB-5	**Sample Identification**	RWB-6
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	07-07-06	Sample Date	07-07-06
Received Date	08-02-06	Received Date	08-02-06
Report Date	08-14-06	Report Date	08-14-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	08-04-06	Preparation Date	08-04-06
Analysis Date	08-09-06	Analysis Date	08-09-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061422-05	Control Number	061422-06

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	94	80-110	Decachlorobiphenyl	90	80-110

NOTES:	MDL = Method Detection Limit, ug/100cm^2 nd = Parameter Not Detected At The MDL

Reviewed By AU Date 8/4/06

Sequence 080906A&B	
RWB-5	RWB-6

PCBs

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - RW Building - Sampling Date of July 07, 2006	Our Project Number CHEM-06-1422

Sample Identification	RWB-7	**Sample Identification**	RWB-8
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	07-07-06	Sample Date	07-07-06
Received Date	08-02-06	Received Date	08-02-06
Report Date	08-14-06	Report Date	08-14-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	08-04-06	Preparation Date	08-04-06
Analysis Date	08-09-06	Analysis Date	08-09-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061422-07	Control Number	061422-08

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	98	80-110	Decachlorobiphenyl	97	80-110

NOTES:	MDL = Method Detection Limit, ug/100cm^2 nd = Parameter Not Detected At The MDL

Reviewed By AU Date 8/4/06

Sequence 080906A&B	
RWB-7	RWB-8

PCBs

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - RW Building - Sampling Date of July 07, 2006	Our Project Number CHEM-06-1422

Sample Identification	RWB-9	Sample Identification	RWB-10
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	07-07-06	Sample Date	07-07-06
Received Date	08-02-06	Received Date	08-02-06
Report Date	08-14-06	Report Date	08-14-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	08-04-06	Preparation Date	08-04-06
Analysis Date	08-09-06	Analysis Date	08-09-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061422-09	Control Number	061422-10

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	97	80-110	Decachlorobiphenyl	96	80-110

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Not Detected At The MDL

Reviewed By Ali Date 8/14/06

Sequence 080906A&B	
RWB-9	RWB-10

PCBs

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - RW Building - Sampling Date of July 07, 2006	Our Project Number CHEM-06-1422

Sample Identification	RWB-11	**Sample Identification**	RWB-12
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	07-07-06	Sample Date	07-07-06
Received Date	08-02-06	Received Date	08-02-06
Report Date	08-14-06	Report Date	08-14-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	08-04-06	Preparation Date	08-04-06
Analysis Date	08-09-06	Analysis Date	08-09-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061422-11	Control Number	061422-12

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	89	80-110	Decachlorobiphenyl	90	80-110

NOTES:	MDL = Method Detection Limit, ug/100cm^2 nd = Parameter Not Detected At The MDL

Reviewed By SM Date 8/40c

Sequence 080906A&B	
RWB-11	RWB-12

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - RW Building - Sampling Date of July 07, 2006	Our Project Number CHEM-06-1422

Sample Identification	RWB-13	Sample Identification	RWB-14
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	07-07-06	Sample Date	07-07-06
Received Date	08-02-06	Received Date	08-02-06
Report Date	08-14-06	Report Date	08-14-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	08-04-06	Preparation Date	08-04-06
Analysis Date	08-09-06	Analysis Date	08-09-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061422-13	Control Number	061422-14

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	87	80-110	Decachlorobiphenyl	98	80-110

NOTES:	MDL = Method Detection Limit, ug/100cm^2 nd = Parameter Not Detected At The MDL

Reviewed By Sli Date 8/406

Sequence 080906A&B	
RWB-13	RWB-14

PCBs

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - RW Building - Sampling Date of July 07, 2006	Our Project Number CHEM-06-1422

Sample Identification	RWB-15	**Sample Identification**	RWB-16
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	07-07-06	Sample Date	07-07-06
Received Date	08-02-06	Received Date	08-02-06
Report Date	08-14-06	Report Date	08-14-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	08-04-06	Preparation Date	08-04-06
Analysis Date	08-09-06	Analysis Date	08-09-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061422-15	Control Number	061422-16

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	93	80-110	Decachlorobiphenyl	93	80-110

NOTES:	MDL = Method Detection Limit, ug/100cm^2 nd = Parameter Not Detected At The MDL

Reviewed By _____ Date _____

Sequence 080906A&B	
RWB-15	RWB-16

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - RW Building - Sampling Date of July 07, 2006	Our Project Number CHEM-06-1422

Sample Identification	RWB-17	Sample Identification	RWB-18
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	07-07-06	Sample Date	07-07-06
Received Date	08-02-06	Received Date	08-02-06
Report Date	08-14-06	Report Date	08-14-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	08-04-06	Preparation Date	08-04-06
Analysis Date	08-09-06	Analysis Date	08-09-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061422-17	Control Number	061422-18

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	96	80-110	Decachlorobiphenyl	101	80-110

NOTES:	MDL = Method Detection Limit, ug/100cm^2 nd = Parameter Not Detected At The MDL

Reviewed By _____ Date _____

Sequence 080906A&B	
RWB-17	RWB-18

PCBs

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - RW Building - Sampling Date of July 07, 2006	Our Project Number CHEM-06-1422

Sample Identification	RWB-19	**Sample Identification**	RWB-20
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	07-07-06	Sample Date	07-07-06
Received Date	08-02-06	Received Date	08-02-06
Report Date	08-14-06	Report Date	08-14-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	08-04-06	Preparation Date	08-07-06
Analysis Date	08-10-06	Analysis Date	08-10-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061422-19	Control Number	061422-20

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	106	80-110	Decachlorobiphenyl	98	80-110

NOTES:	MDL = Method Detection Limit, ug/100cm^2 nd = Parameter Not Detected At The MDL

Reviewed By *Ale* Date *8/14/06*

Sequence 080906A&B	
RWB-19	RWB-20

PCBs

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - RW Building - Sampling Date of July 07, 2006	Our Project Number CHEM-06-1422

Sample Identification	RWB-21	Sample Identification	RWB-22
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	07-07-06	Sample Date	07-07-06
Received Date	08-02-06	Received Date	08-02-06
Report Date	08-14-06	Report Date	08-14-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	08-07-06	Preparation Date	08-07-06
Analysis Date	08-10-06	Analysis Date	08-10-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061422-21	Control Number	061422-22

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	97	80-110	Decachlorobiphenyl	95	80-110

NOTES:

MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Not Detected At The MDL

Reviewed By [illegible] Date 8/14/06

Sequence 080906A&B	
RWB-21	RWB-22

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - RW Building - Sampling Date of July 07, 2006	Our Project Number CHEM-06-1422

Sample Identification	RWB-23	**Sample Identification**	RWB-24
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	07-07-06	Sample Date	07-07-06
Received Date	08-02-06	Received Date	08-02-06
Report Date	08-14-06	Report Date	08-14-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	08-07-06	Preparation Date	08-07-06
Analysis Date	08-10-06	Analysis Date	08-10-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061422-23	Control Number	061422-24

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	105	80-110	Decachlorobiphenyl	96	80-110

NOTES:	MDL = Method Detection Limit, ug/100cm^2 nd = Parameter Not Detected At The MDL

Reviewed By *Au* Date *8/14/06*

Sequence 080906A&B	
RWB-23	RWB-24

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - RW Building - Sampling Date of July 07, 2006	Our Project Number CHEM-06-1422

Sample Identification	RWB-25	Sample Identification	RWB-26
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	07-07-06	Sample Date	07-07-06
Received Date	08-02-06	Received Date	08-02-06
Report Date	08-14-06	Report Date	08-14-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	08-07-06	Preparation Date	08-07-06
Analysis Date	08-10-06	Analysis Date	08-10-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061422-25	Control Number	061422-26

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	95	80-110	Decachlorobiphenyl	94	80-110

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Not Detected At The MDL

Reviewed By _____ Date _____

Sequence 080906A&B	
RWB-25	RWB-26

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - RW Building - Sampling Date of July 07, 2006	Our Project Number CHEM-06-1422

Sample Identification	RWB-27	**Sample Identification**	RWB-28
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	07-07-06	Sample Date	07-07-06
Received Date	08-02-06	Received Date	08-02-06
Report Date	08-14-06	Report Date	08-14-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	08-07-06	Preparation Date	08-07-06
Analysis Date	08-10-06	Analysis Date	08-10-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061422-27	Control Number	061422-28

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	94	80-110	Decachlorobiphenyl	91	80-110

NOTES:	MDL = Method Detection Limit, ug/100cm^2 nd = Parameter Not Detected At The MDL

Reviewed By AU Date 8/14/06

Sequence 080906A&B	
RWB-27	RWB-28

PCBs

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - RW Building - Sampling Date of July 07, 2006	Our Project Number CHEM-06-1422

Sample Identification	RWB-29	**Sample Identification**	RWB-30
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	07-07-06	Sample Date	07-07-06
Received Date	08-02-06	Received Date	08-02-06
Report Date	08-14-06	Report Date	08-14-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	08-07-06	Preparation Date	08-07-06
Analysis Date	08-10-06	Analysis Date	08-10-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061422-29	Control Number	061422-30

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	94	80-110	Decachlorobiphenyl	101	80-110

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Not Detected At The MDL

Reviewed By _____ Date 8/14/06

Sequence 080906A&B	
RWB-29	RWB-30

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - RW Building - Sampling Date of July 07, 2006	Our Project Number CHEM-06-1422

Sample Identification	RWB-31	**Sample Identification**	RWB-32
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	07-07-06	Sample Date	07-07-06
Received Date	08-02-06	Received Date	08-02-06
Report Date	08-14-06	Report Date	08-14-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	08-07-06	Preparation Date	08-07-06
Analysis Date	08-10-06	Analysis Date	08-10-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061422-31	Control Number	061422-32

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	88	80-110	Decachlorobiphenyl	84	80-110

NOTES:	MDL = Method Detection Limit, ug/100cm^2 nd = Parameter Not Detected At The MDL

Reviewed By _____ Date 8/40c

Sequence 080906A&B	
RWB-31	RWB-32

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - RW Building - Sampling Date of July 07, 2006	Our Project Number CHEM-06-1422

Sample Identification	RWB-33	Sample Identification	RWB-34
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	07-07-06	Sample Date	07-07-06
Received Date	08-02-06	Received Date	08-02-06
Report Date	08-14-06	Report Date	08-14-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	08-07-06	Preparation Date	08-07-06
Analysis Date	08-10-06	Analysis Date	08-10-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061422-33	Control Number	061422-34

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	90	78-111	Decachlorobiphenyl	93	78-111

NOTES:	MDL = Method Detection Limit, ug/100cm^2 nd = Parameter Not Detected At The MDL

Reviewed By Sel Date 8/14/06

Sequence 080906A&B	
RWB-33	RWB-34

PCBs

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - RW Building - Sampling Date of July 07, 2006	Our Project Number CHEM-06-1422

Sample Identification	RWB-35	**Sample Identification**	RWB-36
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	07-07-06	Sample Date	07-07-06
Received Date	08-02-06	Received Date	08-02-06
Report Date	08-14-06	Report Date	08-14-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	08-07-06	Preparation Date	08-07-06
Analysis Date	08-10-06	Analysis Date	08-10-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061422-35	Control Number	061422-36

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	84	80-110	Decachlorobiphenyl	101	80-110

NOTES:	MDL = Method Detection Limit, ug/100cm^2 nd = Parameter Not Detected At The MDL

Reviewed By AU Date 8/14/06

Sequence 080906A&B	
RWB-35	RWB-36

PCBs

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - RW Building - Sampling Date of July 07, 2006	Our Project Number CHEM-06-1422

Sample Identification	RWB-37	**Sample Identification**	RWB-38
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	07-07-06	Sample Date	07-07-06
Received Date	08-02-06	Received Date	08-02-06
Report Date	08-14-06	Report Date	08-14-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	08-07-06	Preparation Date	08-07-06
Analysis Date	08-10-06	Analysis Date	08-10-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061422-37	Control Number	061422-38

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	101	80-110	Decachlorobiphenyl	102	80-110

NOTES:	MDL = Method Detection Limit, ug/100cm^2 nd = Parameter Not Detected At The MDL

Reviewed By _____ Date 8/14/06

Sequence 080906A&B	
RWB-37	RWB-38

PCBs

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - RW Building - Sampling Date of July 07, 2006	Our Project Number CHEM-06-1422

Sample Identification	RWB-39	**Sample Identification**	RWB-40
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	07-07-06	Sample Date	07-07-06
Received Date	08-02-06	Received Date	08-02-06
Report Date	08-14-06	Report Date	08-14-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	08-07-06	Preparation Date	08-07-06
Analysis Date	08-10-06	Analysis Date	08-10-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061422-39	Control Number	061422-40

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	99	80-110	Decachlorobiphenyl	108	80-110

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Not Detected At The MDL

Reviewed By _____ Date _____

Sequence 080906A&B	
RWB-39	RWB-40

PCBs

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - RW Building - Sampling Date of July 07, 2006	Our Project Number CHEM-06-1422

Sample Identification	RWB-41	Sample Identification	RWB-42
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	07-07-06	Sample Date	07-07-06
Received Date	08-02-06	Received Date	08-02-06
Report Date	08-14-06	Report Date	08-14-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	08-07-06	Preparation Date	08-07-06
Analysis Date	08-10-06	Analysis Date	08-11-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061422-41	Control Number	061422-42

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	94	80-110	Decachlorobiphenyl	96	80-110

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Not Detected At The MDL

Reviewed By AM Date 8/14/06

Sequence 080906A&B	
RWB-41	RWB-42

PCBs

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - RW Building - Sampling Date of July 07, 2006	Our Project Number CHEM-06-1422

Sample Identification	RWB-43	**Sample Identification**	RWB-44
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	07-07-06	Sample Date	07-07-06
Received Date	08-02-06	Received Date	08-02-06
Report Date	08-14-06	Report Date	08-14-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	08-07-06	Preparation Date	08-07-06
Analysis Date	08-11-06	Analysis Date	08-11-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061422-43	Control Number	061422-44

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	101	80-110	Decachlorobiphenyl	95	80-110

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Not Detected At The MDL

Reviewed By Ak Date 8/14/06

Sequence 080906A&B	
RWB-43	RWB-44

PCBs

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – LABORATORY SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: Big Rock Point

PROJECT NUMBER:

SAMPLING TEAM:

DATE SHIPPED: 8-1-07

SITE SKETCH ATTACHED? CIRCLE ONE: YES NO

PAGE 1 OF 4

SEND REPORT TO: CHM HOAGLUND

PHONE: 231 547-8276

CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	ANALYSIS REQUESTED: PCB	REMARKS
RWB-1	7-7-06	1200	—	PCB SMEAR / RW BLDG	—	1	X	06-1422-01
RWB-2		1205						-02
RWB-3		1210						-03
RWB-4		1215						-04
RWB-5		1220						-05
RWB-6		1225						-06
RWB-7		1230						-07
RWB-8		1235						-08
RWB-9		1240						-09
RWB-10		1245						-10
RWB-11		1250						-11
RWB-12		1255						-12 27°C

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
[signature]	8-1-06 1000	
RELINQUISHED BY: (SIGNATURE) fedex	DATE / TIME 8/01/06 1050	RECEIVED BY: (SIGNATURE) [signature]
RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)

COMMENTS

Please send (4) cases of bottles / sample labels and chain of custody's with results. Thank you.

ORIGINAL TO LAB COPY TO CUSTOMER

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – LABORATORY SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: Big Rock Point

PROJECT NUMBER:

SAMPLING TEAM:

DATE SHIPPED: 8-1-06

SITE SKETCH ATTACHED? CIRCLE ONE: YES NO

ANALYSIS REQUESTED

SEND REPORT TO: Wm Hoglund

PHONE: 231 547-8276

CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	PCB							REMARKS
RWB-13	7-7-06	1300	—	PCB SINEAR/RW BLDG.	—	1	X							06-1422-13
RWB-14		1305												-14
RWB-15		1310												-15
RWB-16		1315												-16
RWB-17		1320												-17
RWB-18		1325												-18
RWB-19		1330												-19
RWB-20		1335												-20
RWB-21		1340												-21
RWB-22		1345												-22
RWB-23		1350												-23
RWB-24		1355												-24

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
[signature]	8-1-06 1000	
RELINQUISHED BY: (SIGNATURE) FedEx	DATE / TIME 8/2/06 1030	RECEIVED BY: (SIGNATURE) [signature]
RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)

COMMENTS

SEE PAGE 1

ORIGINAL TO LAB COPY TO CUSTOMER

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – LABORATORY SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: Big Rock Point

PROJECT NUMBER:

SAMPLING TEAM:

DATE SHIPPED: 8-1-06

SITE SKETCH ATTACHED? CIRCLE ONE: YES NO

PAGE 3 OF 4

SEND REPORT TO: Wm Hoagland

PHONE: 231 547-8276

ANALYSIS REQUESTED: PCB

CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	PCB	REMARKS
RWB-25	7-7-06	1400	—	PCB SMEAR/RW BLDG	—	1	X	06-1435-25
RWB-26		1405						-26
RWB-27		1410						-27
RWB-28		1415						-28
RWB-29		1420						-29
RWB-30		1425						-30
RWB-31		1430						-31
RWB-32		1435						-32
RWB-33		1440						-33
RWB-34		1445						-34
RWB-35		1450						-35
RWB-36		1455						-36

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
[signature]	8-1-06 1000	
RELINQUISHED BY: (SIGNATURE) Fed Ex	DATE / TIME 8/01/06 1050	RECEIVED BY: (SIGNATURE) [signature]
RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)

COMMENTS

SEE PAGE 1

ORIGINAL TO LAB COPY TO CUSTOMER

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – LABORATORY SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: Big Rock Point

PROJECT NUMBER:

SAMPLING TEAM:

DATE SHIPPED: 8-1-06

SITE SKETCH ATTACHED? CIRCLE ONE: YES NO

PAGE 4 OF 4

SEND REPORT TO: Wm Hoagland

PHONE: 231 547-8276

CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	ANALYSIS REQUESTED: PCB	REMARKS
RWB-37	7-1-06	1500	—	PCB SMEAR/RW BLDG.	—	1	X	06-1722-37
RWB-38		1505						-38
RWB-39		1510						-39
RWB-40		1515						-40
RWB-41		1520						-41
RWB-42		1525						-42
RWB-43		1530						-43
RWB-44		1535						-44

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
B Hoagland	8-1-06 1000	
RELINQUISHED BY: (SIGNATURE) Fed Ex	DATE / TIME 8/02/06 1050	RECEIVED BY: (SIGNATURE)
RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)

COMMENTS

SEE PAGE 1

ORIGINAL TO LAB COPY TO CUSTOMER

PCB SURVEY PACKAGE CLOSE-OUT CHECKLIST

Package ID Number: 0015 Survey Area: East Parking Lot Rolloff Storage Area

The survey package is legible and complete and the following necessary information is in the package:

1. ✓ Survey Package Cover Sheet
2. ✓ Survey design documentation
3. ✓ Random number generator sheet for sample start location and QC sample numbers.
4. ✓ Completed survey map/data sheet
5. ✓ Completed PCB Survey Data Record Sheet
6. ✓ Copy of the Chain of Custody
7. ✓ Copy of sample results
8. N/A Other documentation:

Completed By: Jodie L. Reed Date: 08/27/06
(Environmental Technician)

Reviewed By: [illegible] Date: 09/27/06
(Environmental Supervisor)

PCB SURVEY PACKAGE COVER SHEET

Package ID Number : 0015	Survey Area: East Parking Lot Rolloff Storage Area (PCB Bulk Product Waste Storage Area)	Size (m^2): 2422.5

Random Samples

# of Field Samples: 40
# of QC samples: 4

Random Start Location: X, Y (11.1m, 27.6m)
Sample Spacing: 7.8 meters

Isolation Controls implemented. List controls:

Area posted as a PCB survey area. Prior to shipment of PCB waste, a portion of this lot was posted as a PCB storage area.

Comments/specific directions:

This area was utilized to store lined, covered rolloff containing (non-radioactive) PCB Bulk Product Wastes staged for shipment for disposal.

Random sample locations determined by random number generator. Sample analysis results acceptance criteria is <1.0 mg/kg for soil samples.

All results met acceptance criteria for soil samples.

SURVEY PACKAGE CLOSURE

Survey Package is authorized for closure. All required reviews are completed and pertinent information is included in package (see Survey Package Close-Out Checklist).

ENV Technician Josie L. Reed Date: 08/27/06

ENV Supervisor: [illegible] Date: 09/27/06

Package ID Number: 0015

PCB SURVEY DATA RECORD SHEET

Survey Area: East Rolloff Storage Area	Size (m^2): 2422.5	# of Samples: 44

Sample ID Number	Sample Location (X)(Y)	Sample Result (ppm)	Sample ID Number	Sample Location (X)(Y)	Sample Result (ppm)
EPL-PCB-S1		nd	EPL-PCB-S27		nd
EPL-PCB-S2		nd	EPL-PCB-S28		nd
EPL-PCB-S3		nd	EPL-PCB-S29		nd
EPL-PCB-S4		nd	EPL-PCB-S30		nd
EPL-PCB-S5		nd	EPL-PCB-S31		nd
EPL-PCB-S6		nd	EPL-PCB-S32		nd
EPL-PCB-S7		nd	EPL-PCB-S33		nd
EPL-PCB-S8		nd	EPL-PCB-S34		nd
EPL-PCB-S9		nd	EPL-PCB-S35		nd
EPL-PCB-S10		nd	EPL-PCB-S36		nd
EPL-PCB-S11		nd	EPL-PCB-S37		nd
EPL-PCB-S12		nd	EPL-PCB-S38		nd
EPL-PCB-S13		nd	EPL-PCB-S39		nd
EPL-PCB-S14		nd	EPL-PCB-S40		nd
EPL-PCB-S15		nd	EPL-PCB-S41		nd
EPL-PCB-S16		nd	EPL-PCB-S42		nd
EPL-PCB-S17		nd	EPL-PCB-S43	Field blank	nd
EPL-PCB-S18		nd	EPL-PCB-S44	Field blank	nd
EPL-PCB-S19		nd			
EPL-PCB-S20		nd			
EPL-PCB-S21		nd			
EPL-PCB-S22		nd			
EPL-PCB-S23		nd			
EPL-PCB-S24		nd			
EPL-PCB-S25		nd			
EPL-PCB-S26		nd			

Performed By: Joshua L. Reed (Survey Technician) Date: 09/27/06

Reviewed By: [illegible] (Environmental Supervisor) Date: 09/27/06

PCB Storage Area Survey Design - East Parking Lot

Survey Area Dimensions:

Xmax =	42.5 m
Ymax =	57.0 m
Area =	2422.5 sq. m

Randon Start Location:

X =	11.1 m
Y =	27.6 m

Sample Spacing:

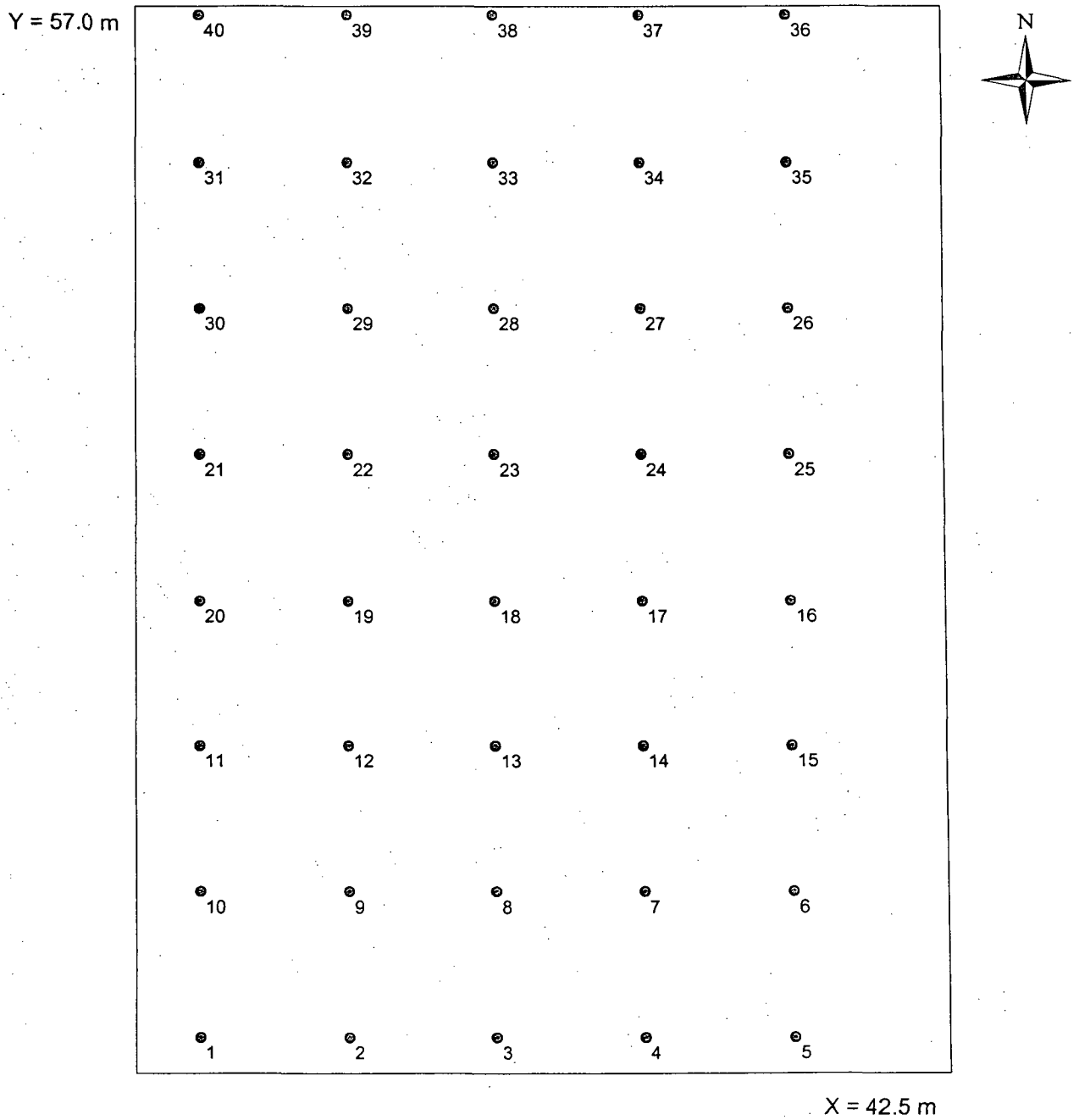
L=	(Area / No Samples) ^1/2
L=	7.8 m

Random X-Y start points		**QC Samples**
X	0.261847121	12
		30
Y	0.484093126	37
		39
		34
		7

SURVEY DESIGN: _____ DATE: 9/5/06

REVIEWED BY: Jodie L Reed DATE: 09/25/06

PCB Sample Locations
East Parking Lot



* Random Start Location = Sample # 19
** Sample Spacing = 7.8 meters

CONSUMERS ENERGY Memorandum

To: TGoble, Big Rock

From: GLCattell, T-254, Jackson

Date: September 22, 2006

Subject: SAMPLES FOR DETERMINATION OF PCBs
- Soils
- Parking Lot East
- Sampling Date of September 05, 2006

CC: WMHoaglund, Big Rock

File Index: 520617-781-601

Fourty-four samples were received on September 07 for determination of polychlorinated biphenyls (PCBs). All determinations were performed by the Chemistry Section of Laboratory Services and the results are attached for your review.

Analytical Methods
Unless otherwise specified, all methods are from SW-846, Test Methods For Evaluating Solid Waste - Physical / Chemical Methods, USEPA.

Polychlorinated Biphenyls
Sample Extraction: Method 3545, Pressurized Fluid Extraction.
Extract Concentration: Nitrogen Evaporation Technique, Exhibit D, Aroclors, Section 10. Multi-Media, Multi-Concentration Organics Analysis; SOM01.X; USEPA.
Extract Cleanup: Method 3620, Florisil Cleanup & Method 3665A, Sulfuric Acid/Permanganate Cleanup.
Analysis: Method 8082, Polychlorinated Biphenyls by Gas Chromatography.
Percent Solids (Dry Weight): Section 7.2 of Method 3545, Determination of Percent Dry Weight, Pressurized Fluid Extraction.

Analytical Remarks & Summary
{a} All samples are reported as 'nd' (not detected) for all Aroclors.
{b} Three surrogate spike recoveries are not within the acceptance criteria (over recovery). Since PCBs were not detected at the TDL, there is no concern. The affected samples are: EPL-21, EPL-24 and EPL-25.

Report Package Contents
The report package consists of 27 pages: 1 cover page, 22 pages of Analytical Results & 4 Chain of Custody page.

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Parking Lot East	Our Project Number CHEM-06-1601

Sample Identification	EPL-1	**Sample Identification**	EPL-2
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	09-05-06	Sample Date	09-05-06
Received Date	09-07-06	Received Date	09-07-06
Report Date	09-22-06	Report Date	09-22-06
Percent Solids, % w/w	89	Percent Solids, % w/w	93
Preparation Date	09-12-06	Preparation Date	09-12-06
Analysis Date	09-15-06	Analysis Date	09-15-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061601-01	Control Number	061601-02

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	100	84-122	Decachlorobiphenyl	97	84-122

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By AU Date 92206 Data File 091506A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Parking Lot East	Our Project Number CHEM-06-1601

Sample Identification	EPL-3	Sample Identification	EPL-4
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	09-05-06	Sample Date	09-05-06
Received Date	09-07-06	Received Date	09-07-06
Report Date	09-22-06	Report Date	09-22-06
Percent Solids, % w/w	93	Percent Solids, % w/w	96
Preparation Date	09-12-06	Preparation Date	09-12-06
Analysis Date	09-15-06	Analysis Date	09-15-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061601-03	Control Number	061601-04

TARGET PCBs, 8082			TARGET PCBs, 8082		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	106	84-122	Decachlorobiphenyl	105	84-122

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By AM Date 92202 Data File 091506A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Parking Lot East	Our Project Number CHEM-06-1601

Sample Identification	EPL-5	**Sample Identification**	EPL-6
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	09-05-06	Sample Date	09-05-06
Received Date	09-07-06	Received Date	09-07-06
Report Date	09-22-06	Report Date	09-22-06
Percent Solids, % w/w	98	Percent Solids, % w/w	95
Preparation Date	09-12-06	Preparation Date	09-12-06
Analysis Date	09-16-06	Analysis Date	09-16-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061601-05	Control Number	061601-06

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	106	84-122	Decachlorobiphenyl	99	84-122

NOTES:

TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date 9-22-06 | Data File 091506A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Parking Lot East	Our Project Number CHEM-06-1601

Sample Identification	EPL-7	Sample Identification	EPL-8
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	09-05-06	Sample Date	09-05-06
Received Date	09-07-06	Received Date	09-07-06
Report Date	09-22-06	Report Date	09-22-06
Percent Solids, % w/w	99	Percent Solids, % w/w	96
Preparation Date	09-12-06	Preparation Date	09-12-06
Analysis Date	09-16-06	Analysis Date	09-16-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061601-07	Control Number	061601-08

TARGET PCBs, 8082			TARGET PCBs, 8082		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	105	84-122	Decachlorobiphenyl	99	84-122

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date _____ Data File 091506A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Parking Lot East	Our Project Number CHEM-06-1601

Sample Identification	EPL-9	Sample Identification	EPL-10
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	09-05-06	Sample Date	09-05-06
Received Date	09-07-06	Received Date	09-07-06
Report Date	09-22-06	Report Date	09-22-06
Percent Solids, % w/w	96	Percent Solids, % w/w	96
Preparation Date	09-12-06	Preparation Date	09-12-06
Analysis Date	09-16-06	Analysis Date	09-16-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061601-09	Control Number	061601-10

TARGET PCBs, 8082			TARGET PCBs, 8082		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	107	84-122	Decachlorobiphenyl	102	84-122

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By AM Date 9-22-06 Data File 091506A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Parking Lot East	Our Project Number CHEM-06-1601

Sample Identification	EPL-11	**Sample Identification**	EPL-12
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	09-05-06	Sample Date	09-05-06
Received Date	09-07-06	Received Date	09-07-06
Report Date	09-22-06	Report Date	09-22-06
Percent Solids, % w/w	95	Percent Solids, % w/w	98
Preparation Date	09-12-06	Preparation Date	09-12-06
Analysis Date	09-16-06	Analysis Date	09-16-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061601-11	Control Number	061601-12

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	--	PCB-1016	nd	--
PCB-1221	nd	--	PCB-1221	nd	--
PCB-1232	nd	--	PCB-1232	nd	--
PCB-1242	nd	--	PCB-1242	nd	--
PCB-1248	nd	--	PCB-1248	nd	--
PCB-1254	nd	--	PCB-1254	nd	--
PCB-1260	nd	--	PCB-1260	nd	--
PCB-1262	nd	--	PCB-1262	nd	--
PCB-1268	nd	--	PCB-1268	nd	--
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	118	84-122	Decachlorobiphenyl	106	84-122

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By SM Date 9/22/06 Data File 091506A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Parking Lot East	Our Project Number CHEM-06-1601

Sample Identification	EPL-13	**Sample Identification**	EPL-14
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	09-05-06	Sample Date	09-05-06
Received Date	09-07-06	Received Date	09-07-06
Report Date	09-22-06	Report Date	09-22-06
Percent Solids, % w/w	97	Percent Solids, % w/w	98
Preparation Date	09-12-06	Preparation Date	09-12-06
Analysis Date	09-16-06	Analysis Date	09-16-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061601-13	Control Number	061601-14

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	111	84-122	Decachlorobiphenyl	108	84-122

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date 9-22-06 | Data File 091506A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Parking Lot East	Our Project Number CHEM-06-1601

Sample Identification	EPL-15	Sample Identification	EPL-16
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	09-05-06	Sample Date	09-05-06
Received Date	09-07-06	Received Date	09-07-06
Report Date	09-22-06	Report Date	09-22-06
Percent Solids, % w/w	99	Percent Solids, % w/w	99
Preparation Date	09-12-06	Preparation Date	09-12-06
Analysis Date	09-16-06	Analysis Date	09-16-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061601-15	Control Number	061601-16

TARGET PCBs, 8082			TARGET PCBs, 8082		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	107	84-122	Decachlorobiphenyl	110	84-122

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By SU Date 92206 Data File 091506A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Parking Lot East	Our Project Number CHEM-06-1601

Sample Identification	EPL-17	Sample Identification	EPL-18
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	09-05-06	Sample Date	09-05-06
Received Date	09-07-06	Received Date	09-07-06
Report Date	09-22-06	Report Date	09-22-06
Percent Solids, % w/w	99	Percent Solids, % w/w	99
Preparation Date	09-12-06	Preparation Date	09-12-06
Analysis Date	09-16-06	Analysis Date	09-16-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061601-17	Control Number	061601-18

TARGET PCBs, 8082			TARGET PCBs, 8082		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	102	84-122	Decachlorobiphenyl	117	84-122

NOTES:

TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By SM Date 9-22-06 Data File 091506A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Parking Lot East	Our Project Number CHEM-06-1601

Sample Identification	EPL-19	**Sample Identification**	EPL-20
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	09-05-06	Sample Date	09-05-06
Received Date	09-07-06	Received Date	09-07-06
Report Date	09-22-06	Report Date	09-22-06
Percent Solids, % w/w	99	Percent Solids, % w/w	99
Preparation Date	09-12-06	Preparation Date	09-12-06
Analysis Date	09-16-06	Analysis Date	09-16-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061601-19	Control Number	061601-20

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	111	84-122	Decachlorobiphenyl	110	84-122

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By AM Date 9/27/06 Data File 091506A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Parking Lot East	Our Project Number CHEM-06-1601

Sample Identification	EPL-21	**Sample Identification**	EPL-22
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	09-05-06	Sample Date	09-05-06
Received Date	09-07-06	Received Date	09-07-06
Report Date	09-22-06	Report Date	09-22-06
Percent Solids, % w/w	98	Percent Solids, % w/w	100
Preparation Date	09-12-06	Preparation Date	09-12-06
Analysis Date	09-16-06	Analysis Date	09-16-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061601-21	Control Number	061601-22

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	123 *	84-122	Decachlorobiphenyl	117	84-122

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL. * = Recovery Higher Than Expected.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By AM Date 9/20/06 Data File 091506A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Parking Lot East	Our Project Number CHEM-06-1601

Sample Identification	EPL-23	**Sample Identification**	EPL-24
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	09-05-06	Sample Date	09-05-06
Received Date	09-07-06	Received Date	09-07-06
Report Date	09-22-06	Report Date	09-22-06
Percent Solids, % w/w	99	Percent Solids, % w/w	98
Preparation Date	09-12-06	Preparation Date	09-12-06
Analysis Date	09-16-06	Analysis Date	09-16-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061601-23	Control Number	061601-24

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	--	PCB-1016	nd	--
PCB-1221	nd	--	PCB-1221	nd	--
PCB-1232	nd	--	PCB-1232	nd	--
PCB-1242	nd	--	PCB-1242	nd	--
PCB-1248	nd	--	PCB-1248	nd	--
PCB-1254	nd	--	PCB-1254	nd	--
PCB-1260	nd	--	PCB-1260	nd	--
PCB-1262	nd	--	PCB-1262	nd	--
PCB-1268	nd	--	PCB-1268	nd	--
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	119	84-122	Decachlorobiphenyl	129 *	84-122

NOTES:

TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL. * = Recovery Higher Than Expected.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By AM Date 9/20/06 Data File 091506A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Parking Lot East	Our Project Number CHEM-06-1601

Sample Identification	EPL-25	**Sample Identification**	EPL-26
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	09-05-06	Sample Date	09-05-06
Received Date	09-07-06	Received Date	09-07-06
Report Date	09-22-06	Report Date	09-22-06
Percent Solids, % w/w	98	Percent Solids, % w/w	95
Preparation Date	09-12-06	Preparation Date	09-12-06
Analysis Date	09-15-06	Analysis Date	09-15-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061601-25	Control Number	061601-26

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	124 *	84-122	Decachlorobiphenyl	113	84-122

NOTES:

TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL. * = Recovery Higher Than Expected.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date _____ Data File 091506A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Parking Lot East	Our Project Number CHEM-06-1601

Sample Identification	EPL-27	Sample Identification	EPL-28
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	09-05-06	Sample Date	09-05-06
Received Date	09-07-06	Received Date	09-07-06
Report Date	09-22-06	Report Date	09-22-06
Percent Solids, % w/w	98	Percent Solids, % w/w	99
Preparation Date	09-12-06	Preparation Date	09-12-06
Analysis Date	09-15-06	Analysis Date	09-15-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061601-27	Control Number	061601-28

TARGET PCBs, 8082			TARGET PCBs, 8082		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	120	84-122	Decachlorobiphenyl	110	84-122

NOTES:

TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date 9-22-06 | Data File 091506A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Parking Lot East	Our Project Number CHEM-06-1601

Sample Identification	EPL-29	**Sample Identification**	EPL-30
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	09-05-06	Sample Date	09-05-06
Received Date	09-07-06	Received Date	09-07-06
Report Date	09-22-06	Report Date	09-22-06
Percent Solids, % w/w	96	Percent Solids, % w/w	97
Preparation Date	09-12-06	Preparation Date	09-12-06
Analysis Date	09-15-06	Analysis Date	09-15-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061601-29	Control Number	061601-30

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	116	84-122	Decachlorobiphenyl	114	84-122

NOTES:

TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By AM Date 9-25-06 Data File 091506A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Parking Lot East	Our Project Number CHEM-06-1601

Sample Identification	EPL-31	**Sample Identification**	EPL-32
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	09-05-06	Sample Date	09-05-06
Received Date	09-07-06	Received Date	09-07-06
Report Date	09-22-06	Report Date	09-22-06
Percent Solids, % w/w	92	Percent Solids, % w/w	96
Preparation Date	09-12-06	Preparation Date	09-12-06
Analysis Date	09-17-06	Analysis Date	09-17-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061601-31	Control Number	061601-32

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	107	84-122	Decachlorobiphenyl	109	84-122

NOTES:

TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By AU Date 9/22/06 Data File 091506A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Parking Lot East	Our Project Number CHEM-06-1601

Sample Identification	EPL-33	**Sample Identification**	EPL-34
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	09-05-06	Sample Date	09-05-06
Received Date	09-07-06	Received Date	09-07-06
Report Date	09-22-06	Report Date	09-22-06
Percent Solids, % w/w	96	Percent Solids, % w/w	97
Preparation Date	09-12-06	Preparation Date	09-12-06
Analysis Date	09-17-06	Analysis Date	09-17-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061601-33	Control Number	061601-34

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	109	84-122	Decachlorobiphenyl	109	84-122

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By AU Date 9-20-06 Data File 091506A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Parking Lot East	Our Project Number CHEM-06-1601

Sample Identification	EPL-35	**Sample Identification**	EPL-36
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	09-05-06	Sample Date	09-05-06
Received Date	09-07-06	Received Date	09-07-06
Report Date	09-22-06	Report Date	09-22-06
Percent Solids, % w/w	98	Percent Solids, % w/w	93
Preparation Date	09-12-06	Preparation Date	09-12-06
Analysis Date	09-17-06	Analysis Date	09-17-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061601-35	Control Number	061601-36

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	110	84-122	Decachlorobiphenyl	110	84-122

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date _____ Data File 091506A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Parking Lot East	Our Project Number CHEM-06-1601

Sample Identification	EPL-37	**Sample Identification**	EPL-38
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	09-05-06	Sample Date	09-05-06
Received Date	09-07-06	Received Date	09-07-06
Report Date	09-22-06	Report Date	09-22-06
Percent Solids, % w/w	92	Percent Solids, % w/w	95
Preparation Date	09-12-06	Preparation Date	09-12-06
Analysis Date	09-17-06	Analysis Date	09-17-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061601-37	Control Number	061601-38

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	104	84-122	Decachlorobiphenyl	105	84-122

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By AM Date 9-22-06 Data File 091506A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Parking Lot East	Our Project Number CHEM-06-1601

Sample Identification	EPL-39	**Sample Identification**	EPL-40
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	09-05-06	Sample Date	09-05-06
Received Date	09-07-06	Received Date	09-07-06
Report Date	09-22-06	Report Date	09-22-06
Percent Solids, % w/w	97	Percent Solids, % w/w	93
Preparation Date	09-12-06	Preparation Date	09-12-06
Analysis Date	09-18-06	Analysis Date	09-18-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061601-39	Control Number	061601-40

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	109	84-122	Decachlorobiphenyl	112	84-122

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date 9-22-06 | Data File 091506A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Parking Lot East	Our Project Number CHEM-06-1601

Sample Identification	EPL-41	**Sample Identification**	EPL-42
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	09-05-06	Sample Date	09-05-06
Received Date	09-07-06	Received Date	09-07-06
Report Date	09-22-06	Report Date	09-22-06
Percent Solids, % w/w	95	Percent Solids, % w/w	96
Preparation Date	09-12-06	Preparation Date	09-12-06
Analysis Date	09-18-06	Analysis Date	09-18-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061601-41	Control Number	061601-42

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	117	84-122	Decachlorobiphenyl	109	84-122

NOTES:

TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date 9-22-06 | Data File 091506A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Parking Lot East	Our Project Number CHEM-06-1601

Sample Identification	EPL-43	**Sample Identification**	EPL-44
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	09-05-06	Sample Date	09-05-06
Received Date	09-07-06	Received Date	09-07-06
Report Date	09-22-06	Report Date	09-22-06
Percent Solids, % w/w	94	Percent Solids, % w/w	97
Preparation Date	09-12-06	Preparation Date	09-12-06
Analysis Date	09-18-06	Analysis Date	09-18-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061601-43	Control Number	061601-44

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	110	84-122	Decachlorobiphenyl	109	84-122

NOTES:

TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By AM Date 9 22 06 Data File 091506A

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – LABORATORY SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: Big Rock Point

PROJECT NUMBER:

SAMPLING TEAM:

DATE SHIPPED: 9-6-06

SITE SKETCH ATTACHED? CIRCLE ONE: YES / NO

PAGE 1 OF 4

SEND REPORT TO: Wm Gronglund

PHONE: 231 547-8276

ANALYSIS REQUESTED: PCB Soil

CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	PCB Soil							REMARKS
EPL-1	9-5-06	1205	Soil	PARKING LOT EAST	3"	1	✓							06-1661-01
EPL-2		1210					✓							-02
EPL-3		1215					✓							-03
EPL-4		1220					✓							-04
EPL-5		1225					✓							-05
EPL-6		1230					✓							-06
EPL-7		1235					✓							-07
EPL-8		1240					✓							-08
EPL-9		1245					✓							-09
EPL-10		1250					✓							-10
EPL-11		1255					✓							-11
EPL-12		1300					✓							-12

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
Wm Gronglund	9-6-06 / 1100	
FedEx	9-07-06 1100	

COMMENTS: 21°C Blue Ice

ORIGINAL TO LAB COPY TO CUSTOMER

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – LABORATORY SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: BIG ROCK POINT

PROJECT NUMBER:

SAMPLING TEAM:

DATE SHIPPED: 9-6-06

SITE SKETCH ATTACHED? CIRCLE ONE: YES NO

PAGE 2 OF 4

SEND REPORT TO: Wm Hoagland

PHONE: 231 547-8276

CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	ANALYSIS REQUESTED: PCB SOIL	REMARKS
EPL-13	9-5-06	1305	SOIL	PARKING LOT EAST	3"	1	✓	06-1601-13
EPL-14		1310					✓	-14
EPL-15		1315					✓	-15
EPL-16		1320					✓	-16
EPL-17		1325					✓	-17
EPL-18		1330					✓	-18
EPL-19		1335					✓	-19
EPL-20		1340					✓	-20
EPL-21		1345					✓	-21
EPL-22		1350					✓	-22
EPL-23		1355					✓	-23
EPL-24		1400					✓	-24

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
Wm Hoagland	9-6-06 / 1100	
FedEx	9-7-06 1100	M Lutto

COMMENTS

ORIGINAL TO LAB COPY TO CUSTOMER

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – LABORATORY SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: Big Rock Point

PROJECT NUMBER:

SAMPLING TEAM:

DATE SHIPPED: 9-6-06

SITE SKETCH ATTACHED? CIRCLE ONE: YES NO

PAGE 3 OF 4

SEND REPORT TO: Wm Hoagglund

PHONE 231 547-8276

CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	ANALYSIS REQUESTED: PCB Soil	REMARKS
EPL-25	9-5-06	1405	Soil	Parking Lot East	3"	1	✓	06-1600-25
EPL-26		1410					✓	-26
EPL-27		1415					✓	-27
EPL-28		1420					✓	-28
EPL-29		1425					✓	-29
EPL-30		1430					✓	-30
EPL-31		1435					✓	-31
EPL-32		1440					✓	-32
EPL-33		1445					✓	-33
EPL-34		1450					✓	-34
EPL-35		1455					✓	-35
EPL-36		1500					✓	-36

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
Wm Hoagglund	9-6-06 / 1100	
RELINQUISHED BY: (SIGNATURE) Fedex	DATE / TIME 9-07-06 1100	RECEIVED BY: (SIGNATURE)
RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)

COMMENTS

ORIGINAL TO LAB COPY TO CUSTOMER

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – LABORATORY SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: BIG ROCK POINT

PROJECT NUMBER:

SAMPLING TEAM:

DATE SHIPPED: 9-6-06

SITE SKETCH ATTACHED? CIRCLE ONE: YES NO

PAGE 4 OF 4

SEND REPORT TO: Chris Hoagglund

PHONE: 231 547-8276

CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	ANALYSIS REQUESTED: PCB Soil	REMARKS
EPL-37	9-5-06	1505	SOIL	PARKING LOT EAST	3"	1	✓	06-1601-37
EPL-38		1510					✓	-38
EPL-39		1515					✓	-39
EPL-40		1520					✓	-40
EPL-41		1525					✓	-41
EPL-42		1530					✓	-42
EPL-43		1535					✓	-43
EPL-44		1540					✓	-44

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
Chris Hoagglund	9-6-06 / 1100	
FedEx	9-7-06 1100	

COMMENTS

ORIGINAL TO LAB COPY TO CUSTOMER

PCB SURVEY PACKAGE CLOSE-OUT CHECKLIST

Package ID Number: 0016 Survey Area: RW Yard Storage Area

The survey package is legible and complete and the following necessary information is in the package:

1. ✓ Survey Package Cover Sheet
2. ✓ Survey design documentation
3. ✓ Random number generator sheet for sample start location and QC sample numbers.
4. ✓ Completed survey map/data sheet
5. ✓ Completed PCB Survey Data Record Sheet
6. ✓ Copy of the Chain of Custody
7. ✓ Copy of sample results
8. _____ Other documentation:

Completed By: Jodie L Reed Date: 09-28-06
(Environmental Technician)

Reviewed By: [illegible] Date: 10-18-06
(Environmental Supervisor)

PCB SURVEY PACKAGE COVER SHEET

Package ID Number : 0016	Survey Area: RW Yard (PCB Bulk Product Waste Storage Area)	Size (m^2): 1650.0

Random Samples

# of Field Samples: 40
# of QC samples: 4

Random Start Location: X, Y (23.3 m, 58.3m)
Sample Spacing: 6.4 meters

Isolation Controls implemented [1] List controls:

Area posted as a PCB survey area. Prior to shipment of PCB waste, a portion of this lot was posted as a PCB storage area.

Comments/specific directions:

This area was utilized to store lined radioactive, PCB Bulk Product Waste containers staged for shipment for disposal.

Random sample locations determined by random number generator. Sample analysis results acceptance criteria is <1.0 mg/kg for soil samples.

All results met acceptance criteria for soil samples.

SURVEY PACKAGE CLOSURE

Survey Package is authorized for closure. All required reviews are completed and pertinent information is included in package (see Survey Package Close-Out Checklist).

ENV Technician Jackie L Reed Date: 09-28-06

ENV Supervisor: [illegible] Date: 10-18-06

Package ID Number: 0016

PCB SURVEY DATA RECORD SHEET

Survey Area: RW Yard Storage Area	Size (m^2): 2422.5	# of Samples: 44

Sample ID Number	Sample Location (X)(Y)	Sample Result (ppm)	Sample ID Number	Sample Location (X)(Y)	Sample Result (ppm)
RWY-PCB-S1	(4.1, 7.1)	nd	RWY-PCB-S27	(16.9, 45.5)	nd
RWY-PCB-S2	(10.5, 7.1)	nd	RWY-PCB-S28	(23.3, 45.5)	nd
RWY-PCB-S3	(16.9, 7.1)	nd	RWY-PCB-S29	(23.3, 51.9)	nd
RWY-PCB-S4	(23.3, 7.1)	nd	RWY-PCB-S30	(16.9, 51.9)	nd
RWY-PCB-S5	(23.3, 13.5)	nd	RWY-PCB-S31	(10.5, 51.9)	nd
RWY-PCB-S6	(16.9, 13.5)	nd	RWY-PCB-S32	(4.1, 51.9)	nd
RWY-PCB-S7	(10.5, 13.5)	nd	RWY-PCB-S33	(4.1, 58.3)	nd
RWY-PCB-S8	(4.1, 13.5)	nd	RWY-PCB-S34	(10.5, 58.3)	nd
RWY-PCB-S9	(4.1, 19.9)	nd	RWY-PCB-S35	(16.9, 58.3)	nd
RWY-PCB-S10	(10.5, 19.9)	nd	RWY-PCB-S36	(23.3, 58.3)	nd
RWY-PCB-S11	(16.9, 19.9)	nd	RWY-PCB-S37	(23.3, 64.7)	nd
RWY-PCB-S12	(23.3, 19.9)	nd	RWY-PCB-S38	(16.9, 64.7)	nd
RWY-PCB-S13	(23.3, 26.3)	nd	RWY-PCB-S39	(10.5, 64.7)	nd
RWY-PCB-S14	(16.9, 26.3)	nd	RWY-PCB-S40	(4.1, 64.7)	nd
RWY-PCB-S15	(10.5, 26.3)	nd	RWY-PCB-S41	(10.5, 7.1)	nd
RWY-PCB-S16	(4.1, 26.3)	nd	RWY-PCB-S42	(4.1, 51.9)	nd
RWY-PCB-S17	(4.1, 32.7)	nd	RWY-PCB-S43	(10.5, 13.5)	nd
RWY-PCB-S18	(10.5, 32.7)	nd	RWY-PCB-S44	(10.5, 51.9)	nd
RWY-PCB-S19	(16.9, 32.7)	nd			
RWY-PCB-S20	(23.3, 32.7)	nd			
RWY-PCB-S21	(23.3, 39.1)	nd			
RWY-PCB-S22	(16.9, 39.1)	nd			
RWY-PCB-S23	(10.5, 39.1)	nd			
RWY-PCB-S24	(4.1, 39.1)	nd			
RWY-PCB-S25	(4.1, 45.5)	nd			
RWY-PCB-S26	(10.5, 45.5)	nd			

Performed By: Joshua L Reed (Survey Technician) Date: 09-28-06

Reviewed By: [illegible] (Environmental Supervisor) Date: 10-18-06

CONSUMERS ENERGY Memorandum

To: TGoble, Big Rock

From: GLCattell, T-254, Jackson

Gordon Cattell Digitally signed by Gordon Cattell DN: cn=Gordon Cattell, c=US, o=Consumers Energy Co, ou=Trail St Chem Lab, email=gcattell@cmsenergy.com Date: 2006.09.30 16:56:50 -04'00'

Date: September 30, 2006

Subject: SAMPLES FOR DETERMINATION OF PCBs
- Soils
- Radwaste Yard
- Sampling Date of September 07, 2006

CC: WMHoaglund, Big Rock

File Index: 520617-781-611

Fourty-four samples were received on September 08 for determination of polychlorinated biphenyls (PCBs). All determinations were performed by the Chemistry Section of Laboratory Services and the results are attached for your review.

Analytical Methods
Unless otherwise specified, all methods are from SW-846, Test Methods For Evaluating Solid Waste - Physical / Chemical Methods, USEPA.

Polychlorinated Biphenyls
Sample Extraction: Method 3545, Pressurized Fluid Extraction.
Extract Concentration: Nitrogen Evaporation Technique, Exhibit D, Aroclors, Section 10. Multi-Media, Multi-Concentration Organics Analysis; SOM01.X; USEPA.
Extract Cleanup: Method 3620, Florisil Cleanup & Method 3665A, Sulfuric Acid/Permanganate Cleanup.
Analysis: Method 8082, Polychlorinated Biphenyls by Gas Chromatography.
Percent Solids (Dry Weight): Section 7.2 of Method 3545, Determination of Percent Dry Weight, Pressurized Fluid Extraction.

Analytical Remarks & Summary
{a} All samples are reported as 'nd' (not detected) for all Aroclors.
{b} Two surrogate spike recoveries are not within the acceptance criteria (under recovery). The affected samples are: RWY-33 & RWY-41.
{c} The samples were not shipped cold.

Report Package Contents
The report package consists of 27 pages: 1 cover page, 22 pages of Analytical Results & 4 Chain of Custody pages.

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Radwaste Yard	Our Project Number CHEM-06-1611

Sample Identification	RWY-1	Sample Identification	RWY-2
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	09-07-06	Sample Date	09-07-06
Received Date	09-08-06	Received Date	09-08-06
Report Date	09-30-06	Report Date	09-30-06
Percent Solids, % w/w	97	Percent Solids, % w/w	96
Preparation Date	09-15-06	Preparation Date	09-15-06
Analysis Date	09-27-06	Analysis Date	09-27-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061611-01	Control Number	061611-02

TARGET PCBs, 8082

Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -
PCB-1221	nd	- -
PCB-1232	nd	- -
PCB-1242	nd	- -
PCB-1248	nd	- -
PCB-1254	nd	- -
PCB-1260	nd	- -
PCB-1262	nd	- -
PCB-1268	nd	- -
Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	105	84-122

TARGET PCBs, 8082

Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -
PCB-1221	nd	- -
PCB-1232	nd	- -
PCB-1242	nd	- -
PCB-1248	nd	- -
PCB-1254	nd	- -
PCB-1260	nd	- -
PCB-1262	nd	- -
PCB-1268	nd	- -
Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	104	84-122

NOTES:

TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date _____ Data File 092706A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Radwaste Yard	Our Project Number CHEM-06-1611

Sample Identification	RWY-3	Sample Identification	RWY-4
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	09-07-06	Sample Date	09-07-06
Received Date	09-08-06	Received Date	09-08-06
Report Date	09-30-06	Report Date	09-30-06
Percent Solids, % w/w	98	Percent Solids, % w/w	97
Preparation Date	09-15-06	Preparation Date	09-15-06
Analysis Date	09-27-06	Analysis Date	09-27-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061611-03	Control Number	061611-04

TARGET PCBs, 8082			TARGET PCBs, 8082		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	101	84-122	Decachlorobiphenyl	108	84-122

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date _____ Data File 091506A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Radwaste Yard	Our Project Number CHEM-06-1611

Sample Identification	RWY-5	**Sample Identification**	RWY-6
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	09-07-06	Sample Date	09-07-06
Received Date	09-08-06	Received Date	09-08-06
Report Date	09-30-06	Report Date	09-30-06
Percent Solids, % w/w	97	Percent Solids, % w/w	97
Preparation Date	09-15-06	Preparation Date	09-15-06
Analysis Date	09-27-06	Analysis Date	09-27-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061611-05	Control Number	061611-06

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	104	84-122	Decachlorobiphenyl	105	84-122

NOTES:	TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1. nd = Parameter Not Detected At The TDL. Results Are Reported On The Dry Weight Basis. Confirming Analytical Column Was Not Required.

Reviewed By _____ Date _____ Data File 091506A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Radwaste Yard	Our Project Number CHEM-06-1611

Sample Identification	RWY-7	Sample Identification	RWY-8
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	09-07-06	Sample Date	09-07-06
Received Date	09-08-06	Received Date	09-08-06
Report Date	09-30-06	Report Date	09-30-06
Percent Solids, % w/w	98	Percent Solids, % w/w	99
Preparation Date	09-15-06	Preparation Date	09-15-06
Analysis Date	09-27-06	Analysis Date	09-27-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061611-07	Control Number	061611-08

TARGET PCBs, 8082			TARGET PCBs, 8082		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	99	84-122	Decachlorobiphenyl	106	84-122

NOTES:

TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date _____ Data File 091506A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Radwaste Yard	Our Project Number CHEM-06-1611

Sample Identification	RWY-9	Sample Identification	RWY-10
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	09-07-06	Sample Date	09-07-06
Received Date	09-08-06	Received Date	09-08-06
Report Date	09-30-06	Report Date	09-30-06
Percent Solids, % w/w	96	Percent Solids, % w/w	98
Preparation Date	09-15-06	Preparation Date	09-15-06
Analysis Date	09-27-06	Analysis Date	09-27-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061611-09	Control Number	061611-10

TARGET PCBs, 8082			TARGET PCBs, 8082		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	92	84-122	Decachlorobiphenyl	101	84-122

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date _____ Data File 091506A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Radwaste Yard	Our Project Number CHEM-06-1611

Sample Identification	RWY-11	Sample Identification	RWY-12
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	09-07-06	Sample Date	09-07-06
Received Date	09-08-06	Received Date	09-08-06
Report Date	09-30-06	Report Date	09-30-06
Percent Solids, % w/w	98	Percent Solids, % w/w	98
Preparation Date	09-15-06	Preparation Date	09-15-06
Analysis Date	09-27-06	Analysis Date	09-27-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061611-11	Control Number	061611-12

TARGET PCBs, 8082			TARGET PCBs, 8082		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	91	84-122	Decachlorobiphenyl	93	84-122

NOTES:

TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date _____ Data File 091506A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Radwaste Yard	Our Project Number CHEM-06-1611

Sample Identification	RWY-13	Sample Identification	RWY-14
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	09-07-06	Sample Date	09-07-06
Received Date	09-08-06	Received Date	09-08-06
Report Date	09-30-06	Report Date	09-30-06
Percent Solids, % w/w	97	Percent Solids, % w/w	97
Preparation Date	09-15-06	Preparation Date	09-15-06
Analysis Date	09-27-06	Analysis Date	09-27-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061611-13	Control Number	061611-14

TARGET PCBs, 8082			TARGET PCBs, 8082		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	91	84-122	Decachlorobiphenyl	95	84-122

NOTES:

TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date _____ Data File 092706A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Radwaste Yard	Our Project Number CHEM-06-1611

Sample Identification	RWY-15	Sample Identification	RWY-16
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	09-07-06	Sample Date	09-07-06
Received Date	09-08-06	Received Date	09-08-06
Report Date	09-30-06	Report Date	09-30-06
Percent Solids, % w/w	99	Percent Solids, % w/w	96
Preparation Date	09-15-06	Preparation Date	09-15-06
Analysis Date	09-27-06	Analysis Date	09-27-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061611-15	Control Number	061611-16

TARGET PCBs, 8082			TARGET PCBs, 8082		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	96	84-122	Decachlorobiphenyl	95	84-122

NOTES:

TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date _____ Data File 091506A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Radwaste Yard	Our Project Number CHEM-06-1611

Sample Identification	RWY-17	Sample Identification	RWY-18
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	09-07-06	Sample Date	09-07-06
Received Date	09-08-06	Received Date	09-08-06
Report Date	09-30-06	Report Date	09-30-06
Percent Solids, % w/w	95	Percent Solids, % w/w	95
Preparation Date	09-15-06	Preparation Date	09-15-06
Analysis Date	09-28-06	Analysis Date	09-28-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061611-17	Control Number	061611-18

TARGET PCBs, 8082			TARGET PCBs, 8082		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	89	84-122	Decachlorobiphenyl	94	84-122

NOTES:

TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date _____ Data File 091506A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Radwaste Yard	Our Project Number CHEM-06-1611

Sample Identification	RWY-19	Sample Identification	RWY-20
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	09-07-06	Sample Date	09-07-06
Received Date	09-08-06	Received Date	09-08-06
Report Date	09-30-06	Report Date	09-30-06
Percent Solids, % w/w	95	Percent Solids, % w/w	93
Preparation Date	09-15-06	Preparation Date	09-18-06
Analysis Date	09-28-06	Analysis Date	09-28-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061611-19	Control Number	061611-20

TARGET PCBs, 8082			TARGET PCBs, 8082		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	95	84-122	Decachlorobiphenyl	97	84-122

NOTES:

TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date _____ Data File 091506A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Radwaste Yard	Our Project Number CHEM-06-1611

Sample Identification	RWY-21	Sample Identification	RWY-22
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	09-07-06	Sample Date	09-07-06
Received Date	09-08-06	Received Date	09-08-06
Report Date	09-30-06	Report Date	09-30-06
Percent Solids, % w/w	94	Percent Solids, % w/w	98
Preparation Date	09-18-06	Preparation Date	09-18-06
Analysis Date	09-28-06	Analysis Date	09-28-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061611-21	Control Number	061611-22

TARGET PCBs, 8082			TARGET PCBs, 8082		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	92	84-122	Decachlorobiphenyl	96	84-122

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date _____ Data File 091506A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Radwaste Yard	Our Project Number CHEM-06-1611

Sample Identification	RWY-23	**Sample Identification**	RWY-24
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	09-07-06	Sample Date	09-07-06
Received Date	09-08-06	Received Date	09-08-06
Report Date	09-30-06	Report Date	09-30-06
Percent Solids, % w/w	98	Percent Solids, % w/w	98
Preparation Date	09-18-06	Preparation Date	09-18-06
Analysis Date	09-28-06	Analysis Date	09-28-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061611-23	Control Number	061611-24

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	94	84-122	Decachlorobiphenyl	94	84-122

NOTES:	TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1. nd = Parameter Not Detected At The TDL. Results Are Reported On The Dry Weight Basis. Confirming Analytical Column Was Not Required.

Reviewed By _____ Date _____ Data File 091506A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Radwaste Yard	Our Project Number CHEM-06-1611

Sample Identification	RWY-25	Sample Identification	RWY-26
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	09-07-06	Sample Date	09-07-06
Received Date	09-08-06	Received Date	09-08-06
Report Date	09-30-06	Report Date	09-30-06
Percent Solids, % w/w	96	Percent Solids, % w/w	98
Preparation Date	09-18-06	Preparation Date	09-18-06
Analysis Date	09-28-06	Analysis Date	09-28-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061611-25	Control Number	061611-26

TARGET PCBs, 8082			TARGET PCBs, 8082		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	101	84-122	Decachlorobiphenyl	93	84-122

NOTES:

TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date _____ Data File 092706A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Radwaste Yard	Our Project Number CHEM-06-1611

Sample Identification	RWY-27	**Sample Identification**	RWY-28
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	09-07-06	Sample Date	09-07-06
Received Date	09-08-06	Received Date	09-08-06
Report Date	09-30-06	Report Date	09-30-06
Percent Solids, % w/w	97	Percent Solids, % w/w	98
Preparation Date	09-18-06	Preparation Date	09-18-06
Analysis Date	09-28-06	Analysis Date	09-28-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061611-27	Control Number	061611-28

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	99	84-122	Decachlorobiphenyl	99	84-122

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date _____ Data File 091506A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Radwaste Yard	Our Project Number CHEM-06-1611

Sample Identification	RWY-29	Sample Identification	RWY-30
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	09-07-06	Sample Date	09-07-06
Received Date	09-08-06	Received Date	09-08-06
Report Date	09-30-06	Report Date	09-30-06
Percent Solids, % w/w	97	Percent Solids, % w/w	91
Preparation Date	09-18-06	Preparation Date	09-18-06
Analysis Date	09-28-06	Analysis Date	09-28-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061611-29	Control Number	061611-30

TARGET PCBs, 8082			TARGET PCBs, 8082		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	103	84-122	Decachlorobiphenyl	98	84-122

NOTES:

TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date _____ Data File 091506A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Radwaste Yard	Our Project Number CHEM-06-1611

Sample Identification	RWY-31	Sample Identification	RWY-32
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	09-07-06	Sample Date	09-07-06
Received Date	09-08-06	Received Date	09-08-06
Report Date	09-30-06	Report Date	09-30-06
Percent Solids, % w/w	93	Percent Solids, % w/w	92
Preparation Date	09-18-06	Preparation Date	09-18-06
Analysis Date	09-28-06	Analysis Date	09-28-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061611-31	Control Number	061611-32

TARGET PCBs, 8082			TARGET PCBs, 8082		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	92	84-122	Decachlorobiphenyl	96	84-122

NOTES:

TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date _____ Data File 091506A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Radwaste Yard	Our Project Number CHEM-06-1611

Sample Identification	RWY-33	Sample Identification	RWY-34
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	09-07-06	Sample Date	09-07-06
Received Date	09-08-06	Received Date	09-08-06
Report Date	09-30-06	Report Date	09-30-06
Percent Solids, % w/w	94	Percent Solids, % w/w	94
Preparation Date	09-19-06	Preparation Date	09-19-06
Analysis Date	09-28-06	Analysis Date	09-28-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061611-33	Control Number	061611-34

TARGET PCBs, 8082			TARGET PCBs, 8082		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	83 *	84-122	Decachlorobiphenyl	101	84-122

NOTES:

TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL. * = Lower Than Expected Recovery.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date _____ Data File 091506B

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Radwaste Yard	Our Project Number CHEM-06-1611

Sample Identification	RWY-35	Sample Identification	RWY-36
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	09-07-06	Sample Date	09-07-06
Received Date	09-08-06	Received Date	09-08-06
Report Date	09-30-06	Report Date	09-30-06
Percent Solids, % w/w	93	Percent Solids, % w/w	93
Preparation Date	09-19-06	Preparation Date	09-19-06
Analysis Date	09-28-06	Analysis Date	09-29-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061611-35	Control Number	061611-36

TARGET PCBs, 8082			TARGET PCBs, 8082		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	103	84-122	Decachlorobiphenyl	96	84-122

NOTES:

TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date _____ Data File 091506B

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Radwaste Yard	Our Project Number CHEM-06-1611

Sample Identification	RWY-37	Sample Identification	RWY-38
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	09-07-06	Sample Date	09-07-06
Received Date	09-08-06	Received Date	09-08-06
Report Date	09-30-06	Report Date	09-30-06
Percent Solids, % w/w	93	Percent Solids, % w/w	94
Preparation Date	09-19-06	Preparation Date	09-19-06
Analysis Date	09-29-06	Analysis Date	09-29-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061611-37	Control Number	061611-38

TARGET PCBs, 8082			TARGET PCBs, 8082		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	98	84-122	Decachlorobiphenyl	104	84-122

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date _____ Data File 092706B

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Radwaste Yard	Our Project Number CHEM-06-1611

Sample Identification	RWY-39	Sample Identification	RWY-40
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	09-07-06	Sample Date	09-07-06
Received Date	09-08-06	Received Date	09-08-06
Report Date	09-30-06	Report Date	09-30-06
Percent Solids, % w/w	93	Percent Solids, % w/w	99
Preparation Date	09-19-06	Preparation Date	09-19-06
Analysis Date	09-29-06	Analysis Date	09-29-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061611-39	Control Number	061611-40

TARGET PCBs, 8082			TARGET PCBs, 8082		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	95	84-122	Decachlorobiphenyl	95	84-122

NOTES:

TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date _____ Data File 092706B

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Radwaste Yard	Our Project Number CHEM-06-1611

Sample Identification	RWY-41	Sample Identification	RWY-42
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	09-07-06	Sample Date	09-07-06
Received Date	09-08-06	Received Date	09-08-06
Report Date	09-30-06	Report Date	09-30-06
Percent Solids, % w/w	95	Percent Solids, % w/w	97
Preparation Date	09-19-06	Preparation Date	09-19-06
Analysis Date	09-29-06	Analysis Date	09-29-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061611-41	Control Number	061611-42

TARGET PCBs, 8082			TARGET PCBs, 8082		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	68 *	84-122	Decachlorobiphenyl	98	84-122

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL. * = Lower Than Expected Recovery.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date _____ Data File 092706B

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Radwaste Yard	Our Project Number CHEM-06-1611

Sample Identification	RWY-43	Sample Identification	RWY-44
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	09-07-06	Sample Date	09-07-06
Received Date	09-08-06	Received Date	09-08-06
Report Date	09-30-06	Report Date	09-30-06
Percent Solids, % w/w	95	Percent Solids, % w/w	92
Preparation Date	09-19-06	Preparation Date	09-19-06
Analysis Date	09-29-06	Analysis Date	09-29-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	061611-43	Control Number	061611-44

TARGET PCBs, 8082			TARGET PCBs, 8082		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	101	84-122	Decachlorobiphenyl	100	84-122

NOTES:

TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date _____ Data File 092706B

PCB Storage Area Survey Design - RW Yard

Survey Area Dimensions:

Xmax =	25.0 m
Ymax =	66.0 m
Area =	1650.0 sq. m

Randon Start Location:

X =	23.3 m
Y =	58.3 m

Sample Spacing:

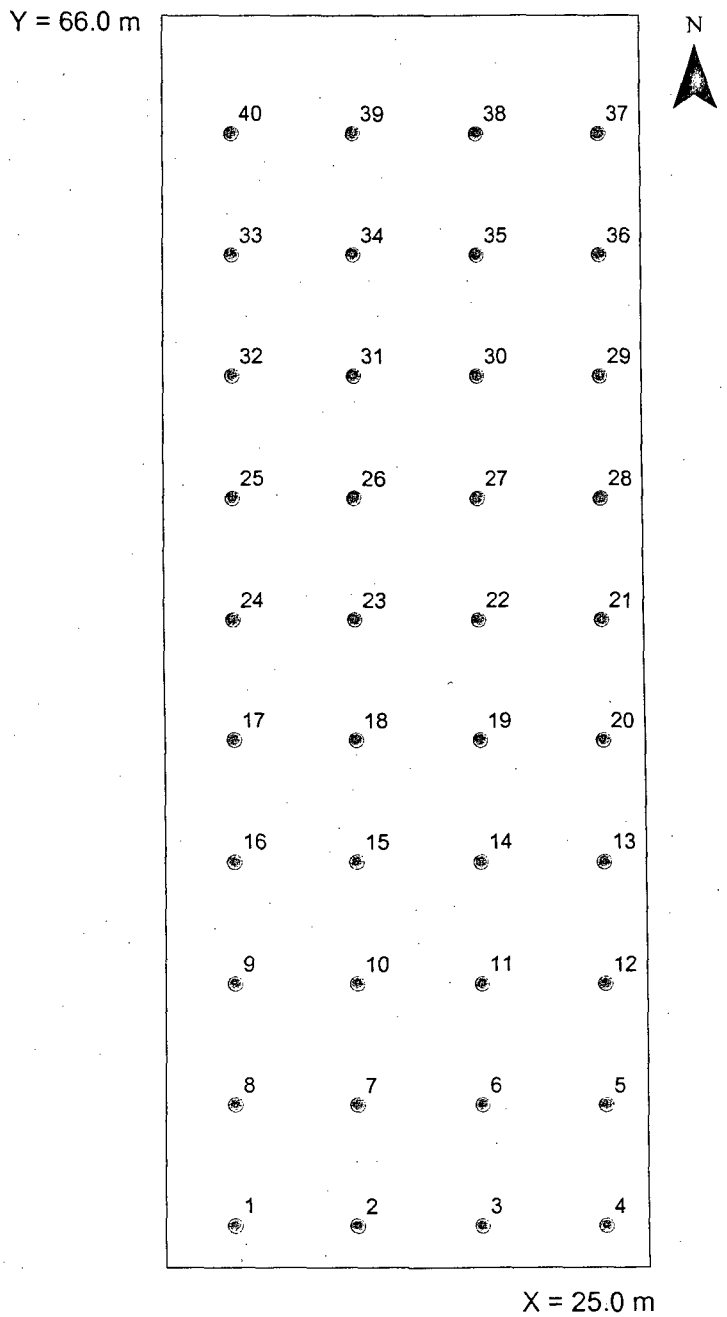
L=	(Area / No Samples) ^1/2
L=	6.4 m

Random X-Y start points		QC Samples
X	0.93105648	2
		32
Y	0.88300826	7
		31

SURVEY DESIGN: [signature] DATE 9/6/06

SURVEY REVIEW: [signature] DATE: 09/7/06

PCB Sample Locations
Radwaste Yard



* Random Start Location = Sample # 19
** Sample Spacing = 7.8 meters

Sample No.	X Coord.	Y Coord.	Sample No.	X Coord.	Y Coord.	Sample No.	X Coord.	Y Coord.
1	4.1	7.1	16	4.1	26.3	31	10.5	51.9
2	10.5	7.1	17	4.1	32.7	32	4.1	51.9
3	16.9	7.1	18	10.5	32.7	33	4.1	58.3
4	23.3	7.1	19	16.9	32.7	34	10.5	58.3
5	23.3	13.5	20	23.3	32.7	35	16.9	58.3
6	16.9	13.5	21	23.3	39.1	36	23.3	58.3
7	10.5	13.5	22	16.9	39.1	37	23.3	64.7
8	4.1	13.5	23	10.5	39.1	38	16.9	64.7
9	4.1	19.9	24	4.1	39.1	39	10.5	64.7
10	10.5	19.9	25	4.1	45.5	40	4.1	64.7
11	16.9	19.9	26	10.5	45.5	41	10.5	7.1
12	23.3	19.9	27	16.9	45.5	42	4.1	51.9
13	23.3	26.3	28	23.3	45.5	43	10.5	13.5
14	16.9	26.3	29	23.3	51.9	44	10.5	51.9
15	10.5	26.3	30	16.9	51.9			

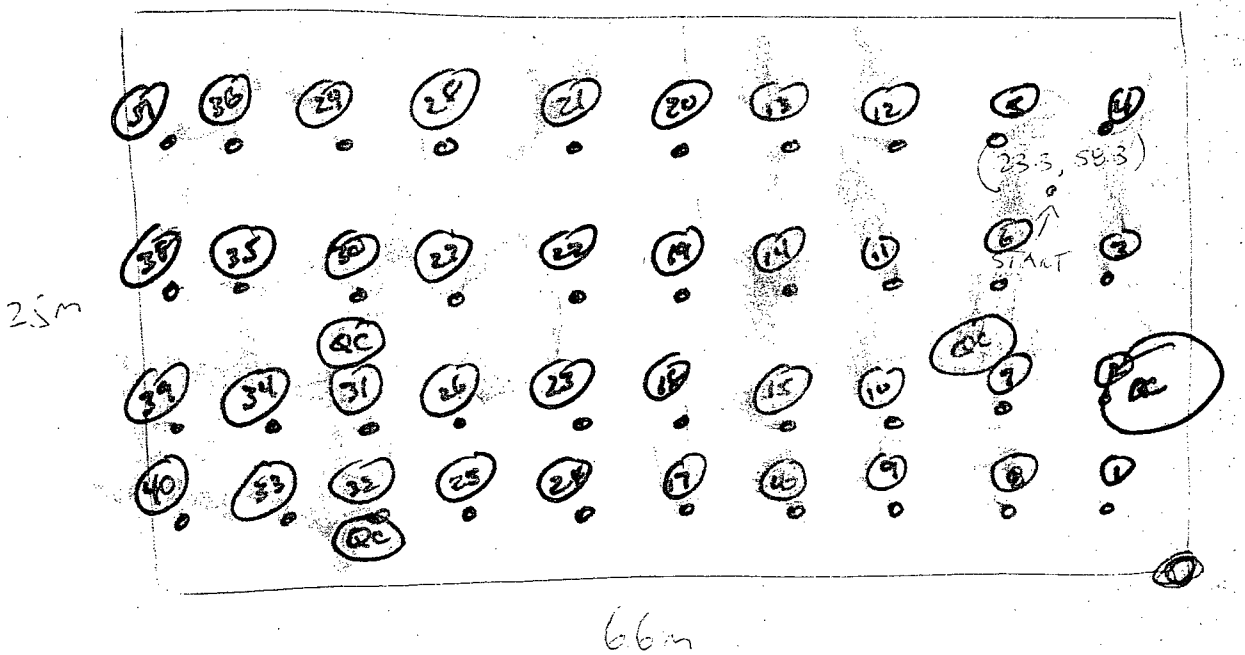
**Sample no. 36 is the random start location*

Sample spacing is 6.4 meters

RW YARP

N

E



W

SPACING = 6.4m

APPENDIX G

Post-Demolition and Storage Area Verification Records

PCB SURVEY PACKAGE CLOSE-OUT CHECKLIST

Package ID Number: 0001 Survey Area: Turbine Building Shield Wall

The survey package is legible and complete and the following necessary information is in the package:

1. ✓ Survey Package Cover Sheet
2. ✓ Survey design documentation
3. ✓ Random number generator sheet for sample start location and QC sample numbers.
4. ✓ Completed survey map/data sheet
5. ✓ Completed PCB Survey Data Record Sheet
6. ✓ Copy of the Chain of Custody
7. ✓ Copy of sample results
8. ✓ Other documentation:

Region I, EPA-New England, 'Draft Standard Operating Procedure for Sampling Concrete in the Field'.

Completed By: Jodie L. Reed (Environmental Technician) Date: 12-14-05

Reviewed By: [illegible] (Environmental Supervisor) Date: 1-4-06

PCB SURVEY PACKAGE COVER SHEET

Package ID Number : 0001	Survey Area: Turbine Building Shield Wall	Size (m^2): ~ 207

# of Field Samples: 10 Random Start Location: X (n/a), Y (n/a)

# of QC samples: n/a Sample Spacing: n/a meters

Isolation Controls implemented ☐ List controls: Area posted as a radiologically controlled area and PCB survey area.

Comments/specific directions[1]: - Samples were taken on concrete surface of the shield wall after scabbling and paint removal for radiological decontamination. Per EPA Region V guidance, a sample was collected per each 400 ft^2 surface area. The attached drawings of this wall show the sample locations.

- Sample analysis results acceptance criteria is all results <50 ppm PCB content.

([1] Address any inaccessible areas or sample points not included in survey).

SURVEY PACKAGE CLOSURE

Screening Survey Package is authorized for closure. All required reviews are completed and pertinent information is included in package (see Survey Package Close-Out Checklist).

ENV Technician Jodie L. Reed Date: 12-15-05

ENV Supervisor: [signature] Date: 1-9-06

Package ID Number: 0001

PCB SURVEY DATA RECORD SHEET

Survey Area: Turbine Building Shield Wall	Size (m^2): 207	# of Samples: 10

Sample ID Number	Sample Location (grid number)	Sample Result (ppm)	Sample ID Number	Sample Location (grid number)	Sample Result (ppm)
SW-ON1, F1	F1	8.1			
SW-OW2, C2	C2	10			
SW-OE, C3	C3	13			
SW-OE, F8	F8	11			
SW-ON2, I3	I3	9			
SW-N1, I1	I1	25			
SW-E, I3	I3	8.1			
SW-N2, F3	F3	19			
SW-E, C7	C7	25			
SW-W1, C2	C2	57			

Performed By: Jackie L. Reed (Survey Technician) Date: 12-15-05

Reviewed By: (Environmental Supervisor) Date: 1-9-06

U21304

CONSUMERS ENERGY Memorandum

To: TAGoble, Big Rock

From: GLCattell, T-254, Jackson

Date: May 13, 2004

Subject: SAMPLES FOR DETERMINATION OF PCBs
- Paint & Concrete
- Sampling Dates of 04-22-04 & 04-29-04

CC: File Index: 510417-783-672

Eleven samples were received from the Big Rock Point plant on May 06 for determination of polychlorinated biphenyls (PCBs).

All determinations were performed by the Chemistry Section of Laboratory Services (CHEM) and the results are attached for your review.

Analytical Method

Polychlorinated Biphenyls - Method 8082, Polychlorinated Biphenyls by Gas Chromatography. SW846, Test Methods For Evaluating Solid Waste – Physical/Chemical Methods, USEPA.

Analytical Remarks & Summary

a. Several Target Detection Limits (TDLs) were elevated and several surrogate spikes were reported as "diluted out" due to required dilutions.

b. The referenced TDLs are for soil.

c. The range of PCB concentrations found was from 1 mg/kg (parts-per-million on the dry weight basis) for the paint chips to over 50 mg/kg for shield wall W1 C2.

d. Only the concrete fines, and not the larger chunks, were mixed and taken for analysis.

e. All PCBs are calculated and reported as Aroclor 1254.

Report Package Contents

The report package consists of 8 pages.
This page
6 pages of Analytical Results
1 Chain of Custody page

ANALYTICAL RESULTS

U51507

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Sampling Dates of April 22 & 29, 2004	Project Number CHEM-04-0672

Sample Identification	SW-ON1, F1	Sample Identification	SW-OW2, C2
Sample Depth, ft	- -	Sample Depth, ft	- -
Sample Type	concrete fines	Sample Type	concrete fines
Sample Date	04-29-04	Sample Date	04-29-04
Received Date	05-06-04	Received Date	05-06-04
Report Date	05-13-04	Report Date	05-13-04
Percent Solids, % w/w	100	Percent Solids, % w/w	100
Preparation Date	05-10-04	Preparation Date	05-10-04
Analysis Date	05-11-04	Analysis Date	05-12-04
Analyst	sjn, glc	Analyst	sjn, glc
Control Number	040672-01	Control Number	040672-02

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	TDL
PCB-1016	nd	0.33
PCB-1221	nd	0.33
PCB-1232	nd	0.33
PCB-1242	nd	0.33
PCB-1248	nd	0.33
PCB-1254	8.1	0.33
PCB-1260	nd	0.33
PCB-1262	nd	0.33
PCB-1268	nd	0.33
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	102	87-119

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	TDL
PCB-1016	nd	0.99
PCB-1221	nd	0.99
PCB-1232	nd	0.99
PCB-1242	nd	0.99
PCB-1248	nd	0.99
PCB-1254	10	0.99
PCB-1260	nd	0.99
PCB-1262	nd	0.99
PCB-1268	nd	0.99
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	diluted out	87-119

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	TDL
PCB-1016	nd	0.33
PCB-1221	nd	0.33
PCB-1232	nd	0.33
PCB-1242	nd	0.33
PCB-1248	nd	0.33
PCB-1254	8.2	0.33
PCB-1260	nd	0.33
PCB-1262	nd	0.33
PCB-1268	nd	0.33
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	104	84-119

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	TDL
PCB-1016	nd	0.99
PCB-1221	nd	0.99
PCB-1232	nd	0.99
PCB-1242	nd	0.99
PCB-1248	nd	0.99
PCB-1254	10	0.99
PCB-1260	nd	0.99
PCB-1262	nd	0.99
PCB-1268	nd	0.99
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	diluted out	84-119

NOTES:

TDL = Target Detection Limit For Soil, mg/kg, parts-per-million. Per MDEQ OM-6, R6
nd = Parameter Not Detected At TDL
Elevated TDLs Are Due To Required Dilutions

Reviewed By AM Date 5-13-04

Data File 051104B
SW-ON1 & SW-OW2

ANALYTICAL RESULTS

UB1SUT

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Sampling Dates of April 22 & 29, 2004	Project Number CHEM-04-0672

Sample Identification	SW-OE, C3	**Sample Identification**	SW-OE, F8
Sample Depth, ft	- -	Sample Depth, ft	- -
Sample Type	concrete fines	Sample Type	concrete fines
Sample Date	04-29-04	Sample Date	04-29-04
Received Date	05-06-04	Received Date	05-06-04
Report Date	05-13-04	Report Date	05-13-04
Percent Solids, % w/w	99	Percent Solids, % w/w	99
Preparation Date	05-10-04	Preparation Date	05-10-04
Analysis Date	05-12-04	Analysis Date	05-12-04
Analyst	sjn, glc	Analyst	sjn, glc
Control Number	040672-03	Control Number	040672-04

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	TDL
PCB-1016	nd	0.99
PCB-1221	nd	0.99
PCB-1232	nd	0.99
PCB-1242	nd	0.99
PCB-1248	nd	0.99
PCB-1254	13	0.99
PCB-1260	nd	0.99
PCB-1262	nd	0.99
PCB-1268	nd	0.99
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	diluted out	87-119

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	TDL
PCB-1016	nd	0.99
PCB-1221	nd	0.99
PCB-1232	nd	0.99
PCB-1242	nd	0.99
PCB-1248	nd	0.99
PCB-1254	11	0.99
PCB-1260	nd	0.99
PCB-1262	nd	0.99
PCB-1268	nd	0.99
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	diluted out	87-119

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	TDL
PCB-1016	nd	0.99
PCB-1221	nd	0.99
PCB-1232	nd	0.99
PCB-1242	nd	0.99
PCB-1248	nd	0.99
PCB-1254	13	0.99
PCB-1260	nd	0.99
PCB-1262	nd	0.99
PCB-1268	nd	0.99
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	diluted out	84-119

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	TDL
PCB-1016	nd	0.99
PCB-1221	nd	0.99
PCB-1232	nd	0.99
PCB-1242	nd	0.99
PCB-1248	nd	0.99
PCB-1254	11	0.99
PCB-1260	nd	0.99
PCB-1262	nd	0.99
PCB-1268	nd	0.99
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	diluted out	84-119

NOTES:
TDL = Target Detection Limit For Soil, mg/kg, parts-per-million. Per MDEQ OM-6, R6
nd = Parameter Not Detected At TDL
Elevated TDLs Are Due To Required Dilutions

Reviewed By AU Date 5-13-04

Data File 051104B
SW-OE

051304

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Sampling Dates of April 22 & 29, 2004	Project Number CHEM-04-0672

Sample Identification	SW-ON2, I3	**Sample Identification**	SW-N1, I1
Sample Depth, ft	- -	Sample Depth, ft	- -
Sample Type	concrete fines	Sample Type	concrete fines
Sample Date	04-29-04	Sample Date	04-29-04
Received Date	05-06-04	Received Date	05-06-04
Report Date	05-13-04	Report Date	05-13-04
Percent Solids, % w/w	99	Percent Solids, % w/w	100
Preparation Date	05-10-04	Preparation Date	05-10-04
Analysis Date	05-12-04	Analysis Date	05-12-04
Analyst	sjn, glc	Analyst	sjn, glc
Control Number	040672-05	Control Number	040672-06

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	mg/kg	TDL	TARGET PCBs, 8082	mg/kg	TDL
PCB-1016	nd	0.99	PCB-1016	nd	3.3
PCB-1221	nd	0.99	PCB-1221	nd	3.3
PCB-1232	nd	0.99	PCB-1232	nd	3.3
PCB-1242	nd	0.99	PCB-1242	nd	3.3
PCB-1248	nd	0.99	PCB-1248	nd	3.3
PCB-1254	9.0	0.99	PCB-1254	25	3.3
PCB-1260	nd	0.99	PCB-1260	nd	3.3
PCB-1262	nd	0.99	PCB-1262	nd	3.3
PCB-1268	nd	0.99	PCB-1268	nd	3.3
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	diluted out	87-119	Decachlorobiphenyl	diluted out	87-119

CONFIRMING ANALYTICAL COLUMN			**CONFIRMING ANALYTICAL COLUMN**		
TARGET PCBs, 8082	mg/kg	TDL	TARGET PCBs, 8082	mg/kg	TDL
PCB-1016	nd	0.99	PCB-1016	nd	3.3
PCB-1221	nd	0.99	PCB-1221	nd	3.3
PCB-1232	nd	0.99	PCB-1232	nd	3.3
PCB-1242	nd	0.99	PCB-1242	nd	3.3
PCB-1248	nd	0.99	PCB-1248	nd	3.3
PCB-1254	9.1	0.99	PCB-1254	25	3.3
PCB-1260	nd	0.99	PCB-1260	nd	3.3
PCB-1262	nd	0.99	PCB-1262	nd	3.3
PCB-1268	nd	0.99	PCB-1268	nd	3.3
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	diluted out	84-119	Decachlorobiphenyl	diluted out	84-119

NOTES:
TDL = Target Detection Limit For Soil, mg/kg, parts-per-million. Per MDEQ OM-6, R6
nd = Parameter Not Detected At TDL
Elevated TDLs Are Due To Required Dilutions

Reviewed By Jll Date 5-13-04

Data File 051104B
SW-ON2 & SW-N1

051304

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Sampling Dates of April 22 & 29, 2004	Project Number CHEM-04-0672

Sample Identification	SW-E, I3	Sample Identification	SW-N2, F3
Sample Depth, ft	- -	Sample Depth, ft	- -
Sample Type	concrete fines	Sample Type	concrete fines
Sample Date	04-29-04	Sample Date	04-29-04
Received Date	05-06-04	Received Date	05-06-04
Report Date	05-13-04	Report Date	05-13-04
Percent Solids, % w/w	100	Percent Solids, % w/w	100
Preparation Date	05-10-04	Preparation Date	05-10-04
Analysis Date	05-12-04	Analysis Date	05-12-04
Analyst	sjn, glc	Analyst	sjn, glc
Control Number	040672-07	Control Number	040672-08

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	TDL
PCB-1016	nd	0.99
PCB-1221	nd	0.99
PCB-1232	nd	0.99
PCB-1242	nd	0.99
PCB-1248	nd	0.99
PCB-1254	8.1	0.99
PCB-1260	nd	0.99
PCB-1262	nd	0.99
PCB-1268	nd	0.99
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	diluted out	87-119

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	TDL
PCB-1016	nd	1.6
PCB-1221	nd	1.6
PCB-1232	nd	1.6
PCB-1242	nd	1.6
PCB-1248	nd	1.6
PCB-1254	19	1.6
PCB-1260	nd	1.6
PCB-1262	nd	1.6
PCB-1268	nd	1.6
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	diluted out	87-119

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	TDL
PCB-1016	nd	0.99
PCB-1221	nd	0.99
PCB-1232	nd	0.99
PCB-1242	nd	0.99
PCB-1248	nd	0.99
PCB-1254	8.2	0.99
PCB-1260	nd	0.99
PCB-1262	nd	0.99
PCB-1268	nd	0.99
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	diluted out	84-119

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	TDL
PCB-1016	nd	1.6
PCB-1221	nd	1.6
PCB-1232	nd	1.6
PCB-1242	nd	1.6
PCB-1248	nd	1.6
PCB-1254	19	1.6
PCB-1260	nd	1.6
PCB-1262	nd	1.6
PCB-1268	nd	1.6
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	diluted out	84-119

NOTES:

TDL = Target Detection Limit For Soil, mg/kg, parts-per-million. Per MDEQ OM-6, R6
nd = Parameter Not Detected At TDL
Elevated TDLs Are Due To Required Dilutions

Reviewed By AM Date 51304

Data File 051104B
SW-E & SW-N2

ANALYTICAL RESULTS

051307

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Sampling Dates of April 22 & 29, 2004	Project Number CHEM-04-0672

Sample Identification	SW-E, C7	**Sample Identification**	SW-W1, C2
Sample Depth, ft	- -	Sample Depth, ft	- -
Sample Type	concrete fines	Sample Type	concrete fines
Sample Date	04-29-04	Sample Date	04-29-04
Received Date	05-06-04	Received Date	05-06-04
Report Date	05-13-04	Report Date	05-13-04
Percent Solids, % w/w	100	Percent Solids, % w/w	100
Preparation Date	05-10-04	Preparation Date	05-10-04
Analysis Date	05-12-04	Analysis Date	05-12-04
Analyst	sjn, glc	Analyst	sjn, glc
Control Number	040672-09	Control Number	040672-10

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	TDL
PCB-1016	nd	3.3
PCB-1221	nd	3.3
PCB-1232	nd	3.3
PCB-1242	nd	3.3
PCB-1248	nd	3.3
PCB-1254	25	3.3
PCB-1260	nd	3.3
PCB-1262	nd	3.3
PCB-1268	nd	3.3
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	diluted out	87-119

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	TDL
PCB-1016	nd	8.2
PCB-1221	nd	8.2
PCB-1232	nd	8.2
PCB-1242	nd	8.2
PCB-1248	nd	8.2
PCB-1254	57	8.2
PCB-1260	nd	8.2
PCB-1262	nd	8.2
PCB-1268	nd	8.2
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	diluted out	87-119

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	TDL
PCB-1016	nd	3.3
PCB-1221	nd	3.3
PCB-1232	nd	3.3
PCB-1242	nd	3.3
PCB-1248	nd	3.3
PCB-1254	26	3.3
PCB-1260	nd	3.3
PCB-1262	nd	3.3
PCB-1268	nd	3.3
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	diluted out	84-119

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	TDL
PCB-1016	nd	8.2
PCB-1221	nd	8.2
PCB-1232	nd	8.2
PCB-1242	nd	8.2
PCB-1248	nd	8.2
PCB-1254	59	8.2
PCB-1260	nd	8.2
PCB-1262	nd	8.2
PCB-1268	nd	8.2
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	diluted out	84-119

NOTES:
TDL = Target Detection Limit For Soil, mg/kg, parts-per-million. Per MDEQ OM-6, R6
nd = Parameter Not Detected At TDL
Elevated TDLs Are Due To Required Dilutions

Reviewed By [signature] Date 5-13-04

Data File 051104B
SW-E & SW-W1

051304

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Sampling Dates of April 22 & 29, 2004	Project Number CHEM-04-0672

Sample Identification	Primer From Water Tank - dark grey
Sample Depth, ft	- -
Sample Type	paint chips
Sample Date	04-22-04
Received Date	05-06-04
Report Date	05-13-04
Percent Solids, % w/w	100
Preparation Date	05-10-04
Analysis Date	05-12-04
Analyst	sjn, glc
Control Number	040672-11

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	TDL
PCB-1016	nd	0.33
PCB-1221	nd	0.33
PCB-1232	nd	0.33
PCB-1242	nd	0.33
PCB-1248	nd	0.33
PCB-1254	1.1	0.33
PCB-1260	nd	0.33
PCB-1262	nd	0.33
PCB-1268	nd	0.33
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	84	87-119

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	TDL
PCB-1016	nd	0.33
PCB-1221	nd	0.33
PCB-1232	nd	0.33
PCB-1242	nd	0.33
PCB-1248	nd	0.33
PCB-1254	1.2	0.33
PCB-1260	nd	0.33
PCB-1262	nd	0.33
PCB-1268	nd	0.33
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	85	84-119

NOTES:
TDL = Target Detection Limit For Soil, mg/kg, parts-per-million. Per MDEQ OM-6, R6
nd = Parameter Not Detected At TDL
Elevated TDLs Are Due To Required Dilutions

Reviewed By AM Date 5-13-04

Data File 051104B
Water Tank

UO 15UT

CONSUMERS ENERGY Memorandum

To: TAGoble, Big Rock

From: GLCattell, T-254, Jackson

Date: June 03, 2004

Subject: SAMPLES FOR DETERMINATION OF PCBs
- Paint & Concrete
- Sampling Dates of 04-22-04 & 04-29-04

CC:

File Index: 510417-783-672
Addendum

Eleven samples were received from the Big Rock Point plant on May 06 for determination of polychlorinated biphenyls (PCBs). Results were previously reported on May 13.

We were requested by you to reprepare and reanalyze one sample (SW-W1, C2) and the analytical result follows.

ANALYTICAL RESULTS

US 1504

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Sampling Dates of April 22 & 29, 2004	Project Number CHEM-04-0672 Addendum

Sample Identification	SW-W1, C2 Reprepared
Sample Depth, ft	- -
Sample Type	concrete fines
Sample Date	04-29-04
Received Date	05-06-04
Report Date	06-03-04
Percent Solids, % w/w	100
Preparation Date	05-14-04
Analysis Date	05-17-04
Analyst	sjn, glc
Control Number	040672-10

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	TDL
PCB-1016	nd	8.3
PCB-1221	nd	8.3
PCB-1232	nd	8.3
PCB-1242	nd	8.3
PCB-1248	nd	8.3
PCB-1254	36	8.3
PCB-1260	nd	8.3
PCB-1262	nd	8.3
PCB-1268	nd	8.3
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	diluted out	87-119

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	mg/kg	TDL
PCB-1016	nd	8.3
PCB-1221	nd	8.3
PCB-1232	nd	8.3
PCB-1242	nd	8.3
PCB-1248	nd	8.3
PCB-1254	37	8.3
PCB-1260	nd	8.3
PCB-1262	nd	8.3
PCB-1268	nd	8.3
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	diluted out	84-119

NOTES:
TDL = Target Detection Limit For Soil, mg/kg, parts-per-million. Per MDEQ OM-6, R6
nd = Parameter Not Detected At TDL
Elevated TDLs Are Due To Required Dilutions

Reviewed By _____ Date 6/03/04

Data File 051704A
SW-W1

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – LABORATORY SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: Big Rock Pt

PROJECT NUMBER: 9647-4976.6

SAMPLING TEAM:

DATE SHIPPED: 5/5/04

SITE SKETCH ATTACHED? CIRCLE ONE: YES NO

PAGE 1 OF 1

SEND REPORT TO: TRACY GOBLE, BIG ROCK PT, PHONE: 231 547-8389

CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	ANALYSIS REQUESTED: PCB	REMARKS
04-0672-01	4/29/04		C	SW-ON1, F1		1	✓	
-02	4/29/04		C	SW-ONZ, C2		1	✓	
-03	4/29/04		C	SW-OE, C3		1	✓	
-04	4/29/04		C	SW-OE, F8		1	✓	
-05	4/29/04		C	SW-ONZ, I3		1	✓	
-06	4/29/04		C	SW-N1, I1		1	✓	
-07	4/29/04		C	SW-E, I3		1	✓	
-08	4/29/04		C	SW-NZ, F3		1	✓	
-09	4/29/04		C	SW-E, C7		1	✓	
-10	4/29/04		C	SW-W1, C2		1	✓	
✓ -11	4/22/04		P	PRIMER, DOM H2O TANK		1	✓	

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
[signature]	5/5/05 1300	
[signature]	5/06/04 1230	[signature]

COMMENTS

C = CONCRETE

P = PRIMER

SW = SHIELD WALL.

ORIGINAL TO LAB COPY TO CUSTOMER

051304

Turbine Shield Wall Sampling

Caution: Turbine shield wall has been released through the BMR program, all tools must be clean (free released) prior to entry. Personnel must perform frisk prior to entry.

Tools:

Impact hammer w/ 1" carbide bit
or
Coring equipment (samples will be crushed later)

10 plastic bags or tray (to collect samples)

Duct tape

Water supply to decon equipment after each sample (rinse bottle)

2 Buckets

Soap

Paper towels

Trash bag

Sampling steps

1. Locate and mark sample locations – see attached grid map for locations
2. If using impact hammer, tape plastic bag below sample to collect concrete. Alternatively, catch trays can be used to catch concrete.
3. Collect concrete sample 1" in depth. Collect sample adjacent to mark – do not sample directly on paint or other type of marking
4. If using coring equipment, place sample in bag
5. Label each bag with "Shield Wall", sample location, and date

   Example: Shield Wall
   Side OE, F8
   4/20/04

6. After each sample decon bit by washing with soap and rinsing. Dry equipment prior to next sample.
7. Collect remaining samples repeating steps 2-6.
8. If using coring equipment, pulverize each sample and place in original bag. Decon equipment used to pulverize between each sample.

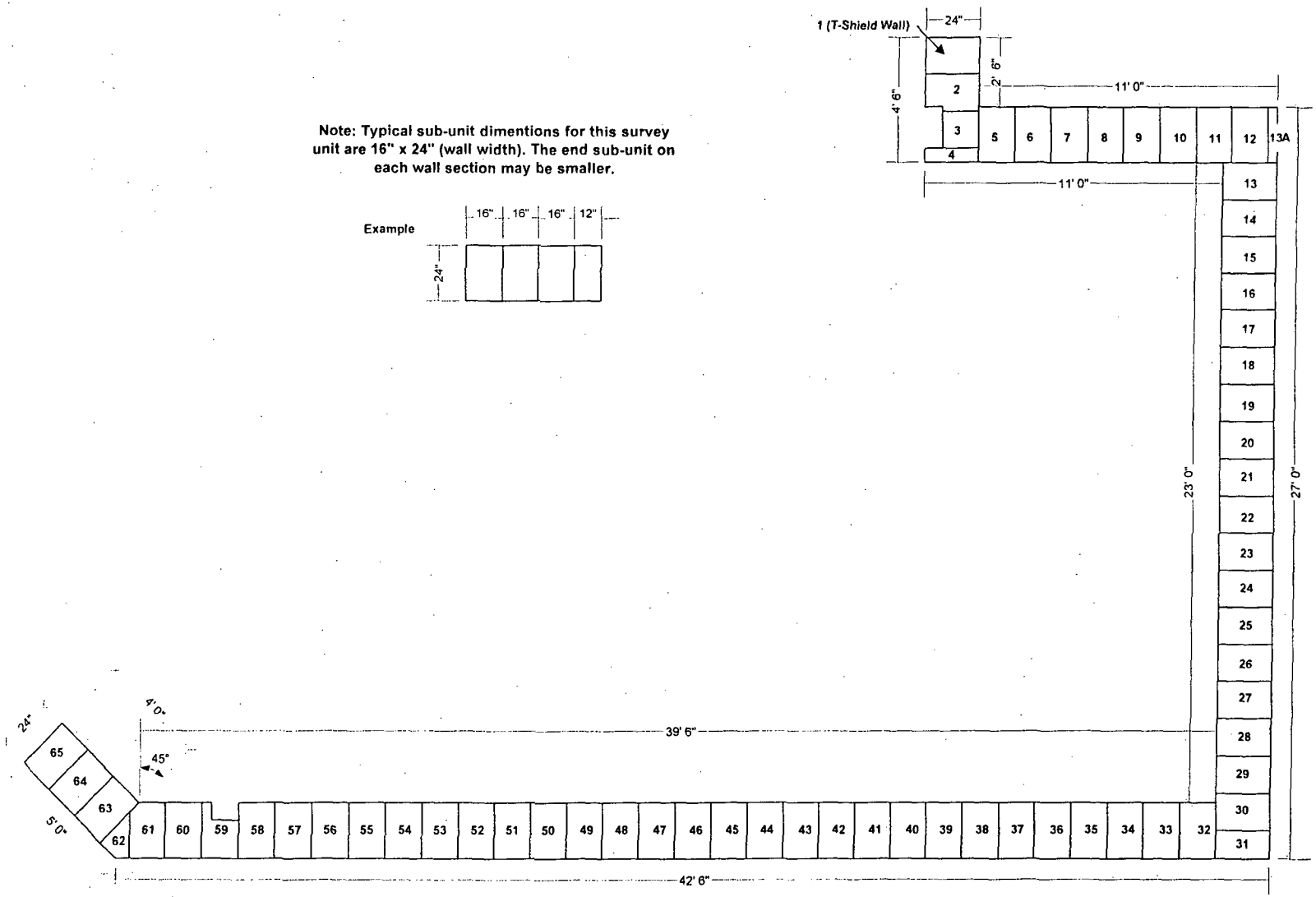
Top Survey Unit and Sub-units

North

BMR 2003-0107
Shield Wall
T-Shield Wall (Top)

Prepared by: T.Hagen
Reviewed by:_____
Date:_____

Note: Typical sub-unit dimentions for this survey unit are 16" x 24" (wall width). The end sub-unit on each wall section may be smaller.

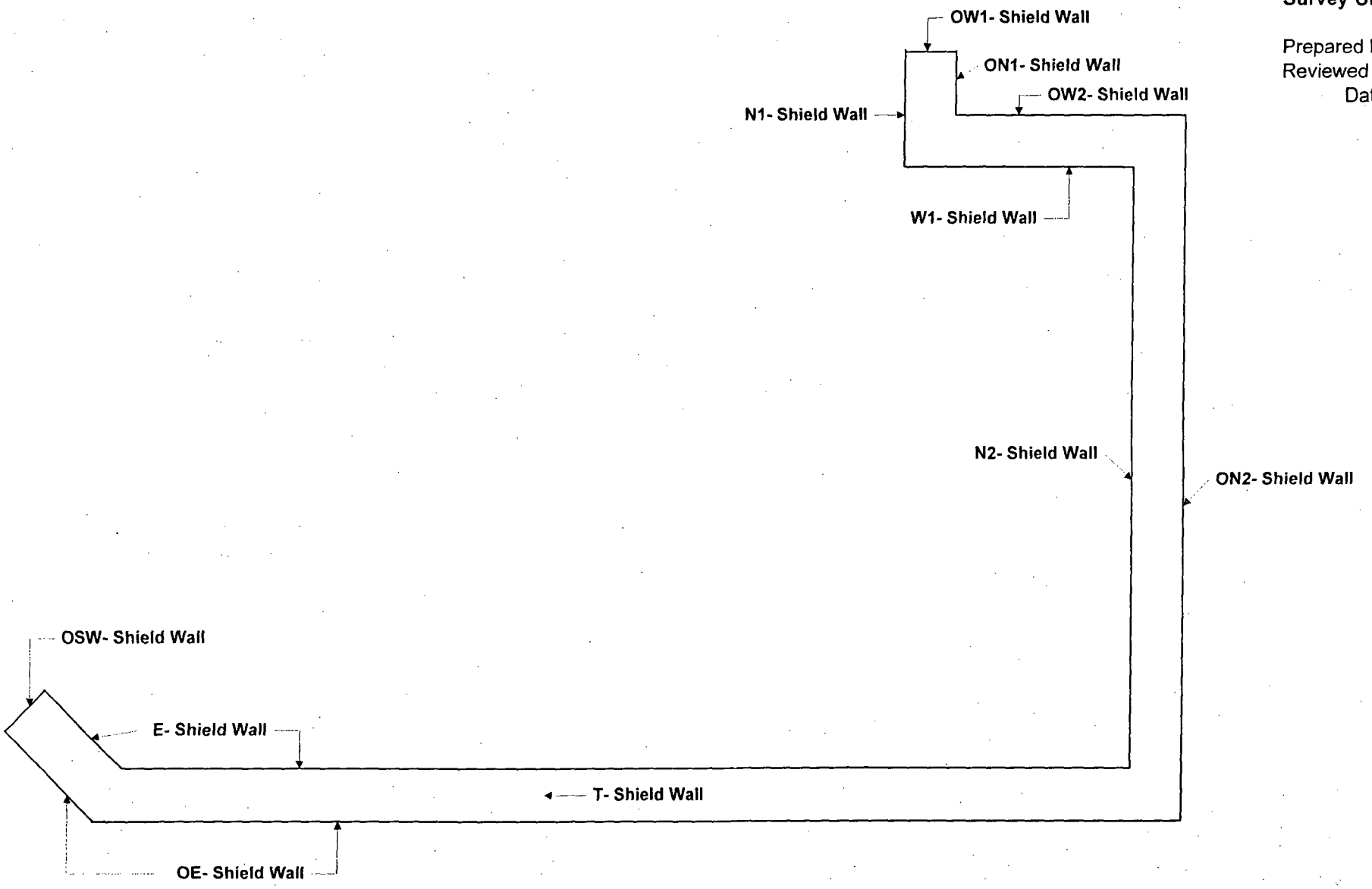


Survey Units layout

North

BMR 2003-0107
Shield Wall
Survey Units layout

Prepared by: T.Hagen
Reviewed by:_____
Date:_____

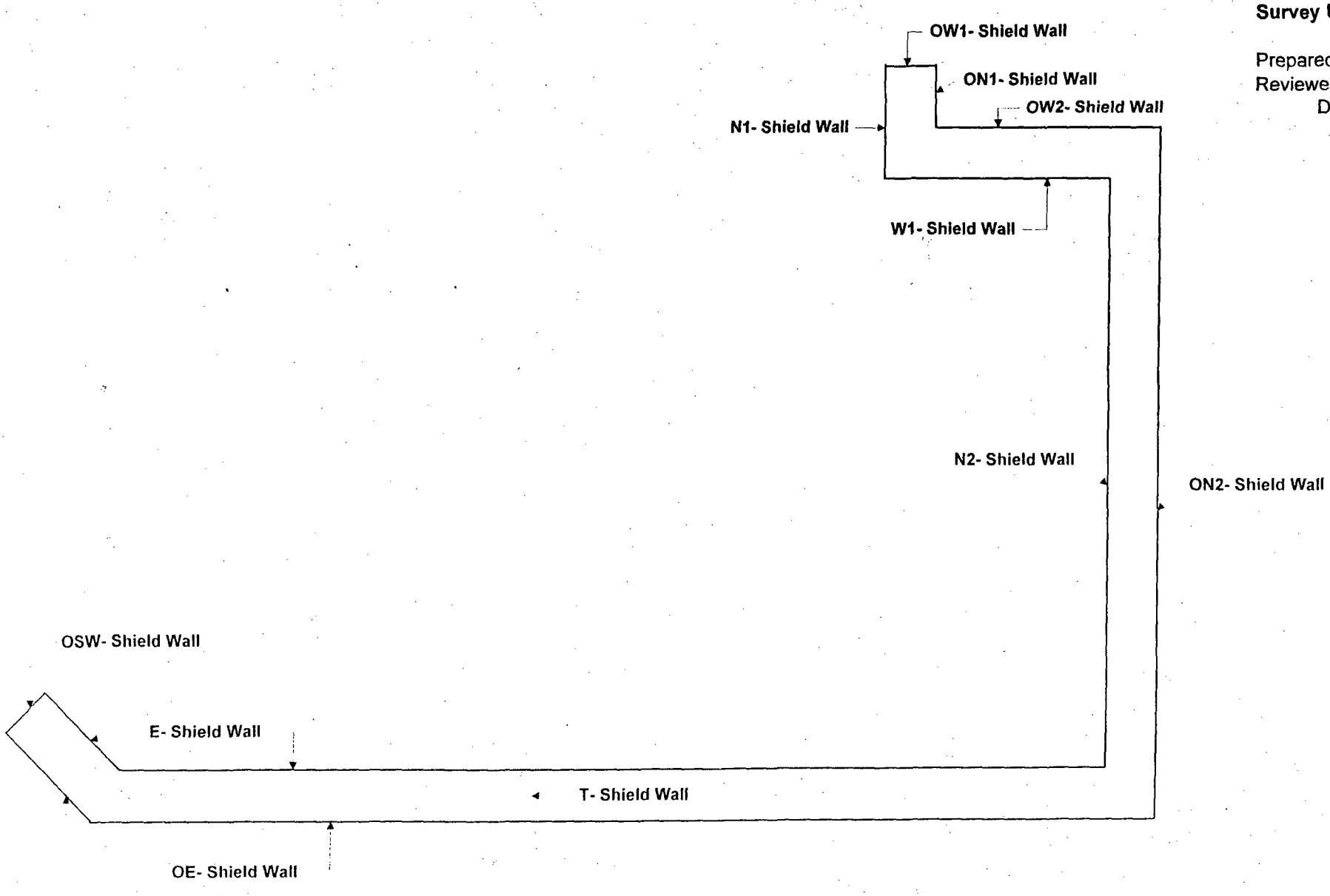


Survey Units layout

North

BMR 2003-0107
Shield Wall
Survey Units layout

Prepared by: T.Hagen
Reviewed by:_____
Date:_____

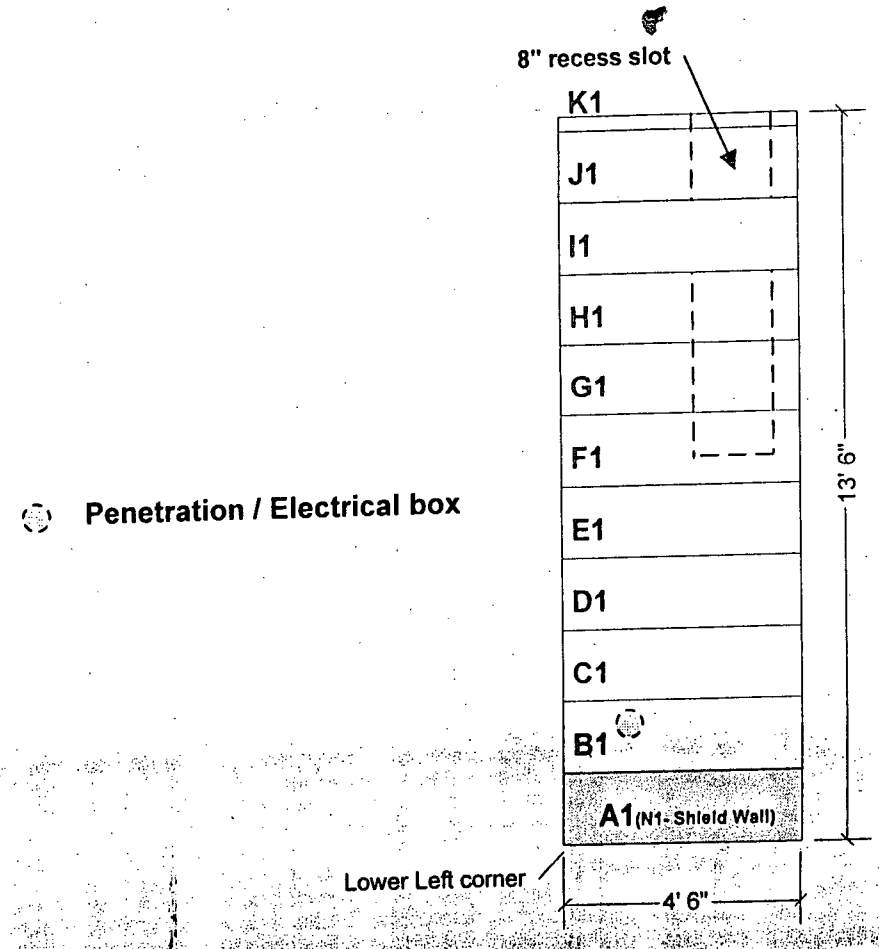


West

BMR 2003-0107
Shield Wall
N1- Shield Wall, north wall #1

Prepared by: T.Hagen
Reviewed by:_____
Date:_____

60.75 FT² ⇒ 1 SAMPLE



North

BMR 2003-0107
Shield Wall
OE- Shield Wall, outside east wall

Prepared by: T.Hagen
Reviewed by:_____
Date:_____

574 FT2 ⇒ 2 SAMPLES

Penetration / Electrical box

Wall bend, 45°

K1	K2	K3	K4	K5	K6	K7	K8	K9	K10
J1	J2	J3	J4	J5	J6	J7	J8	J9	J10
I1	I2	I3	I4	I5	I6	I7	I8	I9	I10
H1	H2	H3	H4	H5	H6	H7	H8	H9	H10
G1	G2	G3	G4	G5	G6	G7	G8	G9	G10
F1	F2	F3	F4	F5	F6	F7	F8	F9	F10
E1	E2	E3	E4	E5	E6	E7	E8	E9	E10
D1	D2	D3	D4	D5	D6	D7	D8	D9	D10
C1	C2	C3	C4	C5	C6	C7	C8	C9	C10
B1	B2	B3	B4	B5	B6	B7	B8	B9	B10
A1 (OE- Shield Wall)	A2	A3	A4	A5	A6	A7	A8	A9	A10

13' 9"

Lower Left corner

2' 6"

42' 6"

West

BMR 2003-0107
Shield Wall
N2- Shield Wall, north wall #2

Prepared by: T.Hagen
Reviewed by:_____
Date:_____

310 ft² ⇒ 1 SAMPLE

K1	K2	K3	K4	K5
J1	J2	J3	J4	J5
I1	I2	I3	I4	I5
H1	H2	H3	H4	H5
G1	G2	G3	G4	G5
F1	F2	F3	F4	F5
E1	E2	E3	E4	E5
D1	D2	D3	D4	D5
C1	C2	C3	C4	C5
B1	B2	B3	B4	B5
A1 (N2- Shield Wall)	A2	A3	A4	A5

13' 6"

Lower Left corner

3' 0"

23' 0"

North

BMR 2003-0107
Shield Wall
W1- Shield Wall, west wall #1

Prepared by: T.Hagen
Reviewed by:_____
Date:_____

140 ft² ⇒ 1 SAMPLE

Penetration / Electrical box

K1	K2	K2
J1	J2	J3
I1	I2	I3
H1	H2	H3
G1	G2	G3
F1	F2	F3
E1	E2	E3
D1	D2	D3
C1	C2	C3
B1	B2	B3
A1 (W1- Shield Wall)	A2	A3

13' 6"

Lower Left corner

12"

11' 0"

North

BMR 2003-0107
Shield Wall
E- Shield Wall, east wall

Prepared by: T.Hagen
Reviewed by:_____
Date:_____

Penetration / Electrical box

Wall bend, 45°

8"d x 12"w recess sbt

K1	K2	K3	K4	K5	K6	K7		K8	K9
J1	J2	J3	J4	J5	J6	J7		J8	J9
I1	I2	I3	I4	I5	I6	I7		I8	I9
H1	H2	H3	H4	H5	H6	H7		H8	H9
G1	G2	G3	G4	G5	G6	G7		G8	G9
F1	F2	F3	F4	F5	F6	F7		F8	F9
E1	E2	E3	E4	E5	E6	E7		E8	E9
D1	D2	D3	D4	D5	D6	D7		D8	D9
C1	C2	C3	C4	C5	C6	C7		C8	C9
B1	B2	B3	B4	B5	B6	B7		B8	B9
A1 (E- Shield Wall)	A2	A3	A4	A5	A6	A7		A8	A9

13' 6"

Lower Left corner

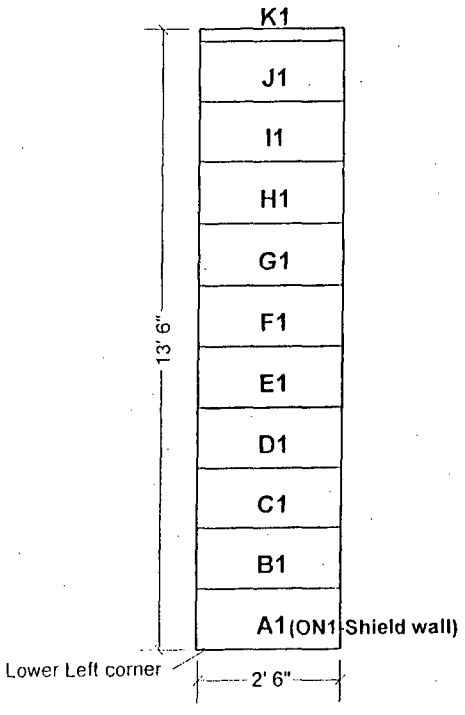
3' 6"

43' 6"

West

BMR 2003-0107
Shield Wall
ON1- Shield Wall, outside north wall #1

Prepared by: T.Hagen
Reviewed by:_____
Date:_____



ON 1 33.75 FT2
OW 1 27.2 FT2
60.9 FT2 ⇒ 1 SAMPLE

West ⇨

BMR 2003-0107
Shield Wall
ON2- Shield Wall, outside north wall #2

Prepared by: T.Hagen
Reviewed by:_____
Date:_____

365 FT² ⇒ 1 SAMPLE

Penetration / Electrical box

K1	K2	K3	K4	K5	K6
J1	J2	J3	J4	J5	J6
I1	I2	I3	I4	I5	I6
H1	H2	H3	H4	H5	H6
G1	G2	G3	G4	G5	G6
F1	F2	F3	F4	F5	F6
E1	E2	E3	E4	E5	E6
D1	D2	D3	D4	D5	D6
C1	C2	C3	C4	C5	C6
B1	B2	B3	B4	B5	B6
A1 (ON2- Shield Wall)	A2	A3	A4	A5	A6

13' 6"

Lower Left corner

2' 0"

27' 0"

⇦ North

BMR 2003-0107
Shield Wall
OW2- Shield Wall, outside west wall #2

Prepared by: T.Hagen
Reviewed by:_____
Date:_____

148 FT² ⇒ 1 SAMPLE

K1	K2	K3
J1	J2	J3
I1	I2	I3
H1	H2	H3
G1	G2	G3
F1	F2	F3
E1	E2	E3
D1	D2	D3
C1	C2	C3
B1	B2	B3
A1 (OW2- Shield Wall)	A2	A3

13' 6"

Lower Left corner

12"

11' 0"

Sampling locations – see attached diagram of each side of Turbine Shield wall

Wall Side	Grid Location	Samples collected in accordance with above steps (Initials)
OE – outside east	C3	
OE – outside east	F8	
ON2 –outside north #2	I3	
OW2 – outside west #2	C2	
ON1 – outside north #1	F1	
N1 – north #1	I1	
N2 – north #2	F3	
W1 – west #1	C2	
E – east	I3	
E – east	C7	

US 1304

Consumers Energy Memorandum

To: PCB File

From: TAGoble

Date: 22 July 2004

Subject: Pre-Demolition Sampling and Analysis of the Turbine Building Shield Wall

CC:

Concrete verification samples were collected from the Turbine Shield Wall in accordance with the EPA's *Draft Standard Operating Procedure for Sampling Concrete in the Field*, and EPA Region 5 guidance. This sampling was conducted following scabbling to remove PCB paint and surface radiological contamination and screening survey for Bulk Material Release, to ensure that scabbling had removed PCBs in this wall to below the regulatory limit of 50 ppm.

Eight samples were collected on 4/29/04 and sent to Consumers Energy's Trail Street Laboratory for analysis using EPA Laboratory Method 8082. Seven of these samples detected PCBs below 50 ppm. One analysis result (SW-W1, C2) detected PCBs at 57 ppm; a second analysis of this sample detected PCBs at 36 ppm. The following paragraph provides an explanation for these results.

Sampling of the Turbine Shield Wall concrete material to obtain fines or powder for PCB analysis provided conservative results. The Turbine Shield Wall was constructed of a larger aggregate material in order to obtain wall density necessary to provide radiation shielding for reactor operators under nuclear accident conditions. Discussions with individuals that obtained samples from this wall indicated that sample collection of fines or powder was difficult due to the quantities of aggregate in each sample. Further discussion with laboratory personnel indicated that all samples were sieved to obtain the fines material for analysis. While this methodology follows EPA guidance for concrete sample collection and preparation, in the case of the Big Rock Point Turbine Building Shield Wall, it did not provide representative sample. Therefore, PCB content detected in these samples is conservatively high due to a relative lower amount of fines material in this wall (larger aggregate or stone material), biasing sample results to yield a higher number on a weight basis, e.g. lower density fines versus higher density aggregate in each analyzed volume.

Ward J Wilson

04/15/04 02:32 PM

To: Tracy M Goble/Br/Consumers/CMS@CMS
cc:
Subject: Sample Area - Concrete Wall

Tony called me back today and stated that we need to take one sample per 400 square feet and not the 1 per 40 square feet stated in his 3/12/04 e-mail.

He has not started reviewing the statisical analysis report on the shell that you submitted.

Ward J Wilson
04/14/04 10:28 AM

To: Tracy M Goble/Br/Consumers/CMS@CMS
cc:
Subject: PCB sampling

I have tryed faxing several time and no luck so here is what I have on this--

The reference for the size of each sample is 40 CFR 761.286. At the meeting with EPA, Tony stated that Subpart O is not appropriate for the sampling scheme (I assume this includes the composting section (761.289)) but I think we can use the guidance in 761.286 on the sample size (at least 20 milliliters) and the analysis procedure (761.292).
We are supposed to develop our own sampling plan for this work but I don't believe that we need EPA approval of the plan as long as we follow the guidance in the Region 1 Procedure as an example for number of samples and other sampling details.

Not having a reliable fax makes it interesting to communicate with you. Maybe it is just a way to make me use the confuser more often.
----- Forwarded by Ward J Wilson/Pr/Consumers/CMS on 04/14/2004 10:19 AM -----

Martig.Anton@epamail.epa.gov
03/12/2004 02:57 PM

To: Ward J Wilson <wjwilson@cmsenergy.com>
cc:
Subject: PCB sampling

Ward,
I reviewed my records and found the grid sampling information on an alternative grid sample we have accepted for characterization for disposal and verification of cleanup. It is one sample per 40 square feet.

Also, attached is an EPA guidance on collection of core samples from concrete. It was prepared by EPA Region 1.
For concrete that was covered with paint, where it is the paint that may or may not have contained PCBs, a sampling depth of 1/2 inch should be used since that seems most appropriate for s surface core sample. The diameter of the sample would be adjusted to collect a sufficient amount of concrete (dust) to conduct an appropriate analysis.

(See attached file: concrete sample R1 1297.wpd) concrete sample R1 1297

PCB SURVEY PACKAGE CLOSE-OUT CHECKLIST

Package ID Number: 0002 Survey Area: Screenhouse Building Floor

The survey package is legible and complete and the following necessary information is in the package:

1. ✓ Survey Package Cover Sheet
2. ✓ Survey design documentation
3. ✓ Random number generator sheet for sample start location and QC sample numbers.
4. ✓ Completed survey map/data sheet
5. ✓ Completed PCB Survey Data Record Sheet
6. ✓ Copy of the Chain of Custody
7. ✓ Copy of sample results
8. N/A Other documentation:

Completed By: Jodie L. Reed (Environmental Technician) Date: 12-15-05

Reviewed By: [illegible] (Environmental Supervisor) Date: 1-4-06

PCB SURVEY PACKAGE COVER SHEET

Package ID Number : 0002	Survey Area: Screenhouse Floor	Size (m^2): ~ 513

# of Field Samples: 6 Random Start Location: X (n/a), Y (n/a)

# of QC samples: 1 Sample Spacing: n/a meters

Isolation Controls implemented ☐ List controls: Area posted as a radiologically controlled area and PCB survey area.

Comments/specific directions[1]: - On September 17, 2004, PCB wipe samples of the SH floor were collected (WGHoaglund, TRSchlueter, TAGoble). Floor considered impervious surface to demolition dust/debris from PCB painted steel; floor also had sealant coating applied during original construction. Structural steel was not in contact with concrete floor due to grifflon barrier. Judgmental samples collected for assurance purposes only.

- Sample results acceptance criteria is <10 mg/100 cm^2 for wipe samples.

([1] Address any inaccessible areas or sample points not included in survey).

SURVEY PACKAGE CLOSURE

Screening Survey Package is authorized for closure. All required reviews are completed and pertinent information is included in package (see Survey Package Close-Out Checklist).

ENV Technician Jackie L. Reed Date: 12-15-05

ENV Supervisor: [illegible] Date: 1-4-06

Package ID Number: 0002

PCB SURVEY DATA RECORD SHEET

Survey Area: Screenhouse Floor	Size (m^2): 513	# of Samples: 7

Sample ID Number	Sample Location (grid number)	Sample Result (ug/100 cm^2)	Sample ID Number	Sample Location (X) (Y)	Sample Result (ug/100 cm^2)
1	506-J2	0.07			
2	506-D4	1.7			
3	504-AA2	1.7			
4	504-O4	0.06			
5	504-L6	1.2			
6	507-H3	0.09			
7	Field Blank	nd			

Note: nd – non detect

Performed By: Jodie L Reed (Survey Technician) Date: 12-15-05

Reviewed By: (Environmental Supervisor) Date: 1-4-06

CONSUMERS ENERGY Memorandum

To: TAGoble, Big Rock

From: GLCattell, T-254, Jackson

Date: September 21, 2004

Subject: SAMPLES FOR DETERMINATION OF PCBs
- Surface Wipes
- Screenhouse Demo
- Sampling Dates of September 17 & 20, 2004

CC: File Index: 520417-783-371

Seven surface wipe samples were received on September 20 & 21 for determination of polychlorinated biphenyls (PCBs). All determinations were performed by the Chemistry Section of Laboratory Services and the results are attached for your review.

Analytical Methods
Unless otherwise specified, all methods are from SW-846, Test Methods For Evaluating Solid Waste - Physical / Chemical Methods, USEPA.

Sample Extraction - Method 3550, Sonication Extraction.

Extract Cleanup – Method 3620, Florisil Cleanup & Method 3665, Sulfuric Acid/Permanganate Cleanup.

Extract Concentration – Nitrogen Evaporation Technique, Exhibit D, Aroclors, Section 10. Multi-Media, Multi-Concentration Organics Analysis; SOM01.X; USEPA.

Polychlorinated Biphenyls - Method 8082, Polychlorinated Biphenyls by Gas Chromatography.

Analytical Remarks
Results are reported with an estimated method detection limit, derived from other matrices and on historical results.

The surrogate spike acceptance criteria are a generic (interim) range. No statisically-derived in-house acceptance criteria is available due to the infrequent analysis of the sample type.

A wipe area of 100 cm^2 was assumed.

Report Contents
Seven pages total: One cover page, four Analytical Results pages, two Chain of Custody pages.

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Sreenhouse Demo - Sampling Dates of September 17 & 20, 2004	Our Project Number CHEM-04-1371

Sample Identification	Screenhouse - 506 J2	**Sample Identification**	Screenhouse - 506 D4
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	09-17-04	Sample Date	09-17-04
Received Date	09-20-04	Received Date	09-20-04
Report Date	09-21-04	Report Date	09-21-04
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	09-20-04	Preparation Date	09-20-04
Final Analysis Date	09-20-04	Final Analysis Date	09-20-04
Analyst	bek, glc	Analyst	bek, glc
Control Number	041371-01	Control Number	041371-02

Primary Analytical Column **TARGET PCBs, 8082**	**ug/100cm^2**	**Est MDL**	**Primary Analytical Column** **TARGET PCBs, 8082**	**ug/100cm^2**	**Est MDL**
PCB-1016	nd	0.05	PCB-1016	nd	0.05
PCB-1221	nd	0.05	PCB-1221	nd	0.05
PCB-1232	nd	0.05	PCB-1232	nd	0.05
PCB-1242	nd	0.05	PCB-1242	nd	0.05
PCB-1248	nd	0.05	PCB-1248	nd	0.05
PCB-1254	0.07	0.05	PCB-1254	1.7	0.05
PCB-1260	nd	0.05	PCB-1260	nd	0.05
PCB-1262	nd	0.05	PCB-1262	nd	0.05
PCB-1268	nd	0.05	PCB-1268	nd	0.05
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	80	60-140	Decachlorobiphenyl	81	60-140

Confirming Column **TARGET PCBs, 8082**	**ug/100cm^2**	**Est MDL**	**Confirming Column** **TARGET PCBs, 8082**	**ug/100cm^2**	**Est MDL**
PCB-1016	nd	0.05	PCB-1016	nd	0.05
PCB-1221	nd	0.05	PCB-1221	nd	0.05
PCB-1232	nd	0.05	PCB-1232	nd	0.05
PCB-1242	nd	0.05	PCB-1242	nd	0.05
PCB-1248	nd	0.05	PCB-1248	nd	0.05
PCB-1254	0.07	0.05	PCB-1254	2.0	0.05
PCB-1260	nd	0.05	PCB-1260	nd	0.05
PCB-1262	nd	0.05	PCB-1262	nd	0.05
PCB-1268	nd	0.05	PCB-1268	nd	0.05
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	75	60-140	Decachlorobiphenyl	79	60-140

NOTES:	Est MDL = Estimated Method Detection Limit, ug/100cm^2 nd = Parameter Was Not Detected at the Est MDL See Report Text For Any Additional Discussion

Reviewed By AM Date 9/21/04

Data File: seq091704A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Sreenhouse Demo - Sampling Dates of September 17 & 20, 2004	Our Project Number CHEM-04-1371

Sample Identification	Screenhouse - 504 AA2	**Sample Identification**	Screenhouse - 504 O4
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	09-17-04	Sample Date	09-17-04
Received Date	09-20-04	Received Date	09-20-04
Report Date	09-21-04	Report Date	09-21-04
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	09-20-04	Preparation Date	09-20-04
Final Analysis Date	09-20-04	Final Analysis Date	09-20-04
Analyst	bek, glc	Analyst	bek, glc
Control Number	041371-03	Control Number	041371-04

Primary Analytical Column **TARGET PCBs, 8082**	**ug/100cm^2**	**Est MDL**	**Primary Analytical Column** **TARGET PCBs, 8082**	**ug/100cm^2**	**Est MDL**
PCB-1016	nd	0.05	PCB-1016	nd	0.05
PCB-1221	nd	0.05	PCB-1221	nd	0.05
PCB-1232	nd	0.05	PCB-1232	nd	0.05
PCB-1242	nd	0.05	PCB-1242	nd	0.05
PCB-1248	nd	0.05	PCB-1248	nd	0.05
PCB-1254	1.7	0.05	PCB-1254	0.06	0.05
PCB-1260	nd	0.05	PCB-1260	nd	0.05
PCB-1262	nd	0.05	PCB-1262	nd	0.05
PCB-1268	nd	0.05	PCB-1268	nd	0.05
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	87	60-140	Decachlorobiphenyl	86	60-140

Confirming Column **TARGET PCBs, 8082**	**ug/100cm^2**	**Est MDL**	**Confirming Column** **TARGET PCBs, 8082**	**ug/100cm^2**	**Est MDL**
PCB-1016	nd	0.05	PCB-1016	nd	0.05
PCB-1221	nd	0.05	PCB-1221	nd	0.05
PCB-1232	nd	0.05	PCB-1232	nd	0.05
PCB-1242	nd	0.05	PCB-1242	nd	0.05
PCB-1248	nd	0.05	PCB-1248	nd	0.05
PCB-1254	2.0	0.05	PCB-1254	0.06	0.05
PCB-1260	nd	0.05	PCB-1260	nd	0.05
PCB-1262	nd	0.05	PCB-1262	nd	0.05
PCB-1268	nd	0.05	PCB-1268	nd	0.05
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	85	60-140	Decachlorobiphenyl	85	60-140

NOTES:
Est MDL = Estimated Method Detection Limit, ug/100cm^2
nd = Parameter Was Not Detected at the Est MDL
See Report Text For Any Additional Discussion

Reviewed By AU Date 9/21/04

Data File: seq091704A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Sreenhouse Demo - Sampling Dates of September 17 & 20, 2004	Our Project Number CHEM-04-1371

Sample Identification	Screenhouse - 504 L6	**Sample Identification**	EDG - 507 H3
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	09-17-04	Sample Date	09-17-04
Received Date	09-20-04	Received Date	09-20-04
Report Date	09-21-04	Report Date	09-21-04
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	09-20-04	Preparation Date	09-20-04
Final Analysis Date	09-20-04	Final Analysis Date	09-20-04
Analyst	bek, glc	Analyst	bek, glc
Control Number	041371-05	Control Number	041371-06

Primary Analytical Column **TARGET PCBs, 8082**	**ug/100cm^2**	**Est MDL**	**Primary Analytical Column** **TARGET PCBs, 8082**	**ug/100cm^2**	**Est MDL**
PCB-1016	nd	0.05	PCB-1016	nd	0.05
PCB-1221	nd	0.05	PCB-1221	nd	0.05
PCB-1232	nd	0.05	PCB-1232	nd	0.05
PCB-1242	nd	0.05	PCB-1242	nd	0.05
PCB-1248	nd	0.05	PCB-1248	nd	0.05
PCB-1254	1.2	0.05	PCB-1254	0.09	0.05
PCB-1260	nd	0.05	PCB-1260	nd	0.05
PCB-1262	nd	0.05	PCB-1262	nd	0.05
PCB-1268	nd	0.05	PCB-1268	nd	0.05
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	72	60-140	Decachlorobiphenyl	89	60-140

Confirming Column **TARGET PCBs, 8082**	**ug/100cm^2**	**Est MDL**	**Confirming Column** **TARGET PCBs, 8082**	**ug/100cm^2**	**Est MDL**
PCB-1016	nd	0.05	PCB-1016	nd	0.05
PCB-1221	nd	0.05	PCB-1221	nd	0.05
PCB-1232	nd	0.05	PCB-1232	nd	0.05
PCB-1242	nd	0.05	PCB-1242	nd	0.05
PCB-1248	nd	0.05	PCB-1248	nd	0.05
PCB-1254	1.4	0.05	PCB-1254	1.2	0.05
PCB-1260	nd	0.05	PCB-1260	nd	0.05
PCB-1262	nd	0.05	PCB-1262	nd	0.05
PCB-1268	nd	0.05	PCB-1268	nd	0.05
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	71	60-140	Decachlorobiphenyl	88	60-140

NOTES:	Est MDL = Estimated Method Detection Limit, ug/100cm^2 nd = Parameter Was Not Detected at the Est MDL See Report Text For Any Additional Discussion

Reviewed By AM Date 9/29

Data File: seq091704A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Sreenhouse Demo - Sampling Dates of September 17 & 20, 2004	Our Project Number CHEM-04-1371

Sample Identification	Field Blank
Sample Type	surface wipe
Sample Date	09-20-04
Received Date	09-21-04
Report Date	09-21-04
Percent Solids, % w/w	- -
Preparation Date	09-21-04
Final Analysis Date	09-21-04
Analyst	bek, glc
Control Number	041371-07

Primary Analytical Column **TARGET PCBs, 8082**	**ug ***	**Est MDL**
PCB-1016	nd	0.05
PCB-1221	nd	0.05
PCB-1232	nd	0.05
PCB-1242	nd	0.05
PCB-1248	nd	0.05
PCB-1254	nd	0.05
PCB-1260	nd	0.05
PCB-1262	nd	0.05
PCB-1268	nd	0.05
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	86	60-140

Confirming Column **TARGET PCBs, 8082**	**ug ***	**Est MDL**
PCB-1016	nd	0.05
PCB-1221	nd	0.05
PCB-1232	nd	0.05
PCB-1242	nd	0.05
PCB-1248	nd	0.05
PCB-1254	nd	0.05
PCB-1260	nd	0.05
PCB-1262	nd	0.05
PCB-1268	nd	0.05
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	87	60-140

NOTES:

Est MDL = Estimated Method Detection Limit, ug/100cm^2
nd = Parameter Was Not Detected at the Est MDL
See Report Text For Any Additional Discussion
* = No Wipe Area Since A Field Blank

Reviewed By _____ Date 9/21/04

Data File: seq091704A

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – LABORATORY SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: Big Rock Point

PROJECT NUMBER: Screenhouse Demo

SAMPLING TEAM:

DATE SHIPPED: 9/17/04

SITE SKETCH ATTACHED? CIRCLE ONE: YES NO

PAGE 1 OF 1

SEND REPORT TO: TAGOBLE

PHONE: 547-8389

ANALYSIS REQUESTED: PCB WIPE

CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	PCB WIPE	REMARKS
04F1371-01	9/17/04	1245	SOLID	SCREEN HOUSE - 506-J2	—	1	✓	PLEASE RUSH
-02		1251		SCREEN HOUSE - 506 - D4	—	1	✓	
-03		1255		SCREENHOUSE - 504 - AA2	—	1	✓	
-04		1259		SCREENHOUSE - 504 - 04	—	1	✓	
-05		1304		SCREENHOUSE - 504 - L6	—	1	✓	
-06		1310		EDG - 507 - H3	—	1	✓	

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
[signature] 9/17/04		
RELINQUISHED BY: (SIGNATURE) ?	DATE / TIME 9/20/04 1235	RECEIVED BY: (SIGNATURE) [signature]
RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)

COMMENTS

ORIGINAL TO LAB COPY TO CUSTOMER

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – LABORATORY SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: Big Rock Point

PROJECT NUMBER:

SAMPLING TEAM:

DATE SHIPPED: 9/20/04

SITE SKETCH ATTACHED? CIRCLE ONE: YES NO

PAGE 1 OF 1

SEND REPORT TO: TAGOBUE

PHONE: 547-9389

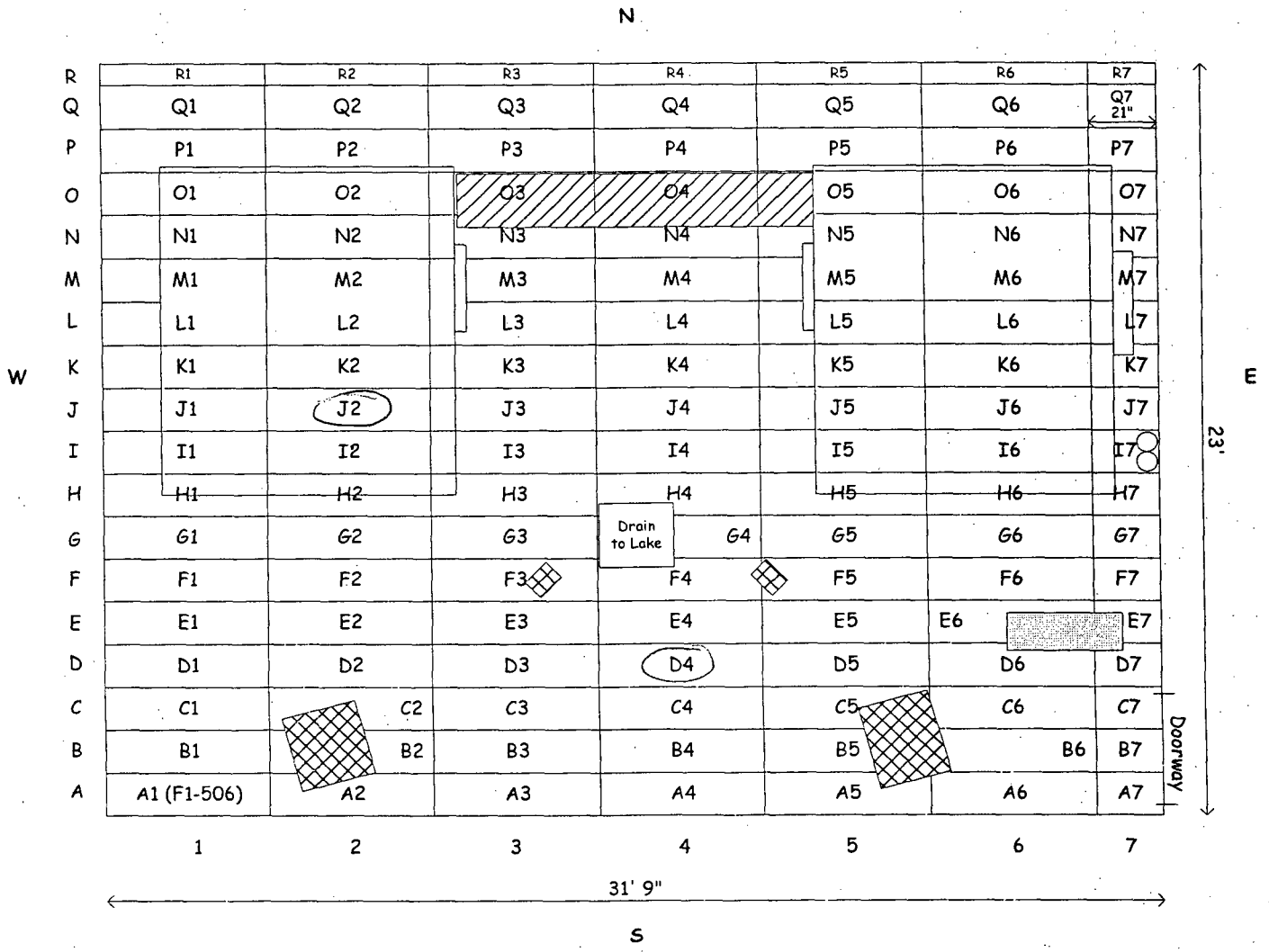
CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	ANALYSIS REQUESTED: PCB WIPE	REMARKS
04-1371-07	9/20/04	100		FIELD BLANK		1	✓	

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
[signature]	9/20/04 1350	
RELINQUISHED BY: (SIGNATURE) ?	DATE / TIME ?/21/04 1015	RECEIVED BY: (SIGNATURE) [signature]
RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)

COMMENTS: INCLUDE w/ 6 SAMPLE SENT ON 9/17/04

ORIGINAL TO LAB COPY TO CUSTOMER

Screen House Room 506
Screen Room Floor: F1-506

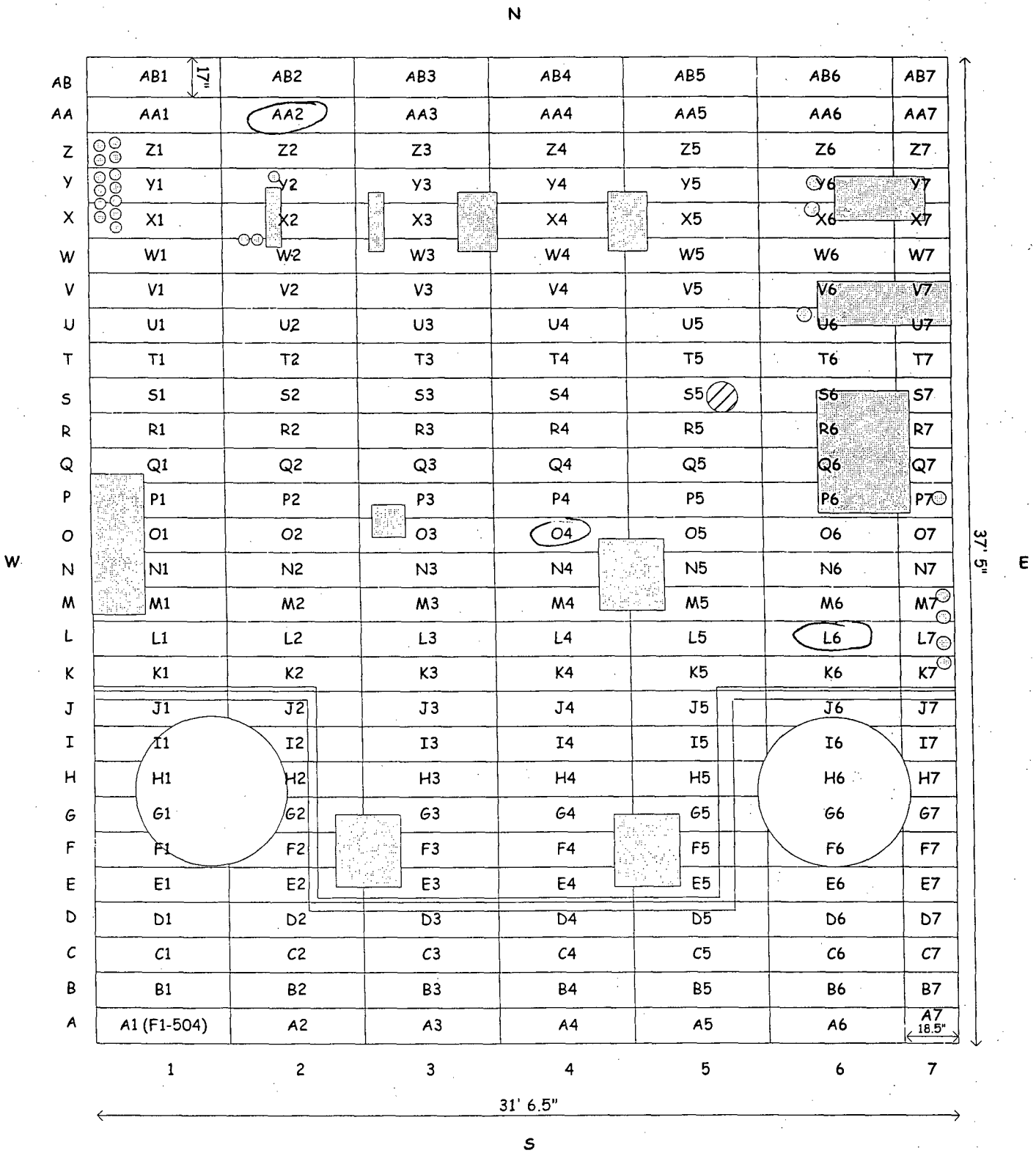


Survey Area: 730.25 sq ft or 67.84244 sq m

0.346372 ESO6

X	Y		
4	4	→ D4	0.591807
2	10		0.123448
6	12		
3	4		
5	10		
6	11		
5	16		
2	7		
3	10		
2	4		
3	2		
1	13		

Screen House Room 504
Pump Room Floor: F1-504



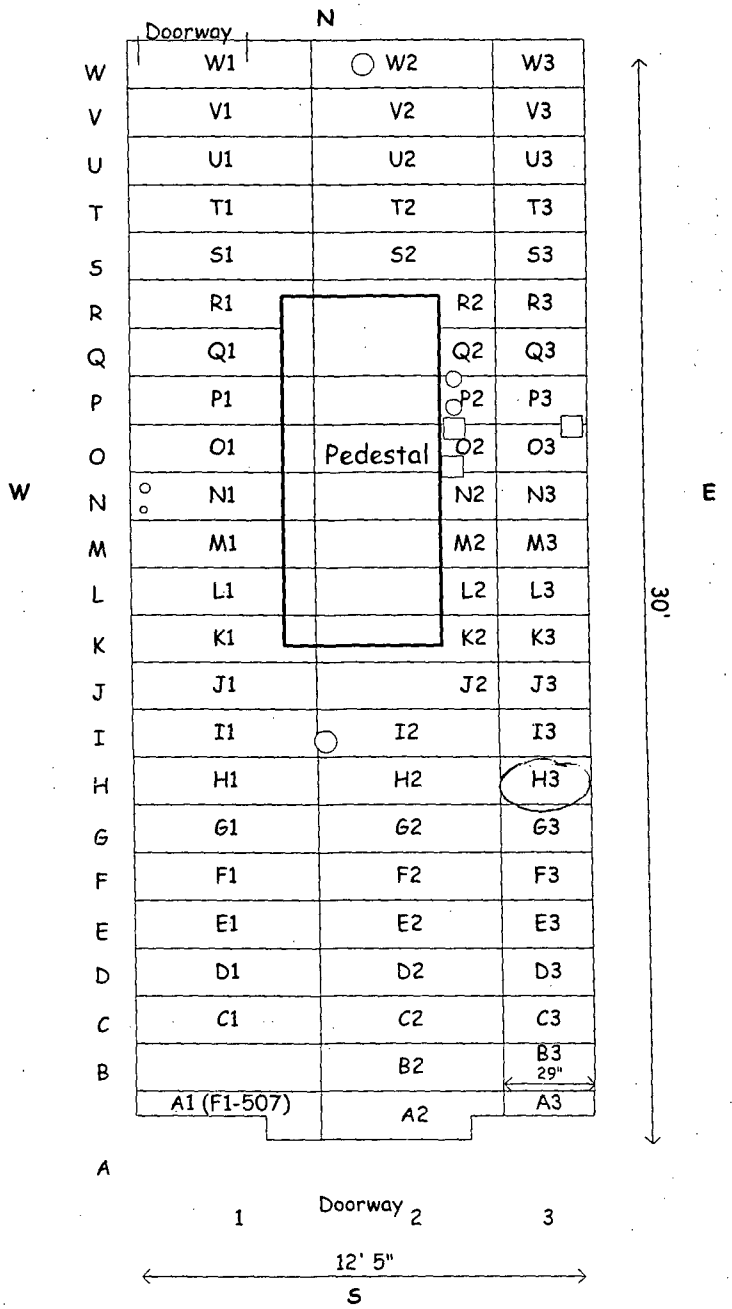
Survey Area: 1180.181 sq ft or 109.6424 sq m

0.577391

504

X	Y		
	4		0.64376
4	15	→ 04	
2	27		0.385443
3	16		
5	14		
7	7		
1	3		
6	6		
2	8		
6	3		
3	23		
3	7		
5	24		

Screen House Room 507
Emergency Diesel Generator Room Floor: F1-507



Survey Area: 379.78 sq ft or 335.283 sq m

EDG Room

0.767886

y	x		
		→43	0.961262
8	3		
3	16		0.833902
1	9		
5	7		
4	17		
6	6		
3	2		
2	13		
2	8		
6	11		
2	9		
1	5		

MICROSOFT EXCEL

RAND()* (b-a)+a

a=1 b = TOTAL COLLECTED
OR TOTAL CLAP
IN EACH DIRECTION

PCB SURVEY PACKAGE CLOSE-OUT CHECKLIST

Package ID Number: 0003 Survey Area: Service Building Floor

The survey package is legible and complete and the following necessary information is in the package:

1. ✓ Survey Package Cover Sheet
2. ✓ Survey design documentation
3. ✓ Random number generator sheet for sample start location and QC sample numbers.
4. ✓ Completed survey map/data sheet
5. ✓ Completed PCB Survey Data Record Sheet
6. ✓ Copy of the Chain of Custody
7. ✓ Copy of sample results
8. N/A Other documentation:

Completed By: Jodie L. Reed Date: 12-15-05
(Environmental Technician)

Reviewed By: [illegible] Date: 02-06-06
(Environmental Supervisor)

PCB SURVEY PACKAGE COVER SHEET

Package ID Number : 0003	Survey Area: Service Building Floor: Area one = Rms 103, 104, 104A, 105, 108, 113; Area two = Rms. 100, 101, 106, 107	Size (m^2): **Area One: 291** **Area Two: 100**

Area One- Rm. 103, 104, 104A, 105, 108, 113

# of Field Samples: 10 — Random Start Location: X (41.1), Y (66.9)

# of QC samples: 1 — Sample Spacing: 37 meters

Area Two- RM. 100, 101, 106, 107

# of Field Samples: 4 — Random Start Location: X (9.3), Y (16.7)

# of QC samples: 1 — Sample Spacing: 37 meters

Isolation Controls implemented ☐ List controls: Area posted as a radiologically controlled area and PCB survey area.

Comments/specific directions[1]: -Samples obtained in random locations as determined by the survey design.

-Sample # S-PCB-5 fell slightly off of the concrete slab. Actual sample was taken at (12.5)(6.4) instead of at (13.0)(6.4).

-Portion of building demo with painted structural steel not complete; awaiting removal of north bay and former control room only to be performed with reminder Turbine Building. Sampled south 2 bays (samples collected by TRS, WGH and JLReed) of service building floor for informational/assurance purposes only. Surface wipe samples of area; floor considered impervious to demolition debris/dust potentially containing PCBs.

-Acceptance criteria: Wipe samples = <10ug/100cm^2; Soil samples = <1ppm PCB

([1] Address any inaccessible areas or sample points not included in survey).

SURVEY PACKAGE CLOSURE

Screening Survey Package is authorized for closure. All required reviews are completed and pertinent information is included in package (see Survey Package Close-Out Checklist).

ENV Technician Jodie L. Reed Date: 12-15-05

ENV Supervisor: [signature] Date: 02-06-06

Package ID Number: 0003

PCB SURVEY DATA RECORD SHEET

Survey Area: Service Building Floor	Size (m^2): 391	# of Samples: 17

Sample ID Number	Sample Location (X) (Y)	Sample Result (ug/100 cm^2)	Sample ID Number	Sample Location (X) (Y)	Sample Result (ug/100 cm^2)
S-PCB-1	(12.5) (20.4)	0.2			
S-PCB-2	(3.2) (14.9)	0.6			
S-PCB-3	(8.1) (11.1)	0.4			
S-PCB-4	(3.4) (4.2)	0.5			
S-PCB-5	(13.0) (6.4)	3.6			
S-PCB-6	(11.0) (7.5)	0.8			
S-PCB-7	(0.8) (5.4)	0.4			
S-PCB-8	(7.0) (17.5)	0.4			
S-PCB-9	(6.1) (17.1)	0.8			
S-PCB-10	(1.4) (16.3)	0.2			
S-PCB-11	(2.8) (5.1)	0.2			
S-PCB-12	(6.6) (10.0)	0.3			
S-PCB-13	(6.0) (9.6)	1.0			
S-PCB-14	(4.2) (7.2)	0.4			
S-PCB-15	(2.8) (6.9)	1.7			
S-PCB-field blank	N/A	0.45			
S-PCB-QC soil		nda			

Note: nd – non detect

Performed By: Jackie L. Reed (Survey Technician) Date: 12/12/05

Reviewed By: (Environmental Supervisor) Date: 02-06-06

CONSUMERS ENERGY Memorandum

To: TAGoble, Big Rock

From: GLCattell, T-254, Jackson

Date: January 27, 2005

Subject: SAMPLES FOR DETERMINATION OF PCBs
- Surface Wipes
- Service Building Demo
- Sampling Date of January 21, 2005

CC:

File Index: 510517-781-136

Sixteen surface wipe samples and one soil sample were received on January 24 for determination of polychlorinated biphenyls (PCBs). All determinations were performed by the Chemistry Section of Laboratory Services and the results are attached for your review.

Analytical Methods

Unless otherwise specified, all methods are from SW-846, Test Methods For Evaluating Solid Waste - Physical / Chemical Methods, USEPA.

Sample Extraction (surface wipes) - Method 3550, Ultrasonic Extraction.

Sample Extraction (soil) - Method 3545, Pressurized Fluid Extraction.

Extract Concentration – Nitrogen Evaporation Technique, Exhibit D, Aroclors, Section 10. Multi-Media, Multi-Concentration Organics Analysis; SOM01.X; USEPA.

Extract Cleanup – Method 3620, Florisil Cleanup & Method 3665, Sulfuric Acid/Permanganate Cleanup.

Percent Solids (Dry Weight) – Section 7.2 of Method 3545, Determination of Percent Dry Weight, Pressurized Fluid Extraction.

Polychlorinated Biphenyls - Method 8082, Polychlorinated Biphenyls by Gas Chromatography.

Analytical Remarks & Summary

a. All MDLs are listed as "<" for uniformity. The actual MDLs of individual Aroclors vary slightly amonst each other and detectors, but are below the indicated limit.
b. All PCBs are identifed, calculated and reported as Aroclor 1254.
c. All surface wipe samples are reported as containing PCBs, ranging from 0.16 to 4.0 ug/100cm^2. The soil did not contain PCBs at or above the indicated target detection limit.
d. The wipe area was assumed to be 100cm^2.

Report Package Contents

The report package consists of 13 pages: 2 cover pages, 9 pages of Analytical Results, 2 Chain of Custody pages.

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Service Builiding Demo - Sampling Date of January 21, 2005	Our Project Number CHEM-05-0136

Sample Identification	S-PCB-1	**Sample Identification**	S-PCB-2
Sample Depth, ft	- -	Sample Depth, ft	- -
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	01-21-05	Sample Date	01-21-05
Received Date	01-24-05	Received Date	01-24-05
Report Date	01-27-05	Report Date	01-27-05
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	01-24-05	Preparation Date	01-24-05
Analysis Date	01-25-05	Analysis Date	01-25-05
Analyst	sjn, glc	Analyst	sjn, glc
Control Number	050136-01	Control Number	050136-02

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.01
PCB-1221	nd	<0.01
PCB-1232	nd	<0.01
PCB-1242	nd	<0.01
PCB-1248	nd	<0.01
PCB-1254	0.22	<0.01
PCB-1260	nd	<0.01
PCB-1262	nd	<0.01
PCB-1268	nd	<0.01
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	98	59-109

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.01
PCB-1221	nd	<0.01
PCB-1232	nd	<0.01
PCB-1242	nd	<0.01
PCB-1248	nd	<0.01
PCB-1254	0.63	<0.01
PCB-1260	nd	<0.01
PCB-1262	nd	<0.01
PCB-1268	nd	<0.01
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	93	59-109

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.01
PCB-1221	nd	<0.01
PCB-1232	nd	<0.01
PCB-1242	nd	<0.01
PCB-1248	nd	<0.01
PCB-1254	0.22	<0.01
PCB-1260	nd	<0.01
PCB-1262	nd	<0.01
PCB-1268	nd	<0.01
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	100	58-104

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.01
PCB-1221	nd	<0.01
PCB-1232	nd	<0.01
PCB-1242	nd	<0.01
PCB-1248	nd	<0.01
PCB-1254	0.65	<0.01
PCB-1260	nd	<0.01
PCB-1262	nd	<0.01
PCB-1268	nd	<0.01
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	91	58-104

NOTES:
MDL = Method Detection Limit, ug/100cm^2. See Report Text.
nd = Parameter Not Detected At MDL

Reviewed By _____ Date 012705

Sequence 012505A
S-PCB-1 S-PCB-2

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Service Builiding Demo - Sampling Date of January 21, 2005	Our Project Number CHEM-05-0136

Sample Identification	S-PCB-3	Sample Identification	S-PCB-4
Sample Depth, ft	- -	Sample Depth, ft	- -
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	01-21-05	Sample Date	01-21-05
Received Date	01-24-05	Received Date	01-24-05
Report Date	01-27-05	Report Date	01-27-05
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	01-24-05	Preparation Date	01-24-05
Analysis Date	01-25-05	Analysis Date	01-25-05
Analyst	sjn, glc	Analyst	sjn, glc
Control Number	050136-03	Control Number	050136-04

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.01
PCB-1221	nd	<0.01
PCB-1232	nd	<0.01
PCB-1242	nd	<0.01
PCB-1248	nd	<0.01
PCB-1254	0.42	<0.01
PCB-1260	nd	<0.01
PCB-1262	nd	<0.01
PCB-1268	nd	<0.01
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	98	59-109

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.01
PCB-1221	nd	<0.01
PCB-1232	nd	<0.01
PCB-1242	nd	<0.01
PCB-1248	nd	<0.01
PCB-1254	0.54	<0.01
PCB-1260	nd	<0.01
PCB-1262	nd	<0.01
PCB-1268	nd	<0.01
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	98	59-109

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.01
PCB-1221	nd	<0.01
PCB-1232	nd	<0.01
PCB-1242	nd	<0.01
PCB-1248	nd	<0.01
PCB-1254	0.48	<0.01
PCB-1260	nd	<0.01
PCB-1262	nd	<0.01
PCB-1268	nd	<0.01
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	99	58-104

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.01
PCB-1221	nd	<0.01
PCB-1232	nd	<0.01
PCB-1242	nd	<0.01
PCB-1248	nd	<0.01
PCB-1254	0.53	<0.01
PCB-1260	nd	<0.01
PCB-1262	nd	<0.01
PCB-1268	nd	<0.01
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	97	58-104

NOTES:
MDL = Method Detection Limit, ug/100cm^2. See Report Text.
nd = Parameter Not Detected At MDL

Reviewed By _____ Date 012705

Sequence 012505A
S-PCB-3 S-PCB-4

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Service Builiding Demo - Sampling Date of January 21, 2005	Our Project Number CHEM-05-0136

Sample Identification	S-PCB-5	**Sample Identification**	S-PCB-6
Sample Depth, ft	- -	Sample Depth, ft	- -
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	01-21-05	Sample Date	01-21-05
Received Date	01-24-05	Received Date	01-24-05
Report Date	01-27-05	Report Date	01-27-05
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	01-24-05	Preparation Date	01-24-05
Analysis Date	01-25-05	Analysis Date	01-25-05
Analyst	sjn, glc	Analyst	sjn, glc
Control Number	050136-05	Control Number	050136-06

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.01
PCB-1221	nd	<0.01
PCB-1232	nd	<0.01
PCB-1242	nd	<0.01
PCB-1248	nd	<0.01
PCB-1254	3.6	<0.01
PCB-1260	nd	<0.01
PCB-1262	nd	<0.01
PCB-1268	nd	<0.01
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	99	59-109

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.01
PCB-1221	nd	<0.01
PCB-1232	nd	<0.01
PCB-1242	nd	<0.01
PCB-1248	nd	<0.01
PCB-1254	0.80	<0.01
PCB-1260	nd	<0.01
PCB-1262	nd	<0.01
PCB-1268	nd	<0.01
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	97	59-109

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.01
PCB-1221	nd	<0.01
PCB-1232	nd	<0.01
PCB-1242	nd	<0.01
PCB-1248	nd	<0.01
PCB-1254	4.0	<0.01
PCB-1260	nd	<0.01
PCB-1262	nd	<0.01
PCB-1268	nd	<0.01
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	103	58-104

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.01
PCB-1221	nd	<0.01
PCB-1232	nd	<0.01
PCB-1242	nd	<0.01
PCB-1248	nd	<0.01
PCB-1254	0.88	<0.01
PCB-1260	nd	<0.01
PCB-1262	nd	<0.01
PCB-1268	nd	<0.01
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	100	58-104

NOTES:
MDL = Method Detection Limit, ug/100cm^2. See Report Text.
nd = Parameter Not Detected At MDL

Reviewed By _____ Date 012705

Sequence 012505A
S-PCB-5 S-PCB-6

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Service Builiding Demo - Sampling Date of January 21, 2005	Our Project Number CHEM-05-0136

Sample Identification	S-PCB-7	**Sample Identification**	S-PCB-8
Sample Depth, ft	- -	Sample Depth, ft	- -
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	01-21-05	Sample Date	01-21-05
Received Date	01-24-05	Received Date	01-24-05
Report Date	01-27-05	Report Date	01-27-05
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	01-25-05	Preparation Date	01-25-05
Analysis Date	01-25-05	Analysis Date	01-25-05
Analyst	sjn, glc	Analyst	sjn, glc
Control Number	050136-07	Control Number	050136-08

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.01
PCB-1221	nd	<0.01
PCB-1232	nd	<0.01
PCB-1242	nd	<0.01
PCB-1248	nd	<0.01
PCB-1254	0.43	<0.01
PCB-1260	nd	<0.01
PCB-1262	nd	<0.01
PCB-1268	nd	<0.01
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	99	59-109

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.01
PCB-1221	nd	<0.01
PCB-1232	nd	<0.01
PCB-1242	nd	<0.01
PCB-1248	nd	<0.01
PCB-1254	0.39	<0.01
PCB-1260	nd	<0.01
PCB-1262	nd	<0.01
PCB-1268	nd	<0.01
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	97	59-109

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.01
PCB-1221	nd	<0.01
PCB-1232	nd	<0.01
PCB-1242	nd	<0.01
PCB-1248	nd	<0.01
PCB-1254	0.43	<0.01
PCB-1260	nd	<0.01
PCB-1262	nd	<0.01
PCB-1268	nd	<0.01
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	102	58-104

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.01
PCB-1221	nd	<0.01
PCB-1232	nd	<0.01
PCB-1242	nd	<0.01
PCB-1248	nd	<0.01
PCB-1254	0.36	<0.01
PCB-1260	nd	<0.01
PCB-1262	nd	<0.01
PCB-1268	nd	<0.01
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	101	58-104

NOTES:
MDL = Method Detection Limit, ug/100cm^2. See Report Text.
nd = Parameter Not Detected At MDL

Reviewed By _____ Date 01270[illegible]

Sequence 012505A
S-PCB-7 S-PCB-8

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Service Builiding Demo - Sampling Date of January 21, 2005	Our Project Number CHEM-05-0136

Sample Identification	S-PCB-9	Sample Identification	S-PCB-10
Sample Depth, ft	- -	Sample Depth, ft	- -
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	01-21-05	Sample Date	01-21-05
Received Date	01-24-05	Received Date	01-24-05
Report Date	01-27-05	Report Date	01-27-05
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	01-25-05	Preparation Date	01-25-05
Analysis Date	01-26-05	Analysis Date	01-26-05
Analyst	sjn, glc	Analyst	sjn, glc
Control Number	050136-09	Control Number	050136-10

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.01
PCB-1221	nd	<0.01
PCB-1232	nd	<0.01
PCB-1242	nd	<0.01
PCB-1248	nd	<0.01
PCB-1254	0.83	<0.01
PCB-1260	nd	<0.01
PCB-1262	nd	<0.01
PCB-1268	nd	<0.01
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	95	59-109

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.01
PCB-1221	nd	<0.01
PCB-1232	nd	<0.01
PCB-1242	nd	<0.01
PCB-1248	nd	<0.01
PCB-1254	0.21	<0.01
PCB-1260	nd	<0.01
PCB-1262	nd	<0.01
PCB-1268	nd	<0.01
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	99	59-109

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.01
PCB-1221	nd	<0.01
PCB-1232	nd	<0.01
PCB-1242	nd	<0.01
PCB-1248	nd	<0.01
PCB-1254	0.84	<0.01
PCB-1260	nd	<0.01
PCB-1262	nd	<0.01
PCB-1268	nd	<0.01
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	98	58-104

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.01
PCB-1221	nd	<0.01
PCB-1232	nd	<0.01
PCB-1242	nd	<0.01
PCB-1248	nd	<0.01
PCB-1254	0.16	<0.01
PCB-1260	nd	<0.01
PCB-1262	nd	<0.01
PCB-1268	nd	<0.01
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	104	58-104

NOTES:
MDL = Method Detection Limit, ug/100cm^2. See Report Text.
nd = Parameter Not Detected At MDL

Reviewed By Sll Date 012705

Sequence 012505A
S-PCB-9 S-PCB-10

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Service Builiding Demo - Sampling Date of January 21, 2005	Our Project Number CHEM-05-0136

Sample Identification	S-PCB-11	Sample Identification	S-PCB-12
Sample Depth, ft	- -	Sample Depth, ft	- -
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	01-21-05	Sample Date	01-21-05
Received Date	01-24-05	Received Date	01-24-05
Report Date	01-27-05	Report Date	01-27-05
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	01-25-05	Preparation Date	01-25-05
Analysis Date	01-26-05	Analysis Date	01-26-05
Analyst	sjn, glc	Analyst	sjn, glc
Control Number	050136-11	Control Number	050136-12

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.01	PCB-1016	nd	<0.01
PCB-1221	nd	<0.01	PCB-1221	nd	<0.01
PCB-1232	nd	<0.01	PCB-1232	nd	<0.01
PCB-1242	nd	<0.01	PCB-1242	nd	<0.01
PCB-1248	nd	<0.01	PCB-1248	nd	<0.01
PCB-1254	0.24	<0.01	PCB-1254	0.31	<0.01
PCB-1260	nd	<0.01	PCB-1260	nd	<0.01
PCB-1262	nd	<0.01	PCB-1262	nd	<0.01
PCB-1268	nd	<0.01	PCB-1268	nd	<0.01
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	97	59-109	Decachlorobiphenyl	96	59-109

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.01	PCB-1016	nd	<0.01
PCB-1221	nd	<0.01	PCB-1221	nd	<0.01
PCB-1232	nd	<0.01	PCB-1232	nd	<0.01
PCB-1242	nd	<0.01	PCB-1242	nd	<0.01
PCB-1248	nd	<0.01	PCB-1248	nd	<0.01
PCB-1254	0.20	<0.01	PCB-1254	0.34	<0.01
PCB-1260	nd	<0.01	PCB-1260	nd	<0.01
PCB-1262	nd	<0.01	PCB-1262	nd	<0.01
PCB-1268	nd	<0.01	PCB-1268	nd	<0.01
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	102	58-104	Decachlorobiphenyl	102	58-104

NOTES:
MDL = Method Detection Limit, ug/100cm^2. See Report Text.
nd = Parameter Not Detected At MDL

Reviewed By Sil Date 012705

Sequence 012505A
S-PCB-11 S-PCB-12

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Service Builiding Demo - Sampling Date of January 21, 2005	Our Project Number CHEM-05-0136

Sample Identification	S-PCB-13	Sample Identification	S-PCB-14
Sample Depth, ft	- -	Sample Depth, ft	- -
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	01-21-05	Sample Date	01-21-05
Received Date	01-24-05	Received Date	01-24-05
Report Date	01-27-05	Report Date	01-27-05
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	01-25-05	Preparation Date	01-25-05
Analysis Date	01-26-05	Analysis Date	01-26-05
Analyst	sjn, glc	Analyst	sjn, glc
Control Number	050136-13	Control Number	050136-14

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.01
PCB-1221	nd	<0.01
PCB-1232	nd	<0.01
PCB-1242	nd	<0.01
PCB-1248	nd	<0.01
PCB-1254	1.0	<0.01
PCB-1260	nd	<0.01
PCB-1262	nd	<0.01
PCB-1268	nd	<0.01
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	92	59-109

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.01
PCB-1221	nd	<0.01
PCB-1232	nd	<0.01
PCB-1242	nd	<0.01
PCB-1248	nd	<0.01
PCB-1254	0.45	<0.01
PCB-1260	nd	<0.01
PCB-1262	nd	<0.01
PCB-1268	nd	<0.01
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	96	59-109

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.01
PCB-1221	nd	<0.01
PCB-1232	nd	<0.01
PCB-1242	nd	<0.01
PCB-1248	nd	<0.01
PCB-1254	1.1	<0.01
PCB-1260	nd	<0.01
PCB-1262	nd	<0.01
PCB-1268	nd	<0.01
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	96	58-104

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.01
PCB-1221	nd	<0.01
PCB-1232	nd	<0.01
PCB-1242	nd	<0.01
PCB-1248	nd	<0.01
PCB-1254	0.42	<0.01
PCB-1260	nd	<0.01
PCB-1262	nd	<0.01
PCB-1268	nd	<0.01
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	103	58-104

NOTES:
MDL = Method Detection Limit, ug/100cm^2. See Report Text.
nd = Parameter Not Detected At MDL

Reviewed By _____ Date 01-27-05

Sequence 012505A
S-PCB-13 S-PCB-14

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Service Builiding Demo - Sampling Date of January 21, 2005	Our Project Number CHEM-05-0136

Sample Identification	S-PCB-15	Sample Identification	S-PCB-Field Blank
Sample Depth, ft	- -	Sample Depth, ft	- -
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	01-21-05	Sample Date	01-21-05
Received Date	01-24-05	Received Date	01-24-05
Report Date	01-27-05	Report Date	01-27-05
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	01-25-05	Preparation Date	01-25-05
Analysis Date	01-26-05	Analysis Date	01-26-05
Analyst	sjn, glc	Analyst	sjn, glc
Control Number	050136-15	Control Number	050136-16

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.01
PCB-1221	nd	<0.01
PCB-1232	nd	<0.01
PCB-1242	nd	<0.01
PCB-1248	nd	<0.01
PCB-1254	1.7	<0.01
PCB-1260	nd	<0.01
PCB-1262	nd	<0.01
PCB-1268	nd	<0.01
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	95	59-109

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.01
PCB-1221	nd	<0.01
PCB-1232	nd	<0.01
PCB-1242	nd	<0.01
PCB-1248	nd	<0.01
PCB-1254	0.45	<0.01
PCB-1260	nd	<0.01
PCB-1262	nd	<0.01
PCB-1268	nd	<0.01
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	96	59-109

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.01
PCB-1221	nd	<0.01
PCB-1232	nd	<0.01
PCB-1242	nd	<0.01
PCB-1248	nd	<0.01
PCB-1254	1.9	<0.01
PCB-1260	nd	<0.01
PCB-1262	nd	<0.01
PCB-1268	nd	<0.01
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	98	58-104

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	not required	<0.01
PCB-1221	not required	<0.01
PCB-1232	not required	<0.01
PCB-1242	not required	<0.01
PCB-1248	not required	<0.01
PCB-1254	not required	<0.01
PCB-1260	not required	<0.01
PCB-1262	not required	<0.01
PCB-1268	not required	<0.01
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	not required	58-104

NOTES:
MDL = Method Detection Limit, ug/100cm^2. See Report Text.
nd = Parameter Not Detected At MDL

Reviewed By _____ Date 9-8-05

Sequence 012505A
S-PCB-15 FB

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Service Builiding Demo - Sampling Date of January 21, 2005	Our Project Number CHEM-05-0136

Sample Identification	S-PCB-Soil
Sample Depth, ft	- -
Sample Type	soil
Sample Date	01-21-05
Received Date	01-24-05
Report Date	01-27-05
Percent Solids, % w/w	88
Preparation Date	01-24-05
Analysis Date	01-26-05
Analyst	sjn, glc
Control Number	050136-17

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/Kg	TDL
PCB-1016	nd	330
PCB-1221	nd	330
PCB-1232	nd	330
PCB-1242	nd	330
PCB-1248	nd	330
PCB-1254	nd	330
PCB-1260	nd	330
PCB-1262	nd	330
PCB-1268	nd	330
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	89	70-127

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/Kg	TDL
PCB-1016	not required	330
PCB-1221	not required	330
PCB-1232	not required	330
PCB-1242	not required	330
PCB-1248	not required	330
PCB-1254	not required	330
PCB-1260	not required	330
PCB-1262	not required	330
PCB-1268	not required	330
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	not required	73-134

NOTES:
TDL = Target Detection Limit, ug/Kg, parts-per-billion. Per MDEQ OM6 R6
nd = Parameter Not Detected At TDL
Results Are Reported On The Dry Weight Basis

Reviewed By SJL Date 012705

Sequence 012505A
S-PCB-Soil

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – LABORATORY SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: Consumers Energy Big Rock Point

PROJECT NUMBER: Service Building Demo.

SAMPLING TEAM:

DATE SHIPPED: 01/21/2005

SITE SKETCH ATTACHED? CIRCLE ONE: YES NO

PAGE 1 OF 2

SEND REPORT TO: TA Goble

PHONE: 547-8389

CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	ANALYSIS REQUESTED: PCB WIPE	ANALYSIS REQUESTED: PCB SOIL						REMARKS
050136-01	01/21/05	10:26	WIPE	S-PCB-1			✓							
-02		10:18		S-PCB-2			✓							
-03		10:16		S-PCB-3			✓							
-04		10:14		S-PCB-4			✓							
-05		10:15		S-PCB-5			✓							
-06		10:16		S-PCB-6			✓							
-07		10:10		S-PCB-7			✓							
-08		10:23		S-PCB-8			✓							
-09		10:24		S-PCB-9			✓							
-10		10:21		S-PCB-10			✓							
-11		10:27		S-PCB-11			✓							
-12	01/21/05	10:31		S-PCB-12			✓							

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
Godfrey Reed	01/21/05 @ 11:29	
FedEx	01/24/05, 1100	[signature]

COMMENTS

NEED RESULTS BY 1/28/05 IF POSSIBLE

THANK YOU!

ORIGINAL TO LAB COPY TO CUSTOMER

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – LABORATORY SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: Consumers Energy Big Rock Point

PROJECT NUMBER: Service Building Demo.

SAMPLING TEAM:

DATE SHIPPED: 01/21/2005

SITE SKETCH ATTACHED? CIRCLE ONE: YES (NO)

PAGE 2 OF 2

SEND REPORT TO: TALOBLE

PHONE: 547-9389

CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	ANALYSIS REQUESTED: PCB WIPE	ANALYSIS REQUESTED: PCB SOIL	REMARKS
05-036-13	01/21/05	10:29		S-PCB-13			✓		
-14		10:28		S-PCB-14			✓		
-15		10:33		S-PCB-15			✓		
-16		10:35		S-PCB-Field Blank			✓		
-17	01/21/05	10:38		S-PCB-Soil				✓	

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
Jackie L. Reed	01/21/05 @ 11:29	
RELINQUISHED BY: (SIGNATURE) FedEx	DATE / TIME 01/24/05, 1100	RECEIVED BY: (SIGNATURE)
RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)

COMMENTS

ORIGINAL TO LAB COPY TO CUSTOMER

Service Building Post Demolition PCB Survey Design

Area 1 - Rms 103, 104, 104A, 105, 108, 113

Dimensions - ft

x =	43.5	
y =	72	
Area =	3132	sq. ft.

Number of Samples

Area / 400 sq ft.	7.83	
Add'l 20%	9.396	==>10 samples

Random Sample Locations - 10 cm x 10 cm Grid Origin

	X (ft)	Y (ft)	X (m)	Y (m)
S-PCB-1	41.1	66.9	12.5	20.4
S-PCB-2	10.5	49.0	3.2	14.9
S-PCB-3	26.4	36.4	8.1	11.1
S-PCB-4	11.2	13.8	3.4	4.2
S-PCB-5	42.6	21.0	13.0	6.4
S-PCB-6	36.2	24.5	11.0	7.5
S-PCB-7	2.5	17.7	0.8	5.4
S-PCB-8	23.0	57.3	7.0	17.5
S-PCB-9	20.0	56.1	6.1	17.1
S-PCB-10	4.5	53.5	1.4	16.3

Area 2 - Rms 100, 101, 106, 107

Dimensions - ft

x =	30	
y =	36	
Area =	1080	sq. ft.

Number of Samples

Area / 400 sq ft.	2.7	
Add'l 20%	3.24	==> 4 samples

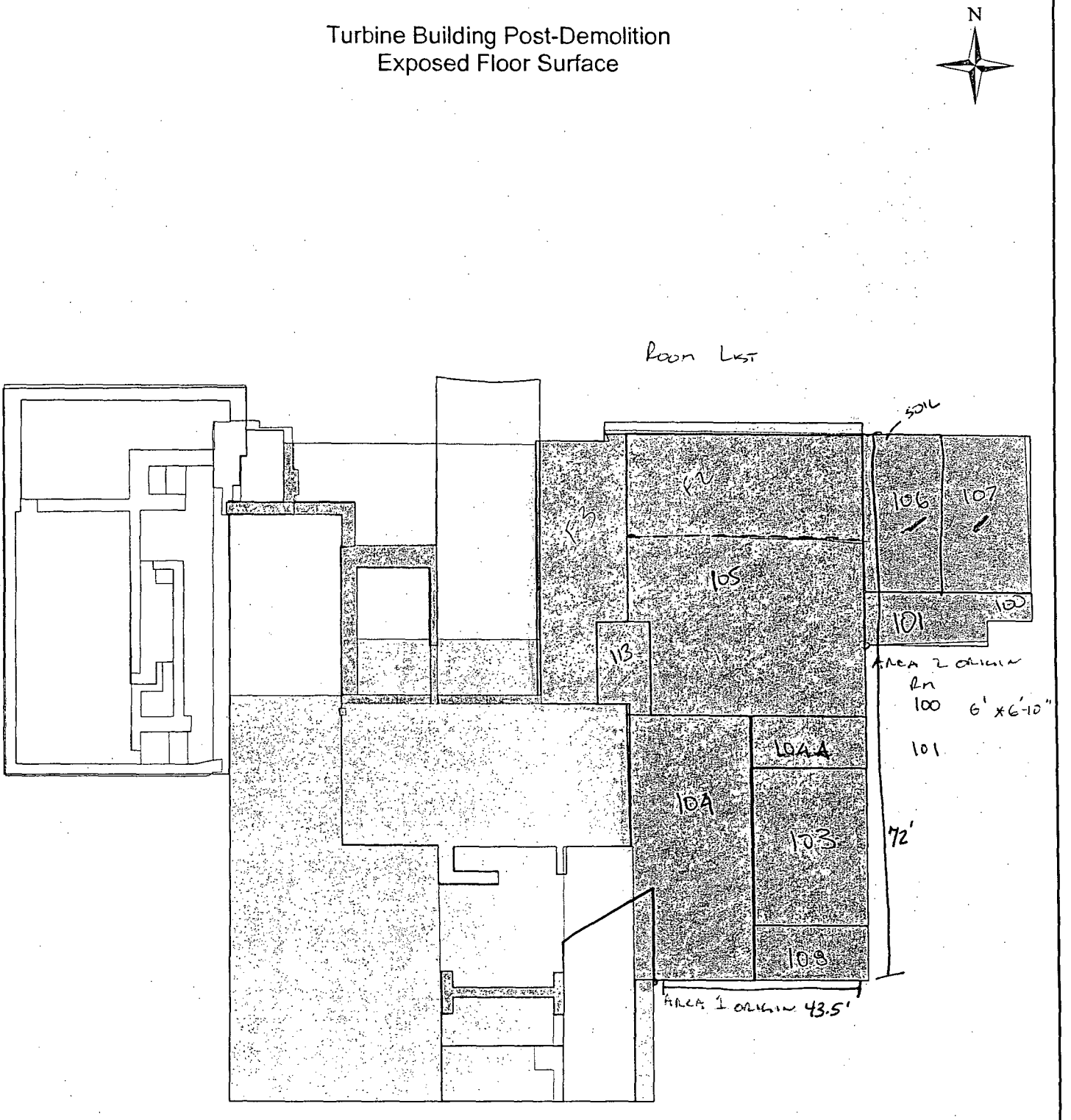
Random Sample Locations - 10 cm x 10 cm Grid Origin

	X (ft)	Y (ft)	X (m)	Y (m)
S-PCB-11	9.3	16.7	2.8	5.1
S-PCB-12	21.6	33.3	6.6	10.1
S-PCB-13	19.7	31.6	6.0	9.6
S-PCB-14	13.6	23.6	4.2	7.2
alt - if nec.	25.2	35.1	7.7	10.7

Designed By: _____ Date: 1/20/05

Reviewed By: _____ Date: 1/20/05

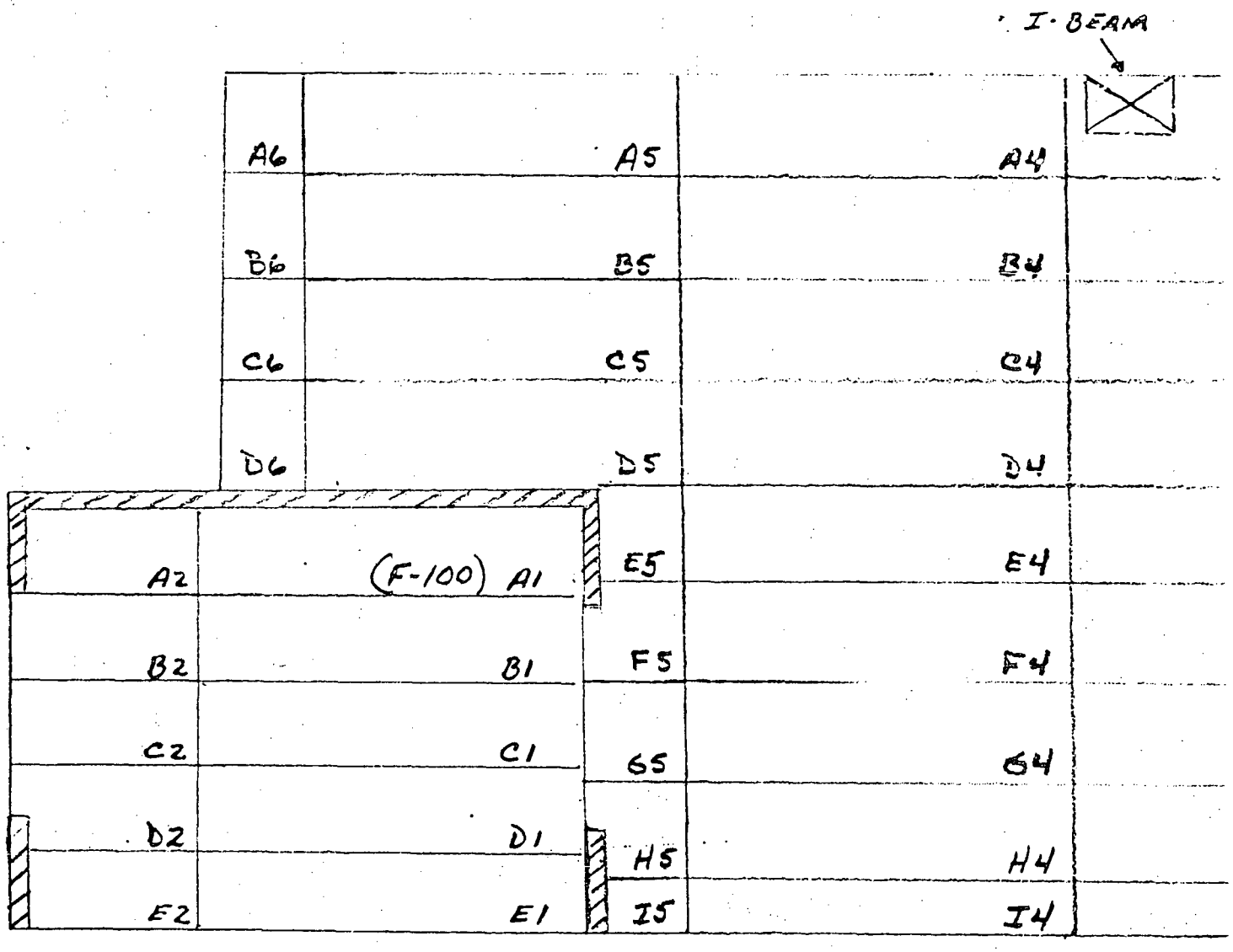
Turbine Building Post-Demolition
Exposed Floor Surface



Legend

- Concrete Floor
- Exposed Subfloor (concrete)
- Exposed Soil

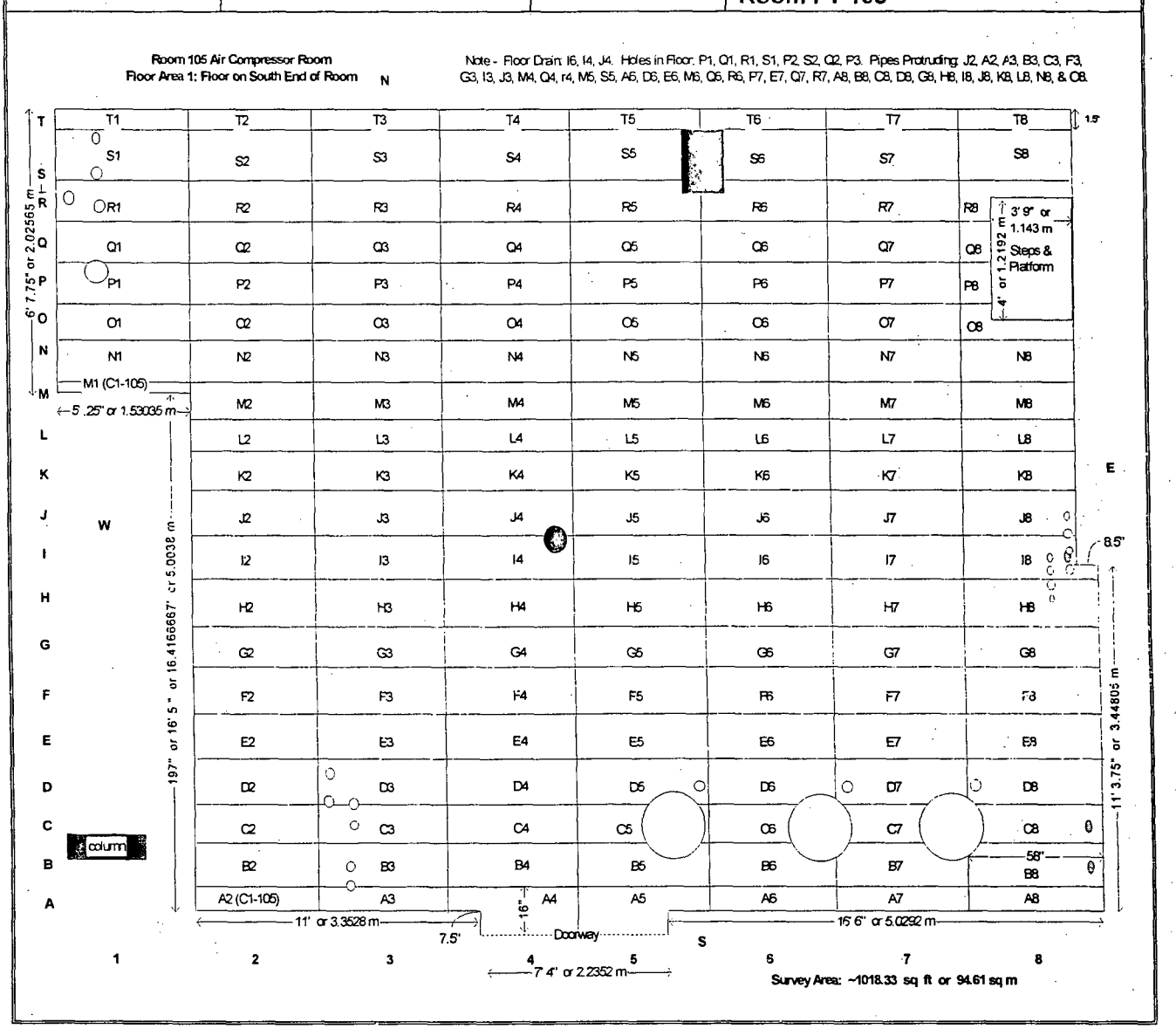
0 2.5 5 10 Meters



0000 4879 0785

AREA LAYOUT

Package ID: **2003-0085**	Building Name: **Turbine Building**	Room Number: **105**	Area or Room Description: **Floor On South Side of Air Compressor Room F1-105**



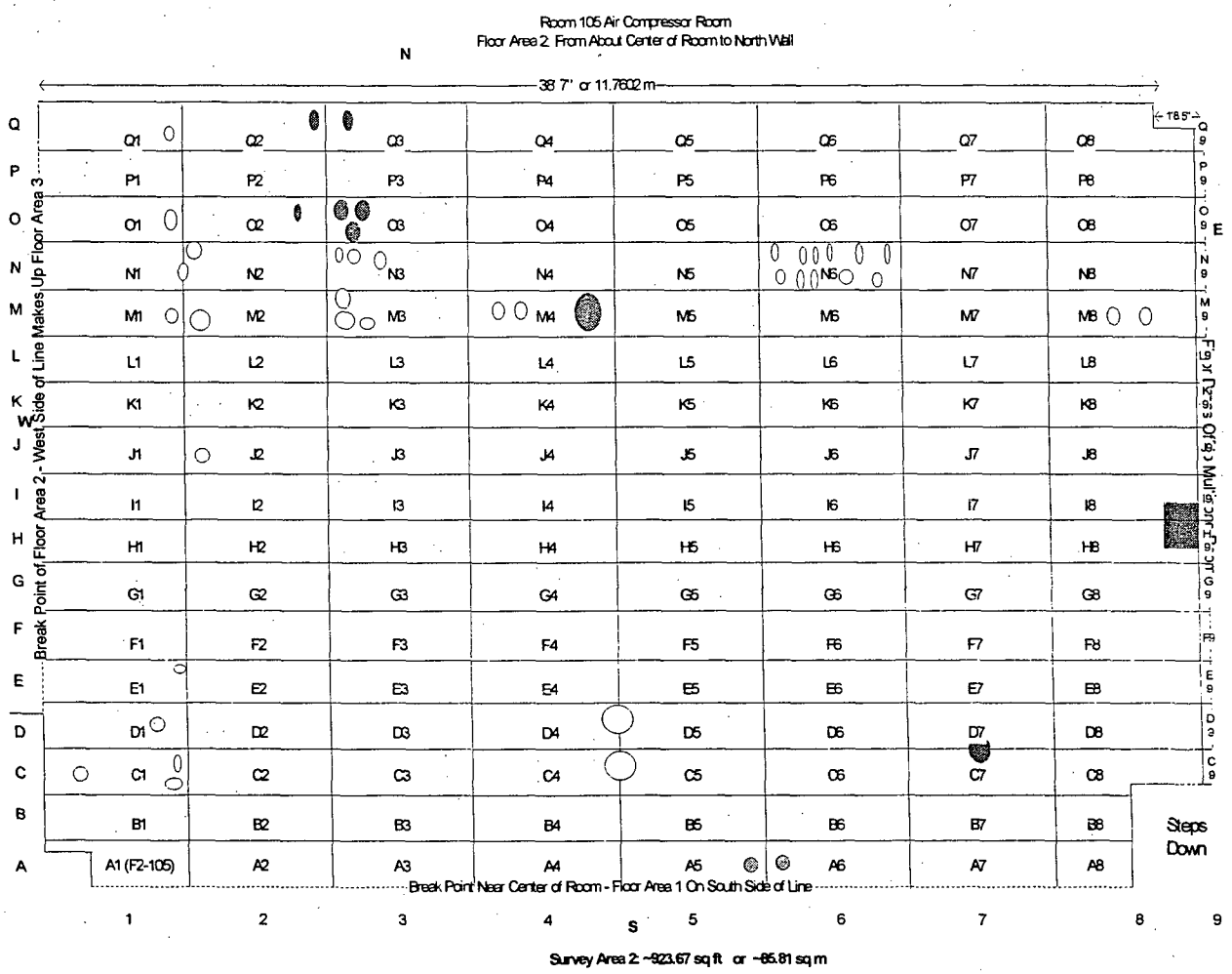
Prepared By / Date:_____/_____
(BMR Planning Group)

Reviewed By / Date:_____/_____
(BMR Superintendent)

Air Compressor Room: F1-105- Floor on South Side of Room Layout Area

AREA LAYOUT

Package ID: **2003-0085**	Building Name: **Turbine Building**	Room Number: **105**	Area or Room Description: **Floor On North Side of Air Compressor Room F2-105**



Note: A5, A6 2 pipes extruding & one 4" plug. C1 - 2 holes. C4, D4, C5, D5 - drain hole plugged. C7, D7 - drain hole plugged. C1 - hole. D1 - hole and 1/2. F1 - hole. J2 hole. M2, N2 1 1/2 holes, 1 1/2 pipes extruding. Q2, Q2 - pipe extruding. M3 1 1/2 pipes extruding. N3, I3 - pipes extruding. O3 - 3 pipes extruding. Q3 1 pipe extruding. M4 - 2 holes & round plate cover. N5 - 10 holes, M6 2 holes.

Prepared By / Date:_____/_____
(BMR Planning Group)

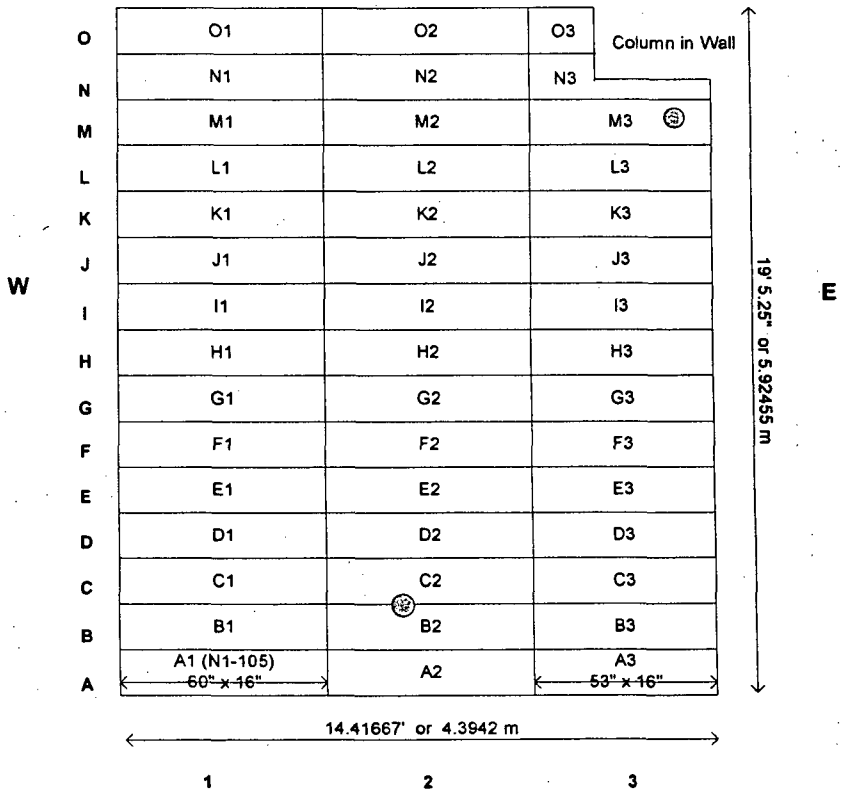
Reviewed By / Date:_____/_____
(BMR Superintendent)

Air Compressor Room: F2-105- Floor on North Side of Room Layout Area

AREA LAYOUT

Package ID:	Building Name:	Room Number:	Area or Room Description:
2003-0085B	**Turbine Building**	~~111~~ 105 12-7-05	**Floor of Lube Oil Storage Room F3-105**

Lube Oil Storage Room (Rm 111)
Floor (F3-105)



Survey Area: 280.224 sq ft or 26.0328 sq m

Prepared By / Date:_____/_____
(BMR Planning Group)

Reviewed By / Date:_____/_____
(BMR Superintendent)

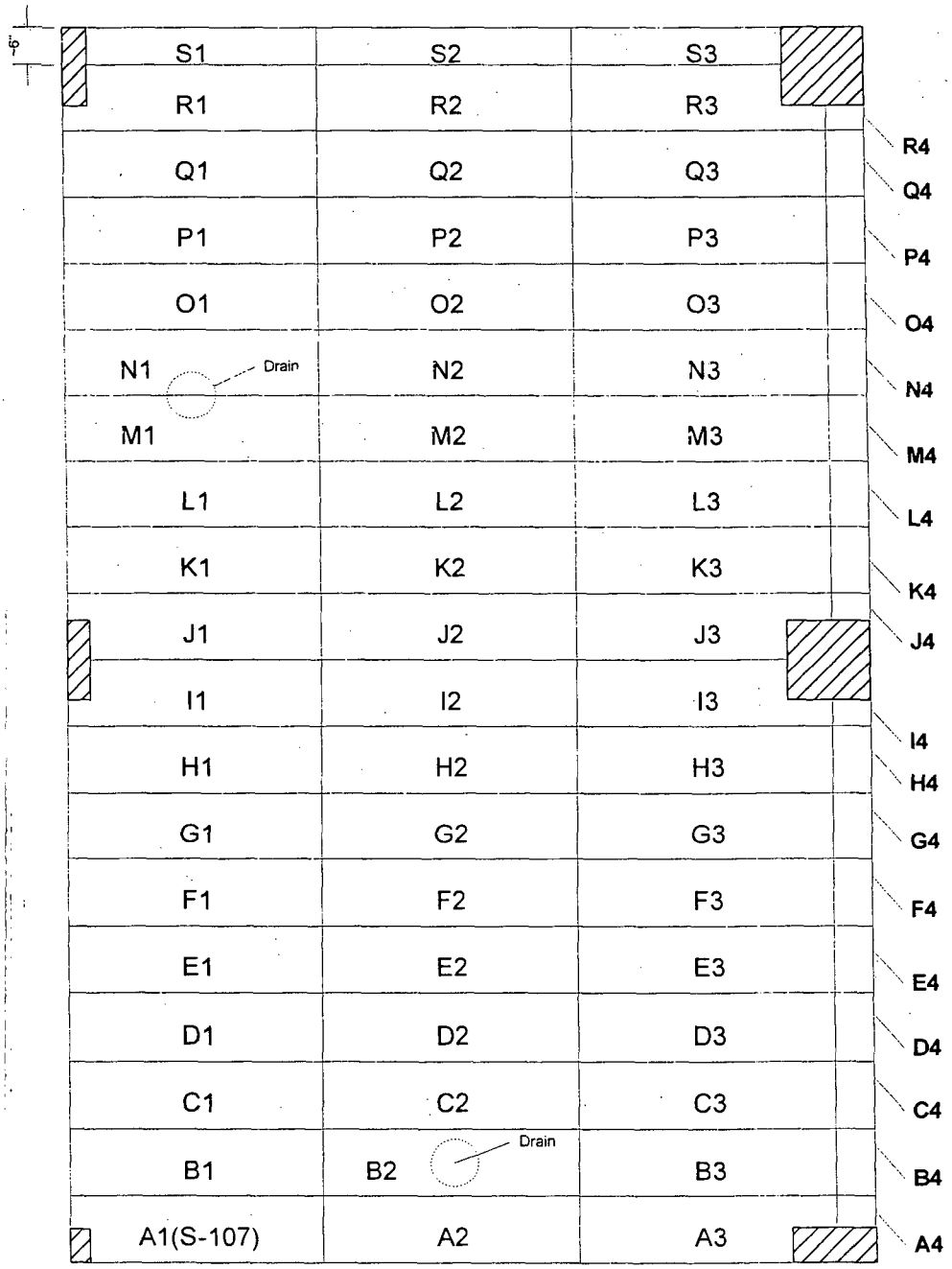
N1
M1
M2
L1
L2
K1
K2
J1
J2
I1
I2
H1
H2
G1
G2
F1
F2
E1
E2
D1
D2
C1
C2
B1
B2
A1
A2
15 FT
42 inches
49 inches
N
BMR 2003-0091
RM 113 Stairwell #8 Floor
REMEDIATION
Prepared by: MDBourassa
Reviewed by:
Date: 3-8-05

North

BMR 2003-0075
Rm 107 Boiler Room
F-107, Floor

Prepared by: T.Hagen
Reviewed by:_____
Date:_____

Column Base, concrete. Will be surveyed in wall Survey Unit.

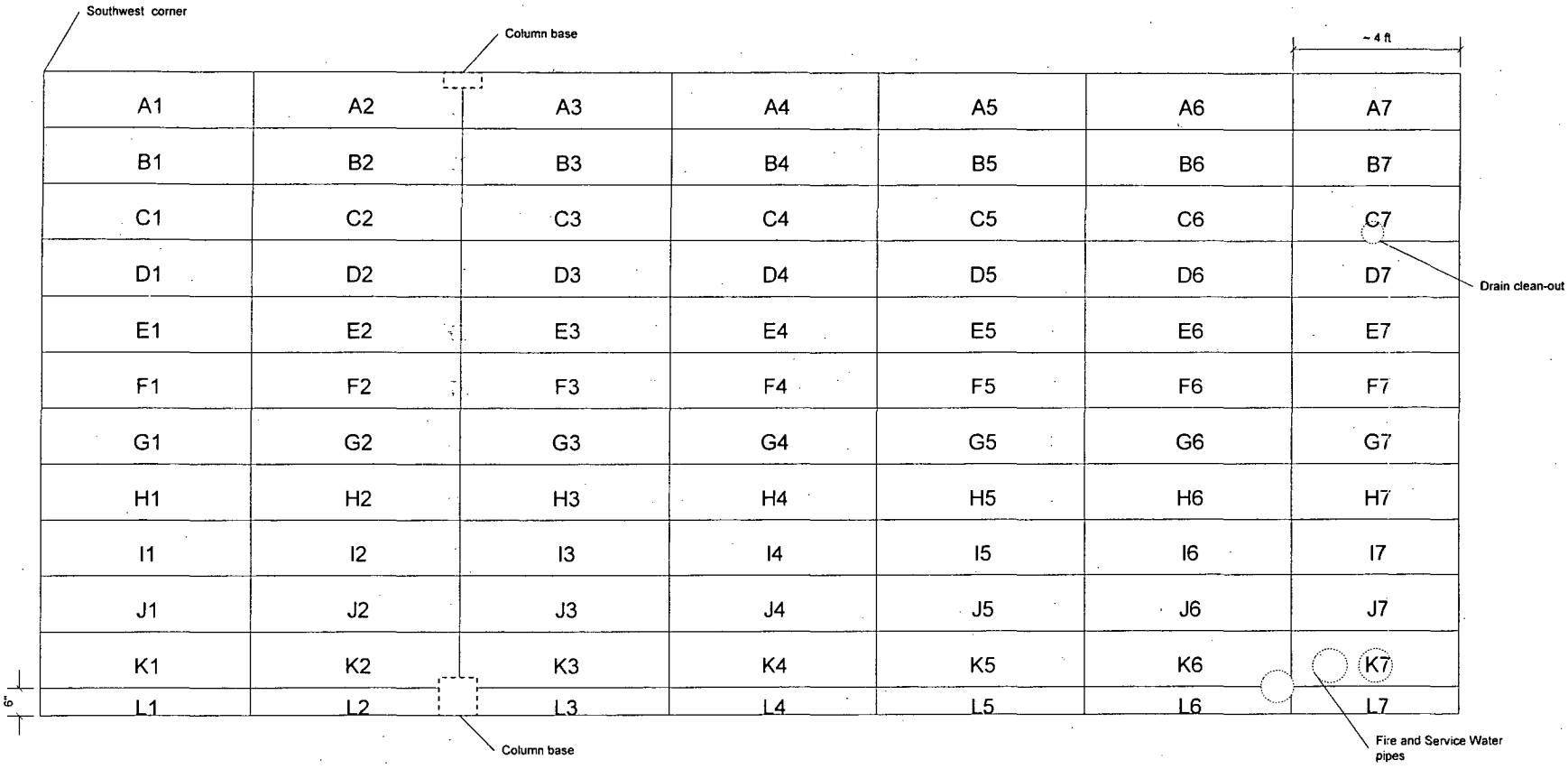


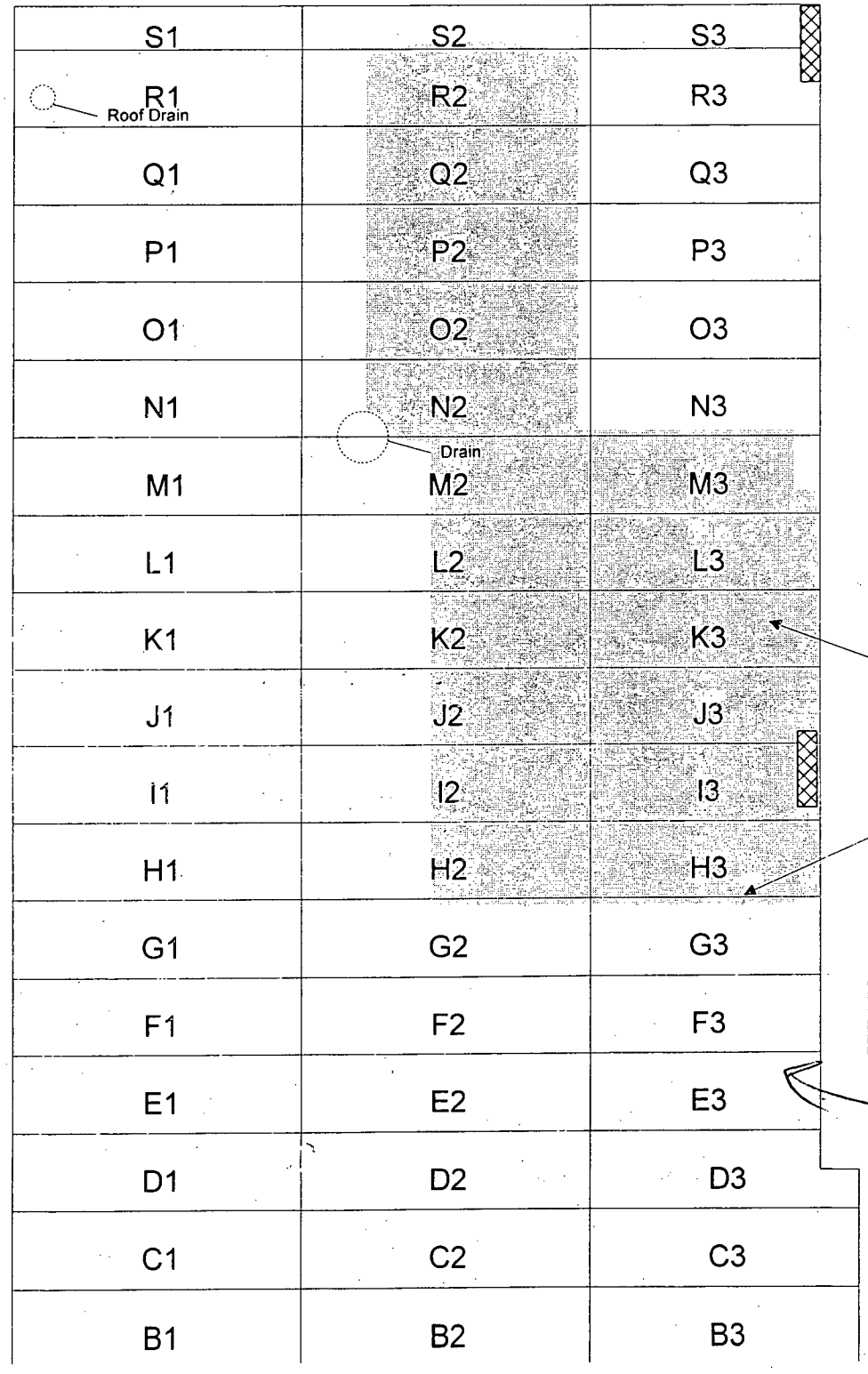
Southwest corner

North

BMR 2003-0051
Rm 103/104A UPS Battery
F-103, Floor

Prepared by: T.Hagen
Reviewed by:_____
Date:_____





North

BMR 2003-0079c
Rm 106 Ventilating Room
F-106, Floor

Prepared by: T.Hagen
Reviewed by:_____
Date:_____

Shaded areas of floor were removed.

South edge of opening may include small portions of the former sub-unit H3. Include this in sub-unit G3 readings.

Column base

Concrete removal expanded beyond the area illustrated on this revision.

PCB SURVEY PACKAGE CLOSE-OUT CHECKLIST

Package ID Number: 0004 Survey Area: Turbine Building Operating Floor

The survey package is legible and complete and the following necessary information is in the package:

1. ✓ Survey Package Cover Sheet
2. ✓ Survey design documentation
3. ✓ Random number generator sheet for sample start location and QC sample numbers.
4. ✓ Completed survey map/data sheet
5. ✓ Completed PCB Survey Data Record Sheet
6. ✓ Copy of the Chain of Custody
7. ✓ Copy of sample results
8. N/A Other documentation:

Completed By: Jodie L. Reed (Environmental Technician) Date: 12/16/05

Reviewed By: [illegible] (Environmental Supervisor) Date: 02-06-06

PCB SURVEY PACKAGE COVER SHEET

Package ID Number : 0004	Survey Area: Turbine Building Operating Floor, Post Demolition. Area one = Rm 325 Passageway; Area two = Rms. 325, 326	Size (m^2): **Area One: 035** **Area Two: 527**

Area One- Rm. 325 Passageway

# of Field Samples: 2
# of QC samples: 1

Random Start Location: X (n/a), Y (n/a)
Sample # Determination: 10% of surface area

Area Two- RM. 325, 326

# of Field Samples: 16
# of QC samples: 1

Random Start Location: X (n/a), Y (n/a)
Sample # Determination: 10% of surface area

Judgmental Samples

# of Field Samples 6

Isolation Controls implemented ☐ List controls: Area posted as a PCB survey area.

Comments/specific directions[1]: -Random sample locations determined by random number generator.

-Both survey areas are irregular in shape. See included drawings for specific details.

-Sample analysis results acceptance criteria = Soil <1ppm; Wipe <10 ug/100 cm^2.

([1] Address any inaccessible areas or sample points not included in survey).

SURVEY PACKAGE CLOSURE

Screening Survey Package is authorized for closure. All required reviews are completed and pertinent information is included in package (see Survey Package Close-Out Checklist).

ENV Technician Jodie L. Reed Date: 12-16-05

ENV Supervisor: [illegible] Date: 02-06-06

Package ID Number: 0004 (Wipe samples)

PCB SURVEY DATA RECORD SHEET

Survey Area: Turbine Building Operating Floor-Post Demolition	Size (m^2): 562	# of Samples: 21

Sample ID Number	Sample Location (grid number)	Sample Result (ug/100 cm^2)	Sample ID Number	Sample Location (grid number)	Sample Result (ug/100 cm^2)
T-PCB-1	J3	0.1			
T-PCB-2	G5	0.5			
T-PCB-3	F2	nd			
T-PCB-4	F5	nd			
T-PCB-5	L1	nd			
T-PCB-6	F2	0.4			
T-PCB-7	E4	0.1			
T-PCB-8	S1	0.2			
T-PCB-9	K4	nd			
T-PCB-10	J6	nd			
T-PCB-11	M2	0.2			
T-PCB-12	R6	0.1			
T-PCB-13	P6	0.4			
T-PCB-14	S5	0.2			
T-PCB-15	P1	1.1			
T-PCB-16	S2	1.8			
T-PCB-17	O2	nd			
T-PCB-18	R3	nd			
Field Blank-1	N/A	nd			
Field Blank-2	N/A	nd			
Cutter Wipe	N/A	0.4			

Note: nd – non detect

Performed By: Jodie L. Reed (Survey Technician) Date: 12/16/05

Reviewed By: (Environmental Supervisor) Date: 02-06-06

PCB SURVEY DATA RECORD SHEET

Survey Area: Turbine Building Operating Floor-Post Demolition	Size (m^2): 562	# of Samples: 3

Sample ID Number	Sample Location (grid number)	Sample Result (ppm)	Sample ID Number	Sample Location (grid number)	Sample Result (ppm)
T-PCB-Soil East	N/A	nd			
T-PCB-Soil West	N/A	nd			
T-PCB-Soil South	N/A	nd			

Note: nd – non detect

Performed By: Jodie L Reed (Survey Technician) Date: 12-16-05

Reviewed By: (Environmental Supervisor) Date: 02-06-06

CONSUMERS ENERGY Memorandum

To: TAGoble, Big Rock

From: GLCattell, T-254, Jackson

Date: ~~January 27, 2005~~ FEBRUARY 10, 2005

Subject: SAMPLES FOR DETERMINATION OF PCBs
- Surface Wipes
- Turbine Building Shell Removal
- Sampling Date of February 04, 2005

CC:

File Index: 510517-784-212

Twenty-one surface wipe samples and three soil samples were received on February 07 for determination of polychlorinated biphenyls (PCBs). All determinations were performed by the Chemistry Section of Laboratory Services and the results are attached for your review.

Analytical Methods

Unless otherwise specified, all methods are from SW-846, Test Methods For Evaluating Solid Waste - Physical / Chemical Methods, USEPA.

Sample Extraction (surface wipes) - Method 3550, Ultrasonic Extraction.

Sample Extraction (soils) - Method 3545, Pressurized Fluid Extraction.

Extract Concentration – Nitrogen Evaporation Technique, Exhibit D, Aroclors, Section 10. Multi-Media, Multi-Concentration Organics Analysis; SOM01.X; USEPA.

Extract Cleanup – Method 3620, Florisil Cleanup & Method 3665, Sulfuric Acid/Permanganate Cleanup.

Percent Solids (Dry Weight) – Section 7.2 of Method 3545, Determination of Percent Dry Weight, Pressurized Fluid Extraction.

Polychlorinated Biphenyls - Method 8082, Polychlorinated Biphenyls by Gas Chromatography.

Analytical Remarks & Summary

a. All MDLs are listed as "<" for uniformity. The actual MDLs of individual Aroclors vary slightly amonst each other and detectors, but are below the indicated limit.
b. All PCBs are identifed, calculated and reported as Aroclor 1254. No other Aroclors were indicated.
c. The soils did not contain PCBs at or above the indicated target detection limit.
d. The wipe area was assumed to be $100cm^2$.
e. Field blanks are reported in micrograms (ug) since they have no wipe area.

Report Package Contents

The report package consists of 16 pages:

2 cover pages,
12 pages of Analytical Results,
2 Chain of Custody pages.

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Turbine Building Shell Removal - Sampling Date of February 04, 2005	Our Project Number CHEM-05-0212

Sample Identification	T-PCB-1	Sample Identification	T-PCB-2
Sample Depth, ft	- -	Sample Depth, ft	- -
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	02-04-05	Sample Date	02-04-05
Received Date	02-07-05	Received Date	02-07-05
Report Date	02-10-05	Report Date	02-10-05
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	02-07-05	Preparation Date	02-07-05
Analysis Date	02-08-05	Analysis Date	02-08-05
Analyst	sjn, glc	Analyst	sjn, glc
Control Number	050212-01	Control Number	050212-02

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	0.1	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	101	59-109

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	0.5	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	94	59-109

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	*	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	96	58-104

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	0.5	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	95	58-104

NOTES:
MDL = Method Detection Limit, ug/100cm^2. See Report Text.
nd = Parameter Not Detected At MDL
* = Qualitative Match But Calculates Less Than 0.1

Reviewed By AM Date 021005

Sequence 020805A
T-PCB-1 T-PCB-2

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Turbine Building Shell Removal - Sampling Date of February 04, 2005	Our Project Number CHEM-05-0212

Sample Identification	T-PCB-3	Sample Identification	T-PCB-4
Sample Depth, ft	- -	Sample Depth, ft	- -
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	02-04-05	Sample Date	02-04-05
Received Date	02-07-05	Received Date	02-07-05
Report Date	02-10-05	Report Date	02-10-05
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	02-07-05	Preparation Date	02-07-05
Analysis Date	02-08-05	Analysis Date	02-08-05
Analyst	sjn, glc	Analyst	sjn, glc
Control Number	050212-03	Control Number	050212-04

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	96	59-109	Decachlorobiphenyl	100	59-109

CONFIRMING ANALYTICAL COLUMN			CONFIRMING ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	not required	<0.1	PCB-1016	not required	<0.1
PCB-1221	not required	<0.1	PCB-1221	not required	<0.1
PCB-1232	not required	<0.1	PCB-1232	not required	<0.1
PCB-1242	not required	<0.1	PCB-1242	not required	<0.1
PCB-1248	not required	<0.1	PCB-1248	not required	<0.1
PCB-1254	not required	<0.1	PCB-1254	not required	<0.1
PCB-1260	not required	<0.1	PCB-1260	not required	<0.1
PCB-1262	not required	<0.1	PCB-1262	not required	<0.1
PCB-1268	not required	<0.1	PCB-1268	not required	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	not required	58-104	Decachlorobiphenyl	not required	58-104

NOTES:	MDL = Method Detection Limit, ug/100cm^2. See Report Text. nd = Parameter Not Detected At MDL

Reviewed By _____ Date 02-10-05

Sequence 020805A	
T-PCB-3	T-PCB-4

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Turbine Building Shell Removal - Sampling Date of February 04, 2005	Our Project Number CHEM-05-0212

Sample Identification	T-PCB-5	Sample Identification	T-PCB-6
Sample Depth, ft	- -	Sample Depth, ft	- -
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	02-04-05	Sample Date	02-04-05
Received Date	02-07-05	Received Date	02-07-05
Report Date	02-10-05	Report Date	02-10-05
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	02-07-05	Preparation Date	02-07-05
Analysis Date	02-08-05	Analysis Date	02-08-05
Analyst	sjn, glc	Analyst	sjn, glc
Control Number	050212-05	Control Number	050212-06

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	nd	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	92	59-109

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	0.4	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	102	59-109

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	not required	<0.1
PCB-1221	not required	<0.1
PCB-1232	not required	<0.1
PCB-1242	not required	<0.1
PCB-1248	not required	<0.1
PCB-1254	not required	<0.1
PCB-1260	not required	<0.1
PCB-1262	not required	<0.1
PCB-1268	not required	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	not required	58-104

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	0.4	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	96	58-104

NOTES:
MDL = Method Detection Limit, ug/100cm^2. See Report Text.
nd = Parameter Not Detected At MDL

Reviewed By AU Date 021005

Sequence 020805A
T-PCB-5 T-PCB-6

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Turbine Building Shell Removal - Sampling Date of February 04, 2005	Our Project Number CHEM-05-0212

Sample Identification	T-PCB-7	Sample Identification	T-PCB-8
Sample Depth, ft	- -	Sample Depth, ft	- -
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	02-04-05	Sample Date	02-04-05
Received Date	02-07-05	Received Date	02-07-05
Report Date	02-10-05	Report Date	02-10-05
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	02-07-05	Preparation Date	02-07-05
Analysis Date	02-08-05	Analysis Date	02-10-05
Analyst	sjn, glc	Analyst	sjn, glc
Control Number	050212-07	Control Number	050212-08

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	0.1	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	94	59-109

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	0.2	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	94	59-109

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	*	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	99	58-104

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	0.2	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	88	58-104

NOTES:
MDL = Method Detection Limit, ug/100cm^2. See Report Text.
nd = Parameter Not Detected At MDL
* = Qualitative Match But Calculates Less Than 0.1

Reviewed By AM Date 021005

Sequence 020805A
T-PCB-7 T-PCB-8

.ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Turbine Building Shell Removal - Sampling Date of February 04, 2005	Our Project Number CHEM-05-0212

Sample Identification	T-PCB-9	Sample Identification	T-PCB-10
Sample Depth, ft	- -	Sample Depth, ft	- -
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	02-04-05	Sample Date	02-04-05
Received Date	02-07-05	Received Date	02-07-05
Report Date	02-10-05	Report Date	02-10-05
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	02-07-05	Preparation Date	02-07-05
Analysis Date	02-08-05	Analysis Date	02-08-05
Analyst	sjn, glc	Analyst	sjn, glc
Control Number	050212-09	Control Number	050212-10

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	nd	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	102	59-109

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	nd	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	101	59-109

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	not required	<0.1
PCB-1221	not required	<0.1
PCB-1232	not required	<0.1
PCB-1242	not required	<0.1
PCB-1248	not required	<0.1
PCB-1254	not required	<0.1
PCB-1260	not required	<0.1
PCB-1262	not required	<0.1
PCB-1268	not required	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	not required	58-104

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	not required	<0.1
PCB-1221	not required	<0.1
PCB-1232	not required	<0.1
PCB-1242	not required	<0.1
PCB-1248	not required	<0.1
PCB-1254	not required	<0.1
PCB-1260	not required	<0.1
PCB-1262	not required	<0.1
PCB-1268	not required	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	not required	58-104

NOTES:
MDL = Method Detection Limit, ug/100cm^2. See Report Text.
nd = Parameter Not Detected At MDL

Reviewed By AM Date 021005

Sequence 020805A
T-PCB-9 T-PCB-10

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Turbine Building Shell Removal - Sampling Date of February 04, 2005	Our Project Number CHEM-05-0212

Sample Identification	T-PCB-11	Sample Identification	T-PCB-12
Sample Depth, ft	- -	Sample Depth, ft	- -
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	02-04-05	Sample Date	02-04-05
Received Date	02-07-05	Received Date	02-07-05
Report Date	02-10-05	Report Date	02-10-05
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	02-07-05	Preparation Date	02-07-05
Analysis Date	02-08-05	Analysis Date	02-08-05
Analyst	sjn, glc	Analyst	sjn, glc
Control Number	050212-11	Control Number	050212-12

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	0.2	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	92	59-109

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	0.1	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	92	59-109

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	0.1	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	96	58-104

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	0.1	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	96	58-104

NOTES:
MDL = Method Detection Limit, ug/100cm^2. See Report Text.
nd = Parameter Not Detected At MDL

Reviewed By AL Date 021005

Sequence 020805A
T-PCB-11 T-PCB-12

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Turbine Building Shell Removal - Sampling Date of February 04, 2005	Our Project Number CHEM-05-0212

Sample Identification	T-PCB-13	Sample Identification	T-PCB-14
Sample Depth, ft	- -	Sample Depth, ft	- -
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	02-04-05	Sample Date	02-04-05
Received Date	02-07-05	Received Date	02-07-05
Report Date	02-10-05	Report Date	02-10-05
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	02-07-05	Preparation Date	02-07-05
Analysis Date	02-09-05	Analysis Date	02-09-05
Analyst	sjn, glc	Analyst	sjn, glc
Control Number	050212-13	Control Number	050212-14

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	0.4	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	97	59-109

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	0.2	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	95	59-109

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	0.4	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	100	58-104

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	0.2	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	98	58-104

NOTES:
MDL = Method Detection Limit, ug/100cm^2. See Report Text.
nd = Parameter Not Detected At MDL

Reviewed By AM Date 021005

Sequence 020805A
T-PCB-13 T-PCB-14

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Turbine Building Shell Removal - Sampling Date of February 04, 2005	Our Project Number CHEM-05-0212

Sample Identification	T-PCB-15	Sample Identification	T-PCB-16
Sample Depth, ft	- -	Sample Depth, ft	- -
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	02-04-05	Sample Date	02-04-05
Received Date	02-07-05	Received Date	02-07-05
Report Date	02-10-05	Report Date	02-10-05
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	02-07-05	Preparation Date	02-07-05
Analysis Date	02-09-05	Analysis Date	02-09-05
Analyst	sjn, glc	Analyst	sjn, glc
Control Number	050212-15	Control Number	050212-16

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	1.1	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	94	59-109

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	1.8	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	92	59-109

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	1.1	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	94	58-104

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	2.0	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	94	58-104

NOTES:
MDL = Method Detection Limit, ug/100cm^2. See Report Text.
nd = Parameter Not Detected At MDL

Reviewed By Ael Date 021005

Sequence 020805A
T-PCB-15 T-PCB-16

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Turbine Building Shell Removal - Sampling Date of February 04, 2005	Our Project Number CHEM-05-0212

Sample Identification	T-PCB-17	Sample Identification	T-PCB-18
Sample Depth, ft	- -	Sample Depth, ft	- -
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	02-04-05	Sample Date	02-04-05
Received Date	02-07-05	Received Date	02-07-05
Report Date	02-10-05	Report Date	02-10-05
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	02-07-05	Preparation Date	02-07-05
Analysis Date	02-09-05	Analysis Date	02-09-05
Analyst	sjn, glc	Analyst	sjn, glc
Control Number	050212-17	Control Number	050212-18

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	93	59-109	Decachlorobiphenyl	90	59-109

CONFIRMING ANALYTICAL COLUMN			CONFIRMING ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	not required	<0.1	PCB-1016	not required	<0.1
PCB-1221	not required	<0.1	PCB-1221	not required	<0.1
PCB-1232	not required	<0.1	PCB-1232	not required	<0.1
PCB-1242	not required	<0.1	PCB-1242	not required	<0.1
PCB-1248	not required	<0.1	PCB-1248	not required	<0.1
PCB-1254	not required	<0.1	PCB-1254	not required	<0.1
PCB-1260	not required	<0.1	PCB-1260	not required	<0.1
PCB-1262	not required	<0.1	PCB-1262	not required	<0.1
PCB-1268	not required	<0.1	PCB-1268	not required	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	not required	58-104	Decachlorobiphenyl	not required	58-104

NOTES:
MDL = Method Detection Limit, ug/100cm^2. See Report Text.
nd = Parameter Not Detected At MDL

Reviewed By SM Date 021005

Sequence 020805A	
T-PCB-17	T-PCB-18

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Turbine Building Shell Removal - Sampling Date of February 04, 2005	Our Project Number CHEM-05-0212

Sample Identification	Field Blank-1	Sample Identification	Field Blank-2
Sample Depth, ft	- -	Sample Depth, ft	- -
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	02-04-05	Sample Date	02-04-05
Received Date	02-07-05	Received Date	02-07-05
Report Date	02-10-05	Report Date	02-10-05
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	02-07-05	Preparation Date	02-07-05
Analysis Date	02-09-05	Analysis Date	02-09-05
Analyst	sjn, glc	Analyst	sjn, glc
Control Number	050212-19	Control Number	050212-20

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	nd	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	97	59-109

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	nd	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	94	59-109

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug	MDL
PCB-1016	not required	<0.1
PCB-1221	not required	<0.1
PCB-1232	not required	<0.1
PCB-1242	not required	<0.1
PCB-1248	not required	<0.1
PCB-1254	not required	<0.1
PCB-1260	not required	<0.1
PCB-1262	not required	<0.1
PCB-1268	not required	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	not required	58-104

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug	MDL
PCB-1016	not required	<0.1
PCB-1221	not required	<0.1
PCB-1232	not required	<0.1
PCB-1242	not required	<0.1
PCB-1248	not required	<0.1
PCB-1254	not required	<0.1
PCB-1260	not required	<0.1
PCB-1262	not required	<0.1
PCB-1268	not required	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	not required	58-104

NOTES:
MDL = Method Detection Limit, ug. See Report Text.
nd = Parameter Not Detected At MDL

Reviewed By Ad Date 021005

Sequence 020805A
FB1 FB2

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Turbine Building Shell Removal - Sampling Date of February 04, 2005	Our Project Number CHEM-05-0212

Sample Identification	Cutter Wipe	Sample Identification	T-PCB-Soil East
Sample Depth, ft	- -	Sample Depth, ft	- -
Sample Type	surface wipe	Sample Type	soil
Sample Date	02-04-05	Sample Date	02-04-05
Received Date	02-07-05	Received Date	02-07-05
Report Date	02-10-05	Report Date	02-10-05
Percent Solids, % w/w	- -	Percent Solids, % w/w	96
Preparation Date	02-07-05	Preparation Date	02-08-05
Analysis Date	02-09-05	Analysis Date	02-09-05
Analyst	sjn, glc	Analyst	sjn, glc
Control Number	050212-21	Control Number	050212-22

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	0.4	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	94	59-109

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	0.4	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	96	58-104

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/Kg	TDL
PCB-1016	nd	- -
PCB-1221	nd	- -
PCB-1232	nd	- -
PCB-1242	nd	- -
PCB-1248	nd	- -
PCB-1254	nd	- -
PCB-1260	nd	- -
PCB-1262	nd	- -
PCB-1268	nd	- -
Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	86	73-134

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/Kg	TDL
PCB-1016	not required	- -
PCB-1221	not required	- -
PCB-1232	not required	- -
PCB-1242	not required	- -
PCB-1248	not required	- -
PCB-1254	not required	- -
PCB-1260	not required	- -
PCB-1262	not required	- -
PCB-1268	not required	- -
Sum of Aroclors	not required	330
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	not required	70-127

NOTES:
MDL = Method Detection Limit, ug/100cm^2. See Report Text.
TDL = Target Detection Limit, ug/Kg (parts-per-billion). Per MDEQ RRD OM2 Att 1
nd = Parameter Not Detected At MDL or TDL
Soil Results Are Reported On The Dry Weight Basis

Reviewed By _____ Date 021005

Sequence 020805A
Cutter Wipe East

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Turbine Building Shell Removal - Sampling Date of February 04, 2005	Our Project Number CHEM-05-0212

Sample Identification	T-PCB-Soil West	Sample Identification	T-PCB-Soil South
Sample Depth, ft	- -	Sample Depth, ft	- -
Sample Type	surface wipe	Sample Type	soil
Sample Date	02-04-05	Sample Date	02-04-05
Received Date	02-07-05	Received Date	02-07-05
Report Date	02-10-05	Report Date	02-10-05
Percent Solids, % w/w	85	Percent Solids, % w/w	89
Preparation Date	02-08-05	Preparation Date	02-08-05
Analysis Date	02-09-05	Analysis Date	02-09-05
Analyst	sjn, glc	Analyst	sjn, glc
Control Number	050212-23	Control Number	050212-24

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/Kg	TDL	TARGET PCBs, 8082	ug/Kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	93	73-134	Decachlorobiphenyl	94	73-134

CONFIRMING ANALYTICAL COLUMN			CONFIRMING ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/Kg	TDL	TARGET PCBs, 8082	ug/Kg	TDL
PCB-1016	not required	- -	PCB-1016	not required	- -
PCB-1221	not required	- -	PCB-1221	not required	- -
PCB-1232	not required	- -	PCB-1232	not required	- -
PCB-1242	not required	- -	PCB-1242	not required	- -
PCB-1248	not required	- -	PCB-1248	not required	- -
PCB-1254	not required	- -	PCB-1254	not required	- -
PCB-1260	not required	- -	PCB-1260	not required	- -
PCB-1262	not required	- -	PCB-1262	not required	- -
PCB-1268	not required	- -	PCB-1268	not required	- -
Sum of Aroclors	not required	330	Sum of Aroclors	not required	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	not required	70-127	Decachlorobiphenyl	not required	70-127

NOTES:

TDL = Target Detection Limit, ug/Kg (parts-per-billion). Per MDEQ RRD OM2 Att 1
nd = Parameter Not Detected At MDL or TDL
Soil Results Are Reported On The Dry Weight Basis

Reviewed By AH Date 021005

Sequence 020805A	
West	South

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – LABORATORY SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: BIG ROCK POINT RESTORATION SITE

PROJECT NUMBER:

SAMPLING TEAM:

DATE SHIPPED:

SITE SKETCH ATTACHED? CIRCLE ONE: YES NO

PAGE 1 OF 2

SEND REPORT TO: TA GOBLE

PHONE: 547-8389

CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	ANALYSIS REQUESTED: PCB WIPE	REMARKS
T-PCB-1	2-4-05	16:18		TURBINE BUILDING-SHELL REMOVAL			✓	
T-PCB-2		16:21					✓	
T-PCB-3		14:25					✓	
T-PCB-4		14:35					✓	
T-PCB-5		14:30					✓	
T-PCB-6		15:25					✓	
T-PCB-7		15:27					✓	
T-PCB-8		15:20					✓	
T-PCB-9		16:10					✓	
T-PCB-10		16:14					✓	
T-PCB-11		16:09					✓	
T-PCB-12		16:12					✓	

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
[signature]		
RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)

COMMENTS

PLEASE RUSH PCB WIPE RESULTS

SOIL TEST - STANDARD TIME

ORIGINAL TO LAB COPY TO CUSTOMER

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – LABORATORY SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: BIG ROCK POINT RESTORATION PROJECT

PROJECT NUMBER:

SAMPLING TEAM:

DATE SHIPPED:

SITE SKETCH ATTACHED? CIRCLE ONE: YES NO

PAGE 2 OF 2

SEND REPORT TO: TA GOBLE

PHONE: 547-8389

CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	ANALYSIS REQUESTED: PCB WIPE	PCB SOIL	PCB WIPE					REMARKS
T-PCB-13	2-27-05	16:16		TURBINE BUILDING SHELL REMOVAL			✓							
T-PCB-14		16:14					✓							
T-PCB-15		14:10					✓							
T-PCB-16		14:15					✓							
T-PCB-17		15:35					✓							
T-PCB-18		15:38					✓							
FIELD BLANK-1		16:22					✓							
FIELD BLANK-2		16:24					✓							
T-PCB-SOIL EAST		16:32						✓						
T-PCB-SOIL WEST		16:35						✓						
T-PCB-SOIL SOUTH		16:38						✓						
CUTTER WIPE		16:40							✓					NO RUSH

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
[signature]		
RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)

COMMENTS

ORIGINAL TO LAB COPY TO CUSTOMER

Turbine Building Operationg Floor PCB Survey Design

Area 1 - Room 325 Passagway

Information:

Dimensions: ~ 38ft x 20 ft irregular shape - see drawing
Area = 380 sq. ft.

Grids:
Total no. of grids 12
Typical size of grid 4' x 10'

Number of Samples Required:
10% of grids 1.2 **2 samples**

Sample Locations:

1. Select Sample Grid Number

Table 1-1. Random Grid Selection

Random No.	Grid No.	Available?	Notes
9.434	9	yes	1
7.918	8	yes	1
2.910	3	yes	alternate
11.158	11		
9.525	10		
2.243	2		

Table Notes
1. Non-standard grid size

2. Select Random Sample Locations w/in Grid - Measured from grid origin

Table 1-2. Sample Location w/in Grid

Grid No.	Size	X (ft)	Y (ft)
9	15' x 4'	7.6	1.2
8	8' x 4'	1.9	0.9
3	10' x 4'	4.8	2.8

Turbine Building Operationg Floor PCB Survey Design

Area 2 - Rooms 325, 326

Information:

Dimensions: 70 ft x 50 ft irregular shape - see drawings
Area = 5673 sq. ft.

Grids:
Total no. of grids 155
Typical size of grid 4' x 10'

Number of Samples Required:
10% of grids 15.5 **16 Samples**

Sample Locations:

1. Select Sample Grid Number

Table 2-1. Random Grid Selection

Random No.	Grid No.	Available?	Notes
85.210	85	no	4
3.702	4	yes	
110.527	111	yes	1
126.767	127	no	4
78.409	78	yes	
68.839	69	yes	5
141.032	141	yes	5
24.218	24	no	3, 4
120.470	120	yes	1
68.263	68	yes	5
51.872	52	no	3
118.748	119	yes	1
48.788	49	yes	1
99.272	99	no	3,4
128.177	128	no	3,4
17.318	17	no	4
48.244	48	no	3,4
42.791	43	no	4
144.260	144	yes	5
6.170	6	yes	1,2
29.677	30	yes	
147.049	147	yes	5
10.200	10	yes	
44.480	44	no	4
28.803	29	yes	

2. Select Random Sample Locations w/in Grid - Measured from grid origin

Table 2-2. Sample Location w/in Grid

Grid No.	Size	X (ft)	Y (ft)	Notes
4	10' x 4'	0.3	3.0	6
111	10' x 2.7'	3.1	2.4	
78	10' x 4'	5.4	2.9	
69	10' x 4'	9.7	0.5	
141	10' x 4'	9.1	3.5	
120	11' x 4'	8.2	0.9	6
68	10' x 4'	6.0	1.9	
119	11' x 4'	2.0	1.2	
49	10' x 2.7'	2.2	1.4	6
144	10' x 4'	0.8	3.5	
6	8' x 4'	4.5	3.9	
30	10' x 4'	5.6	2.2	
10	10' x 4'	3.0	3.1	6
29	10' x 4'	7.0	3.1	
107	10' x 2.7'	7.1	1.0	
71	10' x 4'	5.4	0.1	
79	10' x 4'	1.1	3.4	
148	10' x 4'	9.9	2.3	
67	10' x 4'	1.6	3.6	6
123	11' x 4'	3.0	2.9	

106.891	107	yes	1
71.257	71	yes	
51.997	52	no	3,4
79.280	79	yes	
147.635	148	yes	
66.993	67	yes	
123.168	123	yes	1

Table Notes

1. Non-standard grid size
2. Sample to be collected with "JLG"
3. Sample loction rejected due to safety concern (too close to edge)
4. Sample loction inaccessible - within T/G cavity
5. Rough concrete
6. Collect sample 6' from edge - OSHA req. for working at height

Turbine Bldg Operating Floor - Sample Collection Cordinates

Sample No	PCB Grid No.	BMR Grid No.	X (ft)	Y (ft)	X (m)	Y (m)	Measurement Origin	
Area 1- Room 324								
T-PCB-1	9	J3	11.6	13.2	3.5	4.0	SW corner of Room 324 (Personnel Lock Passageway)	
T-PCB-2	8	G5	21.9	8.9	6.7	2.7		
alternate	3	F1						
Area 2 - Rooms 325, 326								
T-PCB-3	4	F2	6.0	7.0	1.8	2.1	Origin 1 - SW corner of F1-325	
T-PCB-4	6	F5						
T-PCB-5	10	L1						
T-PCB-6	29	F2						
T-PCB-7	30	E4						
T-PCB-8	49	S1						
T-PCB-9	68	K4	15.0	66.3	4.6	20.2		
T-PCB-10	69	J6	23.7	64.9	7.2	19.8	Origin 2 - SW corner of F2-325	
T-PCB-11	71	M2						
T-PCB-12	78	R6	19.4	75.3	5.9	23.0	Origin 2 - SW corner of F2-325	
T-PCB-13	107	P6						
T-PCB-14	111	S5	23.1	25.1	7.0	7.7	Origin 2 - SW corner of F2-325	
T-PCB-15	119	P1						
T-PCB-16	120	S2	2.8	24.9	0.9	7.6	Origin 3 - SW corner of F5-325	collect from JLG
T-PCB-17	141	O2	9.1	19.5	2.8	5.9		
T-PCB-18	144	R3						
alternate	79	R7						

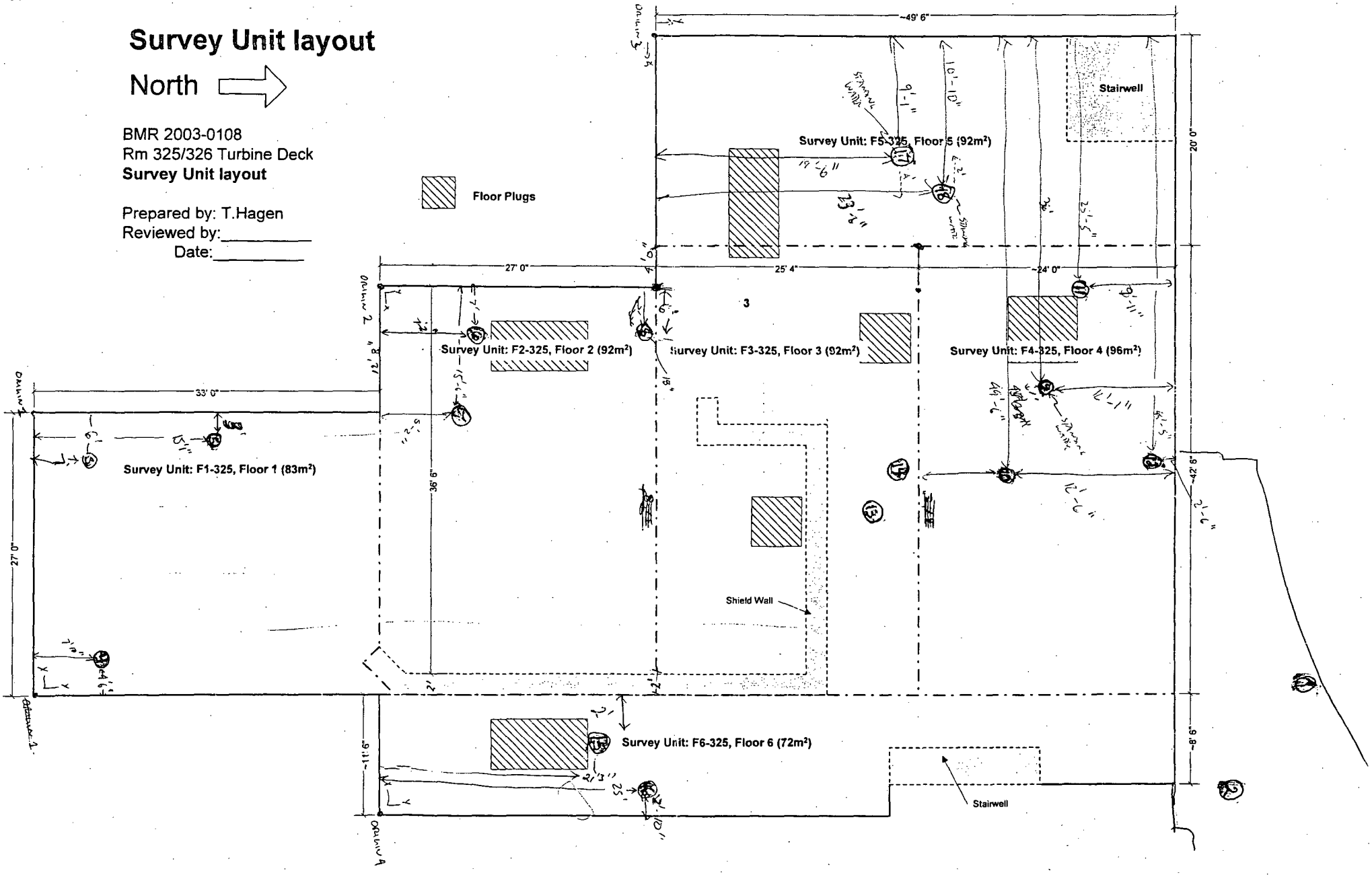
alternate	148	W4
alternate	67	L2

Survey Unit layout

North

BMR 2003-0108
Rm 325/326 Turbine Deck
Survey Unit layout

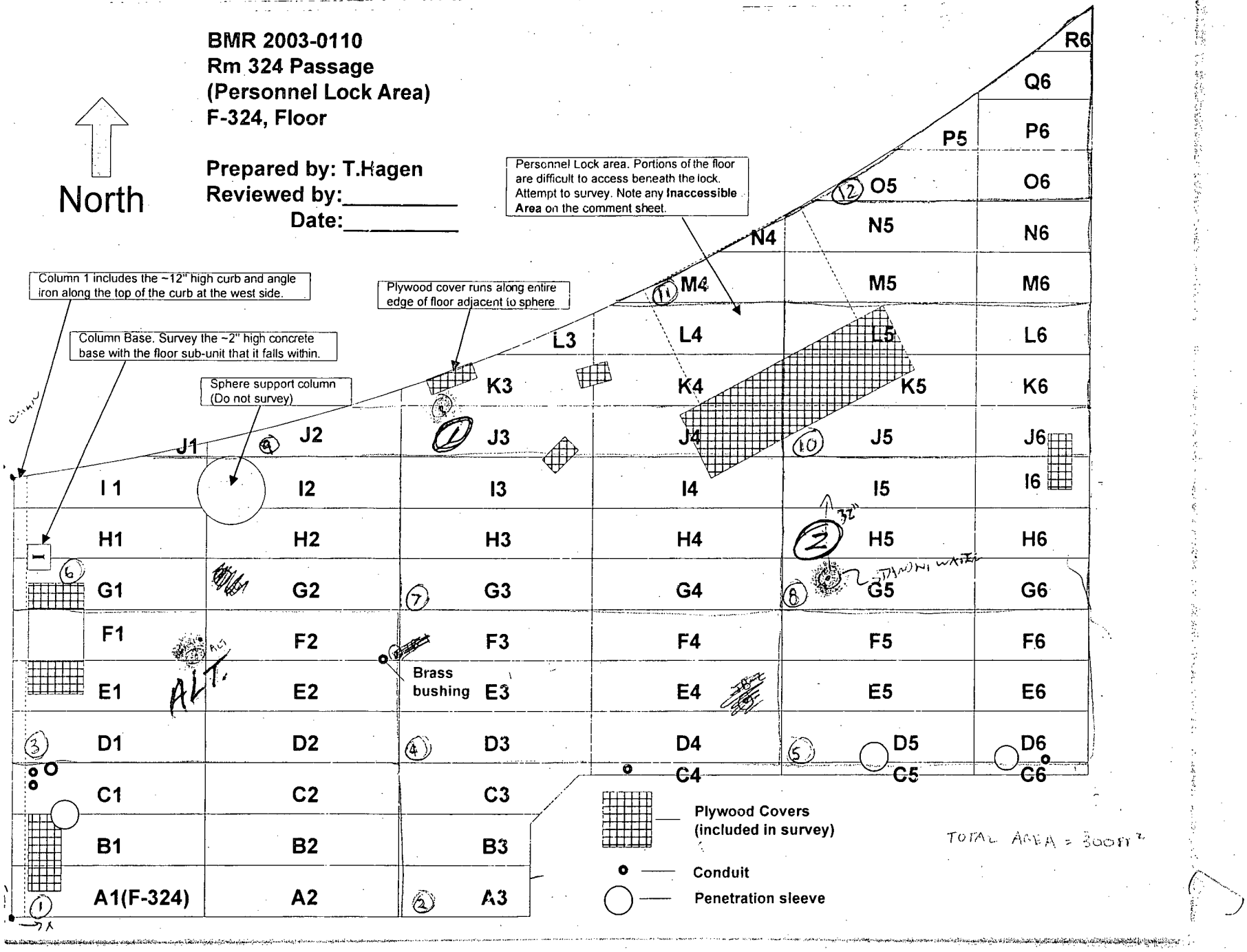
Prepared by: T.Hagen
Reviewed by:_____
Date:_____



BMR 2003-0110
Rm 324 Passage
(Personnel Lock Area)
F-324, Floor

Prepared by: T.Hagen
Reviewed by:_____
Date:_____

North

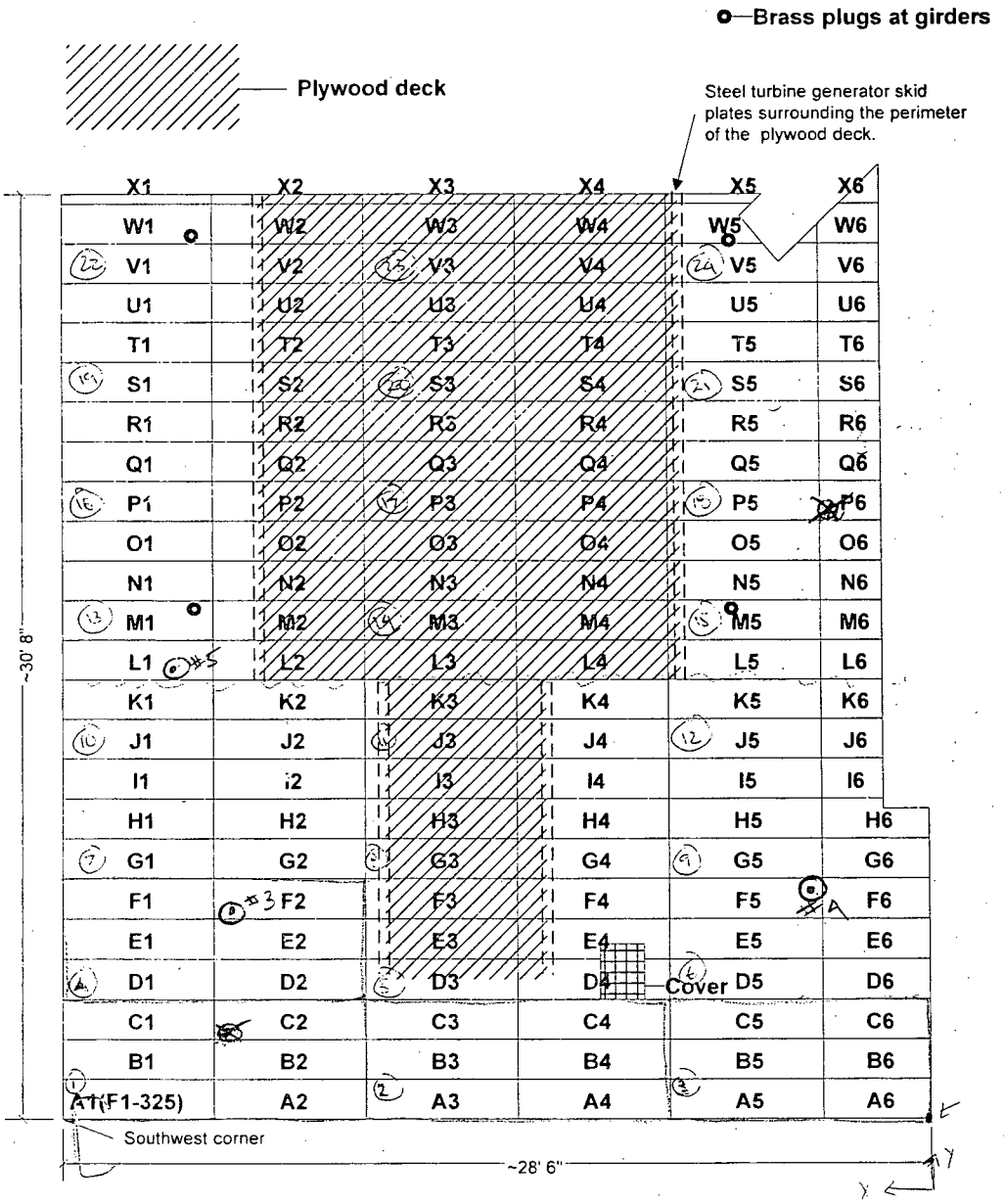


231-838-3444

BMR 2003-0108
Rm 325 Turbine Deck
F1-325, Floor 1

North

Prepared by: T.Hagen
Reviewed by:_____
Date:_____



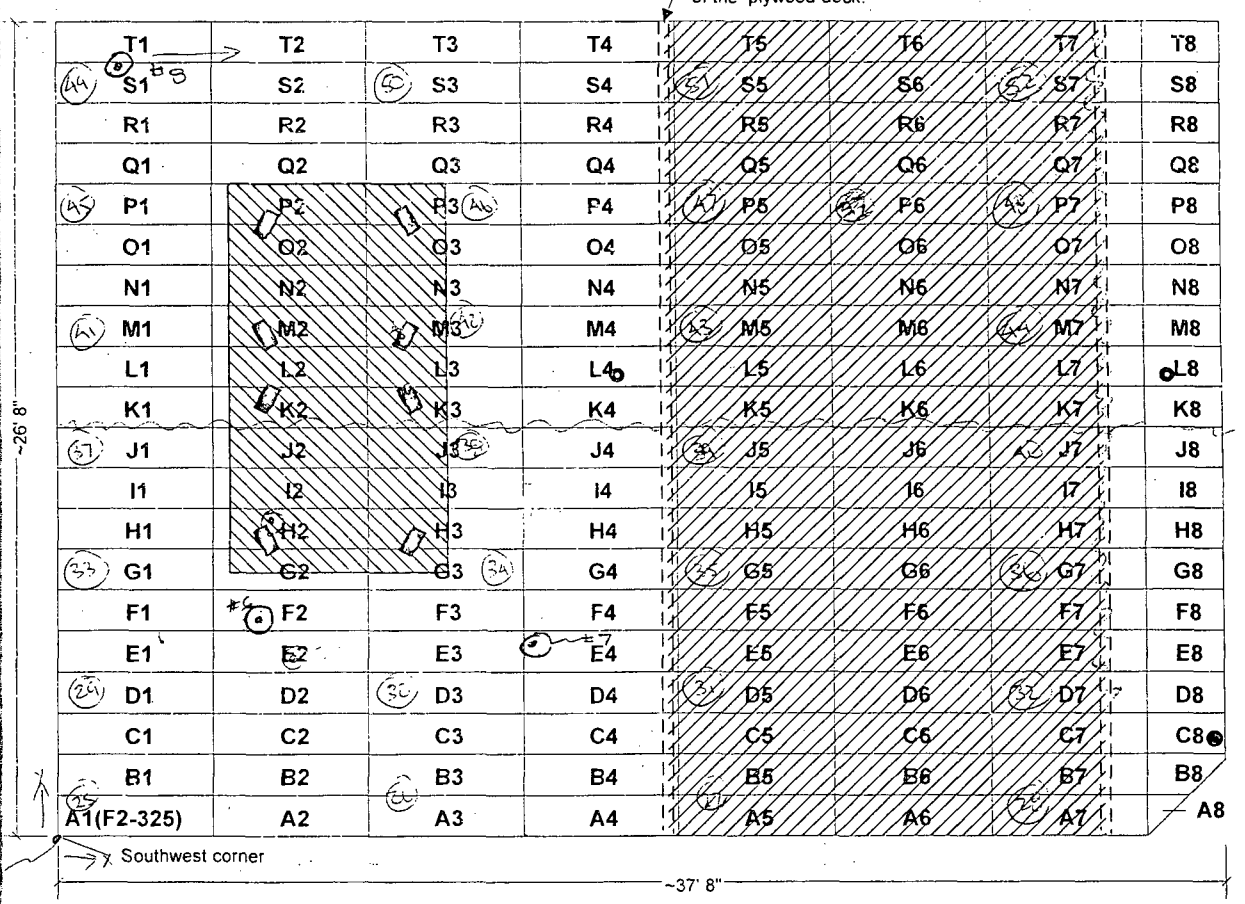
BMR 2003-0108
Rm 325 Turbine Deck
F2-325, Floor 2

Prepared by: T.Hagen
Reviewed by:_____
Date:_____

North

Plywood deck — Brass plugs at girders — Floor plug — Floor plug lifting eye — Pipe

Steel turbine generator skid plates surrounding the perimeter of the plywood deck.



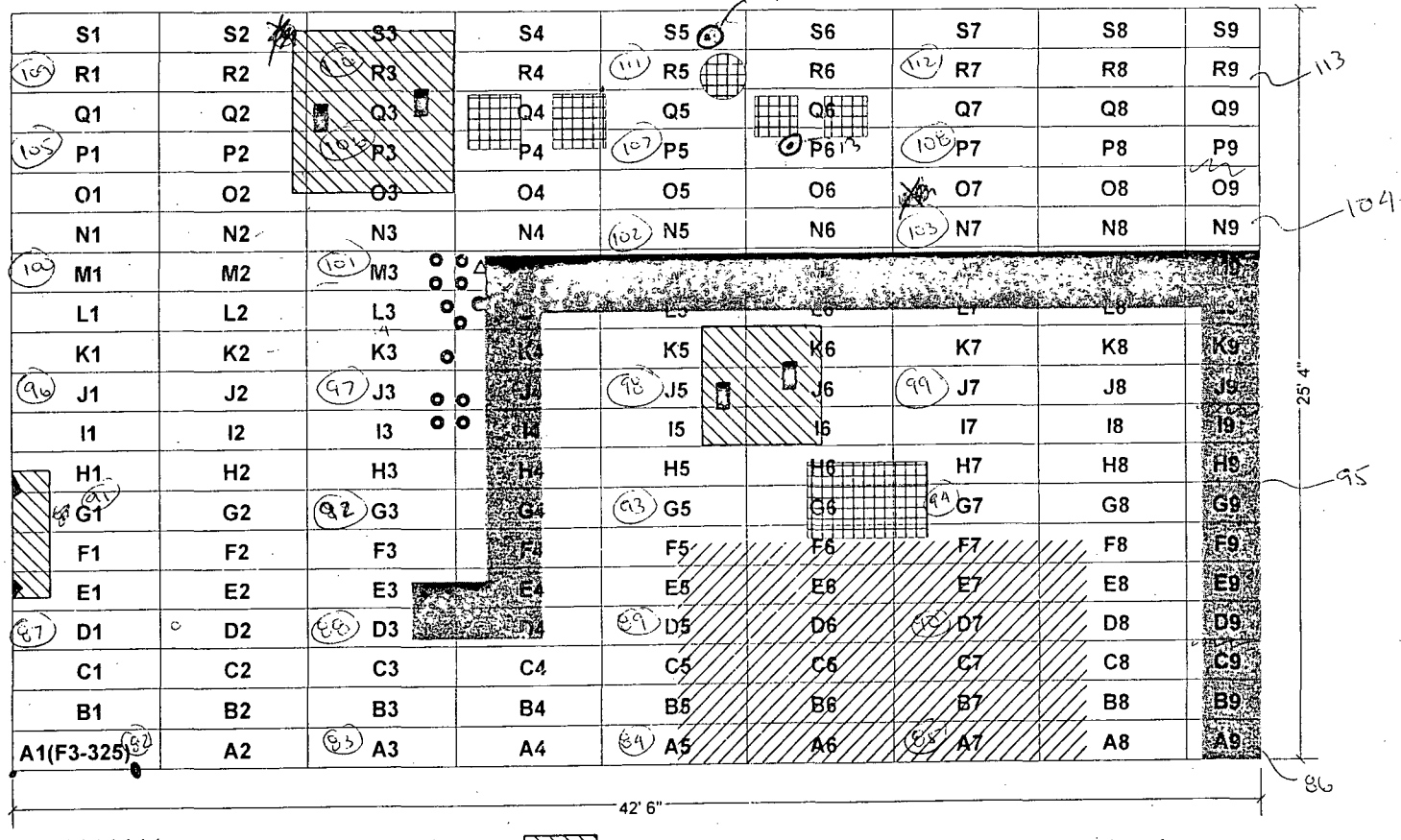
BMR 2003-0108
Rm 325 Turbine Deck
F3-325, Floor 3

Prepared by: T.Hagen
Reviewed by:_____
Date:_____

North

Note: Shaded area represents Turbine Shield Wall. It is not included in this survey.

22.7 +



Plywood deck — Cover — Floor plug — Floor plug lifting eye — Penetration sleeve — Conduit — Pipe

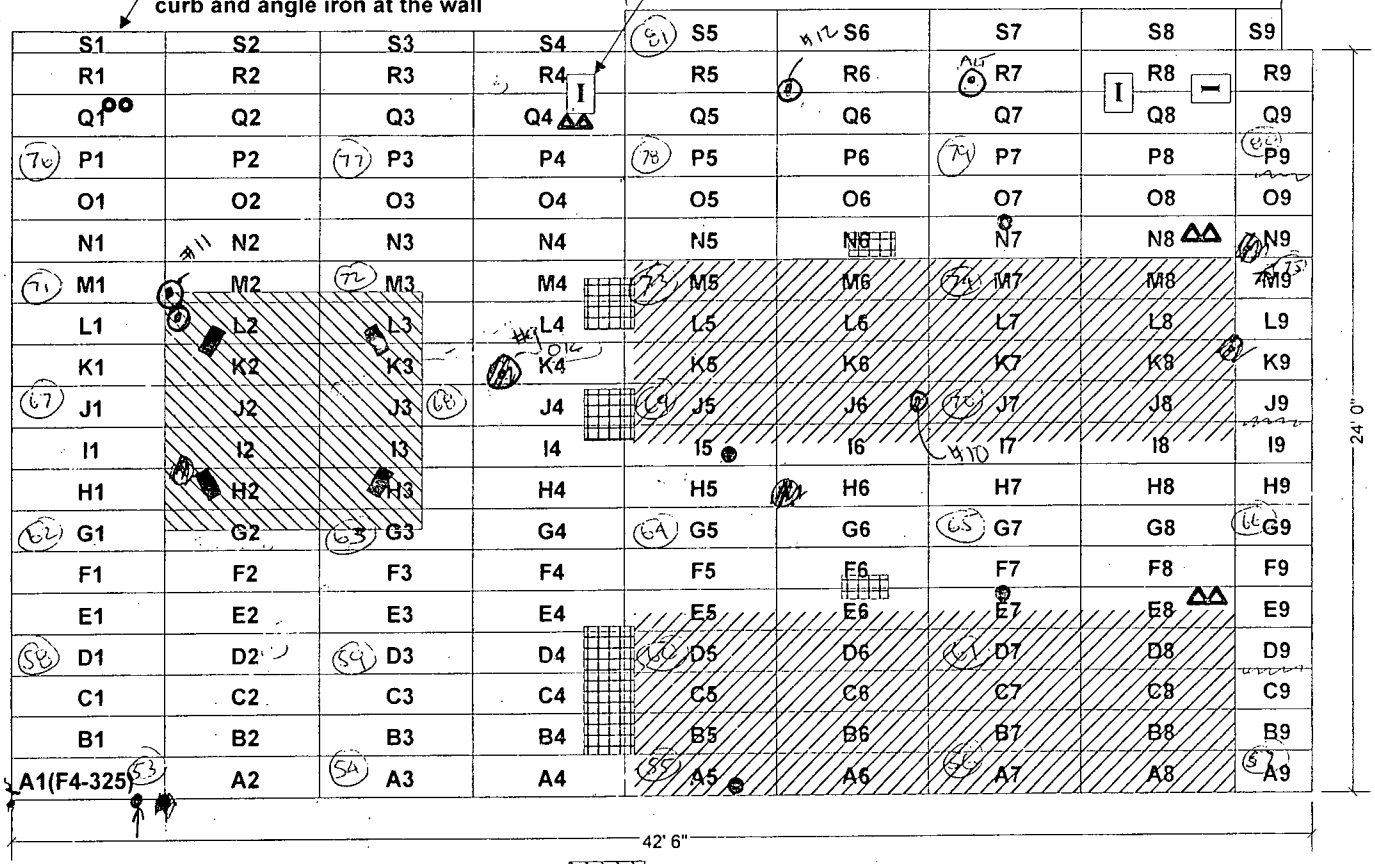
BMR 2003-0108
Rm 325 Turbine Deck
F4-325, Floor 4

Prepared by: T.Hagen
Reviewed by:_____
Date:_____

North

Row "S" includes the concrete curb and angle iron at the wall

Column Bases (3). Survey the ~2" high concrete base with the floor sub-unit that it falls within.



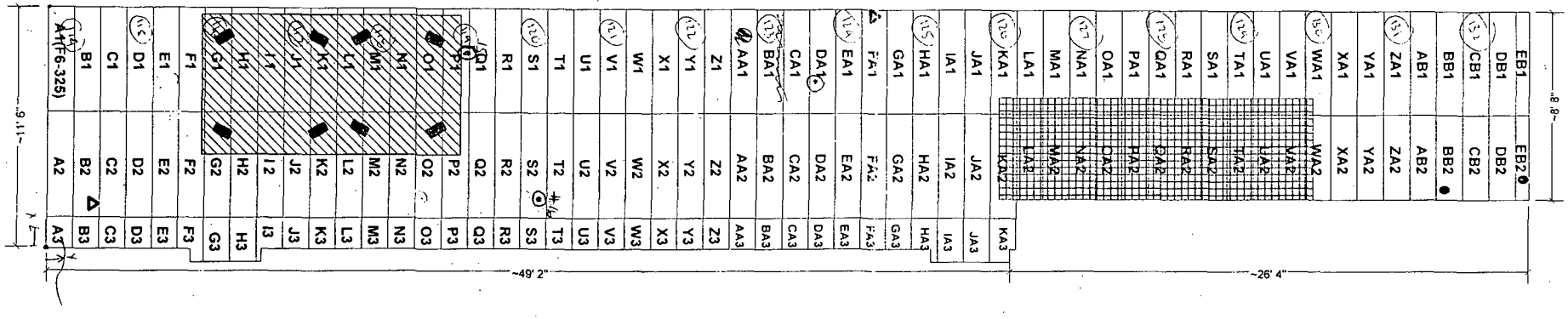
Rough concrete — Cover — Floor plug — Floor plug lifting eye — Penetration sleeve — Conduit — Pipe

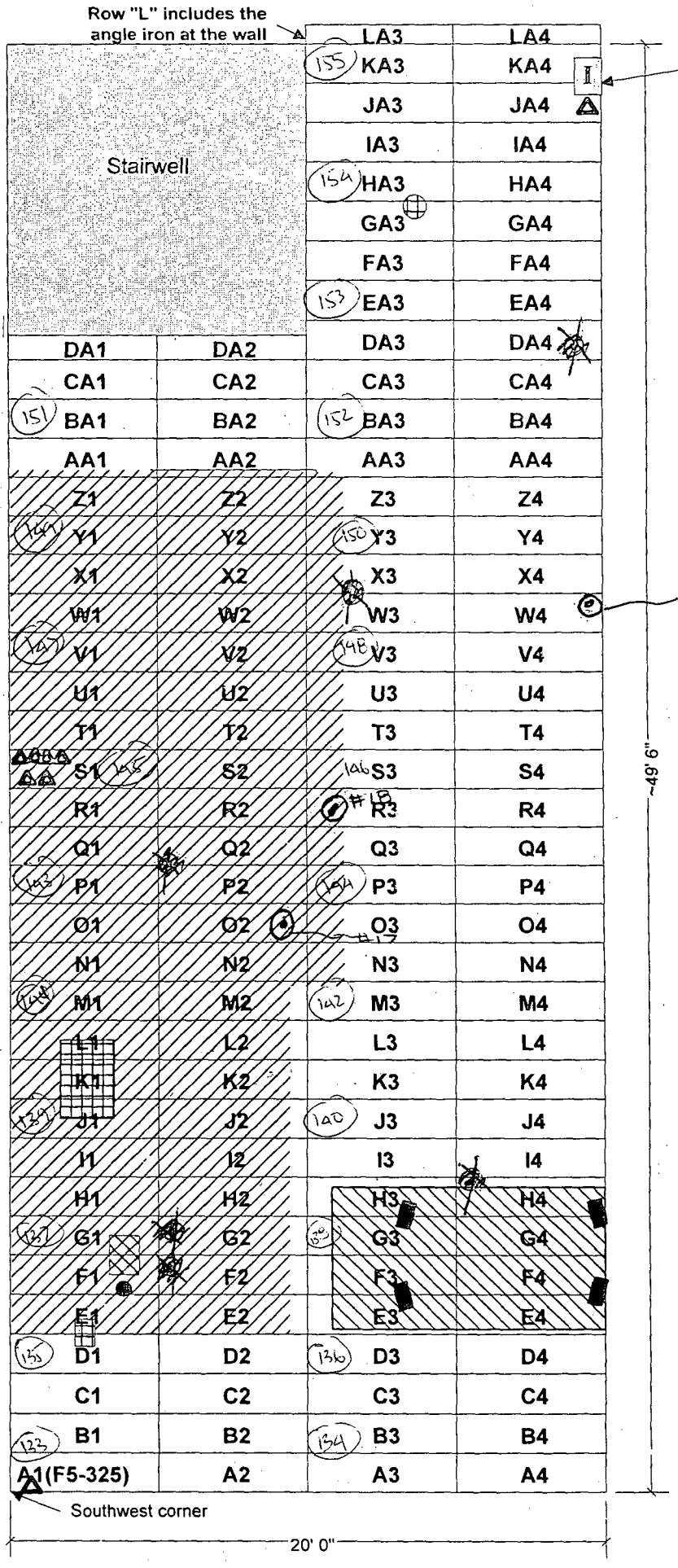
North

BMR 2003-0108
Rm 325 Turbine Deck
F6-325, Floor 6

Prepared by: T.Hagen
Reviewed by:_____
Date:_____

- Penetration sleeve
- Pipe
- Conduit
- Cover
- Floor plug
- Floor plug lifting eye





Column Base. Survey the ~2" high concrete base with the floor sub-unit that it falls within.

North

BMR 2003-0108
Rm 325 Turbine Deck
F5-325, Floor 5

Prepared by: T.Hagen
Reviewed by:_____
Date:_____

Rough concrete

Floor plug

Cover

Floor drain

Penetration sleeve

Pipe

Conduit

Floor plug lifting eye

PCB SURVEY PACKAGE CLOSE-OUT CHECKLIST

Package ID Number: 0005 Survey Area: TB/SB Demolition Area

The survey package is legible and complete and the following necessary information is in the package:

1. ✓ Survey Package Cover Sheet
2. ✓ Survey design documentation
3. ✓ Random number generator sheet for sample start location and QC sample numbers.
4. ✓ Completed survey map/data sheet
5. ✓ Completed PCB Survey Data Record Sheet
6. ✓ Copy of the Chain of Custody
7. ✓ Copy of sample results
8. N/A Other documentation:

Completed By: Jodie L. Reed Date: 12/16/05
(Environmental Technician)

Reviewed By: [illegible] Date: 02-06-06
(Environmental Supervisor)

PCB SURVEY PACKAGE COVER SHEET

Package ID Number : 0005	Survey Area: Turbine Building/Service Building Area, Post Demolition	Size (m^2): ~2700

Random Samples

# of Field Samples: 40

# of QC samples: 6

Random Start Location: X (20.8), Y (17.3)

Sample Spacing: 9.6 meters

Judgmental Samples

# of Field Samples 3

Isolation Controls implemented ☐ List controls: Area posted as a PCB survey area.

Comments/specific directions[1]: -Random sample locations determined by random number generator.

-Sample analysis results acceptance criteria = Soil <1ppm; Wipe <10 ug/100 cm^2

([1] Address any inaccessible areas or sample points not included in survey).

SURVEY PACKAGE CLOSURE

Screening Survey Package is authorized for closure. All required reviews are completed and pertinent information is included in package (see Survey Package Close-Out Checklist).

ENV Technician Jodie L Reed Date: 12/16/05

ENV Supervisor: _____ Date: _____

Package ID Number: 0005 (wipe samples)

PCB SURVEY DATA RECORD SHEET

Survey Area: Turbine/Service Building Area -Post Demolition	Size (m^2): ~2700	# of Samples: 30

Sample ID Number	Sample Location (X)(Y)	Sample Result (ug/100cm^2)	Sample ID Number	Sample Location (X)(Y)	Sample Result (ug/100cm^2)
TB-PCB-W01	(1.6)(7.7)	nd	TB-PCB-W45	(11.2)(7.7)	nd
TB-PCB-W04	(30.4)(7.7)	nd	TB-PCB-W46	(49.6)(55.7)	nd
TB-PCB-W05	(40.0)(7.7)	nd	TB-PCB-WJ01	(22.4)(27.1)	nd
TB-PCB-W06	(49.6)(7.7)	nd	TB-PCB-WJ02	(18.8)(61.9)	0.1
TB-PCB-W07	(1.6)(17.3)	nd	TB-PCB-WJ03	(22.8)(61.7)	nd
TB-PCB-W10	(30.4)(17.3)	nd			
TB-PCB-W12	(49.6)(17.3)	Nd			
TB-PCB-W13	(1.6)(26.9)	0.2			
TB-PCB-W14	(11.2)(26.9)	1.0			
TB-PCB-W16	(30.4)(26.9)	nd			
TB-PCB-W19	(1.6)(36.5)	0.2			
TB-PCB-W20	(11.2)(36.5)	0.2			
TB-PCB-W24	(49.6)(36.5)	nd			
TB-PCB-W25	(1.6)(46.1)	0.1			
TB-PCB-W26	(11.2)(46.1)	nd			
TB-PCB-W27	(20.8)(46.1)	nd			
TB-PCB-W30	(49.6)(46.1)	nd			
TB-PCB-W37	(20.8)(65.3)	0.1			
TB-PCB-W38	(30.4)(65.3)	nd			
TB-PCB-W39	(40.0)(65.3)	nd			
TB-PCB-W40	(49.6)(65.3)	nd			
TB-PCB-W41	(49.6)(7.7)	nd			
TB-PCB-W42	(1.6)(17.3)	nd			
TB-PCB-W43	(1.6)(26.9)	nd			
TB-PCB-W44	(11.2)(26.9)	nd			

Note: nd – non detect

Performed By: Jodie L. Reed (Survey Technician) Date: 12-16-05

Reviewed By: [illegible] (Environmental Supervisor) Date: 02-06-06

PCB SURVEY DATA RECORD SHEET

Survey Area: Turbine/Service Building Area -Post Demolition	Size (m^2): ~2700	# of Samples: 19

Sample ID Number	Sample Location (X)(Y)	Sample Result (ppm)	Sample ID Number	Sample Location (X)(Y)	Sample Result (ppm)
TB-PCB-S02	(11.2)(7.7)	0.370			
TB-PCB-S03	(20.8)(7.7)	nd			
TB-PCB-S08	(11.2)(17.3)	nd			
TB-PCB-S09	(20.8)(17.3)	nd			
TB-PCB-S11	(40.0)(17.3)	nd			
TB-PCB-S15	(20.8)(26.9)	nd			
TB-PCB-S17	(40.0)(26.9)	nd			
TB-PCB-S18	(49.6)(26.9)	nd			
TB-PCB-S21	(20.8)(36.5)	nd			
TB-PCB-S22	(30.4)(36.5)	nd			
TB-PCB-S23	(40.0)(36.5)	nd			
TB-PCB-S28	(30.4)(46.1)	0.990			
TB-PCB-S29	(40.0)(46.1)	nd			
TB-PCB-S31	(1.6)(55.7)	nd			
TB-PCB-S32	(11.2)(55.7)	nd			
TB-PCB-S33	(20.8)(55.7)	nd			
TB-PCB-S34	(30.4)(55.7)	nd			
TB-PCB-S35	(40.0)(55.7)	nd			
TB-PCB-S36	(49.6)(55.7)	nd			

Note: nd – non detect

Performed By: Jodie L. Reed (Survey Technician) Date: 12/16/05

Reviewed By: (Environmental Supervisor) Date: 02-06-06

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Turbine Building Concrete & Soil - Sampling Dates of March 29 - 31, 2005	Our Project Number CHEM-05-0499

Sample Identification	TB-PCB-S33	Sample Identification	TB-PCB-S34
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	03-29-05	Sample Date	03-09-05
Received Date	04-01-05	Received Date	04-01-05
Report Date	04-12-05	Report Date	04-12-05
Percent Solids, % w/w	97	Percent Solids, % w/w	99
Preparation Date	04-04-05	Preparation Date	04-04-05
Analysis Date	04-07-05	Analysis Date	04-06-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	050499-01	Control Number	050499-02

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/kg	TDL	TARGET PCBs, 8082	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	109	73-134	Decachlorobiphenyl	97	73-134

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/kg	TDL	TARGET PCBs, 8082	ug/kg	TDL
PCB-1016	not required	- -	PCB-1016	not required	- -
PCB-1221	not required	- -	PCB-1221	not required	- -
PCB-1232	not required	- -	PCB-1232	not required	- -
PCB-1242	not required	- -	PCB-1242	not required	- -
PCB-1248	not required	- -	PCB-1248	not required	- -
PCB-1254	not required	- -	PCB-1254	not required	- -
PCB-1260	not required	- -	PCB-1260	not required	- -
PCB-1262	not required	- -	PCB-1262	not required	- -
PCB-1268	not required	- -	PCB-1268	not required	- -
Sum of Aroclors	not required	330	Sum of Aroclors	not required	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	not required	70-127	Decachlorobiphenyl	not required	70-127

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At TDL
Results Are Reported On The Dry Weight Basis

Reviewed By _____ Date _____

Sequence 040405B/C
TB-PCB-S33 TB-PCB-S34

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Turbine Building Concrete & Soil - Sampling Dates of March 29 - 31, 2005	Our Project Number CHEM-05-0499

Sample Identification	TB-PCB-W01	Sample Identification	TB-PCB-W07
Sample Depth, inches	- -	Sample Depth, inches	- -
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	03-30-05	Sample Date	03-30-05
Received Date	04-01-05	Received Date	04-01-05
Report Date	04-12-05	Report Date	04-12-05
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	04-01-05	Preparation Date	04-01-05
Analysis Date	04-05-05	Analysis Date	04-05-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	050499-03	Control Number	050499-04

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	- -	- -	Sum of Aroclors	- -	- -
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	89	59-109	Decachlorobiphenyl	91	59-109

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	not required	<0.1	PCB-1016	not required	<0.1
PCB-1221	not required	<0.1	PCB-1221	not required	<0.1
PCB-1232	not required	<0.1	PCB-1232	not required	<0.1
PCB-1242	not required	<0.1	PCB-1242	not required	<0.1
PCB-1248	not required	<0.1	PCB-1248	not required	<0.1
PCB-1254	not required	<0.1	PCB-1254	not required	<0.1
PCB-1260	not required	<0.1	PCB-1260	not required	<0.1
PCB-1262	not required	<0.1	PCB-1262	not required	<0.1
PCB-1268	not required	<0.1	PCB-1268	not required	<0.1
Sum of Aroclors	not required	- -	Sum of Aroclors	not required	- -
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	not required	58-104	Decachlorobiphenyl	not required	58-104

NOTES:
MDL = Method Detection Limit, ug/100cm^2. See Report Text.
nd = Parameter Not Detected At MDL

Reviewed By _____ Date _____

Sequence 040505B
TB-PCB-W01 TB-PCB-W07

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Turbine Building Concrete & Soil - Sampling Dates of March 29 - 31, 2005	Our Project Number CHEM-05-0499

Sample Identification	TB-PCB-W13	Sample Identification	TB-PCB-W14
Sample Depth, inches	- -	Sample Depth, inches	- -
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	03-30-05	Sample Date	03-30-05
Received Date	04-01-05	Received Date	04-01-05
Report Date	04-12-05	Report Date	04-12-05
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	04-01-05	Preparation Date	04-01-05
Analysis Date	04-06-05	Analysis Date	04-05-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	050499-05	Control Number	050499-06

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	0.2	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Sum of Aroclors	- -	- -
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	88	59-109

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	1.0	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Sum of Aroclors	- -	- -
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	90	59-109

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	0.2	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Sum of Aroclors	- -	- -
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	79	58-104

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	0.9	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Sum of Aroclors	- -	- -
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	84	58-104

NOTES:
MDL = Method Detection Limit, ug/100cm^2. See Report Text.
nd = Parameter Not Detected At MDL

Reviewed By _____ Date _____

Sequence 040505B
TB-PCB-W13 TB-PCB-W14

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Turbine Building Concrete & Soil - Sampling Dates of March 29 - 31, 2005	Our Project Number CHEM-05-0499

Sample Identification	TB-PCB-W19	Sample Identification	TB-PCB-W20
Sample Depth, inches	- -	Sample Depth, inches	- -
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	03-30-05	Sample Date	03-30-05
Received Date	04-01-05	Received Date	04-01-05
Report Date	04-12-05	Report Date	04-12-05
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	04-01-05	Preparation Date	04-01-05
Analysis Date	04-06-05	Analysis Date	04-05-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	050499-07	Control Number	050499-08

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	0.2	<0.1	PCB-1254	0.2	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	- -	- -	Sum of Aroclors	- -	- -
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	91	59-109	Decachlorobiphenyl	90	59-109

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	0.2	<0.1	PCB-1254	0.2	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	- -	- -	Sum of Aroclors	- -	- -
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	87	58-104	Decachlorobiphenyl	85	58-104

NOTES:
MDL = Method Detection Limit, ug/100cm^2. See Report Text.
nd = Parameter Not Detected At MDL

Reviewed By _____ Date _____

Sequence 040505B
TB-PCB-W19 TB-PCB-W20

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Turbine Building Concrete & Soil - Sampling Dates of March 29 - 31, 2005	Our Project Number CHEM-05-0499

Sample Identification	TB-PCB-W25	Sample Identification	TB-PCB-W26
Sample Depth, inches	- -	Sample Depth, inches	- -
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	03-30-05	Sample Date	03-30-05
Received Date	04-01-05	Received Date	04-01-05
Report Date	04-12-05	Report Date	04-12-05
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	04-01-05	Preparation Date	04-01-05
Analysis Date	04-06-05	Analysis Date	04-04-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	050499-09	Control Number	050499-10

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	0.1	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Sum of Aroclors	- -	- -
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	85	59-109

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	nd	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Sum of Aroclors	- -	- -
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	90	59-109

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	*	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Sum of Aroclors	- -	- -
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	80	58-104

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	not required	<0.1
PCB-1221	not required	<0.1
PCB-1232	not required	<0.1
PCB-1242	not required	<0.1
PCB-1248	not required	<0.1
PCB-1254	not required	<0.1
PCB-1260	not required	<0.1
PCB-1262	not required	<0.1
PCB-1268	not required	<0.1
Sum of Aroclors	not required	- -
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	not required	58-104

NOTES:
MDL = Method Detection Limit, ug/100cm^2. See Report Text.
nd = Parameter Not Detected At MDL
* = Qualitative Match But Calculates Less Than 0.1

Reviewed By _____ Date _____

Sequence 040505A/B
TB-PCB-W25 TB-PCB-W26

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Turbine Building Concrete & Soil - Sampling Dates of March 29 - 31, 2005	Our Project Number CHEM-05-0499

Sample Identification	TB-PCB-W27	Sample Identification	TB-PCB-W37
Sample Depth, inches	- -	Sample Depth, inches	- -
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	03-30-05	Sample Date	03-30-05
Received Date	04-01-05	Received Date	04-01-05
Report Date	04-12-05	Report Date	04-12-05
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	04-01-05	Preparation Date	04-01-05
Analysis Date	04-04-05	Analysis Date	04-06-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	050499-11	Control Number	050499-12

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	nd	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Sum of Aroclors	- -	- -
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	92	59-109

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	0.1	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Sum of Aroclors	- -	- -
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	90	59-109

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	not required	<0.1
PCB-1221	not required	<0.1
PCB-1232	not required	<0.1
PCB-1242	not required	<0.1
PCB-1248	not required	<0.1
PCB-1254	not required	<0.1
PCB-1260	not required	<0.1
PCB-1262	not required	<0.1
PCB-1268	not required	<0.1
Sum of Aroclors	not required	- -
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	not required	58-104

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	*	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Sum of Aroclors	- -	- -
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	90	58-104

NOTES:
MDL = Method Detection Limit, ug/100cm^2. See Report Text.
nd = Parameter Not Detected At MDL
* = Qualitative Match But Calculates Less Than 0.1

Reviewed By _____ Date _____

Sequence 040505A/B
TB-PCB-W27 TB-PCB-W37

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Turbine Building Concrete & Soil - Sampling Dates of March 29 - 31, 2005	Our Project Number CHEM-05-0499

Sample Identification	TB-PCB-WJ01	Sample Identification	TB-PCB-WJ02
Sample Depth, inches	- -	Sample Depth, inches	- -
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	03-30-05	Sample Date	03-30-05
Received Date	04-01-05	Received Date	04-01-05
Report Date	04-12-05	Report Date	04-12-05
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	04-01-05	Preparation Date	04-01-05
Analysis Date	04-06-05	Analysis Date	04-06-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	050499-13	Control Number	050499-14

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	0.1	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	- -	- -	Sum of Aroclors	- -	- -
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	89	59-109	Decachlorobiphenyl	95	59-109

CONFIRMING ANALYTICAL COLUMN			CONFIRMING ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	not required	<0.1	PCB-1016	nd	<0.1
PCB-1221	not required	<0.1	PCB-1221	nd	<0.1
PCB-1232	not required	<0.1	PCB-1232	nd	<0.1
PCB-1242	not required	<0.1	PCB-1242	nd	<0.1
PCB-1248	not required	<0.1	PCB-1248	nd	<0.1
PCB-1254	not required	<0.1	PCB-1254	0.1	<0.1
PCB-1260	not required	<0.1	PCB-1260	nd	<0.1
PCB-1262	not required	<0.1	PCB-1262	nd	<0.1
PCB-1268	not required	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	not required	- -	Sum of Aroclors	- -	- -
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	not required	58-104	Decachlorobiphenyl	86	58-104

NOTES:	MDL = Method Detection Limit, ug/100cm^2. See Report Text. nd = Parameter Not Detected At MDL

Reviewed By _____ Date _____

Sequence 040505B	
TB-PCB-WJ01	TB-PCB-WJ02

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Turbine Building Concrete & Soil - Sampling Dates of March 29 - 31, 2005	Our Project Number CHEM-05-0499

Sample Identification	TB-PCB-WJ03	Sample Identification	TB-PCB-W42
Sample Depth, inches	- -	Sample Depth, inches	- -
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	03-30-05	Sample Date	03-30-05
Received Date	04-01-05	Received Date	04-01-05
Report Date	04-12-05	Report Date	04-12-05
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	04-01-05	Preparation Date	04-01-05
Analysis Date	04-04-05	Analysis Date	04-04-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	050499-15	Control Number	050499-16

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	nd	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Sum of Aroclors	- -	- -
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	88	59-109

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	nd	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Sum of Aroclors	- -	- -
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	95	59-109

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	not required	<0.1
PCB-1221	not required	<0.1
PCB-1232	not required	<0.1
PCB-1242	not required	<0.1
PCB-1248	not required	<0.1
PCB-1254	not required	<0.1
PCB-1260	not required	<0.1
PCB-1262	not required	<0.1
PCB-1268	not required	<0.1
Sum of Aroclors	not required	- -
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	not required	58-104

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	not required	<0.1
PCB-1221	not required	<0.1
PCB-1232	not required	<0.1
PCB-1242	not required	<0.1
PCB-1248	not required	<0.1
PCB-1254	not required	<0.1
PCB-1260	not required	<0.1
PCB-1262	not required	<0.1
PCB-1268	not required	<0.1
Sum of Aroclors	not required	- -
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	not required	58-104

NOTES:
MDL = Method Detection Limit, ug/100cm^2. See Report Text.
nd = Parameter Not Detected At MDL

Reviewed By _____ Date _____

Sequence 040505A
TB-PCB-WJ03 TB-PCB-W42

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Turbine Building Concrete & Soil - Sampling Dates of March 29 - 31, 2005	Our Project Number CHEM-05-0499

Sample Identification	TB-PCB-W43
Sample Depth, inches	- -
Sample Type	surface wipe
Sample Date	03-30-05
Received Date	04-01-05
Report Date	04-12-05
Percent Solids, % w/w	- -
Preparation Date	04-01-05
Analysis Date	04-05-05
Analyst	bek, glc
Control Number	050499-17

PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	nd	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Sum of Aroclors	- -	- -
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	91	59-109

CONFIRMING ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	not required	<0.1
PCB-1221	not required	<0.1
PCB-1232	not required	<0.1
PCB-1242	not required	<0.1
PCB-1248	not required	<0.1
PCB-1254	not required	<0.1
PCB-1260	not required	<0.1
PCB-1262	not required	<0.1
PCB-1268	not required	<0.1
Sum of Aroclors	not required	- -
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	not required	58-104

NOTES:
MDL = Method Detection Limit, ug/100cm^2. See Report Text.
nd = Parameter Not Detected At MDL

Reviewed By _____ Date _____

Sequence 040505A
TB-PCB-W43

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Turbine Building Concrete & Soil - Sampling Dates of March 29 - 31, 2005	Our Project Number CHEM-05-0499

Sample Identification	TB-PCB-S02	Sample Identification	TB-PCB-S03
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	03-30-05	Sample Date	03-30-05
Received Date	04-01-05	Received Date	04-01-05
Report Date	04-12-05	Report Date	04-12-05
Percent Solids, % w/w	93	Percent Solids, % w/w	95
Preparation Date	04-04-05	Preparation Date	04-04-05
Analysis Date	04-07-05	Analysis Date	04-07-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	050499-18	Control Number	050499-19

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/kg	TDL
PCB-1016	nd	- -
PCB-1221	nd	- -
PCB-1232	nd	- -
PCB-1242	nd	- -
PCB-1248	nd	- -
PCB-1254	370	- -
PCB-1260	nd	- -
PCB-1262	nd	- -
PCB-1268	nd	- -
Sum of Aroclors	370	330
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	81	73-134

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/kg	TDL
PCB-1016	nd	- -
PCB-1221	nd	- -
PCB-1232	nd	- -
PCB-1242	nd	- -
PCB-1248	nd	- -
PCB-1254	nd	- -
PCB-1260	nd	- -
PCB-1262	nd	- -
PCB-1268	nd	- -
Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	100	73-134

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/kg	TDL
PCB-1016	nd	- -
PCB-1221	nd	- -
PCB-1232	nd	- -
PCB-1242	nd	- -
PCB-1248	nd	- -
PCB-1254	340	- -
PCB-1260	nd	- -
PCB-1262	nd	- -
PCB-1268	nd	- -
Sum of Aroclors	340	330
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	80	70-127

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/kg	TDL
PCB-1016	not required	- -
PCB-1221	not required	- -
PCB-1232	not required	- -
PCB-1242	not required	- -
PCB-1248	not required	- -
PCB-1254	not required	- -
PCB-1260	not required	- -
PCB-1262	not required	- -
PCB-1268	not required	- -
Sum of Aroclors	not required	330
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	not required	70-127

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At TDL
Results Are Reported On The Dry Weight Basis

Reviewed By _____ Date _____

Sequence 040505C
TB-PCB-S02 TB-PCB-S03

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Turbine Building Concrete & Soil - Sampling Dates of March 29 - 31, 2005	Our Project Number CHEM-05-0499

Sample Identification	TB-PCB-S08	Sample Identification	TB-PCB-S09
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	03-30-05	Sample Date	03-30-05
Received Date	04-01-05	Received Date	04-01-05
Report Date	04-12-05	Report Date	04-12-05
Percent Solids, % w/w	93	Percent Solids, % w/w	92
Preparation Date	04-04-05	Preparation Date	04-04-05
Analysis Date	04-07-05	Analysis Date	04-08-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	050499-20	Control Number	050499-21

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/kg	TDL	TARGET PCBs, 8082	ug/kg	TDL
PCB-1016	nd	--	PCB-1016	nd	--
PCB-1221	nd	--	PCB-1221	nd	--
PCB-1232	nd	--	PCB-1232	nd	--
PCB-1242	nd	--	PCB-1242	nd	--
PCB-1248	nd	--	PCB-1248	nd	--
PCB-1254	nd	--	PCB-1254	nd	--
PCB-1260	nd	--	PCB-1260	nd	--
PCB-1262	nd	--	PCB-1262	nd	--
PCB-1268	nd	--	PCB-1268	nd	--
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	99	73-134	Decachlorobiphenyl	99	73-134

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/kg	TDL	TARGET PCBs, 8082	ug/kg	TDL
PCB-1016	not required	--	PCB-1016	not required	--
PCB-1221	not required	--	PCB-1221	not required	--
PCB-1232	not required	--	PCB-1232	not required	--
PCB-1242	not required	--	PCB-1242	not required	--
PCB-1248	not required	--	PCB-1248	not required	--
PCB-1254	not required	--	PCB-1254	not required	--
PCB-1260	not required	--	PCB-1260	not required	--
PCB-1262	not required	--	PCB-1262	not required	--
PCB-1268	not required	--	PCB-1268	not required	--
Sum of Aroclors	not required	330	Sum of Aroclors	not required	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	not required	70-127	Decachlorobiphenyl	not required	70-127

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At TDL
Results Are Reported On The Dry Weight Basis

Reviewed By _____ Date _____

Sequence 040505C
TB-PCB-S08 TB-PCB-S09

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Turbine Building Concrete & Soil - Sampling Dates of March 29 - 31, 2005	Our Project Number CHEM-05-0499

Sample Identification	TB-PCB-S11	Sample Identification	TB-PCB-S15
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	03-30-05	Sample Date	03-30-05
Received Date	04-01-05	Received Date	04-01-05
Report Date	04-12-05	Report Date	04-12-05
Percent Solids, % w/w	96	Percent Solids, % w/w	92
Preparation Date	04-04-05	Preparation Date	04-04-05
Analysis Date	04-07-05	Analysis Date	04-08-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	050499-22	Control Number	050499-23

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/kg	TDL	TARGET PCBs, 8082	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	101	73-134	Decachlorobiphenyl	103	73-134

CONFIRMING ANALYTICAL COLUMN			CONFIRMING ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/kg	TDL	TARGET PCBs, 8082	ug/kg	TDL
PCB-1016	not required	- -	PCB-1016	not required	- -
PCB-1221	not required	- -	PCB-1221	not required	- -
PCB-1232	not required	- -	PCB-1232	not required	- -
PCB-1242	not required	- -	PCB-1242	not required	- -
PCB-1248	not required	- -	PCB-1248	not required	- -
PCB-1254	not required	- -	PCB-1254	not required	- -
PCB-1260	not required	- -	PCB-1260	not required	- -
PCB-1262	not required	- -	PCB-1262	not required	- -
PCB-1268	not required	- -	PCB-1268	not required	- -
Sum of Aroclors	not required	330	Sum of Aroclors	not required	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	not required	70-127	Decachlorobiphenyl	not required	70-127

NOTES:

TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At TDL
Results Are Reported On The Dry Weight Basis

Reviewed By _____ Date _____

Sequence 040505C
TB-PCB-S11 TB-PCB-S15

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Turbine Building Concrete & Soil - Sampling Dates of March 29 - 31, 2005	Our Project Number CHEM-05-0499

Sample Identification	TB-PCB-S17	Sample Identification	TB-PCB-S18
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	03-30-05	Sample Date	03-30-05
Received Date	04-01-05	Received Date	04-01-05
Report Date	04-12-05	Report Date	04-12-05
Percent Solids, % w/w	90	Percent Solids, % w/w	90
Preparation Date	04-04-05	Preparation Date	04-04-05
Analysis Date	04-07-05	Analysis Date	04-08-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	050499-24	Control Number	050499-25

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/kg	TDL
PCB-1016	nd	- -
PCB-1221	nd	- -
PCB-1232	nd	- -
PCB-1242	nd	- -
PCB-1248	nd	- -
PCB-1254	nd	- -
PCB-1260	nd	- -
PCB-1262	nd	- -
PCB-1268	nd	- -
Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	96	73-134

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/kg	TDL
PCB-1016	nd	- -
PCB-1221	nd	- -
PCB-1232	nd	- -
PCB-1242	nd	- -
PCB-1248	nd	- -
PCB-1254	nd	- -
PCB-1260	nd	- -
PCB-1262	nd	- -
PCB-1268	nd	- -
Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	106	73-134

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/kg	TDL
PCB-1016	not required	- -
PCB-1221	not required	- -
PCB-1232	not required	- -
PCB-1242	not required	- -
PCB-1248	not required	- -
PCB-1254	not required	- -
PCB-1260	not required	- -
PCB-1262	not required	- -
PCB-1268	not required	- -
Sum of Aroclors	not required	330
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	not required	70-127

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/kg	TDL
PCB-1016	not required	- -
PCB-1221	not required	- -
PCB-1232	not required	- -
PCB-1242	not required	- -
PCB-1248	not required	- -
PCB-1254	not required	- -
PCB-1260	not required	- -
PCB-1262	not required	- -
PCB-1268	not required	- -
Sum of Aroclors	not required	330
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	not required	70-127

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At TDL
Results Are Reported On The Dry Weight Basis

Reviewed By _____ Date _____

Sequence 040505C
TB-PCB-S17 TB-PCB-S18

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Turbine Building Concrete & Soil - Sampling Dates of March 29 - 31, 2005	Our Project Number CHEM-05-0499

Sample Identification	TB-PCB-S21	Sample Identification	TB-PCB-S22
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	03-30-05	Sample Date	03-30-05
Received Date	04-01-05	Received Date	04-01-05
Report Date	04-12-05	Report Date	04-12-05
Percent Solids, % w/w	97	Percent Solids, % w/w	95
Preparation Date	04-04-05	Preparation Date	04-04-05
Analysis Date	04-07-05	Analysis Date	04-07-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	050499-26	Control Number	050499-27

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/kg	TDL	TARGET PCBs, 8082	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	94	73-134	Decachlorobiphenyl	97	73-134

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/kg	TDL	TARGET PCBs, 8082	ug/kg	TDL
PCB-1016	not required	- -	PCB-1016	not required	- -
PCB-1221	not required	- -	PCB-1221	not required	- -
PCB-1232	not required	- -	PCB-1232	not required	- -
PCB-1242	not required	- -	PCB-1242	not required	- -
PCB-1248	not required	- -	PCB-1248	not required	- -
PCB-1254	not required	- -	PCB-1254	not required	- -
PCB-1260	not required	- -	PCB-1260	not required	- -
PCB-1262	not required	- -	PCB-1262	not required	- -
PCB-1268	not required	- -	PCB-1268	not required	- -
Sum of Aroclors	not required	330	Sum of Aroclors	not required	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	not required	70-127	Decachlorobiphenyl	not required	70-127

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At TDL
Results Are Reported On The Dry Weight Basis

Reviewed By _____ Date _____

Sequence 040505C
TB-PCB-S21 TB-PCB-S22

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Turbine Building Concrete & Soil - Sampling Dates of March 29 - 31, 2005	Our Project Number CHEM-05-0499

Sample Identification	TB-PCB-S23	Sample Identification	TB-PCB-S28
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	03-30-05	Sample Date	03-30-05
Received Date	04-01-05	Received Date	04-01-05
Report Date	04-12-05	Report Date	04-12-05
Percent Solids, % w/w	91	Percent Solids, % w/w	93
Preparation Date	04-04-05	Preparation Date	04-04-05
Analysis Date	04-08-05	Analysis Date	04-08-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	050499-28	Control Number	050499-29

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/kg	TDL	TARGET PCBs, 8082	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	990	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	103	73-134	Decachlorobiphenyl	102	73-134

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/kg	TDL	TARGET PCBs, 8082	ug/kg	TDL
PCB-1016	not required	- -	PCB-1016	nd	- -
PCB-1221	not required	- -	PCB-1221	nd	- -
PCB-1232	not required	- -	PCB-1232	nd	- -
PCB-1242	not required	- -	PCB-1242	nd	- -
PCB-1248	not required	- -	PCB-1248	nd	- -
PCB-1254	not required	- -	PCB-1254	990	- -
PCB-1260	not required	- -	PCB-1260	nd	- -
PCB-1262	not required	- -	PCB-1262	nd	- -
PCB-1268	not required	- -	PCB-1268	nd	- -
Sum of Aroclors	not required	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	not required	70-127	Decachlorobiphenyl	99	70-127

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At TDL
Results Are Reported On The Dry Weight Basis

Reviewed By _____ Date _____

Sequence 040505C
TB-PCB-S23 TB-PCB-S28

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Turbine Building Concrete & Soil - Sampling Dates of March 29 - 31, 2005	Our Project Number CHEM-05-0499

Sample Identification	TB-PCB-S29	Sample Identification	TB-PCB-S31
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	03-30-05	Sample Date	03-30-05
Received Date	04-01-05	Received Date	04-01-05
Report Date	04-12-05	Report Date	04-12-05
Percent Solids, % w/w	91	Percent Solids, % w/w	96
Preparation Date	04-04-05	Preparation Date	04-04-05
Analysis Date	04-08-05	Analysis Date	04-08-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	050499-30	Control Number	050499-31

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/kg	TDL	TARGET PCBs, 8082	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	101	73-134	Decachlorobiphenyl	95	73-134

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/kg	TDL	TARGET PCBs, 8082	ug/kg	TDL
PCB-1016	not required	- -	PCB-1016	not required	- -
PCB-1221	not required	- -	PCB-1221	not required	- -
PCB-1232	not required	- -	PCB-1232	not required	- -
PCB-1242	not required	- -	PCB-1242	not required	- -
PCB-1248	not required	- -	PCB-1248	not required	- -
PCB-1254	not required	- -	PCB-1254	not required	- -
PCB-1260	not required	- -	PCB-1260	not required	- -
PCB-1262	not required	- -	PCB-1262	not required	- -
PCB-1268	not required	- -	PCB-1268	not required	- -
Sum of Aroclors	not required	330	Sum of Aroclors	not required	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	not required	70-127	Decachlorobiphenyl	not required	70-127

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At TDL
Results Are Reported On The Dry Weight Basis

Reviewed By _____ Date _____

Sequence 040505C
TB-PCB-S29 TB-PCB-S31

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Turbine Building Concrete & Soil - Sampling Dates of March 29 - 31, 2005	Our Project Number CHEM-05-0499

Sample Identification	TB-PCB-S32	Sample Identification	TB-PCB-S35
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	03-30-05	Sample Date	03-30-05
Received Date	04-01-05	Received Date	04-01-05
Report Date	04-12-05	Report Date	04-12-05
Percent Solids, % w/w	99	Percent Solids, % w/w	98
Preparation Date	04-04-05	Preparation Date	04-04-05
Analysis Date	04-07-05	Analysis Date	04-07-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	050499-32	Control Number	050499-33

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/kg	TDL
PCB-1016	nd	- -
PCB-1221	nd	- -
PCB-1232	nd	- -
PCB-1242	nd	- -
PCB-1248	nd	- -
PCB-1254	nd	- -
PCB-1260	nd	- -
PCB-1262	nd	- -
PCB-1268	nd	- -
Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	113	73-134

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/kg	TDL
PCB-1016	nd	- -
PCB-1221	nd	- -
PCB-1232	nd	- -
PCB-1242	nd	- -
PCB-1248	nd	- -
PCB-1254	nd	- -
PCB-1260	nd	- -
PCB-1262	nd	- -
PCB-1268	nd	- -
Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	96	73-134

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/kg	TDL
PCB-1016	not required	- -
PCB-1221	not required	- -
PCB-1232	not required	- -
PCB-1242	not required	- -
PCB-1248	not required	- -
PCB-1254	not required	- -
PCB-1260	not required	- -
PCB-1262	not required	- -
PCB-1268	not required	- -
Sum of Aroclors	not required	330
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	not required	70-127

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/kg	TDL
PCB-1016	not required	- -
PCB-1221	not required	- -
PCB-1232	not required	- -
PCB-1242	not required	- -
PCB-1248	not required	- -
PCB-1254	not required	- -
PCB-1260	not required	- -
PCB-1262	not required	- -
PCB-1268	not required	- -
Sum of Aroclors	not required	330
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	not required	70-127

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At TDL
Results Are Reported On The Dry Weight Basis

Reviewed By _____ Date _____

Sequence 040505C
TB-PCB-S32 TB-PCB-S35

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Turbine Building Concrete & Soil - Sampling Dates of March 29 - 31, 2005	Our Project Number CHEM-05-0499

Sample Identification	TB-PCB-S36
Sample Depth, inches	3
Sample Type	soil
Sample Date	03-30-05
Received Date	04-01-05
Report Date	04-12-05
Percent Solids, % w/w	77
Preparation Date	04-04-05
Analysis Date	04-08-05
Analyst	bek, glc
Control Number	050499-34

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/kg	TDL
PCB-1016	nd	- -
PCB-1221	nd	- -
PCB-1232	nd	- -
PCB-1242	nd	- -
PCB-1248	nd	- -
PCB-1254	nd	- -
PCB-1260	nd	- -
PCB-1262	nd	- -
PCB-1268	nd	- -
Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	83	73-134

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/kg	TDL
PCB-1016	not required	- -
PCB-1221	not required	- -
PCB-1232	not required	- -
PCB-1242	not required	- -
PCB-1248	not required	- -
PCB-1254	not required	- -
PCB-1260	not required	- -
PCB-1262	not required	- -
PCB-1268	not required	- -
Sum of Aroclors	not required	330
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	not required	70-127

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At TDL
Results Are Reported On The Dry Weight Basis

Reviewed By _____ Date _____

Sequence 040505C
TB-PCB-S36

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Turbine Building Concrete & Soil - Sampling Dates of March 29 - 31, 2005	Our Project Number CHEM-05-0499

Sample Identification	TB-PCB-W04	Sample Identification	TB-PCB-W05
Sample Depth, inches	- -	Sample Depth, inches	- -
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	03-31-05	Sample Date	03-31-05
Received Date	04-01-05	Received Date	04-01-05
Report Date	04-12-05	Report Date	04-12-05
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	04-01-05	Preparation Date	04-01-05
Analysis Date	04-05-05	Analysis Date	04-05-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	050499-35	Control Number	050499-36

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	- -	- -	Sum of Aroclors	- -	- -
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	89	59-109	Decachlorobiphenyl	93	59-109

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	not required	<0.1	PCB-1016	not required	<0.1
PCB-1221	not required	<0.1	PCB-1221	not required	<0.1
PCB-1232	not required	<0.1	PCB-1232	not required	<0.1
PCB-1242	not required	<0.1	PCB-1242	not required	<0.1
PCB-1248	not required	<0.1	PCB-1248	not required	<0.1
PCB-1254	not required	<0.1	PCB-1254	not required	<0.1
PCB-1260	not required	<0.1	PCB-1260	not required	<0.1
PCB-1262	not required	<0.1	PCB-1262	not required	<0.1
PCB-1268	not required	<0.1	PCB-1268	not required	<0.1
Sum of Aroclors	not required	- -	Sum of Aroclors	not required	- -
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	not required	58-104	Decachlorobiphenyl	not required	58-104

NOTES:
MDL = Method Detection Limit, ug/100cm^2. See Report Text.
nd = Parameter Not Detected At MDL

Reviewed By _____ Date _____

Sequence 040505A/B
TB-PCB-W04 TB-PCB-W05

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Turbine Building Concrete & Soil - Sampling Dates of March 29 - 31, 2005	Our Project Number CHEM-05-0499

Sample Identification	TB-PCB-W06	Sample Identification	TB-PCB-W10
Sample Depth, inches	- -	Sample Depth, inches	- -
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	03-31-05	Sample Date	03-31-05
Received Date	04-01-05	Received Date	04-01-05
Report Date	04-12-05	Report Date	04-12-05
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	04-01-05	Preparation Date	04-01-05
Analysis Date	04-06-05	Analysis Date	04-06-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	050499-37	Control Number	050499-38

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	- -	- -	Sum of Aroclors	- -	- -
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	94	59-109	Decachlorobiphenyl	93	59-109

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	not required	<0.1	PCB-1016	not required	<0.1
PCB-1221	not required	<0.1	PCB-1221	not required	<0.1
PCB-1232	not required	<0.1	PCB-1232	not required	<0.1
PCB-1242	not required	<0.1	PCB-1242	not required	<0.1
PCB-1248	not required	<0.1	PCB-1248	not required	<0.1
PCB-1254	not required	<0.1	PCB-1254	not required	<0.1
PCB-1260	not required	<0.1	PCB-1260	not required	<0.1
PCB-1262	not required	<0.1	PCB-1262	not required	<0.1
PCB-1268	not required	<0.1	PCB-1268	not required	<0.1
Sum of Aroclors	not required	- -	Sum of Aroclors	not required	- -
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	not required	58-104	Decachlorobiphenyl	not required	58-104

NOTES:
MDL = Method Detection Limit, ug/100cm^2. See Report Text.
nd = Parameter Not Detected At MDL

Reviewed By _____ Date _____

Sequence 040505A/B
TB-PCB-W06 TB-PCB-W10

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Turbine Building Concrete & Soil - Sampling Dates of March 29 - 31, 2005	Our Project Number CHEM-05-0499

Sample Identification	TB-PCB-W12	Sample Identification	TB-PCB-W16
Sample Depth, inches	- -	Sample Depth, inches	- -
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	03-31-05	Sample Date	03-31-05
Received Date	04-01-05	Received Date	04-01-05
Report Date	04-12-05	Report Date	04-12-05
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	04-01-05	Preparation Date	04-01-05
Analysis Date	04-05-05	Analysis Date	04-05-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	050499-39	Control Number	050499-40

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	- -	- -	Sum of Aroclors	- -	- -
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	90	59-109	Decachlorobiphenyl	95	59-109

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	not required	<0.1	PCB-1016	not required	<0.1
PCB-1221	not required	<0.1	PCB-1221	not required	<0.1
PCB-1232	not required	<0.1	PCB-1232	not required	<0.1
PCB-1242	not required	<0.1	PCB-1242	not required	<0.1
PCB-1248	not required	<0.1	PCB-1248	not required	<0.1
PCB-1254	not required	<0.1	PCB-1254	not required	<0.1
PCB-1260	not required	<0.1	PCB-1260	not required	<0.1
PCB-1262	not required	<0.1	PCB-1262	not required	<0.1
PCB-1268	not required	<0.1	PCB-1268	not required	<0.1
Sum of Aroclors	not required	- -	Sum of Aroclors	not required	- -
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	not required	58-104	Decachlorobiphenyl	not required	58-104

NOTES:
MDL = Method Detection Limit, ug/100cm^2. See Report Text.
nd = Parameter Not Detected At MDL

Reviewed By _____ Date _____

Sequence 040505B
TB-PCB-W12 TB-PCB-W16

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Turbine Building Concrete & Soil - Sampling Dates of March 29 - 31, 2005	Our Project Number CHEM-05-0499

Sample Identification	TB-PCB-W24	Sample Identification	TB-PCB-W30
Sample Depth, inches	- -	Sample Depth, inches	- -
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	03-31-05	Sample Date	03-31-05
Received Date	04-01-05	Received Date	04-01-05
Report Date	04-12-05	Report Date	04-12-05
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	04-01-05	Preparation Date	04-01-05
Analysis Date	04-05-05	Analysis Date	04-05-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	050499-41	Control Number	050499-42

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	- -	- -	Sum of Aroclors	- -	- -
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	93	59-109	Decachlorobiphenyl	95	59-109

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	not required	<0.1	PCB-1016	not required	<0.1
PCB-1221	not required	<0.1	PCB-1221	not required	<0.1
PCB-1232	not required	<0.1	PCB-1232	not required	<0.1
PCB-1242	not required	<0.1	PCB-1242	not required	<0.1
PCB-1248	not required	<0.1	PCB-1248	not required	<0.1
PCB-1254	not required	<0.1	PCB-1254	not required	<0.1
PCB-1260	not required	<0.1	PCB-1260	not required	<0.1
PCB-1262	not required	<0.1	PCB-1262	not required	<0.1
PCB-1268	not required	<0.1	PCB-1268	not required	<0.1
Sum of Aroclors	not required	- -	Sum of Aroclors	not required	- -
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	not required	58-104	Decachlorobiphenyl	not required	58-104

NOTES:
MDL = Method Detection Limit, ug/100cm^2. See Report Text.
nd = Parameter Not Detected At MDL

Reviewed By _____ Date _____

Sequence 040505A
TB-PCB-W24 TB-PCB-W30

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Turbine Building Concrete & Soil - Sampling Dates of March 29 - 31, 2005	Our Project Number CHEM-05-0499

Sample Identification	TB-PCB-W38	Sample Identification	TB-PCB-W39
Sample Depth, inches	- -	Sample Depth, inches	- -
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	03-31-05	Sample Date	03-31-05
Received Date	04-01-05	Received Date	04-01-05
Report Date	04-12-05	Report Date	04-12-05
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	04-01-05	Preparation Date	04-01-05
Analysis Date	04-05-05	Analysis Date	04-06-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	050499-43	Control Number	050499-44

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	nd	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Sum of Aroclors	- -	- -
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	92	59-109

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	nd	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Sum of Aroclors	- -	- -
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	91	59-109

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	not required	<0.1
PCB-1221	not required	<0.1
PCB-1232	not required	<0.1
PCB-1242	not required	<0.1
PCB-1248	not required	<0.1
PCB-1254	not required	<0.1
PCB-1260	not required	<0.1
PCB-1262	not required	<0.1
PCB-1268	not required	<0.1
Sum of Aroclors	not required	- -
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	not required	58-104

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	not required	<0.1
PCB-1221	not required	<0.1
PCB-1232	not required	<0.1
PCB-1242	not required	<0.1
PCB-1248	not required	<0.1
PCB-1254	not required	<0.1
PCB-1260	not required	<0.1
PCB-1262	not required	<0.1
PCB-1268	not required	<0.1
Sum of Aroclors	not required	- -
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	not required	58-104

NOTES:
MDL = Method Detection Limit, ug/100cm^2. See Report Text.
nd = Parameter Not Detected At MDL

Reviewed By _____ Date _____

Sequence 040505B
TB-PCB-W38 TB-PCB-W39

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Turbine Building Concrete & Soil - Sampling Dates of March 29 - 31, 2005	Our Project Number CHEM-05-0499

Sample Identification	TB-PCB-W40
Sample Depth, inches	- -
Sample Type	surface wipe
Sample Date	03-31-05
Received Date	04-01-05
Report Date	04-12-05
Percent Solids, % w/w	- -
Preparation Date	04-01-05
Analysis Date	04-06-05
Analyst	bek, glc
Control Number	050499-45

PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	nd	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Sum of Aroclors	- -	- -
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	95	59-109

CONFIRMING ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	not required	<0.1
PCB-1221	not required	<0.1
PCB-1232	not required	<0.1
PCB-1242	not required	<0.1
PCB-1248	not required	<0.1
PCB-1254	not required	<0.1
PCB-1260	not required	<0.1
PCB-1262	not required	<0.1
PCB-1268	not required	<0.1
Sum of Aroclors	not required	- -
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	not required	58-104

NOTES:
MDL = Method Detection Limit, ug/100cm^2. See Report Text.
nd = Parameter Not Detected At MDL

Reviewed By _____ Date _____

Sequence 040505B
TB-PCB-W40

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Turbine Building Concrete & Soil - Sampling Dates of March 29 - 31, 2005	Our Project Number CHEM-05-0499

Sample Identification	TB-PCB-S45	Sample Identification	TB-PCB-S46
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	03-31-05	Sample Date	03-31-05
Received Date	04-01-05	Received Date	04-01-05
Report Date	04-12-05	Report Date	04-12-05
Percent Solids, % w/w	91	Percent Solids, % w/w	78
Preparation Date	04-04-05	Preparation Date	04-04-05
Analysis Date	04-08-05	Analysis Date	04-08-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	050499-46	Control Number	050499-47

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/kg	TDL	TARGET PCBs, 8082	ug/kg	TDL
PCB-1016	nd	--	PCB-1016	nd	--
PCB-1221	nd	--	PCB-1221	nd	--
PCB-1232	nd	--	PCB-1232	nd	--
PCB-1242	nd	--	PCB-1242	nd	--
PCB-1248	nd	--	PCB-1248	nd	--
PCB-1254	nd	--	PCB-1254	nd	--
PCB-1260	nd	--	PCB-1260	nd	--
PCB-1262	nd	--	PCB-1262	nd	--
PCB-1268	nd	--	PCB-1268	nd	--
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	98	73-134	Decachlorobiphenyl	108	73-134

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/kg	TDL	TARGET PCBs, 8082	ug/kg	TDL
PCB-1016	not required	--	PCB-1016	not required	--
PCB-1221	not required	--	PCB-1221	not required	--
PCB-1232	not required	--	PCB-1232	not required	--
PCB-1242	not required	--	PCB-1242	not required	--
PCB-1248	not required	--	PCB-1248	not required	--
PCB-1254	not required	--	PCB-1254	not required	--
PCB-1260	not required	--	PCB-1260	not required	--
PCB-1262	not required	--	PCB-1262	not required	--
PCB-1268	not required	--	PCB-1268	not required	--
Sum of Aroclors	not required	330	Sum of Aroclors	not required	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	not required	70-127	Decachlorobiphenyl	not required	70-127

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At TDL
Results Are Reported On The Dry Weight Basis

Reviewed By _____ Date _____

Sequence 040505C
TB-PCB-S45 TB-PCB-S46

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Turbine Building Concrete & Soil - Sampling Dates of March 29 - 31, 2005	Our Project Number CHEM-05-0499

Sample Identification	TB-PCB-W41	Sample Identification	TB-PCB-W44
Sample Depth, inches	- -	Sample Depth, inches	- -
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	03-31-05	Sample Date	03-31-05
Received Date	04-01-05	Received Date	04-01-05
Report Date	04-12-05	Report Date	04-12-05
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	04-01-05	Preparation Date	04-01-05
Analysis Date	04-06-05	Analysis Date	04-05-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	050499-48	Control Number	050499-49

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	nd	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Sum of Aroclors	- -	- -
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	95	59-109

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	nd	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Sum of Aroclors	- -	- -
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	91	59-109

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	not required	<0.1
PCB-1221	not required	<0.1
PCB-1232	not required	<0.1
PCB-1242	not required	<0.1
PCB-1248	not required	<0.1
PCB-1254	not required	<0.1
PCB-1260	not required	<0.1
PCB-1262	not required	<0.1
PCB-1268	not required	<0.1
Sum of Aroclors	not required	- -
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	not required	58-104

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	not required	<0.1
PCB-1221	not required	<0.1
PCB-1232	not required	<0.1
PCB-1242	not required	<0.1
PCB-1248	not required	<0.1
PCB-1254	not required	<0.1
PCB-1260	not required	<0.1
PCB-1262	not required	<0.1
PCB-1268	not required	<0.1
Sum of Aroclors	not required	- -
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	not required	58-104

NOTES:
MDL = Method Detection Limit, ug/100cm^2. See Report Text.
nd = Parameter Not Detected At MDL

Reviewed By _____ Date _____

Sequence 040505A/B
TB-PCB-W41 TB-PCB-W44

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Turbine Building Concrete & Soil - Sampling Dates of March 29 - 31, 2005	Our Project Number CHEM-05-0499

Sample Identification	BLE-PCB-W01	Sample Identification	BLE-PCB-W02
Sample Depth, inches	- -	Sample Depth, inches	- -
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	03-31-05	Sample Date	03-31-05
Received Date	04-01-05	Received Date	04-01-05
Report Date	04-12-05	Report Date	04-12-05
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	04-01-05	Preparation Date	04-01-05
Analysis Date	04-05-05	Analysis Date	04-05-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	050499-50	Control Number	050499-51

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	- -	- -	Sum of Aroclors	- -	- -
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	93	59-109	Decachlorobiphenyl	90	59-109

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	not required	<0.1	PCB-1016	not required	<0.1
PCB-1221	not required	<0.1	PCB-1221	not required	<0.1
PCB-1232	not required	<0.1	PCB-1232	not required	<0.1
PCB-1242	not required	<0.1	PCB-1242	not required	<0.1
PCB-1248	not required	<0.1	PCB-1248	not required	<0.1
PCB-1254	not required	<0.1	PCB-1254	not required	<0.1
PCB-1260	not required	<0.1	PCB-1260	not required	<0.1
PCB-1262	not required	<0.1	PCB-1262	not required	<0.1
PCB-1268	not required	<0.1	PCB-1268	not required	<0.1
Sum of Aroclors	not required	- -	Sum of Aroclors	not required	- -
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	not required	58-104	Decachlorobiphenyl	not required	58-104

NOTES:
MDL = Method Detection Limit, ug/100cm^2. See Report Text.
nd = Parameter Not Detected At MDL

Reviewed By _____ Date _____

Sequence 040505A/B
BLE-PCB-W01 BLE-PCB-W02

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Turbine Building Concrete & Soil - Sampling Dates of March 29 - 31, 2005	Our Project Number CHEM-05-0499

Sample Identification	BLE-PCB-W03	Sample Identification	BLE-PCB-W04
Sample Depth, inches	- -	Sample Depth, inches	- -
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	03-31-05	Sample Date	03-31-05
Received Date	04-01-05	Received Date	04-01-05
Report Date	04-12-05	Report Date	04-12-05
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	04-01-05	Preparation Date	04-01-05
Analysis Date	04-06-05	Analysis Date	04-05-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	050499-52	Control Number	050499-53

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	nd	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Sum of Aroclors	- -	- -
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	93	59-109

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	nd	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Sum of Aroclors	- -	- -
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	90	59-109

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	not required	<0.1
PCB-1221	not required	<0.1
PCB-1232	not required	<0.1
PCB-1242	not required	<0.1
PCB-1248	not required	<0.1
PCB-1254	not required	<0.1
PCB-1260	not required	<0.1
PCB-1262	not required	<0.1
PCB-1268	not required	<0.1
Sum of Aroclors	not required	- -
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	not required	58-104

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	not required	<0.1
PCB-1221	not required	<0.1
PCB-1232	not required	<0.1
PCB-1242	not required	<0.1
PCB-1248	not required	<0.1
PCB-1254	not required	<0.1
PCB-1260	not required	<0.1
PCB-1262	not required	<0.1
PCB-1268	not required	<0.1
Sum of Aroclors	not required	- -
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	not required	58-104

NOTES:
MDL = Method Detection Limit, ug/100cm^2. See Report Text.
nd = Parameter Not Detected At MDL

Reviewed By _____ Date _____

Sequence 040505A/B
BLE-PCB-W03 BLE-PCB-W04

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Turbine Building Concrete & Soil - Sampling Dates of March 29 - 31, 2005	Our Project Number CHEM-05-0499

Sample Identification	BLE-PCB-W05	Sample Identification	BLE-PCB-W06
Sample Depth, inches	- -	Sample Depth, inches	- -
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	03-31-05	Sample Date	03-31-05
Received Date	04-01-05	Received Date	04-01-05
Report Date	04-12-05	Report Date	04-12-05
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	04-01-05	Preparation Date	04-01-05
Analysis Date	04-05-05	Analysis Date	04-05-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	050499-54	Control Number	050499-55

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	- -	- -	Sum of Aroclors	- -	- -
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	92	59-109	Decachlorobiphenyl	92	59-109

CONFIRMING ANALYTICAL COLUMN			CONFIRMING ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	not required	<0.1	PCB-1016	not required	<0.1
PCB-1221	not required	<0.1	PCB-1221	not required	<0.1
PCB-1232	not required	<0.1	PCB-1232	not required	<0.1
PCB-1242	not required	<0.1	PCB-1242	not required	<0.1
PCB-1248	not required	<0.1	PCB-1248	not required	<0.1
PCB-1254	not required	<0.1	PCB-1254	not required	<0.1
PCB-1260	not required	<0.1	PCB-1260	not required	<0.1
PCB-1262	not required	<0.1	PCB-1262	not required	<0.1
PCB-1268	not required	<0.1	PCB-1268	not required	<0.1
Sum of Aroclors	not required	- -	Sum of Aroclors	not required	- -
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	not required	58-104	Decachlorobiphenyl	not required	58-104

NOTES:	MDL = Method Detection Limit, ug/100cm^2. See Report Text. nd = Parameter Not Detected At MDL

Reviewed By _____ Date _____

Sequence 040505A
BLE-PCB-W05 BLE-PCB-W06

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Turbine Building Concrete & Soil - Sampling Dates of March 29 - 31, 2005	Our Project Number CHEM-05-0499

Sample Identification	BLE-PCB-W07	Sample Identification	BLE-PCB-W08
Sample Depth, inches	- -	Sample Depth, inches	- -
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	03-31-05	Sample Date	03-31-05
Received Date	04-01-05	Received Date	04-01-05
Report Date	04-12-05	Report Date	04-12-05
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	04-01-05	Preparation Date	04-01-05
Analysis Date	04-06-05	Analysis Date	04-05-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	050499-56	Control Number	050499-57

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	nd	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Sum of Aroclors	- -	- -
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	91	59-109

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	nd	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Sum of Aroclors	- -	- -
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	95	59-109

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	not required	<0.1
PCB-1221	not required	<0.1
PCB-1232	not required	<0.1
PCB-1242	not required	<0.1
PCB-1248	not required	<0.1
PCB-1254	not required	<0.1
PCB-1260	not required	<0.1
PCB-1262	not required	<0.1
PCB-1268	not required	<0.1
Sum of Aroclors	not required	- -
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	not required	58-104

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	not required	<0.1
PCB-1221	not required	<0.1
PCB-1232	not required	<0.1
PCB-1242	not required	<0.1
PCB-1248	not required	<0.1
PCB-1254	not required	<0.1
PCB-1260	not required	<0.1
PCB-1262	not required	<0.1
PCB-1268	not required	<0.1
Sum of Aroclors	not required	- -
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	not required	58-104

NOTES:
MDL = Method Detection Limit, ug/100cm^2. See Report Text.
nd = Parameter Not Detected At MDL

Reviewed By _____ Date _____

Sequence 040505A/B
BLE-PCB-W07 BLE-PCB-W08

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - Turbine Building Concrete & Soil - Sampling Dates of March 29 - 31, 2005	Our Project Number CHEM-05-0499

Sample Identification	BLE-PCB-W09	Sample Identification	BLE-PCB-W10
Sample Depth, inches	- -	Sample Depth, inches	- -
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	03-31-05	Sample Date	03-31-05
Received Date	04-01-05	Received Date	04-01-05
Report Date	04-12-05	Report Date	04-12-05
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	04-01-05	Preparation Date	04-01-05
Analysis Date	04-06-05	Analysis Date	04-05-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	050499-58	Control Number	050499-59

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	nd	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Sum of Aroclors	- -	- -
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	100	59-109

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	nd	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Sum of Aroclors	- -	- -
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	93	59-109

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	not required	<0.1
PCB-1221	not required	<0.1
PCB-1232	not required	<0.1
PCB-1242	not required	<0.1
PCB-1248	not required	<0.1
PCB-1254	not required	<0.1
PCB-1260	not required	<0.1
PCB-1262	not required	<0.1
PCB-1268	not required	<0.1
Sum of Aroclors	not required	- -
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	not required	58-104

CONFIRMING ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	not required	<0.1
PCB-1221	not required	<0.1
PCB-1232	not required	<0.1
PCB-1242	not required	<0.1
PCB-1248	not required	<0.1
PCB-1254	not required	<0.1
PCB-1260	not required	<0.1
PCB-1262	not required	<0.1
PCB-1268	not required	<0.1
Sum of Aroclors	not required	- -
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	not required	58-104

NOTES:
MDL = Method Detection Limit, ug/100cm^2. See Report Text.
nd = Parameter Not Detected At MDL

Reviewed By _____ Date _____

Sequence 040505A/B
BLE-PCB-W09 BLE-PCB-W10

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – LABORATORY SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: Big Rock Point

PROJECT NUMBER: BRP Turbine Bldg. Concrete/soil

SAMPLING TEAM: J.L. Reed, W. Hangelund, T. Schleuter

DATE SHIPPED: 3/31/2005

SITE SKETCH ATTACHED? CIRCLE ONE: YES (NO)

PAGE 1 OF 2 or 5

SEND REPORT TO: Tracy Goble, Big Rock Point

PHONE: 231-547-8389

CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	PCB Wipe	PCB Soil						REMARKS
	3/29/05	1600		TB-PCB-S33	3"	1		X						
	3/29/05	1605		TB-PCB-S34	3"	1		X						
	3/30/05	0852		TB-PCB-W01		1	X							
	3/30/05	0854		TB-PCB-W07		1	X							
	3/30/05	0855		TB-PCB-W13		1	X							
	3/30/05	0903		TB-PCB-W14		1	X							
	3/30/05	0857		TB-PCB-W19		1	X							
	3/30/05	0859		TB-PCB-W20		1	X							
	3/30/05	0858		TB-PCB-W25		1	X							
	3/30/05	0901		TB-PCB-W26		1	X							
	3/30/05	0902		TB-PCB-W27		1	X							
	3/30/05	0910		TB-PCB-W37		1	X							

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
[signature]	3-29-05/16:15	Jodie L. Reed
RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)

COMMENTS

ORIGINAL TO LAB COPY TO CUSTOMER

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – LABORATORY SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: Big Rock Point

PROJECT NUMBER: BRP Turbine bldg. Concrete/soil

SAMPLING TEAM:

DATE SHIPPED: 3/31/2005

SITE SKETCH ATTACHED? CIRCLE ONE: YES (NO)

PAGE 2 OF 2-5

SEND REPORT TO: Tracy Goble, Big Rock Point

PHONE: 231-547-8389

CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	PCB wipe	PCB Soil						REMARKS
	3/30/05	0905		TB-PCB-WJ01		1	X							
	3/30/05	0912		TB-PCB-WJ02		1	X							
	3/30/05	0913		TB-PCB-WJ03		1	X							
	3/30/05	0915		TB-PCB-W42		1	X							
	3/30/05	0916		TB-PCB-W43		1	X							
	3/30/05	1332		TB-PCB-S02	3"	1		X						
	3/30/05	1335		TB-PCB-S03	3"	1		X						
	3/30/05	1349		TB-PCB-S08	3"	1		X						
	3/30/05	1347		TB-PCB-S09	3"	1		X						
	3/30/05	1343		TB-PCB-S11	3"	1		X						
	3/30/05	1352		TB-PCB-S15	3"	1		X						
	3/30/05	1402		TB-PCB-S17	3"	1		X						

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
T. Schlueter	3-30-05 1500	
RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)

COMMENTS

ORIGINAL TO LAB COPY TO CUSTOMER

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – LABORATORY SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: Big Rock Point

PROJECT NUMBER: BRP Turbine Bldg. Concrete/Soil

SAMPLING TEAM: J.L. Reed, W. Haagsma, T. Schluter

DATE SHIPPED: 3-31-2005

SITE SKETCH ATTACHED? CIRCLE ONE: YES (NO)

PAGE 3 OF 5

SEND REPORT TO: Tracy Goble, Big Rock Point

PHONE: 231-547-8389

CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	ANALYSIS REQUESTED: PCB Wipe	PCB Soil			PCB			REMARKS
	3/30/05	1404		TB-PCB-S18	3"	1		X						
	3/30/05	1354		TB-PCB-S21	3"	1		X						
	3/30/05	1359		TB-PCB-S22	3"	1		X						
	3/30/05	1407		TB-PCB-S23	3"	1		X						
	3/30/05	1411		TB-PCB-S28	3"	1		X						
	3/30/05	1409		TB-PCB-S29	3"	1		X						
	3/30/05	1422		TB-PCB-S31	3"	1		X						
	3/30/05	1423		TB-PCB-S32	3"	1		X						
	3/30/05	1417		TB-PCB-S35	3"	1		X						
	3/30/05	1412		TB-PCB-S36	3"	1		X						
	3/31/05	1230		TB-PCB-W04										
	3/31/05	1231		TB-PCB-W05										

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
T. Schluter	3-30-05 1500	[illegible]
RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)

COMMENTS

ORIGINAL TO LAB COPY TO CUSTOMER

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – LABORATORY SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: Big Rock Point

PROJECT NUMBER: BRP Turbine Bldg. Concrete/soil

SAMPLING TEAM: J.L. Reed, W. Hengstand, T. Schleader

DATE SHIPPED: 3/31/2005

SITE SKETCH ATTACHED? CIRCLE ONE: YES NO

PAGE 4 OF 5

SEND REPORT TO: Tracy Goble, Big Rock Point, PHONE: 231-547-8389

CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	ANALYSIS REQUESTED: PCB WIPE	PCB SOIL						REMARKS
	3/31/05	1233		TB-PCB-W06		1	X							
	3/31/05	1229		TB-PCB-W10		1	X							
	3/31/05	1234		TB-PCB-W12		1	X							
	3/31/05	1228		TB-PCB-W16		1	X							
	3/31/05	1235		TB-PCB-W24		1	X							
	3/31/05	1236		TB-PCB-W30		1	X							
	3/31/05	1239		TB-PCB-W38		1	X							
	3/31/05	1238		TB-PCB-W39		1	X							
	3/31/05	1237		TB-PCB-W40		1	X							
	3/31/05	1242		TB-PCB-S45	3"	1		X						
	3/31/05	1240		TB-PCB-S40	3"	1		X						
	3/31/05	1233		TB-PCB-W41										

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)

COMMENTS

ORIGINAL TO LAB COPY TO CUSTOMER

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – LABORATORY SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: Big Rock Point

PROJECT NUMBER: BRP Turbine Bldg. Concret/Soil

SAMPLING TEAM: J.L. Reed, W. Hazelwood, T. Schlenter

DATE SHIPPED: 3/31/2005

SITE SKETCH ATTACHED? CIRCLE ONE: YES NO

PAGE 5 OF 5

SEND REPORT TO: Tracy Goble, Big Rock Point

PHONE: 231-547-8389

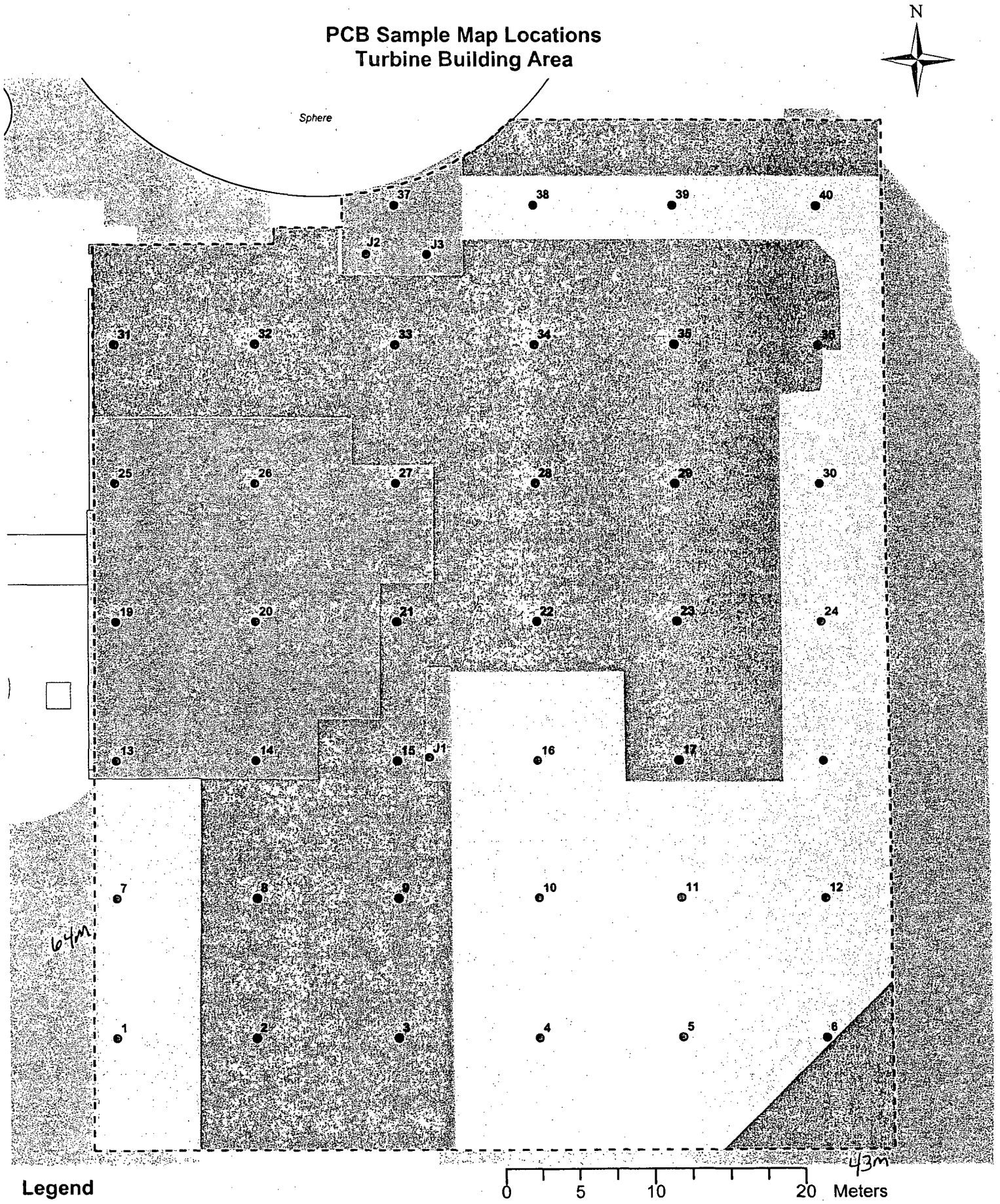
CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	ANALYSIS REQUESTED: PCB WIPE	PCB SOIL						REMARKS
	3/31/05	1244		TB-PCB-WX14		1	X							
	3/31/05	1402		BLE-PCB-W01		1	X							
	3/31/05	1404		BLE-PCB-W02		1	X							
	3/31/05	1410		BLE-PCB-W03		1	X							
	3/31/05	1412		BLE-PCB-W04		1	X							
	3/31/05	1413		BLE-PCB-W05		1	X							
	3/31/05	1415		BLE-PCB-W06		1	X							
	3/31/05	1417		BLE-PCB-W07		1	X							
	3/31/05	1418		BLE-PCB-W08		1	X							
	3/31/05	1420		BLE-PCB-W09		1	X							
	3/31/05	1424		BLE-PCB-WD		1	X							

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)

COMMENTS

ORIGINAL TO LAB COPY TO CUSTOMER

PCB Sample Map Locations
Turbine Building Area



Legend

- PCB Impacted Area
- Numbered Sample Locations
- Soil
- Concrete
- Asphalt

PCB Sample ID	Map Location Number	X Coord. (m)	Y Coord. (m)
TB-PCB-W01	1	1.6	7.7
TB-PCB-S02	2	11.2	7.7
TB-PCB-S03	3	20.8	7.7
TB-PCB-W04	4	30.4	7.7
TB-PCB-W05	5	40.0	7.7
TB-PCB-W06	6	49.6	7.7
TB-PCB-W07	7	1.6	17.3
TB-PCB-S08	8	11.2	17.3
TB-PCB-S09	9	20.8	17.3
TB-PCB-W10	10	30.4	17.3
TB-PCB-S11	11	40.0	17.3
TB-PCB-W12	12	49.6	17.3
TB-PCB-W13	13	1.6	26.9
TB-PCB-W14	14	11.2	26.9
TB-PCB-S15	15	20.8	26.9
TB-PCB-W16	16	30.4	26.9
TB-PCB-S17	17	40.0	26.9
TB-PCB-S18	18	49.6	26.9
TB-PCB-W19	19	1.6	36.5
TB-PCB-W20	20	11.2	36.5
TB-PCB-S21	21	20.8	36.5
TB-PCB-S22	22	30.4	36.5
TB-PCB-S23	23	40.0	36.5
TB-PCB-W24	24	49.6	36.5
TB-PCB-W25	25	1.6	46.1
TB-PCB-W26	26	11.2	46.1
TB-PCB-W27	27	20.8	46.1
TB-PCB-S28	28	30.4	46.1
TB-PCB-S29	29	40.0	46.1
TB-PCB-W30	30	49.6	46.1
TB-PCB-S31	31	1.6	55.7
TB-PCB-S32	32	11.2	55.7
TB-PCB-S33	33	20.8	55.7
TB-PCB-S34	34	30.4	55.7
TB-PCB-S35	35	40.0	55.7
TB-PCB-S36	36	49.6	55.7
TB-PCB-W37	37	20.8	65.3
TB-PCB-W38	38	30.4	65.3
TB-PCB-W39	39	40.0	65.3
TB-PCB-W40	40	49.6	65.3
TB-PCB-W41	6-QA Replicate	49.6	7.7
TB-PCB-W42	7-QA Blank	1.6	17.3
TB-PCB-W43	13-QA Blank	1.6	26.9
TB-PCB-W44	14-QA Replicate	11.2	26.9

Random Start Location: X= 20.8 meters, Y= 17.3 meters. Sample spacing is 9.6 meters.

NOTE: Origin of Impacted area is located 18.7 meters north of protected area fence directly in line with the TB west foundation wall.

PCB Sample ID	Map Location Number	X Coord.	Y Coord.
TB-PCB-545	2-QA Replicate	11.2	7.7
TB-PCB-546	36-QA Replicate	49.6	55.7
TB-PCB-WJ01	J1	22.4	27.1
TB-PCB-WJ02	J2	18.8	61.9
TB-PCB WJ03	J3	22.8	61.7

PCB SURVEY PACKAGE CLOSE-OUT CHECKLIST

Package ID Number: 0006 Survey Area: Containment Construction Access Area

The survey package is legible and complete and the following necessary information is in the package:

1. ✓ Survey Package Cover Sheet
2. ✓ Survey design documentation
3. ✓ Random number generator sheet for sample start location and QC sample numbers.
4. ✓ Completed survey map/data sheet
5. ✓ Completed PCB Survey Data Record Sheet
6. ✓ Copy of the Chain of Custody
7. ✓ Copy of sample results
8. N/A Other documentation:

Completed By: Josie L. Reed Date: 12-19-05
(Environmental Technician)

Reviewed By: [signature] Date: 02-06-06
(Environmental Supervisor)

PCB SURVEY PACKAGE COVER SHEET

Package ID Number : 0006	Survey Area: Containment Construction Access, Post Demolition	Size (m^2): **Area One: 956** **Area Two: 097**

Area One- Asphalt West of CCA Access

# of Field Samples: 39
# of QC samples: 2

Random Start Location: X (5.2), Y (23.5)
Sample Spacing: 4.9 meters

Area Two- CCA Concrete Floor Area

# of Field Samples: 4
# of QC samples: 2

Random Start Location: X (2.0), Y (8.5)
Sample Spacing: 4.9 meters

Isolation Controls implemented ☐ List controls: Area posted as a radiologically controlled area and PCB survey area.

Comments/specific directions[1]: -Samples obtained in random locations as determined by the survey design..

-Acceptance criteria: Wipe samples = <10ug/100cm^2; Soil samples = <1ppm PCB

([1] Address any inaccessible areas or sample points not included in survey).

SURVEY PACKAGE CLOSURE

Screening Survey Package is authorized for closure. All required reviews are completed and pertinent information is included in package (see Survey Package Close-Out Checklist).

ENV Technician Jackie T. Leal Date: 12-19-05

ENV Supervisor: Date: 02-06-06

Package ID Number: 0006 (Wipe samples)

PCB SURVEY DATA RECORD SHEET

Survey Area: Construction Containment Access Area	Size (m^2): ~980	# of Samples: 41

Sample ID Number	Sample Location (X)(Y)	Sample Result (ug/100cm^2)	Sample ID Number	Sample Location (X)(Y)	Sample Result (ug/100cm^2)
CCA-PCB-W1	(0.3)(3.9)	nd	CCA-PCB-W28	(15.0)(23.5)	nd
CCA-PCB-W2	(5.2)(3.9)	nd	CCA-PCB-W29	(19.9)(23.5)	nd
CCA-PCB-W3	(10.1)(3.9)	nd	CCA-PCB-W32	(10.1)(28.4)	nd
CCA-PCB-W4	(15.0)(3.9)	nd	CCA-PCB-W33	(5.2)(28.4)	nd
CCA-PCB-W5	(19.9)(3.9)	nd	CCA-PCB-W34	(0.3)(28.4)	nd
CCA-PCB-W6	(24.8)(3.9)	nd	CCA-PCB-W35	(0.3)(33.3)	nd
CCA-PCB-W7	(24.8)(8.8)	nd	CCA-PCB-W36	(5.2)(33.3)	nd
CCA-PCB-W8	(19.9)(8.8)	nd	CCA-PCB-W40	(2.0)(3.6)	nd
CCA-PCB-W9	(15.0)(8.8)	nd	CCA-PCB-W41	(6.9)(3.6)	nd
CCA-PCB-W10	(10.1)(8.8)	nd	CCA-PCB-W42	(6.9)(8.5)	nd
CCA-PCB-W11	(5.2)(8.8)	nd	CCA-PCB-W43	(2.0)(8.5)	nd
CCA-PCB-W12	(0.3)(8.8)	nd	CCA-PCB-W44	N/A	nd
CCA-PCB-W13	(0.3)(13.7)	nd	CCA-PCB-W45	N/A	nd
CCA-PCB-W14	(5.2)(13.7)	nd	CCA-PCB-W46	(0.3)(8.8)	nd
CCA-PCB-W15	(10.1)(13.7)	nd	CCA-PCB-W47	(10.1)(13.7)	nd
CCA-PCB-W16	(15.0)(13.7)	nd	CCA-PCB-WJ1	(24.8)(23.0)	nd
CCA-PCB-W17	(19.9)(13.7)	nd			
CCA-PCB-W18	(24.8)(13.7)	nd			
CCA-PCB-W19	(24.8)(18.6)	nd			
CCA-PCB-W20	(19.9)(18.6)	nd			
CCA-PCB-W21	(15.0)(18.6)	nd			
CCA-PCB-W22	(10.1)(18.6)	nd			
CCA-PCB-W24	(0.3)(18.6)	nd			
CCA-PCB-W25	(0.3)(23.5)	nd			
CCA-PCB-W27	(10.1)(23.5)	nd			

Note: nd – non detect

Performed By: Jodie L. Reed (Survey Technician) Date: 12-19-05

Reviewed By: [illegible] (Environmental Supervisor) Date: 02-06-06

PCB SURVEY DATA RECORD SHEET

Survey Area: Construction Containment Access Area	Size (m^2): ~980	# of Samples: 7

Sample ID Number	Sample Location (X)(Y)	Sample Result (ppm)	Sample ID Number	Sample Location (X)(Y)	Sample Result (ppm)
CCA-PCB-S23	(5.2)(18.6)	nd			
CCA-PCB-S26	(5.2)(23.5)	nd			
CCA-PCB-S30	(19.9)(28.4)	nd			
CCA-PCB-S31	(15.0)(28.4)	nd			
CCA-PCB-S37	(10.1)(33.3)	nd			
CCA-PCB-S38	(15.0)(33.3)	nd			
CCA-PCB-S39	(19.9)(33.3)	nd			

Note: nd – non detect

Performed By: Jodie L Reed (Survey Technician) Date: 12-19-05

Reviewed By: _____ (Environmental Supervisor) Date: _____

CONSUMERS ENERGY Memorandum

To: TGoble, Big Rock

From: GLCattell, T-254, Jackson

Date: November 28, 2005

Subject: SAMPLES FOR DETERMINATION OF PCBs
- Surface Wipes & Soils
- Containment Construction Access
- Sampling Datesof November 08, 2005

CC: WMHoaglund, Big Rock

File Index: 520517-784-892

Forty-one surface wipe samples and seven soil samples were received on November 10 for determination of polychlorinated biphenyls (PCBs). All determinations were performed by the Chemistry Section of Laboratory Services and the results are attached for your review.

Analytical Methods

Unless otherwise specified, all methods are from SW-846, Test Methods For Evaluating Solid Waste - Physical / Chemical Methods, USEPA.

Sample Extraction (Soils) - Method 3545, Pressurized Fluid Extraction.
Sample Extraction (Surface Wipes) - Method 3550, Ultrasonic Extraction.
Extract Concentration – Nitrogen Evaporation Technique, Exhibit D, Aroclors, Section 10. Multi-Media, Multi-Concentration Organics Analysis; SOM01.X; USEPA.
Extract Cleanup – Method 3620, Florisil Cleanup & Method 3665, Sulfuric Acid/Permanganate Cleanup.
Percent Solids (Dry Weight); Soils – Section 7.2 of Method 3545, Determination of Percent Dry Weight, Pressurized Fluid Extraction.
Polychlorinated Biphenyls - Method 8082, Polychlorinated Biphenyls by Gas Chromatography.

Analytical Remarks & Summary

a. All surface wipe MDLs are listed as "<" for uniformity. The actual MDLs of individual Aroclors vary slightly amongst each other and detectors.
b. All samples are reported as 'nd' (not detected) for all Aroclors.
c. All surface wipe areas are assumed to be $100cm^2$.
d. Surrogate spike recoveries for four surface wipes are slightly over-recoved but this does not effect the results since no PCBs were found. The four samples are: CCA-PCB-W32, -W41, -W42 and -W44.

Report Package Contents

The report package consists of 29 pages: 1 cover page, 24 pages of Analytical Results & 4 Chain of Custody pages.

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Contruction Access - Sampling Date of November 08, 2005	Our Project Number CHEM-05-1892

Sample Identification	CCA-PCB W1	**Sample Identification**	CCA-PCB W2
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	11-08-05	Sample Date	11-08-05
Received Date	11-10-05	Received Date	11-10-05
Report Date	11-28-05	Report Date	11-28-05
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	11-14-05	Preparation Date	11-14-05
Analysis Date	11-22-05	Analysis Date	11-22-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051892-01	Control Number	051892-02

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	95	58-104	Decachlorobiphenyl	97	58-104

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Was Not Detected At The MDL

Reviewed By Ail Date 112805

Sequence 112205A	
W1	W2

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Contruction Access - Sampling Date of November 08, 2005	Our Project Number CHEM-05-1892

Sample Identification	CCA-PCB W3	**Sample Identification**	CCA-PCB W4
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	11-08-05	Sample Date	11-08-05
Received Date	11-10-05	Received Date	11-10-05
Report Date	11-28-05	Report Date	11-28-05
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	11-14-05	Preparation Date	11-14-05
Analysis Date	11-22-05	Analysis Date	11-22-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051892-03	Control Number	051892-04

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	96	58-104	Decachlorobiphenyl	95	58-104

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Was Not Detected At The MDL

Reviewed By _____ Date 11/28/05

Sequence 112205A	
W3	W4

PCBs

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Contruction Access - Sampling Date of November 08, 2005	Our Project Number CHEM-05-1892

Sample Identification	CCA-PCB W5	**Sample Identification**	CCA-PCB W6
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	11-08-05	Sample Date	11-08-05
Received Date	11-10-05	Received Date	11-10-05
Report Date	11-28-05	Report Date	11-28-05
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	11-14-05	Preparation Date	11-14-05
Analysis Date	11-22-05	Analysis Date	11-22-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051892-05	Control Number	051892-06

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	94	58-104	Decachlorobiphenyl	94	58-104

NOTES:	MDL = Method Detection Limit, ug/100cm^2 nd = Parameter Was Not Detected At The MDL

Reviewed By Ali Date 112805

Sequence 112205A	
W5	W6

PCBs

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Contruction Access - Sampling Date of November 08, 2005	Our Project Number CHEM-05-1892

Sample Identification	CCA-PCB W7	Sample Identification	CCA-PCB W8
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	11-08-05	Sample Date	11-08-05
Received Date	11-10-05	Received Date	11-10-05
Report Date	11-28-05	Report Date	11-28-05
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	11-14-05	Preparation Date	11-14-05
Analysis Date	11-22-05	Analysis Date	11-22-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051892-07	Control Number	051892-08

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	97	58-104	Decachlorobiphenyl	96	58-104

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Was Not Detected At The MDL

Reviewed By AM Date 11/28/05

Sequence 112205A	
W7	W8

PCBs

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Contruction Access - Sampling Date of November 08, 2005	Our Project Number CHEM-05-1892

Sample Identification	CCA-PCB W9	Sample Identification	CCA-PCB W10
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	11-08-05	Sample Date	11-08-05
Received Date	11-10-05	Received Date	11-10-05
Report Date	11-28-05	Report Date	11-28-05
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	11-14-05	Preparation Date	11-14-05
Analysis Date	11-22-05	Analysis Date	11-22-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051892-09	Control Number	051892-10

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	97	58-104	Decachlorobiphenyl	100	58-104

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Was Not Detected At The MDL

Reviewed By AH Date 11-28-05

Sequence 112205A	
W9	W10

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Contruction Access - Sampling Date of November 08, 2005	Our Project Number CHEM-05-1892

Sample Identification	CCA-PCB W11	**Sample Identification**	CCA-PCB W12
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	11-08-05	Sample Date	11-08-05
Received Date	11-10-05	Received Date	11-10-05
Report Date	11-28-05	Report Date	11-28-05
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	11-14-05	Preparation Date	11-14-05
Analysis Date	11-22-05	Analysis Date	11-22-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051892-11	Control Number	051892-12

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	99	58-104	Decachlorobiphenyl	99	58-104

NOTES:	MDL = Method Detection Limit, ug/100cm^2 nd = Parameter Was Not Detected At The MDL

Reviewed By AH Date 11/28/05

Sequence 112205A	
W11	W12

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Contruction Access - Sampling Date of November 08, 2005	Our Project Number CHEM-05-1892

Sample Identification	CCA-PCB W13	**Sample Identification**	CCA-PCB W14
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	11-08-05	Sample Date	11-08-05
Received Date	11-10-05	Received Date	11-10-05
Report Date	11-28-05	Report Date	11-28-05
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	11-14-05	Preparation Date	11-14-05
Analysis Date	11-22-05	Analysis Date	11-22-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051892-13	Control Number	051892-14

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	104	58-104	Decachlorobiphenyl	98	58-104

NOTES:	MDL = Method Detection Limit, ug/100cm^2 nd = Parameter Was Not Detected At The MDL

Reviewed By _____ Date 11/28/05

Sequence 112205A	
W13	W14

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Contruction Access - Sampling Date of November 08, 2005	Our Project Number CHEM-05-1892

Sample Identification	CCA-PCB W15	**Sample Identification**	CCA-PCB W16
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	11-08-05	Sample Date	11-08-05
Received Date	11-10-05	Received Date	11-10-05
Report Date	11-28-05	Report Date	11-28-05
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	11-14-05	Preparation Date	11-14-05
Analysis Date	11-22-05	Analysis Date	11-22-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051892-15	Control Number	051892-16

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	96	58-104	Decachlorobiphenyl	99	58-104

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Was Not Detected At The MDL

Reviewed By AM Date 11/28/05

Sequence 112205A	
W15	W16

PCBs

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Contruction Access - Sampling Date of November 08, 2005	Our Project Number CHEM-05-1892

Sample Identification	CCA-PCB W17	Sample Identification	CCA-PCB W18
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	11-08-05	Sample Date	11-08-05
Received Date	11-10-05	Received Date	11-10-05
Report Date	11-28-05	Report Date	11-28-05
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	11-14-05	Preparation Date	11-14-05
Analysis Date	11-23-05	Analysis Date	11-23-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051892-17	Control Number	051892-18

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	103	58-104	Decachlorobiphenyl	100	58-104

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Was Not Detected At The MDL

Reviewed By _____ Date _____

Sequence 112205A	
W17	W18

PCBs

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Contruction Access - Sampling Date of November 08, 2005	Our Project Number CHEM-05-1892

Sample Identification	CCA-PCB W19	Sample Identification	CCA-PCB W20
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	11-08-05	Sample Date	11-08-05
Received Date	11-10-05	Received Date	11-10-05
Report Date	11-28-05	Report Date	11-28-05
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	11-14-05	Preparation Date	11-15-05
Analysis Date	11-23-05	Analysis Date	11-23-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051892-19	Control Number	051892-20

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	96	58-104	Decachlorobiphenyl	99	58-104

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Was Not Detected At The MDL

Reviewed By AM Date 11/28/05

Sequence 112205A	
W19	W20

PCBs

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Contruction Access - Sampling Date of November 08, 2005	Our Project Number CHEM-05-1892

Sample Identification	CCA-PCB W21	Sample Identification	CCA-PCB W22
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	11-08-05	Sample Date	11-08-05
Received Date	11-10-05	Received Date	11-10-05
Report Date	11-28-05	Report Date	11-28-05
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	11-15-05	Preparation Date	11-15-05
Analysis Date	11-23-05	Analysis Date	11-23-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051892-21	Control Number	051892-22

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	99	58-104	Decachlorobiphenyl	100	58-104

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Was Not Detected At The MDL

Reviewed By AM Date 112805

Sequence 112205A	
W21	W22

PCBs

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Contruction Access - Sampling Date of November 08, 2005	Our Project Number CHEM-05-1892

Sample Identification	CCA-PCB S23	**Sample Identification**	CCA-PCB W24
Sample Depth, inches	3		
Sample Type	soil	Sample Type	surface wipe
Sample Date	11-08-05	Sample Date	11-08-05
Received Date	11-10-05	Received Date	11-10-05
Report Date	11-28-05	Report Date	11-28-05
Percent Solids, % w/w	93	Percent Solids, % w/w	- -
Preparation Date	11-14-05	Preparation Date	11-15-05
Analysis Date	11-23-05	Analysis Date	11-23-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051892-23	Control Number	051892-24

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	ug/kg	TDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	- -	PCB-1016	nd	<0.1
PCB-1221	nd	- -	PCB-1221	nd	<0.1
PCB-1232	nd	- -	PCB-1232	nd	<0.1
PCB-1242	nd	- -	PCB-1242	nd	<0.1
PCB-1248	nd	- -	PCB-1248	nd	<0.1
PCB-1254	nd	- -	PCB-1254	nd	<0.1
PCB-1260	nd	- -	PCB-1260	nd	<0.1
PCB-1262	nd	- -	PCB-1262	nd	<0.1
PCB-1268	nd	- -	PCB-1268	nd	<0.1
Sum of Aroclors	nd	330	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	102	75-117	Decachlorobiphenyl	101	58-104

NOTES:	MDL = Method Detection Limit, ug/100cm^2. TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1. nd = Parameter Was Not Detected At The MDL or TDL, As Applicable. Soil Results Are Reported On The Dry Weight Basis.

Reviewed By _____ Date _____

Sequence 112205A	
S23	W24

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Contruction Access - Sampling Date of November 08, 2005	Our Project Number CHEM-05-1892

Sample Identification	CCA-PCB W25	Sample Identification	CCA-PCB S26
		Sample Depth, inches	3
Sample Type	surface wipe	Sample Type	soil
Sample Date	11-08-05	Sample Date	11-08-05
Received Date	11-10-05	Received Date	11-10-05
Report Date	11-28-05	Report Date	11-28-05
Percent Solids, % w/w	- -	Percent Solids, % w/w	93
Preparation Date	11-15-05	Preparation Date	11-14-05
Analysis Date	11-23-05	Analysis Date	11-23-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051892-25	Control Number	051892-26

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	nd	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	101	58-104

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/kg	TDL
PCB-1016	nd	- -
PCB-1221	nd	- -
PCB-1232	nd	- -
PCB-1242	nd	- -
PCB-1248	nd	- -
PCB-1254	nd	- -
PCB-1260	nd	- -
PCB-1262	nd	- -
PCB-1268	nd	- -
Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	96	75-117

NOTES:
MDL = Method Detection Limit, ug/100cm^2.
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Was Not Detected At The MDL or TDL, As Applicable.
Soil Results Are Reported On The Dry Weight Basis.

Reviewed By [signature] Date 11/8/05

Sequence 112205A	
W25	S26

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Contruction Access - Sampling Date of November 08, 2005	Our Project Number CHEM-05-1892

Sample Identification	CCA-PCB W27	Sample Identification	CCA-PCB W28
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	11-08-05	Sample Date	11-08-05
Received Date	11-10-05	Received Date	11-10-05
Report Date	11-28-05	Report Date	11-28-05
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	11-15-05	Preparation Date	11-15-05
Analysis Date	11-23-05	Analysis Date	11-23-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051892-27	Control Number	051892-28

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	102	58-104	Decachlorobiphenyl	101	58-104

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Was Not Detected At The MDL

Reviewed By SM Date 11-28-05

Sequence 112205A	
W27	W28

PCBs

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Contruction Access - Sampling Date of November 08, 2005	Our Project Number CHEM-05-1892

Sample Identification	CCA-PCB W29	Sample Identification	CCA-PCB WJ1
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	11-08-05	Sample Date	11-08-05
Received Date	11-10-05	Received Date	11-10-05
Report Date	11-28-05	Report Date	11-28-05
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	11-15-05	Preparation Date	11-15-05
Analysis Date	11-23-05	Analysis Date	11-23-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051892-29	Control Number	051892-30

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	103	58-104	Decachlorobiphenyl	105	58-104

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Was Not Detected At The MDL

Reviewed By _____ Date 11-28-05

Sequence 112205A	
W29	WJ1

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Contruction Access - Sampling Date of November 08, 2005	Our Project Number CHEM-05-1892

Sample Identification	CCA-PCB S30	Sample Identification	CCA-PCB S31
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	11-08-05	Sample Date	11-08-05
Received Date	11-10-05	Received Date	11-10-05
Report Date	11-28-05	Report Date	11-28-05
Percent Solids, % w/w	96	Percent Solids, % w/w	95
Preparation Date	11-14-05	Preparation Date	11-14-05
Analysis Date	11-23-05	Analysis Date	11-23-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051892-31	Control Number	051892-32

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/kg	TDL	TARGET PCBs, 8082	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	105	75-117	Decachlorobiphenyl	98	75-117

NOTES:

MDL = Method Detection Limit, ug/100cm^2.
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Was Not Detected At The MDL or TDL, As Applicable.
Soil Results Are Reported On The Dry Weight Basis.

Reviewed By Au Date 11/28/05

Sequence 112205A	
S30	S31

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Contruction Access - Sampling Date of November 08, 2005	Our Project Number CHEM-05-1892

Sample Identification	CCA-PCB W32	Sample Identification	CCA-PCB W33
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	11-08-05	Sample Date	11-08-05
Received Date	11-10-05	Received Date	11-10-05
Report Date	11-28-05	Report Date	11-28-05
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	11-15-05	Preparation Date	11-15-05
Analysis Date	11-23-05	Analysis Date	11-23-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051892-33	Control Number	051892-34

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	106 *	58-104	Decachlorobiphenyl	101	58-104

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Was Not Detected At The MDL
* = Slight Over-Recovery Of Surrogate Spike

Reviewed By AU Date 11/28/05

Sequence 112205A	
W32	W33

PCBs

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Contruction Access - Sampling Date of November 08, 2005	Our Project Number CHEM-05-1892

Sample Identification	CCA-PCB W34	**Sample Identification**	CCA-PCB W35
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	11-08-05	Sample Date	11-08-05
Received Date	11-10-05	Received Date	11-10-05
Report Date	11-28-05	Report Date	11-28-05
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	11-15-05	Preparation Date	11-15-05
Analysis Date	11-23-05	Analysis Date	11-23-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051892-35	Control Number	051892-36

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	103	58-104	Decachlorobiphenyl	102	58-104

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Was Not Detected At The MDL

Reviewed By [signature] Date 11/28/05

Sequence 112205A	
W34	W35

PCBs

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Contruction Access - Sampling Date of November 08, 2005	Our Project Number CHEM-05-1892

Sample Identification	CCA-PCB W36	**Sample Identification**	CCA-PCB S37
		Sample Depth, inches	3
Sample Type	surface wipe	Sample Type	soil
Sample Date	11-08-05	Sample Date	11-08-05
Received Date	11-10-05	Received Date	11-10-05
Report Date	11-28-05	Report Date	11-28-05
Percent Solids, % w/w	- -	Percent Solids, % w/w	88
Preparation Date	11-15-05	Preparation Date	11-14-05
Analysis Date	11-23-05	Analysis Date	11-23-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051892-37	Control Number	051892-38

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/kg	TDL
PCB-1016	nd	<0.1	PCB-1016	nd	- -
PCB-1221	nd	<0.1	PCB-1221	nd	- -
PCB-1232	nd	<0.1	PCB-1232	nd	- -
PCB-1242	nd	<0.1	PCB-1242	nd	- -
PCB-1248	nd	<0.1	PCB-1248	nd	- -
PCB-1254	nd	<0.1	PCB-1254	nd	- -
PCB-1260	nd	<0.1	PCB-1260	nd	- -
PCB-1262	nd	<0.1	PCB-1262	nd	- -
PCB-1268	nd	<0.1	PCB-1268	nd	- -
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	103	58-104	Decachlorobiphenyl	106	75-117

NOTES:	MDL = Method Detection Limit, ug/100cm^2. TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1. nd = Parameter Was Not Detected At The MDL or TDL, As Applicable. Soil Results Are Reported On The Dry Weight Basis.

Reviewed By _____ Date 112805

Sequence 112205A	
W36	S37

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Contruction Access - Sampling Date of November 08, 2005	Our Project Number CHEM-05-1892

Sample Identification	CCA-PCB S38	Sample Identification	CCA-PCB S39
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	11-08-05	Sample Date	11-08-05
Received Date	11-10-05	Received Date	11-10-05
Report Date	11-28-05	Report Date	11-28-05
Percent Solids, % w/w	95	Percent Solids, % w/w	94
Preparation Date	11-14-05	Preparation Date	11-15-05
Analysis Date	11-23-05	Analysis Date	11-23-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051892-39	Control Number	051892-40

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/kg	TDL	TARGET PCBs, 8082	ug/kg	TDL
PCB-1016	nd	--	PCB-1016	nd	--
PCB-1221	nd	--	PCB-1221	nd	--
PCB-1232	nd	--	PCB-1232	nd	--
PCB-1242	nd	--	PCB-1242	nd	--
PCB-1248	nd	--	PCB-1248	nd	--
PCB-1254	nd	--	PCB-1254	nd	--
PCB-1260	nd	--	PCB-1260	nd	--
PCB-1262	nd	--	PCB-1262	nd	--
PCB-1268	nd	--	PCB-1268	nd	--
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	106	75-117	Decachlorobiphenyl	104	75-117

NOTES:
MDL = Method Detection Limit, ug/100cm^2.
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Was Not Detected At The MDL or TDL, As Applicable.
Soil Results Are Reported On The Dry Weight Basis.

Reviewed By AM Date 11/28/05

Sequence 112205A	
S38	S39

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Contruction Access - Sampling Date of November 08, 2005	Our Project Number CHEM-05-1892

Sample Identification	CCA-PCB W40	**Sample Identification**	CCA-PCB W41
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	11-08-05	Sample Date	11-08-05
Received Date	11-10-05	Received Date	11-10-05
Report Date	11-28-05	Report Date	11-28-05
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	11-15-05	Preparation Date	11-15-05
Analysis Date	11-23-05	Analysis Date	11-23-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051892-41	Control Number	051892-42

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	104	58-104	Decachlorobiphenyl	106 *	58-104

NOTES:	MDL = Method Detection Limit, ug/100cm^2 nd = Parameter Was Not Detected At The MDL * = Slight Over-Recovery Of Surrogate Spike

Reviewed By Ad Date 112805

Sequence 112205A	
W40	W41

PCBs

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Contruction Access - Sampling Date of November 08, 2005	Our Project Number CHEM-05-1892

Sample Identification	CCA-PCB W42	**Sample Identification**	CCA-PCB W43
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	11-08-05	Sample Date	11-08-05
Received Date	11-10-05	Received Date	11-10-05
Report Date	11-28-05	Report Date	11-28-05
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	11-15-05	Preparation Date	11-15-05
Analysis Date	11-24-05	Analysis Date	11-24-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051892-43	Control Number	051892-44

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	105 *	58-104	Decachlorobiphenyl	104	58-104

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Was Not Detected At The MDL
* = Slight Over-Recovery Of Surrogate Spike

Reviewed By _____ Date 11/28/05

Sequence 112205A	
W42	W43

PCBs

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Contruction Access - Sampling Date of November 08, 2005	Our Project Number CHEM-05-1892

Sample Identification	CCA-PCB W44	Sample Identification	CCA-PCB W45
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	11-08-05	Sample Date	11-08-05
Received Date	11-10-05	Received Date	11-10-05
Report Date	11-28-05	Report Date	11-28-05
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	11-15-05	Preparation Date	11-15-05
Analysis Date	11-24-05	Analysis Date	11-24-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051892-45	Control Number	051892-46

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	105 *	58-104	Decachlorobiphenyl	102	58-104

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Was Not Detected At The MDL
* = Slight Over-Recovery Of Surrogate Spike

Reviewed By _____ Date 11-28-05

Sequence 112205A	
W44	W45

PCBs

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment Contruction Access - Sampling Date of November 08, 2005	Our Project Number CHEM-05-1892

Sample Identification	CCA-PCB W46	**Sample Identification**	CCA-PCB W47
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	11-08-05	Sample Date	11-08-05
Received Date	11-10-05	Received Date	11-10-05
Report Date	11-28-05	Report Date	11-28-05
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	11-15-05	Preparation Date	11-15-05
Analysis Date	11-24-05	Analysis Date	11-24-05
Analyst	bek, glc	Analyst	bek, glc
Control Number	051892-47	Control Number	051892-48

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	102	58-104	Decachlorobiphenyl	103	58-104

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Was Not Detected At The MDL

Reviewed By _____ Date 11/28/05

Sequence 112205A	
W46	W47

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – LABORATORY SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: Consumers Energy Big Rock Point

PROJECT NUMBER:

SAMPLING TEAM: JLReed / J. Schlueter

DATE SHIPPED: 11-09-05

SITE SKETCH ATTACHED? CIRCLE ONE: YES (NO)

PAGE 1 OF 4

SEND REPORT TO: TA Goble

PHONE: 231-547-8389

CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	ANALYSIS REQUESTED: PCB WIPE	ANALYSIS REQUESTED: PCB Soil						REMARKS
CCA-PCB-W1	11-08-05	1558		Containment Construction Access		1	X							05-1892-01
CCA-PCB-W2	11-08-05	1559				1	X							-02
CCA-PCB-W3	11-08-05	1600				1	X							-03
CCA-PCB-W4	11-08-05	1602				1	X							-04
CCA-PCB-W5	11-08-05	1603				1	X							-05
CCA-PCB-W6	11-08-05	1604				1	X							-06
CCA-PCB-W7	11-08-05	1605				1	X							-07
CCA-PCB-W8	11-08-05	1606				1	X							-08
CCA-PCB-W9	11-08-05	1607				1	X							-09
CCA-PCB-W10	11-08-05	1608				1	X							-10
CCA-PCB-W11	11-08-05	1609				1	X							-11
CCA-PCB-W12	11-08-05	1611		Containment Construction Access		1	X							-12

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
J. Schlueter	11-8-05 1705	Locked in Storage Cabinet
J. Schlueter	11-9-05 0750	Jodie L. Reed
FedEx	11-10-05 1130	[illegible]

COMMENTS

ORIGINAL TO LAB COPY TO CUSTOMER

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – LABORATORY SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: Consumers Energy Big Rock Point

PROJECT NUMBER:

SAMPLING TEAM: JL Reed, T. Schlueter

DATE SHIPPED: 11-09-05

SITE SKETCH ATTACHED? CIRCLE ONE: YES (NO)

PAGE 2 OF 4

SEND REPORT TO: TA Goble

PHONE: 231-547-8389

CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	PCB WIPE	PCB Soil						REMARKS
CCA-PCB-W13	11-08-05	1612		Containment Construction Access		1	X							05-1882-13
CCA-PCB-W14	11-08-05	1613				1	X							-14
CCA-PCB-W15	11-08-05	1614				1	X							-15
CCA-PCB-W16	11-08-05	1615				1	X							-16
CCA-PCB-W17	11-08-05	1616				1	X							-17
CCA-PCB-W18	11-08-05	1617				1	X							-18
CCA-PCB-W19	11-08-05	1618				1	X							-19
CCA-PCB-W20	11-08-05	1620				1	X							-20
CCA-PCB-W21	11-08-05	1621				1	X							-21
CCA-PCB-W22	11-08-05	1622				1	X							-22
CCA-PCB-S23	11-08-05	1625			3"	1		X						-23
CCA-PCB-W24	11-08-05	1626		Containment Construction Access		1	X							-24

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
T. Schlueter	11-8-05 1705	Locked in Storage Cabinet
T. Schlueter	11-9-05 0750	Jodie L. Reed
Fed Ex	11-10-05 1130	[illegible]

COMMENTS

ORIGINAL TO LAB COPY TO CUSTOMER

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – LABORATORY SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: Consumers Energy Big Rock Point

PROJECT NUMBER:

SAMPLING TEAM: JL Reed/T. Schlueter

DATE SHIPPED: 11-09-05

SITE SKETCH ATTACHED? CIRCLE ONE: YES (NO)

PAGE 3 OF 4

SEND REPORT TO: TA Goble

PHONE: 231-547-8389

CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	PCB WIPE	PCB Soil						REMARKS
CCA-PCB-W25	11-08-05	1628		Containment Construction Access		1	X							05-1882-25
CCA-PCB-S26	11-08-05	1629			3"	1		X						-26
CCA-PCB-W27	11-08-05	1630				1	X							-27
CCA-PCB-W28	11-08-05	1631				1	X							-28
CCA-PCB-W29	11-08-05	1635				1	X							-29
CCA-PCB-WJ1	11-08-05	1636				1	X							-30
CCA-PCB-S30	11-08-05	1637			3"	1		X						-31
CCA-PCB-S31	11-08-05	1638			3"	1		X						-32
CCA-PCB-W32	11-08-05	1640				1	X							-33
CCA-PCB-W33	11-08-05	1641				1	X							-34
CCA-PCB-W34	11-08-05	1642				1	X							-35
CCA-PCB-W35	11-08-05	1643		Containment Construction Access		1	X							-36

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
T. Schlueter	11-8-05 1705	Locked in Storage Cabinet
T. Schlueter	11-9-05 0750	Jackie L. Reed
Fed Ex	11-10-05 1130	[illegible]

COMMENTS

ORIGINAL TO LAB COPY TO CUSTOMER

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – LABORATORY SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: Consumers Energy Big Rock Point

PROJECT NUMBER:

SAMPLING TEAM: JL Reed / T. Schlueter

DATE SHIPPED: 11-09-05

SITE SKETCH ATTACHED? CIRCLE ONE: YES NO

PAGE 4 OF 4

SEND REPORT TO: TA Goble

PHONE: 231-547-8389

CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	ANALYSIS REQUESTED: PCB WIPE	ANALYSIS REQUESTED: PCB Soil						REMARKS
CCA-PCB-W36	11-08-05	1645		Containment Construction Access		1	X							05-1892-37
CCA-PCB-S37	11-08-05	1646			3"	1		X						-38
CCA-PCB-S38	11-08-05	1647			3"	1		X						-39
CCA-PCB-S39	11-08-05	1649			3"	1		X						-40
CCA-PCB-W40	11-09-05	1650				1	X							-41
CCA-PCB-W41	11-08-05	1651				1	X							-42
CCA-PCB-W42	11-08-05	1652				1	X							-43
CCA-PCB-W43	11-08-05	1653				1	X							-44
CCA-PCB-W44	11-08-05	1654				1	X							-45
CCA-PCB-W45	11-08-05	1655				1	X							-46
CCA-PCB-W46	11-08-05	1656				1	X							-47
CCA-PCB-W47	11-08-05	1657		Containment Construction Access		1	X							-48

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
T. Schlueter	11-8-05 1705	Locked in Storage Cabinet
T. Schlueter	11-9-05 0750	Jodie L. Reed
Fed Ex	11-10-05 1130	[illegible]

COMMENTS

ORIGINAL TO LAB COPY TO CUSTOMER

Containment Construction Access-- PCB Survey Design

Number of Samples: 40 minimum for two area defined below
QC Samples: 2 Field Blanks, 2 Replicates

Area 1- Asphalt West of CCA Access 39 Samples (91% of total area)

Dimensions - m
X = 28.65 (94ft)
Y = 33.38 (109.5 ft)
Area = 956.34 sq. m
Sample Spacing = 4.9 m

Random Start Location:
Rand 1 0.181503
Rand 2 0.703591
Coordinates: x = 5.2 m
y = 23.5 m

Area 2- CCA Concrete Floor Area 4 Samples (9% of total area)

Dimensions - m
X = 8.08 (26.5 ft)
Y = 12.04 (39.5 ft)
Area = 97.28 sq. m
Sample Spacing = 4.9 m

Random Start Location:
Rand 1 0.246766
Rand 2 0.703292
Coordinates: x = 2.0 m
y = 8.5 m

QC Random Sample Generator

Single RN 0.624714065

Set 1	Set 2
	4
Sample point # 12 = #46	10
Sample point # 15 = #47	3
11	4
5	7
8	4

# of smp 43

=

Set 3	Set 4
10	10
17	8
13	7
3	2
7	14
16	7

=

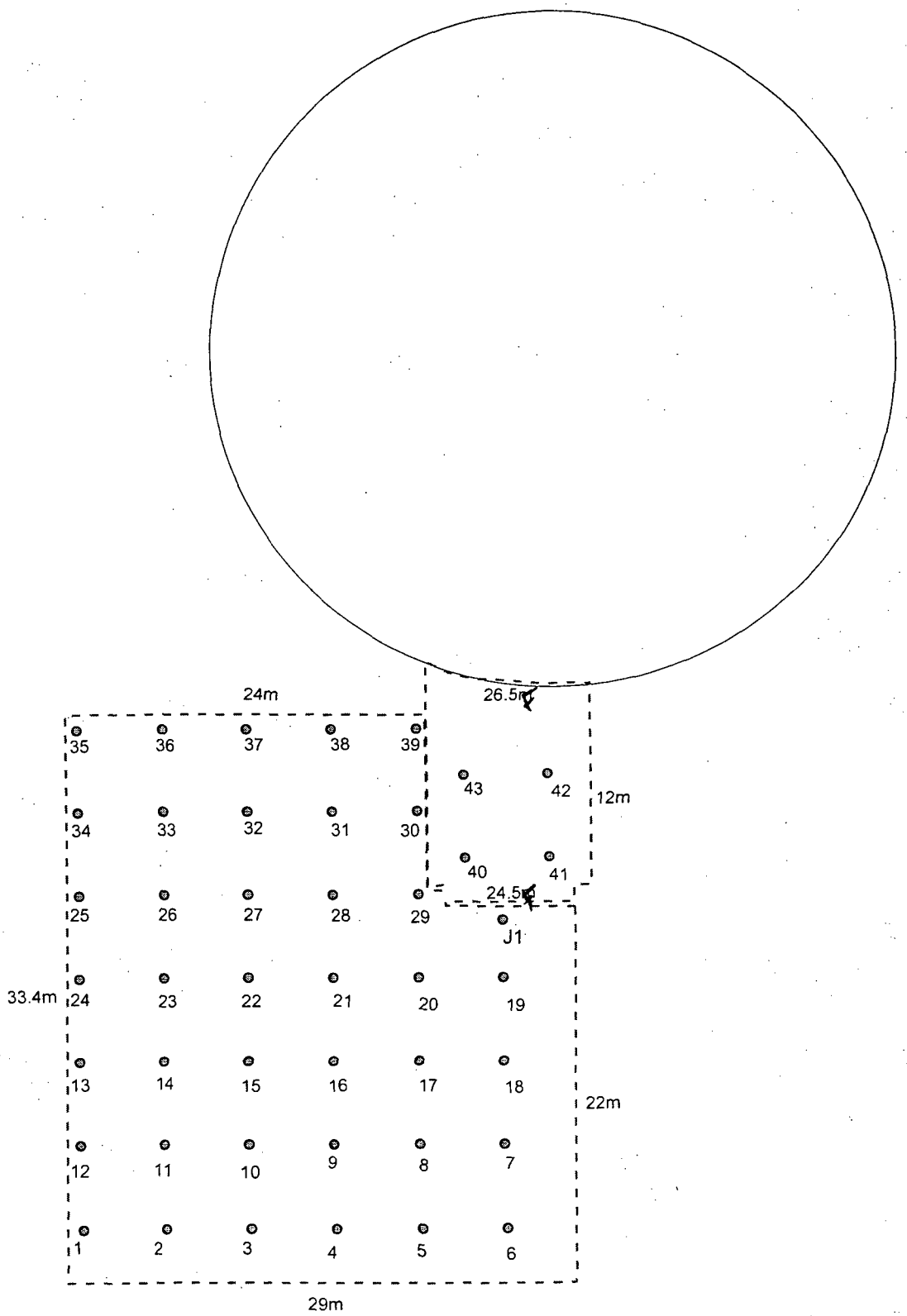
Sample Locations -
Containment Construction Access

Sample No.	X Coord.	Y Coord.	Sample No.	X Coord.	Y Coord.	Sample No.	X Coord.	Y Coord.
1	0.3	3.9	16	15.0	13.7	31	15.0	28.4
2	5.2	3.9	17	19.9	13.7	32	10.1	28.4
3	10.1	3.9	18	24.8	13.7	33	5.2	28.4
4	15.0	3.9	19	24.8	18.6	34	0.3	28.4
5	19.9	3.9	20	19.9	18.6	35	0.3	33.3
6	24.8	3.9	21	15.0	18.6	36	5.2	33.3
7	24.8	8.8	22	10.1	18.6	37	10.1	33.3
8	19.9	8.8	23	5.2	18.6	38	15.0	33.3
9	15.0	8.8	24	0.3	18.6	39	19.9	33.3
10	10.1	8.8	25	0.3	23.5	40	2.0	3.6
11	5.2	8.8	26	5.2	23.5	41	6.9	3.6
12	0.3	8.8	27	10.1	23.5	42	6.9	8.5
13	0.3	13.7	28	15.0	23.5	43	2.0	8.5
14	5.2	13.7	29	19.9	23.5	J1	24.8	23
15	10.1	13.7	30	19.9	28.4			

**Sample no. 26 is the random start location*

Sample spacing is 4.9 meters

PCB Sample Map Locations
Containment Construction Access Area



Legend

PCB Impacted Area

Numbered Sample Locations

0 1.25 2.5 5 Meters

PCB SURVEY PACKAGE CLOSE-OUT CHECKLIST

Package ID Number: 0007 Survey Area: PCB South Laydown Area

The survey package is legible and complete and the following necessary information is in the package:

1. ✓ Survey Package Cover Sheet
2. ✓ Survey design documentation
3. ✓ Random number generator sheet for sample start location and QC sample numbers.
4. ✓ Completed survey map/data sheet
5. ✓ Completed PCB Survey Data Record Sheet
6. ✓ Copy of the Chain of Custody
7. ✓ Copy of sample results
8. N/A Other documentation:

Completed By: Jodie L. Reed (Environmental Technician) Date: 2-2-06

Reviewed By: [illegible] (Environmental Supervisor) Date: 02-23-06

SEE SURVEY PACKAGE 009 FOR POST REMEDIATION RESULTS

PCB SURVEY PACKAGE COVER SHEET

Package ID Number : 0007	Survey Area: South PCB Lay-Down Area	Size (m^2): ~110

Random Samples

# of Field Samples: 40
# of QC samples: 04

Random Start Location: X (1.2), Y (6.5)
Sample Spacing: 1.6 meters

Isolation Controls implemented ☑ List controls: Area posted as a PCB survey area.

Comments/specific directions[1]: -Random sample locations determined by random number generator.

-Samples # 41 and #42 fell outside of the survey unit. Samples not taken.

-Sample analysis results acceptance criteria is <1ppm for soil samples.

([1] Address any inaccessible areas or sample points not included in survey).

SURVEY PACKAGE CLOSURE

Screening Survey Package is authorized for closure. All required reviews are completed and pertinent information is included in package (see Survey Package Close-Out Checklist).

ENV Technician Jodie L. Reed Date: 2-2-06

ENV Supervisor: [signature] Date: 02-28-06

SAMPLES SLD-PCB-S34 & SLD-PCB-S44 EXCEEDED 1.0ppm PCB. ENTIRE AREA REMEDIATED (TOOK 6" SOIL OFF TOP SURFACE) AND DISPOSED OF SOIL AS PCB REMEDIATION WASTE. AREA RESURVEYED -- SEE PCB SURVEY PACKAGE 009

Package ID Number: 0007

PCB SURVEY DATA RECORD SHEET

Survey Area: PCB South Laydown Area	Size (m^2): ~110	# of Samples: 44

Sample ID Number	Sample Location (X)(Y)	Sample Result (ppm)	Sample ID Number	Sample Location (X)(Y)	Sample Result (ppm)
SLD-PCB-S1	(1.2)(0.1)	nda	SLD-PCB-S26	(4.4)(4.9)	nda
SLD-PCB-S2	(2.8)(0.1)	nda	SLD-PCB-S27	(6.0)(4.9)	nda
SLD-PCB-S3	(4.4)(0.1)	nda	SLD-PCB-S28	(7.6)(4.9)	nda
SLD-PCB-S4	(6.0)(0.1)	nda	SLD-PCB-S29	(9.2)(4.9)	nda
SLD-PCB-S5	(7.6)(0.1)	nda	SLD-PCB-S30	(10.8)(4.9)	nda
SLD-PCB-S6	(9.2)(0.1)	nda	SLD-PCB-S31	(1.2)(6.5)	nda
SLD-PCB-S7	(10.8)(0.1)	nda	SLD-PCB-S32	(2.8)(6.5)	nda
SLD-PCB-S8	(12.4)(0.1)	nda	SLD-PCB-S33	(4.4)(6.5)	nda
SLD-PCB-S9	(1.2)(1.7)	nda	SLD-PCB-S34	(6.0)(6.5)	2.4
SLD-PCB-S10	(2.8)(1.7)	nda	SLD-PCB-S35	(7.6)(6.5)	nda
SLD-PCB-S11	(4.4)(1.7)	nda	SLD-PCB-S36	(9.2)(6.5)	nda
SLD-PCB-S12	(6.0)(1.7)	nda	SLD-PCB-S37	(1.2)(8.1)	0.45
SLD-PCB-S13	(7.6)(1.7)	nda	SLD-PCB-S38	(2.8)(8.1)	nda
SLD-PCB-S14	(9.2)(1.7)	nda	SLD-PCB-S39	(4.4)(8.1)	nda
SLD-PCB-S15	(10.8)(1.7)	nda	SLD-PCB-S42	(1.2)(4.9)	nda
SLD-PCB-S16	(12.4)(1.7)	nda	SLD-PCB-S43	(1.2)(0.1)	nda
SLD-PCB-S17	(1.2)(3.3)	0.58	SLD-PCB-S44	(1.2)(1.7)	1.2
SLD-PCB-S18	(2.8)(3.3)	nda	SLD-PCB-S45	(1.2)(0.1)	nda
SLD-PCB-S19	(4.4)(3.3)	nda	SLD-PCB-S46	(1.2)(1.7)	nda
SLD-PCB-S20	(6.0)(3.3)	nda			
SLD-PCB-S21	(7.6)(3.3)	nda			
SLD-PCB-S22	(9.2)(3.3)	nda			
SLD-PCB-S23	(10.8)(3.3)	nda			
SLD-PCB-S24	(1.2)(4.9)	nda			
SLD-PCB-S25	(2.8)(4.9)	nda			

Performed By: Jackie L. Reed (Survey Technician) Date: 2-2-06

Reviewed By: (Environmental Supervisor) Date: 02-28-06

CONSUMERS ENERGY Memorandum

To: TGoble, Big Rock

From: GLCattell, T-254, Jackson

Date: January 20, 2006

Subject: SAMPLES FOR DETERMINATION OF PCBs
- Soils
- South PCB Laydown Area
- Sampling Date of December 22, 2005

CC: WMHoaglund, Big Rock

File Index: 530517-781-177

Forty-four soil samples were received on December 30 for determination of polychlorinated biphenyls (PCBs). All determinations were performed by the Chemistry Section of Laboratory Services and the results are attached for your review.

Analytical Methods

Unless otherwise specified, all methods are from SW-846, Test Methods For Evaluating Solid Waste - Physical / Chemical Methods, USEPA.

Sample Extraction - Method 3545, Pressurized Fluid Extraction.
Extract Concentration – Nitrogen Evaporation Technique, Exhibit D, Aroclors, Section 10. Multi-Media, Multi-Concentration Organics Analysis; SOM01.X; USEPA.
Extract Cleanup – Method 3620, Florisil Cleanup; Method 3665A, Sulfuric Acid/Permanganate Cleanup & Method 3660B, Sulfur Cleanup.
Percent Solids (Dry Weight) – Section 7.2 of Method 3545, Determination of Percent Dry Weight, Pressurized Fluid Extraction.
Polychlorinated Biphenyls - Method 8082, Polychlorinated Biphenyls by Gas Chromatography.

Analytical Remarks & Summary

The following samples have reportable concentrations of PCBs: SLD-PCB-S17, -S34, -S37, -S44. All other samples are reported as 'not detected'.

Report Package Contents

The report package consists of 27 pages: 1 cover page, 22 pages of Analytical Results & 4 Chain of Custody pages.

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - South PCB Laydown Area - Sampling Date of December 22, 2005	Our Project Number CHEM-05-2177

Sample Identification	SLD-PCB-S1	**Sample Identification**	SLD-PCB-S2
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	12-22-05	Sample Date	12-22-05
Received Date	12-30-05	Received Date	12-30-05
Report Date	01-20-06	Report Date	01-20-06
Percent Solids, % w/w	95	Percent Solids, % w/w	80
Preparation Date	01-03-06	Preparation Date	01-03-06
Analysis Date	01-06-06	Analysis Date	01-06-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	052177-01	Control Number	052177-02

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	97	73-134	Decachlorobiphenyl	104	73-134

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Was Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date 01/20/06 Sequence 010606A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - South PCB Laydown Area - Sampling Date of December 22, 2005	Our Project Number CHEM-05-2177

Sample Identification	SLD-PCB-S3	**Sample Identification**	SLD-PCB-S4
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	12-22-05	Sample Date	12-22-05
Received Date	12-30-05	Received Date	12-30-05
Report Date	01-20-06	Report Date	01-20-06
Percent Solids, % w/w	91	Percent Solids, % w/w	92
Preparation Date	01-03-06	Preparation Date	01-03-06
Analysis Date	01-06-06	Analysis Date	01-06-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	052177-03	Control Number	052177-04

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	103	73-134	Decachlorobiphenyl	97	73-134

NOTES:

TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Was Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By AM Date 02006 Sequence 010606A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - South PCB Laydown Area - Sampling Date of December 22, 2005	Our Project Number CHEM-05-2177

Sample Identification	SLD-PCB-S5	**Sample Identification**	SLD-PCB-S6
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	12-22-05	Sample Date	12-22-05
Received Date	12-30-05	Received Date	12-30-05
Report Date	01-20-06	Report Date	01-20-06
Percent Solids, % w/w	92	Percent Solids, % w/w	92
Preparation Date	01-03-06	Preparation Date	01-03-06
Analysis Date	01-07-06	Analysis Date	01-07-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	052177-05	Control Number	052177-06

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	100	73-134	Decachlorobiphenyl	102	73-134

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Was Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By AM Date 01/2006 Sequence 010606A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - South PCB Laydown Area - Sampling Date of December 22, 2005	Our Project Number CHEM-05-2177

Sample Identification	SLD-PCB-S7	**Sample Identification**	SLD-PCB-S8
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	12-22-05	Sample Date	12-22-05
Received Date	12-30-05	Received Date	12-30-05
Report Date	01-20-06	Report Date	01-20-06
Percent Solids, % w/w	92	Percent Solids, % w/w	89
Preparation Date	01-03-06	Preparation Date	01-03-06
Analysis Date	01-07-06	Analysis Date	01-07-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	052177-07	Control Number	052177-08

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	103	73-134	Decachlorobiphenyl	103	73-134

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Was Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By AH Date 01/2006 Sequence 010606A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - South PCB Laydown Area - Sampling Date of December 22, 2005	Our Project Number CHEM-05-2177

Sample Identification	SLD-PCB-S9	Sample Identification	SLD-PCB-S10
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	12-22-05	Sample Date	12-22-05
Received Date	12-30-05	Received Date	12-30-05
Report Date	01-20-06	Report Date	01-20-06
Percent Solids, % w/w	83	Percent Solids, % w/w	84
Preparation Date	01-03-06	Preparation Date	01-03-06
Analysis Date	01-07-06	Analysis Date	01-07-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	052177-09	Control Number	052177-10

TARGET PCBs, 8082			TARGET PCBs, 8082		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	101	73-134	Decachlorobiphenyl	104	73-134

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Was Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By AU Date 01/2006 Sequence 010606A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - South PCB Laydown Area - Sampling Date of December 22, 2005	Our Project Number CHEM-05-2177

Sample Identification	SLD-PCB-S11	**Sample Identification**	SLD-PCB-S12
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	12-22-05	Sample Date	12-22-05
Received Date	12-30-05	Received Date	12-30-05
Report Date	01-20-06	Report Date	01-20-06
Percent Solids, % w/w	89	Percent Solids, % w/w	93
Preparation Date	01-03-06	Preparation Date	01-03-06
Analysis Date	01-07-06	Analysis Date	01-07-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	052177-11	Control Number	052177-12

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	99	73-134	Decachlorobiphenyl	101	73-134

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Was Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By [signature] Date 01/20/06 Sequence 010606A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - South PCB Laydown Area - Sampling Date of December 22, 2005	Our Project Number CHEM-05-2177

Sample Identification	SLD-PCB-S13	Sample Identification	SLD-PCB-S14
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	12-22-05	Sample Date	12-22-05
Received Date	12-30-05	Received Date	12-30-05
Report Date	01-20-06	Report Date	01-20-06
Percent Solids, % w/w	87	Percent Solids, % w/w	83
Preparation Date	01-03-06	Preparation Date	01-03-06
Analysis Date	01-07-06	Analysis Date	01-07-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	052177-13	Control Number	052177-14

TARGET PCBs, 8082			TARGET PCBs, 8082		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	77	73-134	Decachlorobiphenyl	106	73-134

NOTES:

TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Was Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date 012006 Sequence 010606A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - South PCB Laydown Area - Sampling Date of December 22, 2005	Our Project Number CHEM-05-2177

Sample Identification	SLD-PCB-S15	**Sample Identification**	SLD-PCB-S16
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	12-22-05	Sample Date	12-22-05
Received Date	12-30-05	Received Date	12-30-05
Report Date	01-20-06	Report Date	01-20-06
Percent Solids, % w/w	92	Percent Solids, % w/w	73
Preparation Date	01-03-06	Preparation Date	01-03-06
Analysis Date	01-07-06	Analysis Date	01-07-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	052177-15	Control Number	052177-16

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	101	73-134	Decachlorobiphenyl	111	73-134

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Was Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By [signature] Date 01/20/06 Sequence 010606A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - South PCB Laydown Area - Sampling Date of December 22, 2005	Our Project Number CHEM-05-2177

Sample Identification	SLD-PCB-S17	**Sample Identification**	SLD-PCB-S18
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	12-22-05	Sample Date	12-22-05
Received Date	12-30-05	Received Date	12-30-05
Report Date	01-20-06	Report Date	01-20-06
Percent Solids, % w/w	91	Percent Solids, % w/w	91
Preparation Date	01-03-06	Preparation Date	01-03-06
Analysis Date	01-07-06	Analysis Date	01-07-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	052177-17	Control Number	052177-18

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	580	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	580	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	104	73-134	Decachlorobiphenyl	108	73-134

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Was Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.

Reviewed By _____ Date 01/20/06 | Sequence 010606A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - South PCB Laydown Area - Sampling Date of December 22, 2005	Our Project Number CHEM-05-2177

Sample Identification	SLD-PCB-S19	**Sample Identification**	SLD-PCB-S20
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	12-22-05	Sample Date	12-22-05
Received Date	12-30-05	Received Date	12-30-05
Report Date	01-20-06	Report Date	01-20-06
Percent Solids, % w/w	88	Percent Solids, % w/w	88
Preparation Date	01-03-06	Preparation Date	01-04-06
Analysis Date	01-07-06	Analysis Date	01-07-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	052177-19	Control Number	052177-20

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	101	73-134	Decachlorobiphenyl	100	73-134

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Was Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By AU Date 012006 Sequence 010606A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - South PCB Laydown Area - Sampling Date of December 22, 2005	Our Project Number CHEM-05-2177

Sample Identification	SLD-PCB-S21	**Sample Identification**	SLD-PCB-S22
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	12-22-05	Sample Date	12-22-05
Received Date	12-30-05	Received Date	12-30-05
Report Date	01-20-06	Report Date	01-20-06
Percent Solids, % w/w	89	Percent Solids, % w/w	93
Preparation Date	01-04-06	Preparation Date	01-04-06
Analysis Date	01-07-06	Analysis Date	01-07-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	052177-21	Control Number	052177-22

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	--	PCB-1016	nd	--
PCB-1221	nd	--	PCB-1221	nd	--
PCB-1232	nd	--	PCB-1232	nd	--
PCB-1242	nd	--	PCB-1242	nd	--
PCB-1248	nd	--	PCB-1248	nd	--
PCB-1254	nd	--	PCB-1254	nd	--
PCB-1260	nd	--	PCB-1260	nd	--
PCB-1262	nd	--	PCB-1262	nd	--
PCB-1268	nd	--	PCB-1268	nd	--
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	102	73-134	Decachlorobiphenyl	103	73-134

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Was Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By SU Date 01/2006 Sequence 010606A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - South PCB Laydown Area - Sampling Date of December 22, 2005	Our Project Number CHEM-05-2177

Sample Identification	SLD-PCB-S23	**Sample Identification**	SLD-PCB-S24
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	12-22-05	Sample Date	12-22-05
Received Date	12-30-05	Received Date	12-30-05
Report Date	01-20-06	Report Date	01-20-06
Percent Solids, % w/w	84	Percent Solids, % w/w	89
Preparation Date	01-04-06	Preparation Date	01-04-06
Analysis Date	01-07-06	Analysis Date	01-07-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	052177-23	Control Number	052177-24

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	99	73-134	Decachlorobiphenyl	99	73-134

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Was Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By [signature] Date 01/20/06 Sequence 010606A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - South PCB Laydown Area - Sampling Date of December 22, 2005	Our Project Number CHEM-05-2177

Sample Identification	SLD-PCB-S25	**Sample Identification**	SLD-PCB-S26
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	12-22-05	Sample Date	12-22-05
Received Date	12-30-05	Received Date	12-30-05
Report Date	01-20-06	Report Date	01-20-06
Percent Solids, % w/w	86	Percent Solids, % w/w	84
Preparation Date	01-04-06	Preparation Date	01-04-06
Analysis Date	01-09-06	Analysis Date	01-09-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	052177-25	Control Number	052177-26

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	102	73-134	Decachlorobiphenyl	88	73-134

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Was Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By [signature] Date 01/20/06 Sequence 010906A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - South PCB Laydown Area - Sampling Date of December 22, 2005	Our Project Number CHEM-05-2177

Sample Identification	SLD-PCB-S27	**Sample Identification**	SLD-PCB-S28
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	12-22-05	Sample Date	12-22-05
Received Date	12-30-05	Received Date	12-30-05
Report Date	01-20-06	Report Date	01-20-06
Percent Solids, % w/w	83	Percent Solids, % w/w	81
Preparation Date	01-04-06	Preparation Date	01-04-06
Analysis Date	01-09-06	Analysis Date	01-09-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	052177-27	Control Number	052177-28

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	103	73-134	Decachlorobiphenyl	102	73-134

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Was Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By JM Date 01/20/06 Sequence 010906A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - South PCB Laydown Area - Sampling Date of December 22, 2005	Our Project Number CHEM-05-2177

Sample Identification	SLD-PCB-S29	**Sample Identification**	SLD-PCB-S30
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	12-22-05	Sample Date	12-22-05
Received Date	12-30-05	Received Date	12-30-05
Report Date	01-20-06	Report Date	01-20-06
Percent Solids, % w/w	85	Percent Solids, % w/w	83
Preparation Date	01-04-06	Preparation Date	01-04-06
Analysis Date	01-09-06	Analysis Date	01-10-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	052177-29	Control Number	052177-30

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	103	73-134	Decachlorobiphenyl	107	73-134

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Was Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By AM Date 012006 Sequence 010906A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - South PCB Laydown Area - Sampling Date of December 22, 2005	Our Project Number CHEM-05-2177

Sample Identification	SLD-PCB-S31	**Sample Identification**	SLD-PCB-S32
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	12-22-05	Sample Date	12-22-05
Received Date	12-30-05	Received Date	12-30-05
Report Date	01-20-06	Report Date	01-20-06
Percent Solids, % w/w	88	Percent Solids, % w/w	89
Preparation Date	01-04-06	Preparation Date	01-04-06
Analysis Date	01-10-06	Analysis Date	01-10-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	052177-31	Control Number	052177-32

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	100	73-134	Decachlorobiphenyl	98	73-134

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Was Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By SU Date 9 2006 Sequence 010906A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - South PCB Laydown Area - Sampling Date of December 22, 2005	Our Project Number CHEM-05-2177

Sample Identification	SLD-PCB-S33		**Sample Identification**	SLD-PCB-S34	
Sample Depth, inches	3		Sample Depth, inches	3	
Sample Type	soil		Sample Type	soil	
Sample Date	12-22-05		Sample Date	12-22-05	
Received Date	12-30-05		Received Date	12-30-05	
Report Date	01-20-06		Report Date	01-20-06	
Percent Solids, % w/w	91		Percent Solids, % w/w	84	
Preparation Date	01-04-06		Preparation Date	01-04-06	
Analysis Date	01-10-06		Analysis Date	01-10-06	
Analyst	bek, glc		Analyst	bek, glc	
Control Number	052177-33		Control Number	052177-34	
TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	--	PCB-1016	nd	--
PCB-1221	nd	--	PCB-1221	nd	--
PCB-1232	nd	--	PCB-1232	nd	--
PCB-1242	nd	--	PCB-1242	nd	--
PCB-1248	nd	--	PCB-1248	nd	--
PCB-1254	nd	--	PCB-1254	2,400	--
PCB-1260	nd	--	PCB-1260	nd	--
PCB-1262	nd	--	PCB-1262	nd	--
PCB-1268	nd	--	PCB-1268	nd	--
Sum of Aroclors	nd	330	Sum of Aroclors	2,400	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	99	73-134	Decachlorobiphenyl	97	73-134

NOTES:

TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Was Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Aroclor Type & Concentration Were Confirmed Using A Second Column.

Reviewed By AU Date 012006 Sequence 010906A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - South PCB Laydown Area - Sampling Date of December 22, 2005	Our Project Number CHEM-05-2177

Sample Identification	SLD-PCB-S35	**Sample Identification**	SLD-PCB-S36
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	12-22-05	Sample Date	12-22-05
Received Date	12-30-05	Received Date	12-30-05
Report Date	01-20-06	Report Date	01-20-06
Percent Solids, % w/w	87	Percent Solids, % w/w	83
Preparation Date	01-04-06	Preparation Date	01-04-06
Analysis Date	01-10-06	Analysis Date	01-10-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	052177-35	Control Number	052177-36

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	97	73-134	Decachlorobiphenyl	95	73-134

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Was Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By SM Date 01/2006 Sequence 010906A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - South PCB Laydown Area - Sampling Date of December 22, 2005	Our Project Number CHEM-05-2177

Sample Identification	SLD-PCB-S37	**Sample Identification**	SLD-PCB-S38
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	12-22-05	Sample Date	12-22-05
Received Date	12-30-05	Received Date	12-30-05
Report Date	01-20-06	Report Date	01-20-06
Percent Solids, % w/w	87	Percent Solids, % w/w	85
Preparation Date	01-04-06	Preparation Date	01-04-06
Analysis Date	01-10-06	Analysis Date	01-10-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	052177-37	Control Number	052177-38

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	450	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	450	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	103	73-134	Decachlorobiphenyl	105	73-134

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Was Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Aroclor Type & Concentration Were Confirmed Using A Second Column.

Reviewed By _____ Date 01/2006 Sequence 010906A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - South PCB Laydown Area - Sampling Date of December 22, 2005	Our Project Number CHEM-05-2177

Sample Identification	SLD-PCB-S39	**Sample Identification**	SLD-PCB-S40
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	12-22-05	Sample Date	12-22-05
Received Date	12-30-05	Received Date	12-30-05
Report Date	01-20-06	Report Date	01-20-06
Percent Solids, % w/w	82	Percent Solids, % w/w	87
Preparation Date	01-04-06	Preparation Date	01-04-06
Analysis Date	01-10-06	Analysis Date	01-10-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	052177-39	Control Number	052177-40

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	103	73-134	Decachlorobiphenyl	98	73-134

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Was Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By SM Date 6/2006 Sequence 010906A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - South PCB Laydown Area - Sampling Date of December 22, 2005	Our Project Number CHEM-05-2177

Sample Identification	SLD-PCB-S43	**Sample Identification**	SLD-PCB-S44
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	12-22-05	Sample Date	12-22-05
Received Date	12-30-05	Received Date	12-30-05
Report Date	01-20-06	Report Date	01-20-06
Percent Solids, % w/w	91	Percent Solids, % w/w	91
Preparation Date	01-04-06	Preparation Date	01-04-06
Analysis Date	01-10-06	Analysis Date	01-10-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	052177-41	Control Number	052177-42

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	1,200	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	1,200	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	105	73-134	Decachlorobiphenyl	100	73-134

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Was Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Aroclor Type & Concentration Were Confirmed Using A Second Column.

Reviewed By AM Date 01/20/06 Sequence 010906A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - South PCB Laydown Area - Sampling Date of December 22, 2005	Our Project Number CHEM-05-2177

Sample Identification	SLD-PCB-S45	**Sample Identification**	SLD-PCB-S46
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	12-22-05	Sample Date	12-22-05
Received Date	12-30-05	Received Date	12-30-05
Report Date	01-20-06	Report Date	01-20-06
Percent Solids, % w/w	88	Percent Solids, % w/w	84
Preparation Date	01-04-06	Preparation Date	01-04-06
Analysis Date	01-10-06	Analysis Date	01-10-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	052177-43	Control Number	052177-44

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	99	73-134	Decachlorobiphenyl	98	73-134

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Was Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By AH Date 01/20/06 Sequence 010906A

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – LABORATORY SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: Big Rock Point

PROJECT NUMBER: BRP South PCB Laydown Area

SAMPLING TEAM:

DATE SHIPPED:

SITE SKETCH ATTACHED? CIRCLE ONE: YES NO

PAGE 1 OF 4

SEND REPORT TO: Tracy Goble, Big Rock, PHONE: 231-547-8389

ANALYSIS REQUESTED: PCB's

CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	PCB's	REMARKS
05-2177-01	2/22/05	1250		SLD-PCB-S1	3"	1	X	
.02	2/22/05	1251		SLD-PCB-S2	3"	1	X	
.03	2/22/05	1252		SLD-PCB-S3	3"	1	X	
.04	2/22/05	1254		SLD-PCB-S4	3"	1	X	
.05	2/22/05	1257		SLD-PCB-S5	3"	1	X	
.06	2/22/05	1300		SLD-PCB-S6	3"	1	X	
.07	2/22/05	1301		SLD-PCB-S7	3"	1	X	
.08	2/22/05	1303		SLD-PCB-S8	3"	1	X	
.09	2/22/05	1306		SLD-PCB-S9	3"	1	X	
.10	2/22/05	1307		SLD-PCB-S10	3"	1	X	
.11	2/22/05	1308		SLD-PCB-S11	3"	1	X	
.12	2/22/05	1310		SLD-PCB-S12	3"	1	X	

All months should be "12" not "2" JLK

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
Jodie L. Reed	12/28/05 @ 1500	FEDEX
FedEx	12/30/05 @ 1600	[illegible]

COMMENTS: Two survey teams were collecting samples simultaneously; therefore, some sample times may be the same. JLA

ORIGINAL TO LAB COPY TO CUSTOMER 12-22-05

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – LABORATORY SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: Big Rock Point

PROJECT NUMBER: BRP South PCB Laydown Area

SAMPLING TEAM:

DATE SHIPPED:

SITE SKETCH ATTACHED? CIRCLE ONE: YES NO

ANALYSIS REQUESTED: PCB'S

PAGE 2 OF 4

SEND REPORT TO: Tracy Goble, Big Rock, PHONE: 231-547-8389

CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	PCB'S							REMARKS
05-2177-13	2/22/05	1311		SLD-PCB-S13	3"	1	X							
-14	2/22/05	1312		SLD-PCB-S14	3"	1	X							
-15	2/22/05	1315		SLD-PCB-S15	3"	1	X							
-16	2/22/05	1317		SLD-PCB-S16	3"	1	X							
-17	2/22/05	1312		SLD-PCB-S17	3"	1	X							
-18	2/22/05	1313		SLD-PCB-S18	3"	1	X							
-19	2/22/05	1315		SLD-PCB-S19	3"	1	X							
-20	2/22/05	1317		SLD-PCB-S20	3"	1	X							
-21	2/22/05	1313		SLD-PCB-S21	3"	1	X							
-22	2/22/05	1314		SLD-PCB-S22	3"	1	X							
-23	2/22/05	1311		SLD-PCB-S23	3"	1	X							
-24	2/22/05	1318		SLD-PCB-S24	3"	1	X							

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
[signature]	12/28/05 @ 1500	FEDEX
FEDEX	12/30/05 @ 16:00	[signature]

COMMENTS: Two Survey teams were collecting samples simultaneously; therefore, some sample

ORIGINAL TO LAB COPY TO CUSTOMER

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – LABORATORY SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: Big Rock Point

PROJECT NUMBER: BRP South PCB Laydown Area

SAMPLING TEAM:

DATE SHIPPED:

SITE SKETCH ATTACHED? CIRCLE ONE: YES NO

PAGE 3 OF 4

SEND REPORT TO: Tracy Goble, Big Rock, PHONE: 231-547-8389

CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	ANALYSIS REQUESTED: PCB's							REMARKS
05.2177.25	2/22/05	1319		SLD-PCB-525	3"	1	X							
.26	2/22/05	1320		SLD-PCB-526	3"	1	X							
.27	2/22/05	1322		SLD-PCB-527	3"	1	X							
.28	2/22/05	1319		SLD-PCB-528	3"	1	X							
.29	2/22/05	1320		SLD-PCB-529	3"	1	X							
.30	2/22/05	1321		SLD-PCB-530	3"	1	X							
.31	2/22/05	1327		SLD-PCB-531	3"	1	X							
.32	2/22/05	1326		SLD-PCB-532	3"	1	X							
.33	2/22/05	1324		SLD-PCB-533	3"	1	X							
.34	2/22/05	1323		SLD-PCB-534	3"	1	X							
.35	2/22/05	1322		SLD-PCB-535	3"	1	X							
.36	2/22/05	1321		SLD-PCB-536	3"	1	X							

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
Jodie T. Reed	12/28/05 @ 1500	FEDEX
FEDEX	12/30/05 @ 1600	[signature]

COMMENTS

Two survey teams were collecting samples simultaneously; therefore, some sample times may be the same.

ORIGINAL TO LAB COPY TO CUSTOMER

gll 12-22-05

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – LABORATORY SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: Big Rock Point

PROJECT NUMBER: BRP South PCB Laydown Area

SAMPLING TEAM:

DATE SHIPPED:

SITE SKETCH ATTACHED? CIRCLE ONE: YES NO

PAGE 4 OF 4

SEND REPORT TO: Tracy Goble, Big Rock, PHONE: 231-547-8389

CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	ANALYSIS REQUESTED: PCB's							REMARKS
05-2177-37	2/22/05	1322		SLD-PCB-37	3"	1	X							
-38	2/22/05	1323		SLD-PCB-38	3"	1	X							
-39	2/22/05	1325		SLD-PCB-39	3"	1	X							
-40	2/22/05	1325		SLD-PCB-40	3"	1	X							
-41	2/22/05	1328		SLD-PCB-43	3"	1	X							
-42	2/22/05	1319		SLD-PCB-44	3"	1	X							
-43	2/22/05	1329		SLD-PCB-45	3"	1	X							
-44	2/22/05	1328		SLD-PCB-46	3"	1	X							

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
Jackie L. Reed	12/28/05 @ 1500	FEDEX
FEDEX	12/30/05 @ 1600	[illegible]

COMMENTS

Sample #41 + #42 fell outside of the survey unit; therefore, no sample was taken at either location.

ORIGINAL TO LAB COPY TO CUSTOMER

Sample Locations -
PCB Laydown South

Sample No.	X Coord.	Y Coord.	Sample No.	X Coord.	Y Coord.	Sample No.	X Coord.	Y Coord.
1	1.2	0.1	16	12.4	1.7	31	1.2	6.5
2	2.8	0.1	17	1.2	3.3	32	2.8	6.5
3	4.4	0.1	18	2.8	3.3	33	4.4	6.5
4	6.0	0.1	19	4.4	3.3	34	6.0	6.5
5	7.6	0.1	20	6.0	3.3	35	7.6	6.5
6	9.2	0.1	21	7.6	3.3	36	9.2	6.5
7	10.8	0.1	22	9.2	3.3	37	1.2	8.1
8	12.4	0.1	23	10.8	3.3	38	2.8	8.1
9	1.2	1.7	24	1.2	4.9	39	4.4	8.1
10	2.8	1.7	25	2.8	4.9	40	6.0	8.1
11	4.4	1.7	26	4.4	4.9	41	7.6	8.1
12	6.0	1.7	27	6.0	4.9	42	9.2	8.1
13	7.6	1.7	28	7.6	4.9			
14	9.2	1.7	29	9.2	4.9			
15	10.8	1.7	30	10.8	4.9			

**Sample no. 31 is the random start location*

Sample spacing is 1.6 meters

Single RN 0.346227026

Set 1	Set 2
5	17
24	3
1	13
9	16
29	7
40	5
5	
23	**Set 4**
31	16
28	6
8	6
32	12
31	12
21	5

Random X-Y start points

X	0.252839
Y	0.506948

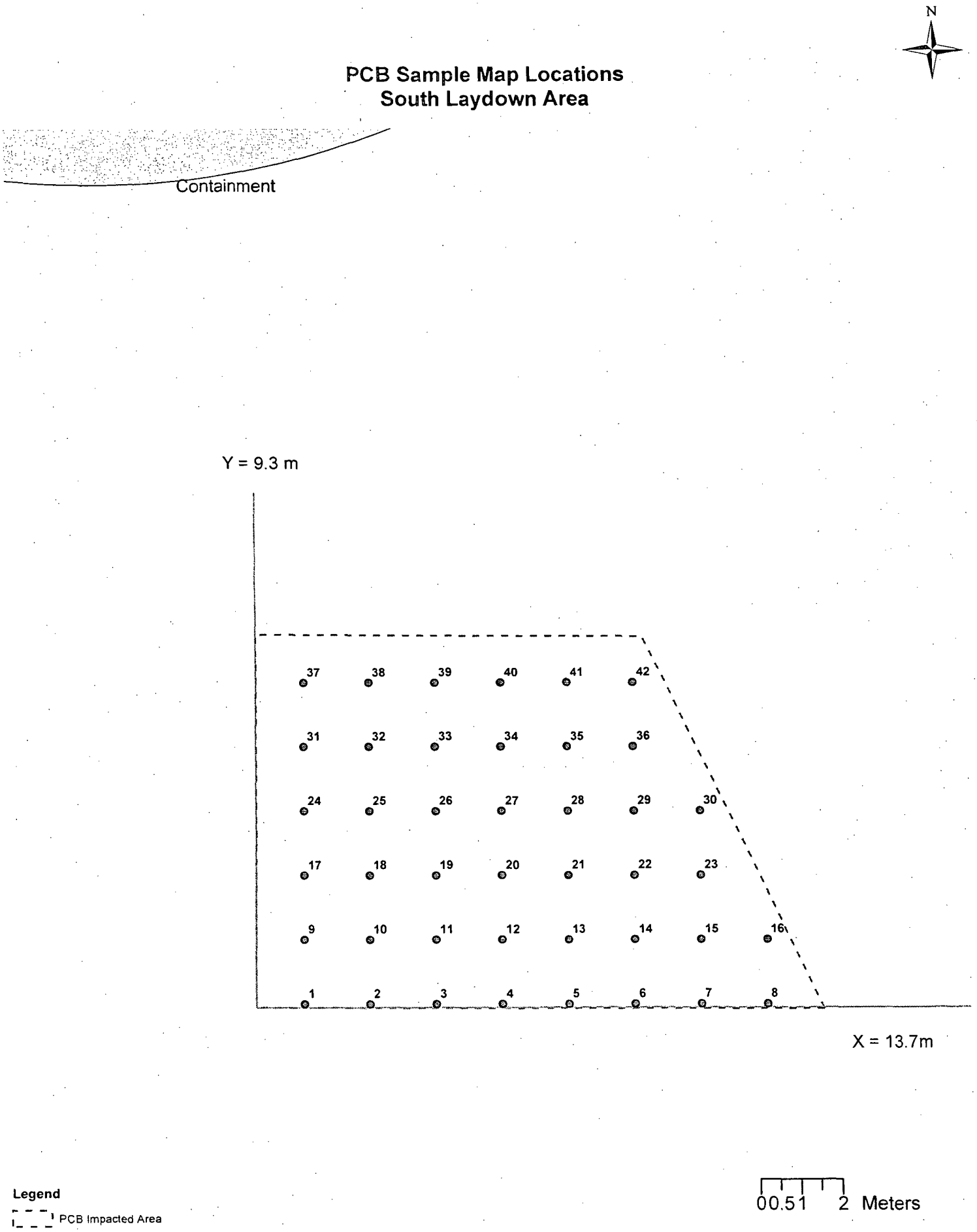
=

=

Random QA
Sample #'s

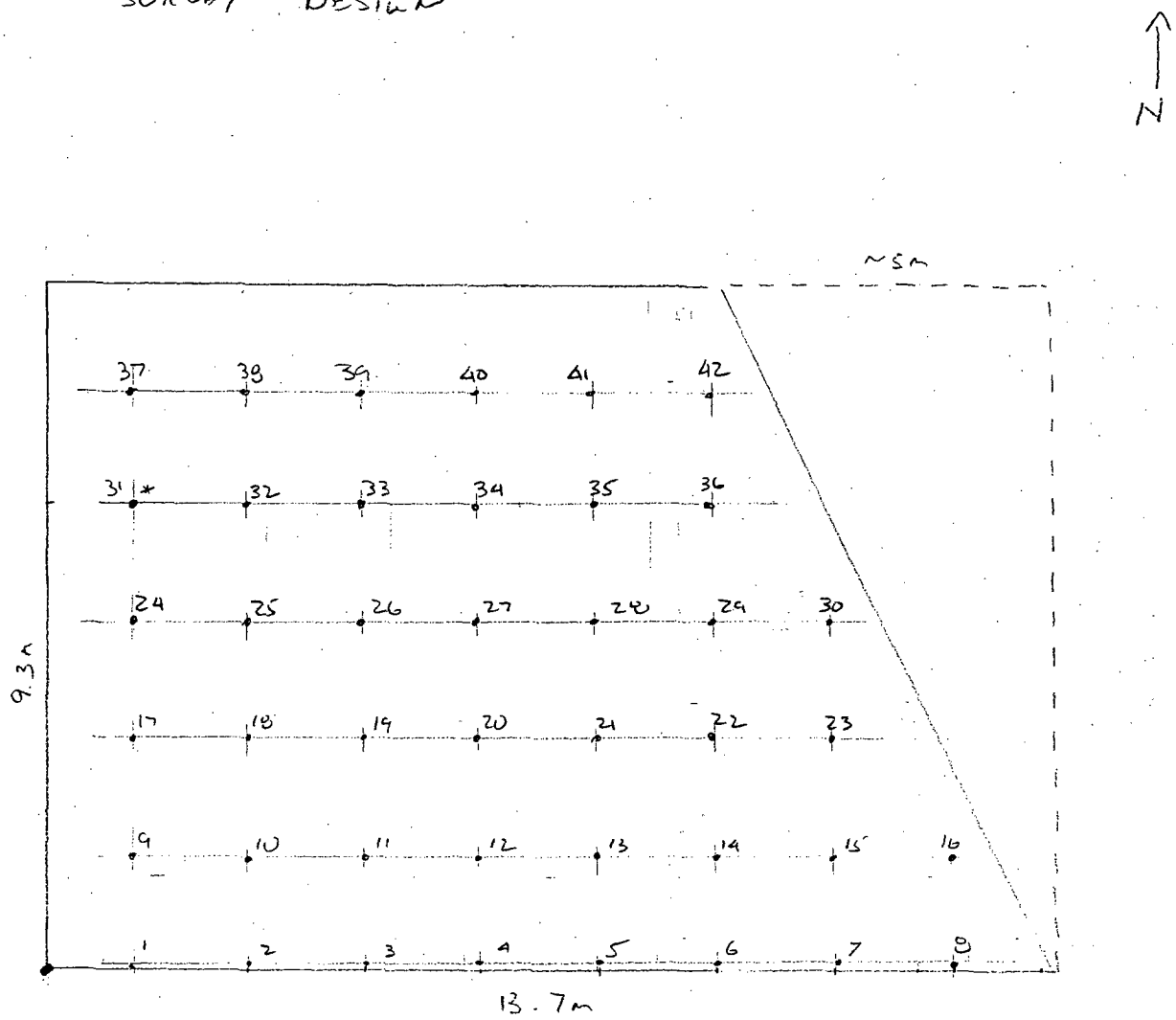
5 = 43
24 = 44
1 = 45
9 = 46

PCB Sample Map Locations
South Laydown Area



PCB AREA SOUTH OF SPHERE

SURVEY DESIGN



IRREGULAR SIZE AREA

USING 1.6 m SPACING

SQUARE - GRID

*RANDOM START LOCATION $X = (13.7)(0.083982) = 1.15$ m

$Y = (9.3)(0.696504) = 6.48$ m

PCB SURVEY PACKAGE CLOSE-OUT CHECKLIST

Package ID Number: 0008 Survey Area: Containment 599.5' Elevation

The survey package is legible and complete and the following necessary information is in the package:

1. ✓ Survey Package Cover Sheet
2. ✓ Survey design documentation
3. ✓ Random number generator sheet for sample start location and QC sample numbers.
4. ✓ Completed survey map/data sheet
5. ✓ Completed PCB Survey Data Record Sheet
6. ✓ Copy of the Chain of Custody
7. ✓ Copy of sample results
8. N/A Other documentation:

Completed By: Jodie L Reed Date: 02/14/06
(Environmental Technician)

Reviewed By: [illegible] Date: 02/21/06
(Environmental Supervisor)

PCB SURVEY PACKAGE COVER SHEET

Package ID Number : 0008	Survey Area: Containment 599.5' Elevation	Size (m^2): ~225.7

Random Samples

# of Field Samples: 43
# of QC samples: 04

Random Start Location: X (2.5), Y (2.7)
Sample Spacing: 2.3 meters

Isolation Controls implemented ☑ List controls: Area posted as a PCB survey area.

Comments/specific directions[1]: -Random sample locations determined by random number generator.

-Sample analysis results acceptance criteria is <10 ug/100cm^2 for wipe samples.

([1] Address any inaccessible areas or sample points not included in survey).

SURVEY PACKAGE CLOSURE

Screening Survey Package is authorized for closure. All required reviews are completed and pertinent information is included in package (see Survey Package Close-Out Checklist).

ENV Technician Jodie A. Reed Date: 02/14/06

ENV Supervisor: [illegible] Date: 02/21/06

Package ID Number: 0008

PCB SURVEY DATA RECORD SHEET

Survey Area: 599.5' Floor Containment	Size (m^2): ~225.7	# of Samples: 46

Sample ID Number	Sample Location (X)(Y)	Sample Result (ug/100cm^2)	Sample ID Number	Sample Location (X)(Y)	Sample Result (ug/100cm^2)
C-PCB-W1	(0.2)(0.4)	0.1	C-PCB-W27	(14.0)(7.3)	0.2
C-PCB-W2	(2.5)(0.4)	0.2	C-PCB-W28	(11.7)(7.3)	0.1
C-PCB-W3	(4.8)(0.4)	nda	C-PCB-W29	(9.4)(7.3)	nda
C-PCB-W4	(7.1)(0.4)	nda	C-PCB-W30	(7.1)(7.3)	nda
C-PCB-W5	(9.4)(0.4)	nda	C-PCB-W31	(4.8)(7.3)	0.2
C-PCB-W6	(11.7)(0.4)	nda	C-PCB-W32	(7.1)(9.6)	0.1
C-PCB-W7	(14.0)(0.4)	na	C-PCB-W33	(9.4)(9.6)	0.2
C-PCB-W8	(16.3)(2.7)	nda	C-PCB-W34	(11.7)(9.6)	nda
C-PCB-W9	(14.0)(2.7)	nda	C-PCB-W35	(14.0)(9.6)	0.2
C-PCB-W10	(11.7)(2.7)	nda	C-PCB-W36	(16.3)(9.6)	0.1
C-PCB-W11	(9.4)(2.7)	0.1	C-PCB-W37	(18.6)(9.6)	nda
C-PCB-W12	(7.1)(2.7)	nda	C-PCB-W38	(20.9)(9.6)	0.1
C-PCB-W13	(4.8)(2.7)	nda	C-PCB-W39	(20.9)(11.9)	nda
C-PCB-W14	(2.5)(2.7)	nda	C-PCB-W40	(18.6)(11.9)	nda
C-PCB-W15	(2.5)(5.0)	0.1	C-PCB-W41	(16.3)(11.9)	nda
C-PCB-W16	(4.8)(5.0)	nda	C-PCB-W42	(14.0)(11.9)	nda
C-PCB-W17	(7.1)(5.0)	nda	C-PCB-W43	(11.7)(11.9)	nda
C-PCB-W18	(9.4)(5.0)	nda	C-PCB-W44	(4.8)(0.4)	nda
C-PCB-W19	(11.7)(5.0)	0.2	C-PCB-W45	(7.1)(5.0)	nda
C-PCB-W20	(14.0)(5.0)	nda	C-PCB-W46	FIELD BLANK	nda
C-PCB-W21	(16.3)(5.0)	nda	C-PCB-W47	FIELD BLANK	nda
C-PCB-W23	(20.9)(5.0)	0.1			
C-PCB-W24	(20.9)(7.3)	0.1			
C-PCB-W25	(20.9)(7.3)	nda			
C-PCB-W26	(20.9)(7.3)	0.1			

Performed By: Jodie L. Reed (Survey Technician) Date: 02/14/06

Reviewed By: (Environmental Supervisor) Date: 2/21/06

CONSUMERS ENERGY Memorandum

To: TGoble, Big Rock

From: GLCattell, T-254, Jackson

Date: February 02, 2006

Subject: SAMPLES FOR DETERMINATION OF PCBs
- Surface Wipes
- Containment @ 599'6"
- Sampling Date of January 31, 2006

CC: WMHoaglund, Big Rock

File Index: 510617-784-199

Eight surface wipe samples were received on February 01 for determination of polychlorinated biphenyls (PCBs). All determinations were performed by the Chemistry Section of Laboratory Services and the results are attached for your review.

Analytical Methods

Unless otherwise specified, all methods are from SW-846, Test Methods For Evaluating Solid Waste - Physical / Chemical Methods, USEPA.

Sample Extraction - Method 3550, Ultrasonic Extraction.
Extract Concentration – Nitrogen Evaporation Technique, Exhibit D, Aroclors, Section 10.
Multi-Media, Multi-Concentration Organics Analysis; SOM01.X; USEPA.
Extract Cleanup – Method 3620, Florisil Cleanup & Method 3665, Sulfuric Acid/Permanganate Cleanup.
Polychlorinated Biphenyls - Method 8082, Polychlorinated Biphenyls by Gas Chromatography.

Analytical Remarks & Summary

a. All surface wipe MDLs are listed as "<" for uniformity. The actual MDLs of individual Aroclors vary slightly amongst each other and detectors.
b. All samples are reported as 'nd' (not detected) for all Aroclors.
c. All surface wipe areas are assumed to be $100cm^2$.

Report Package Contents

The report package consists of 6 pages: 1 cover page, 4 pages of Analytical Results & 1 Chain of Custody page.

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment @ 599' 6" - Sampling Date of January 31, 2006	Our Project Number CHEM-06-0199

Sample Identification	C-BRP-W39	**Sample Identification**	C-BRP-W40
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	01-31-06	Sample Date	01-31-06
Received Date	02-01-06	Received Date	02-01-06
Report Date	02-02-06	Report Date	02-02-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	02-01-06	Preparation Date	02-01-06
Analysis Date	02-01-06	Analysis Date	02-01-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060199-01	Control Number	060199-02

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	82	59-109	Decachlorobiphenyl	89	59-109

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Was Not Detected At The MDL

Reviewed By _____ Date 02-03-06

Sequence 020106A	
C-BRP-W39	C-BRP-W40

PCBs

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment @ 599' 6" - Sampling Date of January 31, 2006	Our Project Number CHEM-06-0199

Sample Identification	C-BRP-W41	Sample Identification	C-BRP-W42
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	01-31-06	Sample Date	01-31-06
Received Date	02-01-06	Received Date	02-01-06
Report Date	02-02-06	Report Date	02-02-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	02-01-06	Preparation Date	02-01-06
Analysis Date	02-01-06	Analysis Date	02-01-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060199-03	Control Number	060199-04

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	88	59-109	Decachlorobiphenyl	92	59-109

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Was Not Detected At The MDL

Reviewed By _____ Date 02-02-06

Sequence 020106A	
C-BRP-W41	C-BRP-W42

PCBs

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment @ 599' 6" - Sampling Date of January 31, 2006	Our Project Number CHEM-06-0199

Sample Identification	C-BRP-W43	**Sample Identification**	C-BRP-W6
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	01-31-06	Sample Date	01-31-06
Received Date	02-01-06	Received Date	02-01-06
Report Date	02-02-06	Report Date	02-02-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	02-01-06	Preparation Date	02-01-06
Analysis Date	02-01-06	Analysis Date	02-01-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060199-05	Control Number	060199-06

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	92	59-109	Decachlorobiphenyl	96	59-109

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Was Not Detected At The MDL

Reviewed By [signature] Date 020206

Sequence 020106A	
C-BRP-W43	C-BRP-W6

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment @ 599' 6" - Sampling Date of January 31, 2006	Our Project Number CHEM-06-0199

Sample Identification	C-BRP-W12	Sample Identification	C-BRP-W25
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	01-31-06	Sample Date	01-31-06
Received Date	02-01-06	Received Date	02-01-06
Report Date	02-02-06	Report Date	02-02-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	02-01-06	Preparation Date	02-01-06
Analysis Date	02-01-06	Analysis Date	02-01-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060199-07	Control Number	060199-08

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	96	59-109	Decachlorobiphenyl	96	59-109

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Was Not Detected At The MDL

Reviewed By _____ Date 020206

Sequence 020106A	
C-BRP-W12	C-BRP-W25

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – LABORATORY SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: Consumers Energy Big Rock Point

PROJECT NUMBER: Containment - 599' 6" elevation

SAMPLING TEAM:

DATE SHIPPED: 1-31-06

SITE SKETCH ATTACHED? CIRCLE ONE: YES NO

PAGE 1 OF 1

SEND REPORT TO: Tracy Goble Big Rock

PHONE: 231-547-8389

CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	ANALYSIS REQUESTED: PCB's							REMARKS
C-BRP-W39	1-31-06	1010		C - BRP - W39			X							06-0199-01
C-BRP-W40	1-31-06	1013		C - BRP - W40			X							-02
C-BRP-W41	1-31-06	1014		C - BRP - W41			X							-03
C-BRP-W42	1-31-06	1015		C - BRP - W42			X							-04
C-BRP-W43	1-31-06	1016		C - BRP - W43			X							-05
C-BRP-W6	1-31-06	0845		C - BRP - W6			X							-06
C-BRP-W12	1-31-06	0900		C - BRP - W12			X							-07
C-BRP-W25	1-31-06	0942		C - BRP - W25			X							-08

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
Joshua L. Reed	1-31-06 / 1501	FEDEX OVERNIGHT
	02.01.06 1050	

COMMENTS: RUSH

ORIGINAL TO LAB COPY TO CUSTOMER

CONSUMERS ENERGY Memorandum

To: TGoble, Big Rock

From: GLCattell, T-254, Jackson

Date: February 10, 2006

Subject: SAMPLES FOR DETERMINATION OF PCBs
- Surface Wipes
- Containment @ 599.5'
- Sampling Date of January 31, 2006

CC: WMHoaglund, Big Rock

File Index: 510617-784-210

Thirty-eight surface wipe samples were received on February 02 for determination of polychlorinated biphenyls (PCBs). All determinations were performed by the Chemistry Section of Laboratory Services and the results are attached for your review.

Analytical Methods

Unless otherwise specified, all methods are from SW-846, Test Methods For Evaluating Solid Waste - Physical / Chemical Methods, USEPA.

Sample Extraction - Method 3550, Ultrasonic Extraction.
Extract Concentration – Nitrogen Evaporation Technique, Exhibit D, Aroclors, Section 10. Multi-Media, Multi-Concentration Organics Analysis; SOM01.X; USEPA.
Extract Cleanup – Method 3620, Florisil Cleanup; Method 3665A, Sulfuric Acid/Permanganate Cleanup & Method 3660B, Sulfur Cleanup.
Polychlorinated Biphenyls - Method 8082, Polychlorinated Biphenyls by Gas Chromatography.

Analytical Remarks & Summary

a. All surface wipe MDLs are listed as "<" for uniformity. The actual MDLs of individual Aroclors vary slightly amongst each other and detectors.
b. Sixteen samples are reported with PCB concentrations above the MDL; All identified as Aroclor 1254. All other samples are reported as 'nd' (not detected) for all Aroclors.
c. All surface wipe areas are assumed to be $100cm^2$.

Report Package Contents

The report package consists of 24 pages: 1 cover page, 19 pages of Analytical Results & 4 Chain of Custody pages.

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment @ 599.5' Elevation - Sampling Date of January 31, 2006	Our Project Number CHEM-06-0210

Sample Identification	C-PCB-W1	**Sample Identification**	C-PCB-W2
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	01-31-06	Sample Date	01-31-06
Received Date	02-02-06	Received Date	02-02-06
Report Date	02-10-06	Report Date	02-10-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	02-02-06	Preparation Date	02-02-06
Analysis Date	02-07-06	Analysis Date	02-07-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060210-01	Control Number	060210-02

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	0.1	<0.1	PCB-1254	0.2	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	95	59-109	Decachlorobiphenyl	91	59-109

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Was Not Detected At The MDL
Any Aroclors & Concentrations > MDL Were Confirmed On A Second Column

Reviewed By JM Date 02/10/06

Sequence 020706A&B	
C-PCB-W1	C-PCB-W2

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment @ 599.5' Elevation - Sampling Date of January 31, 2006	Our Project Number CHEM-06-0210

Sample Identification	C-PCB-W3	**Sample Identification**	C-PCB-W4
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	01-31-06	Sample Date	01-31-06
Received Date	02-02-06	Received Date	02-02-06
Report Date	02-10-06	Report Date	02-10-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	02-02-06	Preparation Date	02-02-06
Analysis Date	02-07-06	Analysis Date	02-07-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060210-03	Control Number	060210-04

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	98	59-109	Decachlorobiphenyl	100	59-109

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Was Not Detected At The MDL
Any Aroclors & Concentrations > MDL Were Confirmed On A Second Column

Reviewed By AU Date 02/2006

Sequence 020706A&B	
C-PCB-W3	C-PCB-W4

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment @ 599.5' Elevation - Sampling Date of January 31, 2006	Our Project Number CHEM-06-0210

Sample Identification	C-PCB-W5	**Sample Identification**	C-PCB-W7
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	01-31-06	Sample Date	01-31-06
Received Date	02-02-06	Received Date	02-02-06
Report Date	02-10-06	Report Date	02-10-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	02-02-06	Preparation Date	02-02-06
Analysis Date	02-09-06	Analysis Date	02-07-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060210-05	Control Number	060210-06

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	83	59-109	Decachlorobiphenyl	99	59-109

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Was Not Detected At The MDL
Any Aroclors & Concentrations > MDL Were Confirmed On A Second Column

Reviewed By AU Date 02/10/06

Sequence 020706A&B	
C-PCB-W5	C-PCB-W7

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment @ 599.5' Elevation - Sampling Date of January 31, 2006	Our Project Number CHEM-06-0210

Sample Identification	C-PCB-W8	**Sample Identification**	C-PCB-W9
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	01-31-06	Sample Date	01-31-06
Received Date	02-02-06	Received Date	02-02-06
Report Date	02-10-06	Report Date	02-10-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	02-02-06	Preparation Date	02-02-06
Analysis Date	02-07-06	Analysis Date	02-09-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060210-07	Control Number	060210-08

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	98	59-109	Decachlorobiphenyl	89	59-109

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Was Not Detected At The MDL
Any Aroclors & Concentrations > MDL Were Confirmed On A Second Column

Reviewed By AU Date 02/10/06

Sequence 020706A&B	
C-PCB-W8	C-PCB-W9

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment @ 599.5' Elevation - Sampling Date of January 31, 2006	Our Project Number CHEM-06-0210

Sample Identification	C-PCB-W10	**Sample Identification**	C-PCB-W11
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	01-31-06	Sample Date	01-31-06
Received Date	02-02-06	Received Date	02-02-06
Report Date	02-10-06	Report Date	02-10-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	02-02-06	Preparation Date	02-02-06
Analysis Date	02-07-06	Analysis Date	02-07-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060210-09	Control Number	060210-10

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	nd	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	97	59-109

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	0.1	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	98	59-109

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Was Not Detected At The MDL
Any Aroclors & Concentrations > MDL Were Confirmed On A Second Column

Reviewed By AM Date 02-10-06

Sequence 020706A&B	
C-PCB-W10	C-PCB-W11

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment @ 599.5' Elevation - Sampling Date of January 31, 2006	Our Project Number CHEM-06-0210

Sample Identification	C-PCB-W13	**Sample Identification**	C-PCB-W14
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	01-31-06	Sample Date	01-31-06
Received Date	02-02-06	Received Date	02-02-06
Report Date	02-10-06	Report Date	02-10-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	02-02-06	Preparation Date	02-02-06
Analysis Date	02-07-06	Analysis Date	02-07-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060210-11	Control Number	060210-12

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	101	59-109	Decachlorobiphenyl	100	59-109

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Was Not Detected At The MDL
Any Aroclors & Concentrations > MDL Were Confirmed On A Second Column

Reviewed By AU Date 02/10/06

Sequence 020706A&B	
C-PCB-W13	C-PCB-W14

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment @ 599.5' Elevation - Sampling Date of January 31, 2006	Our Project Number CHEM-06-0210

Sample Identification	C-PCB-W15	**Sample Identification**	C-PCB-W16
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	01-31-06	Sample Date	01-31-06
Received Date	02-02-06	Received Date	02-02-06
Report Date	02-10-06	Report Date	02-10-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	02-02-06	Preparation Date	02-02-06
Analysis Date	02-07-06	Analysis Date	02-07-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060210-13	Control Number	060210-14

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	0.1	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	102	59-109	Decachlorobiphenyl	96	59-109

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Was Not Detected At The MDL
Any Aroclors & Concentrations > MDL Were Confirmed On A Second Column

Reviewed By AU Date 02-10-06

Sequence 020706A&B	
C-PCB-W15	C-PCB-W16

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment @ 599.5' Elevation - Sampling Date of January 31, 2006	Our Project Number CHEM-06-0210

Sample Identification	C-PCB-W17	**Sample Identification**	C-PCB-W18
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	01-31-06	Sample Date	01-31-06
Received Date	02-02-06	Received Date	02-02-06
Report Date	02-10-06	Report Date	02-10-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	02-02-06	Preparation Date	02-02-06
Analysis Date	02-07-06	Analysis Date	02-07-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060210-15	Control Number	060210-16

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	96	59-109	Decachlorobiphenyl	91	59-109

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Was Not Detected At The MDL
Any Aroclors & Concentrations > MDL Were Confirmed On A Second Column

Reviewed By Su Date 021006

Sequence 020706A&B	
C-PCB-W17	C-PCB-W18

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment @ 599.5' Elevation - Sampling Date of January 31, 2006	Our Project Number CHEM-06-0210

Sample Identification	C-PCB-W19	**Sample Identification**	C-PCB-W20
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	01-31-06	Sample Date	01-31-06
Received Date	02-02-06	Received Date	02-02-06
Report Date	02-10-06	Report Date	02-10-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	02-02-06	Preparation Date	02-02-06
Analysis Date	02-07-06	Analysis Date	02-07-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060210-17	Control Number	060210-18

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	0.2	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	97	59-109	Decachlorobiphenyl	96	59-109

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Was Not Detected At The MDL
Any Aroclors & Concentrations > MDL Were Confirmed On A Second Column

Reviewed By AJL Date 021006

Sequence 020706A&B	
C-PCB-W19	C-PCB-W20

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment @ 599.5' Elevation - Sampling Date of January 31, 2006	Our Project Number CHEM-06-0210

Sample Identification	C-PCB-W21	Sample Identification	C-PCB-W23
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	01-31-06	Sample Date	01-31-06
Received Date	02-02-06	Received Date	02-02-06
Report Date	02-10-06	Report Date	02-10-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	02-02-06	Preparation Date	02-03-06
Analysis Date	02-07-06	Analysis Date	02-07-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060210-19	Control Number	060210-20

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	0.1	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	91	59-109	Decachlorobiphenyl	94	59-109

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Was Not Detected At The MDL
Any Aroclors & Concentrations > MDL Were Confirmed On A Second Column

Reviewed By _____ Date 02/06/06

Sequence 020706A&B	
C-PCB-W21	C-PCB-W23

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment @ 599.5' Elevation - Sampling Date of January 31, 2006	Our Project Number CHEM-06-0210

Sample Identification	C-PCB-W24	**Sample Identification**	C-PCB-W26
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	01-31-06	Sample Date	01-31-06
Received Date	02-02-06	Received Date	02-02-06
Report Date	02-10-06	Report Date	02-10-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	02-03-06	Preparation Date	02-03-06
Analysis Date	02-07-06	Analysis Date	02-08-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060210-21	Control Number	060210-22

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	0.1	<0.1	PCB-1254	0.1	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	93	59-109	Decachlorobiphenyl	95	59-109

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Was Not Detected At The MDL
Any Aroclors & Concentrations > MDL Were Confirmed On A Second Column

Reviewed By _____ Date 02-10-06

Sequence 020706A&B	
C-PCB-W24	C-PCB-W26

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment @ 599.5' Elevation - Sampling Date of January 31, 2006	Our Project Number CHEM-06-0210

Sample Identification	C-PCB-W27	Sample Identification	C-PCB-W28
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	01-31-06	Sample Date	01-31-06
Received Date	02-02-06	Received Date	02-02-06
Report Date	02-10-06	Report Date	02-10-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	02-03-06	Preparation Date	02-03-06
Analysis Date	02-08-06	Analysis Date	02-08-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060210-23	Control Number	060210-24

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	0.2	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	94	59-109

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	0.1	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	92	59-109

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Was Not Detected At The MDL
Any Aroclors & Concentrations > MDL Were Confirmed On A Second Column

Reviewed By _____ Date 021006

Sequence 020706A&B	
C-PCB-W27	C-PCB-W28

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment @ 599.5' Elevation - Sampling Date of January 31, 2006	Our Project Number CHEM-06-0210

Sample Identification	C-PCB-W29	**Sample Identification**	C-PCB-W30
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	01-31-06	Sample Date	01-31-06
Received Date	02-02-06	Received Date	02-02-06
Report Date	02-10-06	Report Date	02-10-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	02-03-06	Preparation Date	02-03-06
Analysis Date	02-08-06	Analysis Date	02-08-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060210-25	Control Number	060210-26

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	88	59-109	Decachlorobiphenyl	92	59-109

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Was Not Detected At The MDL
Any Aroclors & Concentrations > MDL Were Confirmed On A Second Column

Reviewed By AU Date 021006

Sequence 020706A&B	
C-PCB-W29	C-PCB-W30

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment @ 599.5' Elevation - Sampling Date of January 31, 2006	Our Project Number CHEM-06-0210

Sample Identification	C-PCB-W31	**Sample Identification**	C-PCB-W32
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	01-31-06	Sample Date	01-31-06
Received Date	02-02-06	Received Date	02-02-06
Report Date	02-10-06	Report Date	02-10-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	02-03-06	Preparation Date	02-03-06
Analysis Date	02-08-06	Analysis Date	02-08-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060210-27	Control Number	060210-28

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	0.2	<0.1	PCB-1254	0.1	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	91	59-109	Decachlorobiphenyl	91	59-109

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Was Not Detected At The MDL
Any Aroclors & Concentrations > MDL Were Confirmed On A Second Column

Reviewed By SU Date 021006

Sequence 020706A&B	
C-PCB-W31	C-PCB-W32

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment @ 599.5' Elevation - Sampling Date of January 31, 2006	Our Project Number CHEM-06-0210

Sample Identification	C-PCB-W33	**Sample Identification**	C-PCB-W34
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	01-31-06	Sample Date	01-31-06
Received Date	02-02-06	Received Date	02-02-06
Report Date	02-10-06	Report Date	02-10-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	02-03-06	Preparation Date	02-03-06
Analysis Date	02-08-06	Analysis Date	02-08-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060210-29	Control Number	060210-30

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	0.2	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	92	59-109	Decachlorobiphenyl	91	59-109

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Was Not Detected At The MDL
Any Aroclors & Concentrations > MDL Were Confirmed On A Second Column

Reviewed By SM Date 02/10/06

Sequence 020706A&B	
C-PCB-W33	C-PCB-W34

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment @ 599.5' Elevation - Sampling Date of January 31, 2006	Our Project Number CHEM-06-0210

Sample Identification	C-PCB-W35	Sample Identification	C-PCB-W36
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	01-31-06	Sample Date	01-31-06
Received Date	02-02-06	Received Date	02-02-06
Report Date	02-10-06	Report Date	02-10-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	02-03-06	Preparation Date	02-03-06
Analysis Date	02-08-06	Analysis Date	02-08-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060210-31	Control Number	060210-32

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	0.2	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	100	59-109

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	0.1	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	98	59-109

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Was Not Detected At The MDL
Any Aroclors & Concentrations > MDL Were Confirmed On A Second Column

Reviewed By AU Date 02/10/06

Sequence 020706A&B	
C-PCB-W35	C-PCB-W36

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment @ 599.5' Elevation - Sampling Date of January 31, 2006	Our Project Number CHEM-06-0210

Sample Identification	C-PCB-W37	**Sample Identification**	C-PCB-W38
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	01-31-06	Sample Date	01-31-06
Received Date	02-02-06	Received Date	02-02-06
Report Date	02-10-06	Report Date	02-10-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	02-03-06	Preparation Date	02-03-06
Analysis Date	02-08-06	Analysis Date	02-08-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060210-33	Control Number	060210-34

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	nd	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	96	59-109

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	0.1	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	98	59-109

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Was Not Detected At The MDL
Any Aroclors & Concentrations > MDL Were Confirmed On A Second Column

Reviewed By _____ Date 021006

Sequence 020706A&B	
C-PCB-W37	C-PCB-W38

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment @ 599.5' Elevation - Sampling Date of January 31, 2006	Our Project Number CHEM-06-0210

Sample Identification	C-PCB-W44	**Sample Identification**	C-PCB-W45
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	01-31-06	Sample Date	01-31-06
Received Date	02-02-06	Received Date	02-02-06
Report Date	02-10-06	Report Date	02-10-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	02-03-06	Preparation Date	02-03-06
Analysis Date	02-08-06	Analysis Date	02-08-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060210-35	Control Number	060210-36

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	96	59-109	Decachlorobiphenyl	93	59-109

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Was Not Detected At The MDL
Any Aroclors & Concentrations > MDL Were Confirmed On A Second Column

Reviewed By _____ Date 02-10-06

Sequence 020706A&B	
C-PCB-W44	C-PCB-W45

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point Restoration Project - Containment @ 599.5' Elevation - Sampling Date of January 31, 2006	Our Project Number CHEM-06-0210

Sample Identification	C-PCB-W46	Sample Identification	C-PCB-W47
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	01-31-06	Sample Date	01-31-06
Received Date	02-02-06	Received Date	02-02-06
Report Date	02-10-06	Report Date	02-10-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	02-03-06	Preparation Date	02-03-06
Analysis Date	02-08-06	Analysis Date	02-09-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060210-37	Control Number	060210-38

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	95	59-109	Decachlorobiphenyl	98	59-109

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Was Not Detected At The MDL
Any Aroclors & Concentrations > MDL Were Confirmed On A Second Column

Reviewed By _____ Date 021006

Sequence 020706A&B	
C-PCB-W46	C-PCB-W47

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – LABORATORY SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: Consumers Energy Big Rock Point

PROJECT NUMBER: Containment 599.5' Elevation

SAMPLING TEAM:

DATE SHIPPED: 02-01-06 ~~1-31-06~~

SITE SKETCH ATTACHED? CIRCLE ONE: YES (NO)

PAGE 1 OF 4

SEND REPORT TO: Tracy Goble, Big Rock Point, PHONE: 231-547-8389

CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	ANALYSIS REQUESTED: PCB'S	REMARKS
06-0210-01	1-31-06	0840		C-PCB-W1		1	X	
.02	1-31-06	0841		C-PCB-W2		1	X	
.03	1-31-06	0842		C-PCB-W3		1	X	
.04	1-31-06	0843		C-PCB-W4		1	X	
.05	1-31-06	0844		C-PCB-W5		1	X	
.06	1-31-06	0846		C-PCB-W7		1	X	
.07	1-31-06	0902		C-PCB-W8		1	X	
.08	1-31-06	0944		C-PCB-W9		1	X	
.09	1-31-06	0901		C-PCB-W10		1	X	
.10	1-31-06	0903		C-PCB-W11		1	X	
.11	1-31-06	0859		C-PCB-W13		1	X	
.12	1-31-06	0858		C-PCB-W14		1	X	

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
Jackie L. Reed	02-01-06 / 1030	(FED EX)
RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
	02.02.06 11:00	Brian E. [illegible]
RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)

COMMENTS

ORIGINAL TO LAB COPY TO CUSTOMER

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – LABORATORY SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: Consumers Energy Big Rock Point

PROJECT NUMBER: Containment 599.5' Elevation

SAMPLING TEAM:

DATE SHIPPED: 02-01-06

SITE SKETCH ATTACHED? CIRCLE ONE: YES NO

PAGE 2 OF 4

SEND REPORT TO: Tracy Goble, Big Rock Point

PHONE: 231-547-8389

CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	ANALYSIS REQUESTED: PCB'S							REMARKS
06-0210-13	1-31-06	0934		C-PCB-W15		1	X							
-14	1-31-06	0913		C-PCB-W16		1	X							
-15	1-31-06	0914		C-PCB-W17		1	X							
-16	1-31-06	0915		C-PCB-W18		1	X							
-17	1-31-06	0915 ~~0916~~		C-PCB-W19		1	X							
-18	1-31-06	0916		C-PCB-W20		1	X							
-19	1-31-06	0917		C-PCB-W21		1	X							
-20	1-31-06	0918		C-PCB-W23		1	X							
-21	1-31-06	0942		C-PCB-W24		1	X							
-22	1-31-06	0940		C-PCB-W26		1	X							
-23	1-31-06	0941		C-PCB-W27		1	X							
-24	1-31-06	0939		C-PCB-W28		1	X							

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
Jodie L. Reed	2-1-06 / 1030	(FED EX)
RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
	02.02.06 11:00	Brian E. [illegible]
RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)

COMMENTS

ORIGINAL TO LAB COPY TO CUSTOMER

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – LABORATORY SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: Consumers Energy Big Rock Point

PROJECT NUMBER: Containment 599.5' Elevation

SAMPLING TEAM:

DATE SHIPPED: 02-01-06

SITE SKETCH ATTACHED? CIRCLE ONE: YES NO

PAGE 3 OF 4

SEND REPORT TO: Tracy Goble, Big Rock Point, PHONE: 231-547-8389

CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	ANALYSIS REQUESTED: PCB's	REMARKS
06-02.10-25	1-31-06	0938		C - PCB - W29		1	X	
.26	1-31-06	0936		C - PCB - W30		1	X	
.27	1-31-06	0937		C - PCB - W31		1	X	
.28	1-31-06	1003		C - PCB - W32		1	X	
.29	1-31-06	1004		C - PCB - W33		1	X	
.30	1-31-06	1005		C - PCB - W34		1	X	
.31	1-31-06	1006		C - PCB - W35		1	X	
.32	1-31-06	1007		C - PCB - W36		1	X	
.33	1-31-06	1008		C - PCB - W37		1	X	
.34	1-31-06	1009		C - PCB - W38		1	X	
.35	1-31-06	0842		C - PCB - W44		1	X	
.36	1-31-06	0919		C - PCB - W45		1	X	

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
Jackie L. Reed	2-1-06 / 1030	(FED EX)
RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
	02.02.06 11:00	[illegible]
RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)

COMMENTS

ORIGINAL TO LAB COPY TO CUSTOMER

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – LABORATORY SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: Consumers Energy Big Rock Point

PROJECT NUMBER: Containment 599.5' Ekvation

SAMPLING TEAM:

DATE SHIPPED:

SITE SKETCH ATTACHED? CIRCLE ONE: YES NO

PAGE 4 OF 4

SEND REPORT TO: Tracy Goble, Big Rock Point, PHONE: 231-547-8389

CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	ANALYSIS REQUESTED: PCB's	REMARKS
06-0210-37	1-31-06	1020		C-PCB-W46		1	X	
↓ -38	1-31-06	1021		C-PCB-W47		1	X	

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
Jackie L. Reed	2-1-06 / 1030	(FED EX)
RELINQUISHED BY: (SIGNATURE)	DATE / TIME 02.02.06 1100	RECEIVED BY: (SIGNATURE) Brian E. [illegible]
RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)

COMMENTS

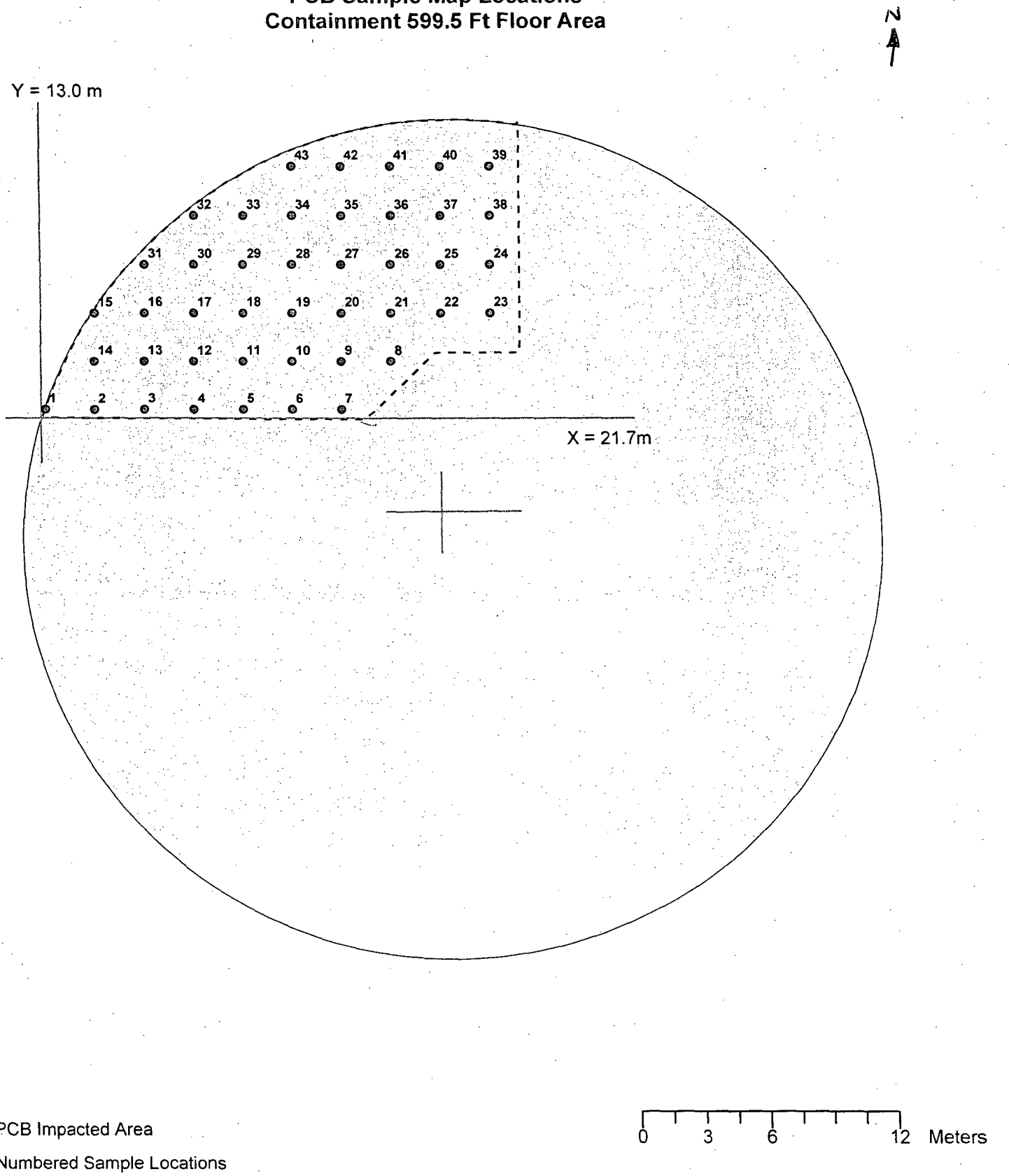
ORIGINAL TO LAB COPY TO CUSTOMER

PCB Sample Locations
Containment 599.5 Ft Floor Elevation

Sample No.	X Coord.	Y Coord.	Sample No.	X Coord.	Y Coord.	Sample No.	X Coord.	Y Coord.
1	0.2	0.4	17	7.1	5.0	33	9.4	9.6
2	2.5	0.4	18	9.4	5.0	34	11.7	9.6
3	4.8	0.4	19	11.7	5.0	35	14.0	9.6
4	7.1	0.4	20	14.0	5.0	36	16.3	9.6
5	9.4	0.4	21	16.3	5.0	37	18.6	9.6
6	11.7	0.4	22	18.6	5.0	38	20.9	9.6
7	14.0	0.4	23	20.9	5.0	39	20.9	11.9
8	16.3	2.7	24	20.9	7.3	40	18.6	11.9
9	14.0	2.7	25	18.6	7.3	41	16.3	11.9
10	11.7	2.7	26	16.3	7.3	42	14.0	11.9
11	9.4	2.7	27	14.0	7.3	43	11.7	11.9
12	7.1	2.7	28	11.7	7.3	44	4.8	0.4
13	4.8	2.7	29	9.4	7.3	45	7.1	5.0
14	2.5	2.7	30	7.1	7.3			
15	2.5	5.0	31	4.8	7.3			
16	4.8	5.0	32	7.1	9.6			

**Sample No.14 is the random start location*
Sample spacing is 2.3 meters

PCB Sample Map Locations
Containment 599.5 Ft Floor Area



PCB Post Demolition Survey Design - Containment 599.5 Ft Floor

Survey Area Dimensions:

Xmax =	21.7 m
Ymax =	13.0 m
Area =	225.7 sq. m

Randon Start Location:

X =	2.5 m
Y =	2.7 m

Sample Spacing:

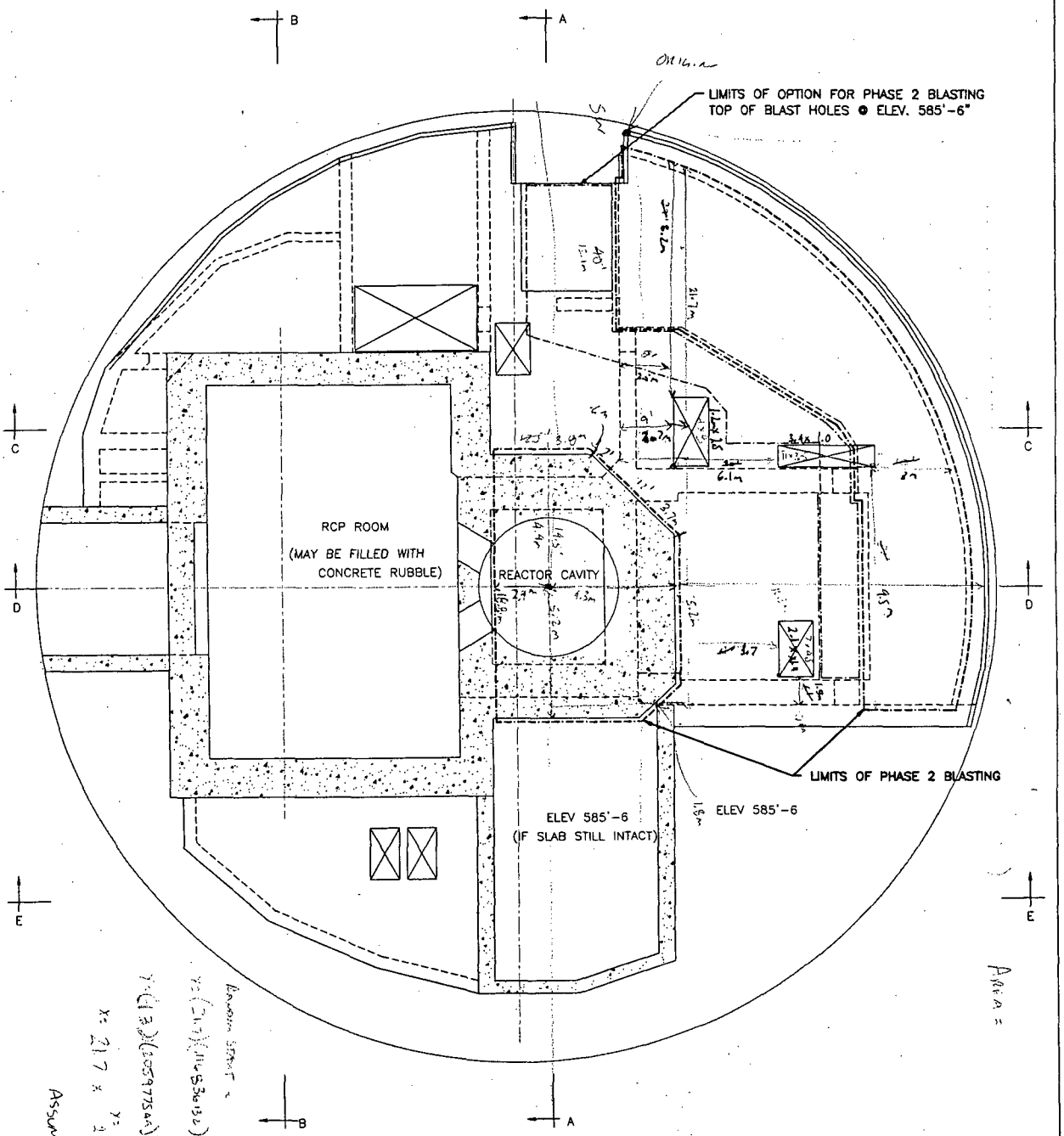
L=	(Area / No Samples) ^1/2	(44 SAMPLES ASSUMED)
L=	2.3 m	

PCB Survey Design

Random X-Y start points		QC Samples
X	0.116836132	3
		17
Y	0.205977549	4
		2
		5
		12

=

=



PLAN VIEW

ELEVATION 599'-5" U.O.N.

N

REV	DESCRIPTION	BY	DATE
3	ADDED OPTION PHASE 2 BLAST LIMITS	SMP	1/24/06
2	ADDED PHASE 2 BLAST LIMITS	SMP	1/09/06
1	FOR PLANNING PHASE 2 BLAST	SMP	1/05/06
0	FOR PLANNING	SMP	1/26/05

CONTAINMENT INTERIOR CONCRETE

SK 012105

SHEET 1 OF 6

PCB SURVEY PACKAGE CLOSE-OUT CHECKLIST

Package ID Number: 0009 Survey Area: South PCB Laydown Area Post Remediation

The survey package is legible and complete and the following necessary information is in the package:

1. ✓ Survey Package Cover Sheet
2. ✓ Survey design documentation
3. ✓ Random number generator sheet for sample start location and QC sample numbers.
4. ✓ Completed survey map/data sheet
5. ✓ Completed PCB Survey Data Record Sheet
6. ✓ Copy of the Chain of Custody
7. ✓ Copy of sample results
8. _____ Other documentation:

Completed By: Jodie L. Reed Date: 02-23-06
(Environmental Technician)

Reviewed By: [illegible] Date: 02-28-06
(Environmental Supervisor)

PCB SURVEY PACKAGE COVER SHEET

Package ID Number : 0009	Survey Area: South PCB Laydown Area – Post Remediation	Size (m^2): ~168

Random Samples

# of Field Samples: 42
# of QC samples: 04

Random Start Location: X (8.3), Y (6.2)
Sample Spacing: 2.0 meters

Isolation Controls implemented ☐ List controls: Area posted as a PCB survey area.

Comments/specific directions[1]: -Random sample locations determined by random number generator.

-Sample analysis results acceptance criteria is <1 mg/Kg for soil samples.

([1] Address any inaccessible areas or sample points not included in survey).

SURVEY PACKAGE CLOSURE

Screening Survey Package is authorized for closure. All required reviews are completed and pertinent information is included in package (see Survey Package Close-Out Checklist).

ENV Technician Jodie L Reed Date: 02-23-06

ENV Supervisor: [illegible] Date: 02-28-06

Package ID Number: 0009

PCB SURVEY DATA RECORD SHEET

Survey Area: South PCB Laydown Area- Post Remediation	Size (m^2): 168	# of Samples: 46

Sample ID Number	Sample Location (X)(Y)	Sample Result (ppm)	Sample ID Number	Sample Location (X)(Y)	Sample Result (ppm)
SLD2-PCB-S1	(0.3)(0.2)	nda	SLD2-PCB-S26	(4.3)(6.2)	nda
SLD2-PCB-S2	(2.3)(0.2)	nda	SLD2-PCB-S27	(2.3)(6.2)	nda
SLD2-PCB-S3	(4.3)(0.2)	nda	SLD2-PCB-S28	(0.3)(6.2)	nda
SLD2-PCB-S4	(6.3)(0.2)	nda	SLD2-PCB-S29	(0.3)(8.2)	nda
SLD2-PCB-S5	(8.3)(0.2)	nda	SLD2-PCB-S30	(2.3)(8.2)	nda
SLD2-PCB-S6	(10.3)(0.2)	nda	SLD2-PCB-S31	(4.3)(8.2)	nda
SLD2-PCB-S7	(12.3)(0.2)	nda	SLD2-PCB-S32	(6.3)(8.2)	nda
SLD2-PCB-S8	(12.3)(2.2)	nda	SLD2-PCB-S33	(8.3)(8.2)	nda
SLD2-PCB-S9	(10.3)(2.2)	nda	SLD2-PCB-S34	(10.3)(8.2)	nda
SLD2-PCB-S10	(8.3)(2.2)	nda	SLD2-PCB-S35	(12.3)(8.2)	nda
SLD2-PCB-S11	(6.3)(2.2)	nda	SLD2-PCB-S36	(12.3)(10.2)	nda
SLD2-PCB-S12	(4.3)(2.2)	nda	SLD2-PCB-S37	(10.3)(10.2)	nda
SLD2-PCB-S13	(2.3)(2.2)	nda	SLD2-PCB-S38	(8.3)(10.2)	0.33
SLD2-PCB-S14	(0.3)(4.2)	nda	SLD2-PCB-S39	(6.3)(10.2)	nda
SLD2-PCB-S15	(0.3)(4.2)	nda	SLD2-PCB-S40	(4.3)(10.2)	nda
SLD2-PCB-S16	(2.3)(4.2)	nda	SLD2-PCB-S41	(2.3)(10.2)	nda
SLD2-PCB-S17	(4.3)(4.2)	nda	SLD2-PCB-S42	(0.3)(10.2)	nda
SLD2-PCB-S18	(6.3)(4.2)	nda	SLD2-PCB-S43	(10.3)(10.2)	nda
SLD2-PCB-S19	(8.3)(4.2)	nda	SLD2-PCB-S44	(6.3)(8.2)	nda
SLD2-PCB-S20	(10.3)(4.2)	nda	SLD2-PCB-S45	(0.3)(8.2)	nda
SLD2-PCB-S21	(12.3)(4.2)	nda	SLD2-PCB-S46	(2.3)(4.2)	nda
SLD2-PCB-S22	(12.3)(6.2)	nda			
SLD2-PCB-S23	(10.3)(6.2)	nda			
SLD2-PCB-S24	(8.3)(6.2)	nda			
SLD2-PCB-S25	(6.3)(6.2)	nda			

Performed By: Jodie L. Reed Date: 02-23-06
(Survey Technician)

Reviewed By: Date: 02-28-06
(Environmental Supervisor)

CONSUMERS ENERGY Memorandum

To: TGoble, Big Rock

From: GLCattell, T-254, Jackson

Date: February 22, 2006

Subject: SAMPLES FOR DETERMINATION OF PCBs
- Soils
- South Laydown Area; Post Remediation
- Sampling Date of February 02, 2006

CC: WMHoaglund, Big Rock

File Index: 510617-781-218

Forty-six soil samples were received on February 03 for determination of polychlorinated biphenyls (PCBs). All determinations were performed by the Chemistry Section of Laboratory Services and the results are attached for your review.

Analytical Methods
Unless otherwise specified, all methods are from SW-846, Test Methods For Evaluating Solid Waste - Physical / Chemical Methods, USEPA.

Polychlorinated Biphenyls
Sample Extraction: Method 3545, Pressurized Fluid Extraction.
Extract Concentration: Nitrogen Evaporation Technique, Exhibit D, Aroclors, Section 10. Multi-Media, Multi-Concentration Organics Analysis; SOM01.X; USEPA.
Extract Cleanup: Method 3620, Florisil Cleanup; Method 3665A, Sulfuric Acid/Permanganate Cleanup & Method 3660B, Sulfur Cleanup.
Analysis: Method 8082, Polychlorinated Biphenyls by Gas Chromatography.
Percent Solids (Dry Weight): Section 7.2 of Method 3545, Determination of Percent Dry Weight, Pressurized Fluid Extraction.

Analytical Remarks & Summary
a. One sample is reported with a PCB concentration at the TDL and identified as Aroclor 1254. All other samples are reported as 'nd' (not detected) for all Aroclors.
c. Two surrogate spike recoveries are slightly (3%) under the lower criteria limit.

Report Package Contents
The report package consists of 28 pages: 1 cover page, 23 pages of Analytical Results & 4 Chain of Custody pages.

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - South Laydown Area; Post Remediation	Our Project Number CHEM-06-0218

Sample Identification	SLD2-PCB-S1	**Sample Identification**	SLD2-PCB-S2
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	02-02-06	Sample Date	02-02-06
Received Date	02-03-06	Received Date	02-03-06
Report Date	02-22-06	Report Date	02-22-06
Percent Solids, % w/w	90	Percent Solids, % w/w	95
Preparation Date	02-06-06	Preparation Date	02-06-06
Analysis Date	02-09-06	Analysis Date	02-09-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060218-01	Control Number	060218-02

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	--	PCB-1016	nd	--
PCB-1221	nd	--	PCB-1221	nd	--
PCB-1232	nd	--	PCB-1232	nd	--
PCB-1242	nd	--	PCB-1242	nd	--
PCB-1248	nd	--	PCB-1248	nd	--
PCB-1254	nd	--	PCB-1254	nd	--
PCB-1260	nd	--	PCB-1260	nd	--
PCB-1262	nd	--	PCB-1262	nd	--
PCB-1268	nd	--	PCB-1268	nd	--
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	95	82-121	Decachlorobiphenyl	86	82-121

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date 02-22-06 Data File 020906A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - South Laydown Area; Post Remediation	Our Project Number CHEM-06-0218

Sample Identification	SLD2-PCB-S3	**Sample Identification**	SLD2-PCB-S4
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	02-02-06	Sample Date	02-02-06
Received Date	02-03-06	Received Date	02-03-06
Report Date	02-22-06	Report Date	02-22-06
Percent Solids, % w/w	86	Percent Solids, % w/w	93
Preparation Date	02-06-06	Preparation Date	02-06-06
Analysis Date	02-09-06	Analysis Date	02-09-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060218-03	Control Number	060218-04

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	88	82-121	Decachlorobiphenyl	87	82-121

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date 022206 Data File 020906A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - South Laydown Area; Post Remediation	Our Project Number CHEM-06-0218

Sample Identification	SLD2-PCB-S5	**Sample Identification**	SLD2-PCB-S6
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	02-02-06	Sample Date	02-02-06
Received Date	02-03-06	Received Date	02-03-06
Report Date	02-22-06	Report Date	02-22-06
Percent Solids, % w/w	92	Percent Solids, % w/w	91
Preparation Date	02-06-06	Preparation Date	02-06-06
Analysis Date	02-09-06	Analysis Date	02-09-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060218-05	Control Number	060218-06

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	83	82-121	Decachlorobiphenyl	87	82-121

NOTES:

TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date 022206 | Data File 020906A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - South Laydown Area; Post Remediation	Our Project Number CHEM-06-0218

Sample Identification	SLD2-PCB-S7	**Sample Identification**	SLD2-PCB-S8
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	02-02-06	Sample Date	02-02-06
Received Date	02-03-06	Received Date	02-03-06
Report Date	02-22-06	Report Date	02-22-06
Percent Solids, % w/w	87	Percent Solids, % w/w	87
Preparation Date	02-06-06	Preparation Date	02-06-06
Analysis Date	02-09-06	Analysis Date	02-09-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060218-07	Control Number	060218-08

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	--	PCB-1016	nd	--
PCB-1221	nd	--	PCB-1221	nd	--
PCB-1232	nd	--	PCB-1232	nd	--
PCB-1242	nd	--	PCB-1242	nd	--
PCB-1248	nd	--	PCB-1248	nd	--
PCB-1254	nd	--	PCB-1254	nd	--
PCB-1260	nd	--	PCB-1260	nd	--
PCB-1262	nd	--	PCB-1262	nd	--
PCB-1268	nd	--	PCB-1268	nd	--
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	87	82-121	Decachlorobiphenyl	87	82-121

NOTES:

TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By AU Date 02-26 Data File 020906A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - South Laydown Area; Post Remediation	Our Project Number CHEM-06-0218

Sample Identification	SLD2-PCB-S9	**Sample Identification**	SLD2-PCB-S10
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	02-02-06	Sample Date	02-02-06
Received Date	02-03-06	Received Date	02-03-06
Report Date	02-22-06	Report Date	02-22-06
Percent Solids, % w/w	92	Percent Solids, % w/w	93
Preparation Date	02-06-06	Preparation Date	02-06-06
Analysis Date	02-21-06	Analysis Date	02-09-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060218-09	Control Number	060218-10

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	95	82-121	Decachlorobiphenyl	86	82-121

NOTES:

TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date 022206 Data File 020906A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - South Laydown Area; Post Remediation	Our Project Number CHEM-06-0218

Sample Identification	SLD2-PCB-S11	**Sample Identification**	SLD2-PCB-S12
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	02-02-06	Sample Date	02-02-06
Received Date	02-03-06	Received Date	02-03-06
Report Date	02-22-06	Report Date	02-22-06
Percent Solids, % w/w	93	Percent Solids, % w/w	94
Preparation Date	02-06-06	Preparation Date	02-06-06
Analysis Date	02-10-06	Analysis Date	02-10-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060218-11	Control Number	060218-12

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	85	82-121	Decachlorobiphenyl	88	82-121

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By AH Date 02-22-06 Data File 020906A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - South Laydown Area; Post Remediation	Our Project Number CHEM-06-0218

Sample Identification	SLD2-PCB-S13	**Sample Identification**	SLD2-PCB-S14
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	02-02-06	Sample Date	02-02-06
Received Date	02-03-06	Received Date	02-03-06
Report Date	02-22-06	Report Date	02-22-06
Percent Solids, % w/w	91	Percent Solids, % w/w	96
Preparation Date	02-06-06	Preparation Date	02-06-06
Analysis Date	02-10-06	Analysis Date	02-10-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060218-13	Control Number	060218-14

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	98	82-121	Decachlorobiphenyl	89	82-121

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date 02/22/06 | Data File 020906A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - South Laydown Area; Post Remediation	Our Project Number CHEM-06-0218

Sample Identification	SLD2-PCB-S15	**Sample Identification**	SLD2-PCB-S16
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	02-02-06	Sample Date	02-02-06
Received Date	02-03-06	Received Date	02-03-06
Report Date	02-22-06	Report Date	02-22-06
Percent Solids, % w/w	95	Percent Solids, % w/w	94
Preparation Date	02-06-06	Preparation Date	02-06-06
Analysis Date	02-10-06	Analysis Date	02-10-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060218-15	Control Number	060218-16

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	95	82-121	Decachlorobiphenyl	90	82-121

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date _____ Data File 020906A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - South Laydown Area; Post Remediation	Our Project Number CHEM-06-0218

Sample Identification	SLD2-PCB-S17	**Sample Identification**	SLD2-PCB-S18
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	02-02-06	Sample Date	02-02-06
Received Date	02-03-06	Received Date	02-03-06
Report Date	02-22-06	Report Date	02-22-06
Percent Solids, % w/w	95	Percent Solids, % w/w	94
Preparation Date	02-06-06	Preparation Date	02-06-06
Analysis Date	02-10-06	Analysis Date	02-10-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060218-17	Control Number	060218-18

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	87	82-121	Decachlorobiphenyl	92	82-121

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By Adi Date 022206 Data File 020906A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - South Laydown Area; Post Remediation	Our Project Number CHEM-06-0218

Sample Identification	SLD2-PCB-S19	**Sample Identification**	SLD2-PCB-S20
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	02-02-06	Sample Date	02-02-06
Received Date	02-03-06	Received Date	02-03-06
Report Date	02-22-06	Report Date	02-22-06
Percent Solids, % w/w	93	Percent Solids, % w/w	82
Preparation Date	02-06-06	Preparation Date	02-07-06
Analysis Date	02-10-06	Analysis Date	02-10-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060218-19	Control Number	060218-20

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	91	82-121	Decachlorobiphenyl	98	82-121

NOTES:	TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1. nd = Parameter Not Detected At The TDL. Results Are Reported On The Dry Weight Basis. Confirming Analytical Column Was Not Required.

Reviewed By _____ Date _____ Data File 020906A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - South Laydown Area; Post Remediation	Our Project Number CHEM-06-0218

Sample Identification	SLD2-PCB-S21	Sample Identification	SLD2-PCB-S22
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	02-02-06	Sample Date	02-02-06
Received Date	02-03-06	Received Date	02-03-06
Report Date	02-22-06	Report Date	02-22-06
Percent Solids, % w/w	85	Percent Solids, % w/w	93
Preparation Date	02-07-06	Preparation Date	02-07-06
Analysis Date	02-10-06	Analysis Date	02-10-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060218-21	Control Number	060218-22

TARGET PCBs, 8082			TARGET PCBs, 8082		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	95	82-121	Decachlorobiphenyl	96	82-121

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date _____ Data File 020906A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - South Laydown Area; Post Remediation	Our Project Number CHEM-06-0218

Sample Identification	SLD2-PCB-S23	**Sample Identification**	SLD2-PCB-S24
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	02-02-06	Sample Date	02-02-06
Received Date	02-03-06	Received Date	02-03-06
Report Date	02-22-06	Report Date	02-22-06
Percent Solids, % w/w	98	Percent Solids, % w/w	86
Preparation Date	02-07-06	Preparation Date	02-07-06
Analysis Date	02-10-06	Analysis Date	02-10-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060218-23	Control Number	060218-24

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	93	82-121	Decachlorobiphenyl	93	82-121

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date 02-22-06 | Data File 020906A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - South Laydown Area; Post Remediation	Our Project Number CHEM-06-0218

Sample Identification	SLD2-PCB-S25	**Sample Identification**	SLD2-PCB-S26
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	02-02-06	Sample Date	02-02-06
Received Date	02-03-06	Received Date	02-03-06
Report Date	02-22-06	Report Date	02-22-06
Percent Solids, % w/w	88	Percent Solids, % w/w	93
Preparation Date	02-07-06	Preparation Date	02-07-06
Analysis Date	02-10-06	Analysis Date	02-10-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060218-25	Control Number	060218-26

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	93	82-121	Decachlorobiphenyl	95	82-121

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date _____ Data File 020906A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - South Laydown Area; Post Remediation	Our Project Number CHEM-06-0218

Sample Identification	SLD2-PCB-S27	**Sample Identification**	SLD2-PCB-S28
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	02-02-06	Sample Date	02-02-06
Received Date	02-03-06	Received Date	02-03-06
Report Date	02-22-06	Report Date	02-22-06
Percent Solids, % w/w	90	Percent Solids, % w/w	94
Preparation Date	02-07-06	Preparation Date	02-07-06
Analysis Date	02-10-06	Analysis Date	02-10-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060218-27	Control Number	060218-28

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	87	82-121	Decachlorobiphenyl	95	82-121

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date 02/22/06 | Data File 020906A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - South Laydown Area; Post Remediation	Our Project Number CHEM-06-0218

Sample Identification	SLD2-PCB-S29	**Sample Identification**	SLD2-PCB-S30
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	02-02-06	Sample Date	02-02-06
Received Date	02-03-06	Received Date	02-03-06
Report Date	02-22-06	Report Date	02-22-06
Percent Solids, % w/w	92	Percent Solids, % w/w	95
Preparation Date	02-07-06	Preparation Date	02-07-06
Analysis Date	02-10-06	Analysis Date	02-10-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060218-29	Control Number	060218-30

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	93	82-121	Decachlorobiphenyl	91	82-121

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date 02-22-06 | Data File 020906A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - South Laydown Area; Post Remediation	Our Project Number CHEM-06-0218

Sample Identification	SLD2-PCB-S31	**Sample Identification**	SLD2-PCB-S32
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	02-02-06	Sample Date	02-02-06
Received Date	02-03-06	Received Date	02-03-06
Report Date	02-22-06	Report Date	02-22-06
Percent Solids, % w/w	94	Percent Solids, % w/w	73
Preparation Date	02-07-06	Preparation Date	02-07-06
Analysis Date	02-10-06	Analysis Date	02-10-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060218-31	Control Number	060218-32

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	79 *	82-121	Decachlorobiphenyl	94	82-121

NOTES:

TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL. * Recovery Slightly Lower Than Criteria.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date 02-22-06 | Data File 020906A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - South Laydown Area; Post Remediation	Our Project Number CHEM-06-0218

Sample Identification	SLD2-PCB-S33	**Sample Identification**	SLD2-PCB-S34
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	02-02-06	Sample Date	02-02-06
Received Date	02-03-06	Received Date	02-03-06
Report Date	02-22-06	Report Date	02-22-06
Percent Solids, % w/w	86	Percent Solids, % w/w	91
Preparation Date	02-07-06	Preparation Date	02-07-06
Analysis Date	02-10-06	Analysis Date	02-10-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060218-33	Control Number	060218-34

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	79 *	82-121	Decachlorobiphenyl	88	82-121

NOTES:

TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL. * Recovery Slightly Lower Than Criteria.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date _____ Data File 020906A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - South Laydown Area; Post Remediation	Our Project Number CHEM-06-0218

Sample Identification	SLD2-PCB-S35	**Sample Identification**	SLD2-PCB-S36
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	02-02-06	Sample Date	02-02-06
Received Date	02-03-06	Received Date	02-03-06
Report Date	02-22-06	Report Date	02-22-06
Percent Solids, % w/w	91	Percent Solids, % w/w	89
Preparation Date	02-07-06	Preparation Date	02-07-06
Analysis Date	02-10-06	Analysis Date	02-10-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060218-35	Control Number	060218-36

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	86	82-121	Decachlorobiphenyl	84	82-121

NOTES:

TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date _____ Data File 020906A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - South Laydown Area; Post Remediation	Our Project Number CHEM-06-0218

Sample Identification	SLD2-PCB-S37	**Sample Identification**	SLD2-PCB-S38
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	02-02-06	Sample Date	02-02-06
Received Date	02-03-06	Received Date	02-03-06
Report Date	02-22-06	Report Date	02-22-06
Percent Solids, % w/w	88	Percent Solids, % w/w	94
Preparation Date	02-07-06	Preparation Date	02-07-06
Analysis Date	02-11-06	Analysis Date	02-21-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060218-37	Control Number	060218-38

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	330	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	330	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	91	82-121	Decachlorobiphenyl	93	82-121

NOTES:

TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Sample SLD2-PCB-S38: Arolcor Type & Concentration Was Confirmed.

Reviewed By AK Date 02-22-06 Data File 020906A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - South Laydown Area; Post Remediation	Our Project Number CHEM-06-0218

Sample Identification	SLD2-PCB-S39	**Sample Identification**	SLD2-PCB-S40
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	02-02-06	Sample Date	02-02-06
Received Date	02-03-06	Received Date	02-03-06
Report Date	02-22-06	Report Date	02-22-06
Percent Solids, % w/w	94	Percent Solids, % w/w	95
Preparation Date	02-08-06	Preparation Date	02-08-06
Analysis Date	02-21-06	Analysis Date	02-11-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060218-39	Control Number	060218-40

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	84	82-121	Decachlorobiphenyl	83	82-121

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date 020906 Data File 020906A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - South Laydown Area; Post Remediation	Our Project Number CHEM-06-0218

Sample Identification	SLD2-PCB-S41	**Sample Identification**	SLD2-PCB-S42
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	02-02-06	Sample Date	02-02-06
Received Date	02-03-06	Received Date	02-03-06
Report Date	02-22-06	Report Date	02-22-06
Percent Solids, % w/w	95	Percent Solids, % w/w	93
Preparation Date	02-08-06	Preparation Date	02-08-06
Analysis Date	02-13-06	Analysis Date	02-13-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060218-41	Control Number	060218-42

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	99	82-121	Decachlorobiphenyl	82	82-121

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date _____ Data File 020906A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - South Laydown Area; Post Remediation	Our Project Number CHEM-06-0218

Sample Identification	SLD2-PCB-S43	**Sample Identification**	SLD2-PCB-S44
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	02-02-06	Sample Date	02-02-06
Received Date	02-03-06	Received Date	02-03-06
Report Date	02-22-06	Report Date	02-22-06
Percent Solids, % w/w	88	Percent Solids, % w/w	82
Preparation Date	02-08-06	Preparation Date	02-08-06
Analysis Date	02-13-06	Analysis Date	02-13-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060218-43	Control Number	060218-44

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	90	82-121	Decachlorobiphenyl	91	82-121

NOTES:

TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date 02-22-06 | Data File 020906A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - South Laydown Area; Post Remediation	Our Project Number CHEM-06-0218

Sample Identification	SLD2-PCB-S45	**Sample Identification**	SLD2-PCB-S46
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	02-02-06	Sample Date	02-02-06
Received Date	02-03-06	Received Date	02-03-06
Report Date	02-22-06	Report Date	02-22-06
Percent Solids, % w/w	95	Percent Solids, % w/w	95
Preparation Date	02-08-06	Preparation Date	02-08-06
Analysis Date	02-13-06	Analysis Date	02-13-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060218-45	Control Number	060218-46

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	92	82-121	Decachlorobiphenyl	87	82-121

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By AG Date 022206 Data File 020906A

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – LABORATORY SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: Consumers Energy Big Rock Point

PROJECT NUMBER: South Laydown Area - Post Remediation

SAMPLING TEAM:

DATE SHIPPED: 2-2-06

SITE SKETCH ATTACHED? CIRCLE ONE: YES (NO)

PAGE 1 OF 4

SEND REPORT TO: Tracy Goble, Big Rock Point

PHONE: 231-547-8389

CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	ANALYSIS REQUESTED: PCB's							REMARKS
06-0218-01	2-2-06	1310		SLD2 - PCB - S1	3"	1	X							
.02	2-2-06	1311		SLD2 - PCB - S2	3"	1	X							
.03	2-2-06	1312		SLD2 - PCB - S3	3"	1	X							
.04	2-2-06	1313		SLD2 - PCB - S4	3"	1	X							
.05	2-2-06	1315		SLD2 - PCB - S5	3"	1	X							
.06	2-2-06	1317		SLD2 - PCB - S6	3"	1	X							
.07	2-2-06	1318		SLD2 - PCB - S7	3"	1	X							
.08	2-2-06	1320		SLD2 - PCB - S8	3"	1	X							
.09	2-2-06	1323		SLD2 - PCB - S9	3"	1	X							
.10	2-2-06	1324		SLD2 - PCB - S10	3"	1	X							
.11	2-2-06	1326		SLD2 - PCB - S11	3"	1	X							
.12	2-2-06	1328		SLD2 - PCB - S12	3"	1	X							

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
Joshua L. Reed	2-2-06 1545	
RELINQUISHED BY: (SIGNATURE) FED EX	DATE / TIME 2.3.06 1245	RECEIVED BY: (SIGNATURE) Bri E. [illegible]
RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)

COMMENTS

ORIGINAL TO LAB COPY TO CUSTOMER

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – LABORATORY SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: Consumers Energy Big Rock Point

PROJECT NUMBER: South Laydown Area - Post Remediation

SAMPLING TEAM:

DATE SHIPPED: 2-2-06

SITE SKETCH ATTACHED? CIRCLE ONE: YES (NO)

PAGE 2 OF 4

SEND REPORT TO: Tracy Goble, Big Rock Point, PHONE: 231-547-8389

CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	ANALYSIS REQUESTED: PCB's	REMARKS
06-0218-13	2-2-06	1330		SLD2-PCB-S13	3"	1	X	
-14	2-2-06	1331		SLD2-PCB-S14	3"	1	X	
-15	2-2-06	1333		SLD2-PCB-S15	3"	1	X	
-16	2-2-06	1335		SLD2-PCB-S16	3"	1	X	
-17	2-2-06	1338		SLD2-PCB-S17	3"	1	X	
-18	2-2-06	1341		SLD2-PCB-S18	3"	1	X	
-19	2-2-06	1343		SLD2-PCB-S19	3"	1	X	
-20	2-2-06	1345		SLD2-PCB-S20	3"	1	X	
-21	2-2-06	1348		SLD2-PCB-S21	3"	1	X	
-22	2-2-06	1349		SLD2-PCB-S22	3"	1	X	
-23	2-2-06	1352		SLD2-PCB-S23	3"	1	X	
-24	2-2-06	1356		SLD2-PCB-S24	3"	1	X	

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
Jodie L. Reed	2-2-06 1545	
RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
FED EX	2-3-06 12^45	Brian E. [illegible]
RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)

COMMENTS

ORIGINAL TO LAB COPY TO CUSTOMER

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – LABORATORY SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: Consumers Energy Big Rock Point

PROJECT NUMBER: South Laydown Area - post Remediation

SAMPLING TEAM:

DATE SHIPPED: 2-2-06

SITE SKETCH ATTACHED? CIRCLE ONE: YES NO

PAGE 3 OF 4

SEND REPORT TO: Tracy Goble Big Rock

PHONE: 231-547-8389

CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	ANALYSIS REQUESTED: PCB's							REMARKS
06-0218-25	2-2-06	1400		SLD2-PCB-S25	3"	1	X							
.26	2-2-06	1402		SLD2-PCB-S26	3"	1	X							
.27	2-2-06	1404		SLD2-PCB-S27	3"	1	X							
.28	2-2-06	1405		SLD2-PCB-S28	3"	1	X							
.29	2-2-06	1408		SLD2-PCB-S29	3"	1	X							
.30	2-2-06	1410		SLD2-PCB-S30	3"	1	X							
.31	2-2-06	1412		SLD2-PCB-S31	3"	1	X							
.32	2-2-06	1414		SLD2-PCB-S32	3"	1	X							
.33	2-2-06	1418		SLD2-PCB-S33	3"	1	X							
.34	2-2-06	1420		SLD2-PCB-S34	3"	1	X							
.35	2-2-06	1421		SLD2-PCB-S35	3"	1	X							
.36	2-2-06	1423		SLD2-PCB-S36	3"	1	X							

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
Jackie L. Reed	2-2-06 1545	
FED EX	2-3-06 1245	Brian E. [illegible]

COMMENTS

ORIGINAL TO LAB COPY TO CUSTOMER

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – LABORATORY SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: Consumers Energy Big Rock Point

PROJECT NUMBER: South Laydown AREA – Post Remediation

SAMPLING TEAM:

DATE SHIPPED: 2-2-06

SITE SKETCH ATTACHED? CIRCLE ONE: YES NO

PAGE 4 OF 4

SEND REPORT TO: Tracy Goble, Big Rock, PHONE 231-547-8389

CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	ANALYSIS REQUESTED: PCB'S	REMARKS
06-0218-37	2-2-06	1425		SLD2-PCB-537	3"	1	X	
-38	2-2-06	1427		SLD2-PCB-538	3"	1	X	
-39	2-2-06	1428		SLD2-PCB-539	3"	1	X	
-40	2-2-06	1431		SLD2-PCB-540	3"	1	X	
-41	2-2-06	1433		SLD2-PCB-541	3"	1	X	
-42	2-2-06	1435		SLD2-PCB-542	3"	1	X	
-43	2-2-06	1437		SLD2-PCB-543	3"	1	X	
-44	2-2-06	1441		SLD2-PCB-544	3"	1	X	
-45	2-2-06	1445		SLD2-PCB-545	3"	1	X	
-46	2-2-06	1448		SLD2-PCB-546	3"	1	X	
	~~2-2-06~~							
	~~2-2-06~~							

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
Jodie A. Reed	2-2-06 1545	
RELINQUISHED BY: (SIGNATURE) FED Ex	DATE / TIME 2-3-06 1245	RECEIVED BY: (SIGNATURE)
RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)

COMMENTS

ORIGINAL TO LAB COPY TO CUSTOMER

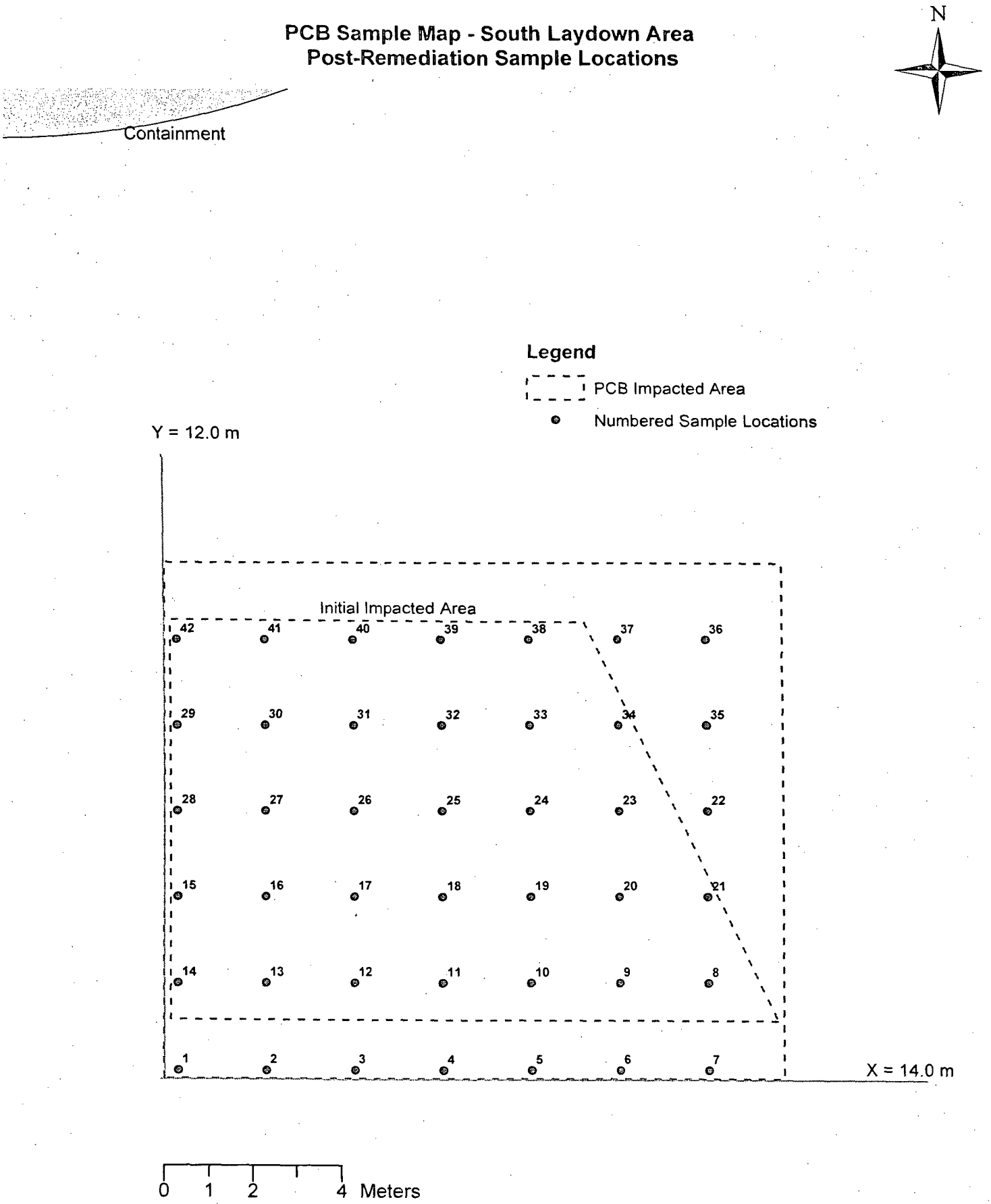
PCB Sample Locations
South Laydown Area
Post Remediation

Sample No.	X Coord.	Y Coord.	Sample No.	X Coord.	Y Coord.	Sample No.	X Coord.	Y Coord.
1	0.3	0.2	17	4.3	4.2	33	8.3	8.2
2	2.3	0.2	18	6.3	4.2	34	10.3	8.2
3	4.3	0.2	19	8.3	4.2	35	12.3	8.2
4	6.3	0.2	20	10.3	4.2	36	12.3	10.2
5	8.3	0.2	21	12.3	4.2	37	10.3	10.2
6	10.3	0.2	22	12.3	6.2	38	8.3	10.2
7	12.3	0.2	23	10.3	6.2	39	6.3	10.2
8	12.3	2.2	24	8.3	6.2	40	4.3	10.2
9	10.3	2.2	25	6.3	6.2	41	2.3	10.2
10	8.3	2.2	26	4.3	6.2	42	0.3	10.2
11	6.3	2.2	27	2.3	6.2	43	10.3	10.2
12	4.3	2.2	28	0.3	6.2	44	6.3	8.2
13	2.3	2.2	29	0.3	8.2	45	0.3	8.2
14	0.3	2.2	30	2.3	8.2	46	2.3	4.2
15	0.3	4.2	31	4.3	8.2			
16	2.3	4.2	32	6.3	8.2			

**Sample No.24 is the random start location*

Sample spacing is 2.0 meters

PCB Sample Map - South Laydown Area
Post-Remediation Sample Locations



PCB Post Demolition Survey Design - South Laydown Area Post Remediation

Survey Area Dimensions:

Xmax =	14.0 m
Ymax =	12.0 m
Area =	168.0 sq. m

Randon Start Location:

X =	8.3 m
Y =	6.2 m

Sample Spacing:

L=	(Area / No Samples) ^1/2	40 Samples
L=	2.0 m	

Random X-Y start points		**QC Samples**
X	0.59623357	37
		32
Y	0.51933458	29
		37
		16
		33

PCB SURVEY PACKAGE CLOSE-OUT CHECKLIST

Package ID Number: 0010 Survey Area: NE PCB Laydown Area

The survey package is legible and complete and the following necessary information is in the package:

1. ✓ Survey Package Cover Sheet
2. ✓ Survey design documentation
3. ✓ Random number generator sheet for sample start location and QC sample numbers.
4. ✓ Completed survey map/data sheet
5. ✓ Completed PCB Survey Data Record Sheet
6. ✓ Copy of the Chain of Custody
7. ✓ Copy of sample results
8. ✓ Other documentation: SAMPLE NE-PCB-S14 AREA RESAMPLED SEE SURVEY # 13

Completed By: Jodie L. Reed (Environmental Technician) Date: 05-10-06

Reviewed By: [illegible] (Environmental Supervisor) Date: 05-11-06

PCB SURVEY PACKAGE COVER SHEET

Package ID Number : 0010	Survey Area: NE PCB Laydown Area	Size (m^2): ~1182

Random Samples

# of Field Samples: 46
# of QC samples: 05

Random Start Location: X (11.6), Y (29.7)
Sample Spacing: 5.2 meters

Isolation Controls implemented ☐ List controls: Area posted as a PCB survey area.

Comments/specific directions[1]: -Random sample locations determined by random number generator.

-Sample analysis results acceptance criteria is <1 mg/Kg for soil samples.

SAMPLE # NE-PCB-S14 FAILED/EXCEEDED CRITERIA.

([1] Address any inaccessible areas or sample points not included in survey).

SURVEY PACKAGE CLOSURE

Screening Survey Package is authorized for closure. All required reviews are completed and pertinent information is included in package (see Survey Package Close-Out Checklist).

ENV Technician Jodie R. Reed Date: 05-10-06

ENV Supervisor: [signature] Date: 05-11-06

PCB Post Demolition Survey Design - NE Laydown Area

Survey Area Dimensions:

Xmax =	32.8 m	
Ymax =	43.7 m	
Area =	1182.3 sq. m	Actual area -- see map

Randon Start Location:

X =	11.6 m
Y =	29.7 m

Sample Spacing:

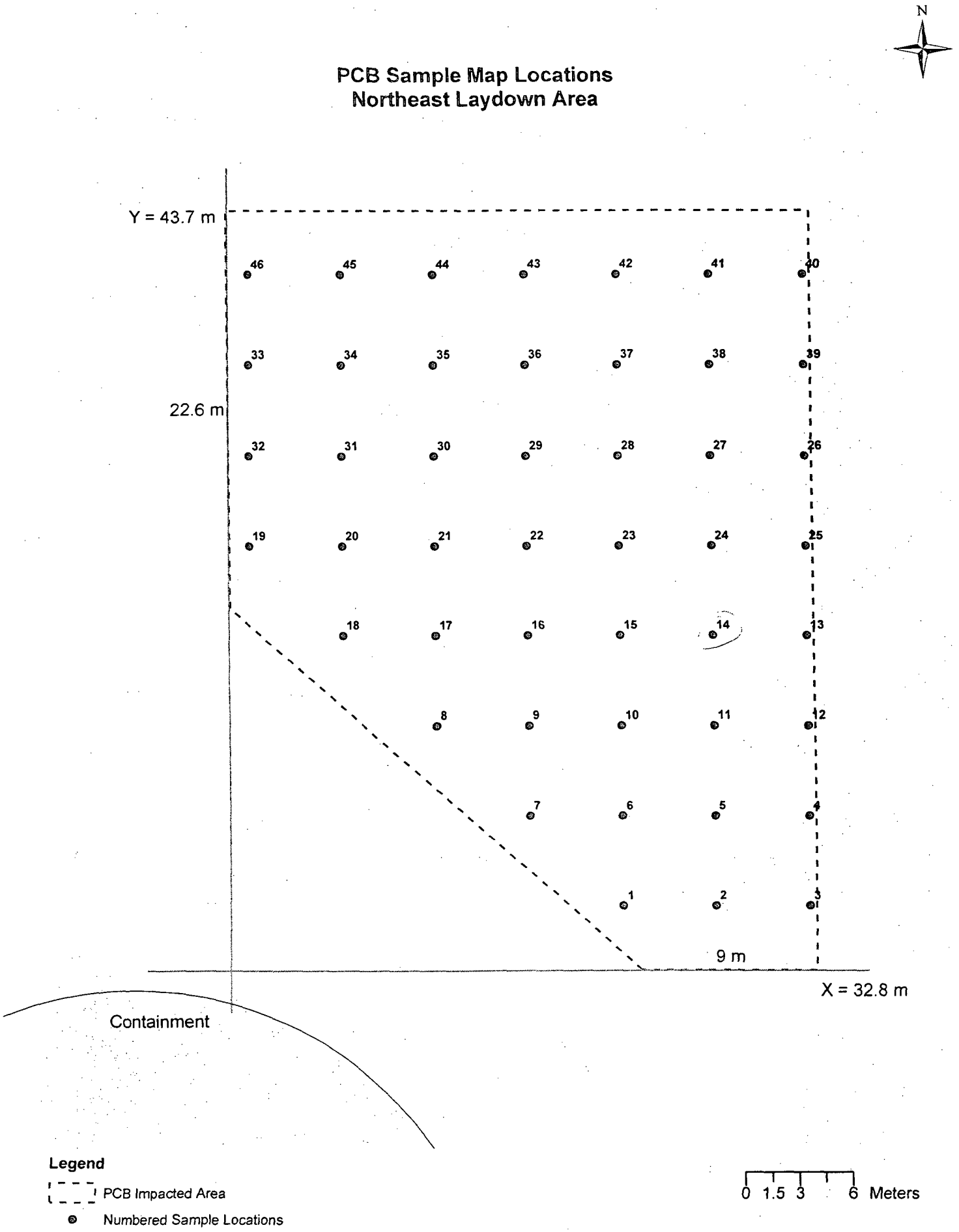
L=	(Area / No Samples) ^1/2	Minimum of 40 samples plus QC samples.
L=	5.2 m	

Random X-Y start points		**QC Samples**
X	0.354485412	34
		17
Y	0.678866018	30
		3
		6
		25

Survey Design: [signature] Date: 3/23/06

Reviewd By: [signature] Date: 3/27/06

PCB Sample Map Locations
Northeast Laydown Area



Sample Locations
NE PCB Laydown Area

Sample No.	X Coord.	Y Coord.	Sample No.	X Coord.	Y Coord.	Sample No.	X Coord.	Y Coord.	Sample No.	X Coord.	Y Coord.
1	22.0	3.7	16	16.8	19.3	31	6.4	29.7	46	1.2	40.1
2	27.2	3.7	17	11.6	19.3	32	1.2	29.7	47	6.4	34.9
3	32.4	3.7	18	6.4	19.3	33	1.2	34.9	48	11.6	19.3
4	32.4	8.9	19	1.2	24.5	34	6.4	34.9	49	11.6	29.7
5	27.2	8.9	20	6.4	24.5	35	11.6	34.9	50	32.4	3.7
6	22.0	8.9	21	11.6	24.5	36	16.8	34.9	51	22.0	8.9
7	16.8	8.9	22	16.8	24.5	37	22.0	34.9			
8	11.6	14.1	23	22.0	24.5	38	27.2	34.9			
9	16.8	14.1	24	27.2	24.5	39	32.4	34.9			
10	22.0	14.1	25	32.4	24.5	40	32.4	40.1			
11	27.2	14.1	26	32.4	29.7	41	27.2	40.1			
12	32.4	14.1	27	27.2	29.7	42	22.0	40.1			
13	32.4	19.3	28	22.0	29.7	43	16.8	40.1			
14	27.2	19.3	29	16.8	29.7	44	11.6	40.1			
15	22.0	19.3	30	11.6	29.7	45	6.4	40.1			

**Sample no. 30 is the random start location*

Sample spacing is 5.2 meters

Package ID Number: 0010

PCB SURVEY DATA RECORD SHEET

Survey Area: NE PCB Laydown Area	Size (m^2): 1182	# of Samples: 51

Sample ID Number	Sample Location (X)(Y)	Sample Result (ppm)	Sample ID Number	Sample Location (X)(Y)	Sample Result (ppm)
NE-PCB-S1	(22.0)(3.7)	nda	NE-PCB-S27	(27.2)(29.7)	nda
NE-PCB-S2	(27.2)(3.7)	nda	NE-PCB-S28	(22.0)(29.7)	nda
NE-PCB-S3	(32.4)(3.7)	nda	NE-PCB-S29	(16.8)(29.7)	nda
NE-PCB-S4	(32.4)(8.9)	nda	NE-PCB-S30	(11.6)(29.7)	nda
NE-PCB-S5	(27.2)(8.9)	nda	NE-PCB-S31	(6.4)(29.7)	nda
NE-PCB-S6	(22.0)(8.9)	nda	NE-PCB-S32	(1.2)(29.7)	nda
NE-PCB-S7	(16.8)(8.9)	nda	NE-PCB-S33	(1.2)(34.9)	nda
NE-PCB-S8	(11.6)(14.1)	nda	NE-PCB-S34	(6.4)(34.9)	nda
NE-PCB-S9	(16.8)(14.1)	nda	NE-PCB-S35	(11.6)(34.9)	nda
NE-PCB-S10	(22.0(14.1)	nda	NE-PCB-S36	(16.8)(34.9)	nda
NE-PCB-S11	(27.2)(14.1)	nda	NE-PCB-S37	(22.0)(34.9)	nda
NE-PCB-S12	(32.4)(14.1)	nda	NE-PCB-S38	(27.2)(34.9)	nda
NE-PCB-S13	(32.4)(19.3)	nda	NE-PCB-S39	(32.4)(34.9)	nda
NE-PCB-S14	(27.2)(19.3)	13	NE-PCB-S40	(32.4)(40.1)	nda
NE-PCB-S15	(22.0)(19.3)	nda	NE-PCB-S41	(27.2)(40.1)	nda
NE-PCB-S16	(16.8)(19.3)	nda	NE-PCB-S42	(22.0)(40.1)	nda
NE-PCB-S17	(11.6)(19.3)	nda	NE-PCB-S43	(16.8)(40.1)	nda
NE-PCB-S18	(6.4)(19.3)	nda	NE-PCB-S44	(11.6)(40.1)	nda
NE-PCB-S19	(1.2)(24.5)	nda	NE-PCB-S45	(6.4)(40.1)	nda
NE-PCB-S20	(6.4)(24.5)	nda	NE-PCB-S46	(1.2)(40.1)	nda
NE-PCB-S21	(11.6)(24.5)	nda	NE-PCB-S47	(6.4)(34.9)	nda
NE-PCB-S22	(16.8)(24.5)	nda	NE-PCB-S48	(11.6)(19.3)	nda
NE-PCB-S23	(22.0)(24.5)	nda	NE-PCB-S49	(11.6)(29.7)	nda
NE-PCB-S24	(27.2)(24.5)	nda	NE-PCB-S50	(32.4)(3.7)	nda
NE-PCB-S25	(32.4)(24.5)	nda	NE-PCB-S51	(22.0)(8.9)	nda
NE-PCB-S26	(32.4)(29.7)	nda			

Performed By: Jodie L. Reed (Survey Technician) Date: 05-10-06

Reviewed By: (Environmental Supervisor) Date: 05-11-06

CONSUMERS ENERGY Memorandum

To: TGoble, Big Rock

From: GLCattell, T-254, Jackson

Date: April 20, 2006

Subject: SAMPLES FOR DETERMINATION OF PCBs
- Soils
- NE Laydown Area
- Sampling Dates of March 27 & 28, 2006

CC: WMHoaglund, Big Rock

File Index: 510617-781-582

Fifty-three soil samples were received on March 29 for determination of polychlorinated biphenyls (PCBs). All determinations were performed by the Chemistry Section of Laboratory Services and the results are attached for your review.

Analytical Methods
Unless otherwise specified, all methods are from SW-846, Test Methods For Evaluating Solid Waste - Physical / Chemical Methods, USEPA.

Polychlorinated Biphenyls
Sample Extraction: Method 3545, Pressurized Fluid Extraction.
Extract Concentration: Nitrogen Evaporation Technique, Exhibit D, Aroclors, Section 10. Multi-Media, Multi-Concentration Organics Analysis; SOM01.X; USEPA.
Extract Cleanup: Method 3620, Florisil Cleanup; Method 3665A, Sulfuric Acid/Permanganate Cleanup & Method 3660B, Sulfur Cleanup.
Analysis: Method 8082, Polychlorinated Biphenyls by Gas Chromatography.
Percent Solids (Dry Weight): Section 7.2 of Method 3545, Determination of Percent Dry Weight, Pressurized Fluid Extraction.

Analytical Remarks & Summary
Sample S14 is reported with a total PCB concentration of 1300 ug/kg (ppb, dry wt basis) as Aroclor 1254. All other samples are reported as 'nd' (not detected) for all Aroclors.

Surrogate spike recoveries for S40, S41 & S43 were slightly lower than expected, based on matrix specific in-house statistical data.

The TDL was doubled from 330 ug/kg to 660 ug/kg for samples '55 Gal-1-S1' and '55 Gal-2-S1' due to matrix effects.

Report Package Contents
The report package consists of 33 pages: 1 cover page, 27 pages of Analytical Results & 5 Chain of Custody pages.

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - NE Laydown Area	Our Project Number CHEM-06-0582

Sample Identification	NE-PCB-S1	Sample Identification	NE-PCB-S2
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	03-27-06	Sample Date	03-27-06
Received Date	03-29-06	Received Date	03-29-06
Report Date	04-20-06	Report Date	04-20-06
Percent Solids, % w/w	97	Percent Solids, % w/w	99
Preparation Date	03-30-06	Preparation Date	03-30-06
Analysis Date	04-13-06	Analysis Date	04-13-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060582-01	Control Number	060582-02

TARGET PCBs, 8082			TARGET PCBs, 8082		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	--	PCB-1016	nd	--
PCB-1221	nd	--	PCB-1221	nd	--
PCB-1232	nd	--	PCB-1232	nd	--
PCB-1242	nd	--	PCB-1242	nd	--
PCB-1248	nd	--	PCB-1248	nd	--
PCB-1254	nd	--	PCB-1254	nd	--
PCB-1260	nd	--	PCB-1260	nd	--
PCB-1262	nd	--	PCB-1262	nd	--
PCB-1268	nd	--	PCB-1268	nd	--
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	94	84-122	Decachlorobiphenyl	93	84-122

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By Ad Date 4/2006 Data File 041306A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - NE Laydown Area	Our Project Number CHEM-06-0582

Sample Identification	NE-PCB-S3	**Sample Identification**	NE-PCB-S4
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	03-27-06	Sample Date	03-27-06
Received Date	03-29-06	Received Date	03-29-06
Report Date	04-20-06	Report Date	04-20-06
Percent Solids, % w/w	97	Percent Solids, % w/w	98
Preparation Date	03-30-06	Preparation Date	03-30-06
Analysis Date	04-13-06	Analysis Date	04-13-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060582-03	Control Number	060582-04

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	96	84-122	Decachlorobiphenyl	97	84-122

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By AM Date 4/20/06 Data File 041306A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - NE Laydown Area	Our Project Number CHEM-06-0582

Sample Identification	NE-PCB-S5	**Sample Identification**	NE-PCB-S6
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	03-27-06	Sample Date	03-27-06
Received Date	03-29-06	Received Date	03-29-06
Report Date	04-20-06	Report Date	04-20-06
Percent Solids, % w/w	99	Percent Solids, % w/w	96
Preparation Date	03-30-06	Preparation Date	03-30-06
Analysis Date	04-13-06	Analysis Date	04-13-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060582-05	Control Number	060582-06

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	94	84-122	Decachlorobiphenyl	95	84-122

NOTES:

TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By AU Date 4/20/06 Data File 041306A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - NE Laydown Area	Our Project Number CHEM-06-0582

Sample Identification	NE-PCB-S7	Sample Identification	NE-PCB-S8
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	03-27-06	Sample Date	03-27-06
Received Date	03-29-06	Received Date	03-29-06
Report Date	04-20-06	Report Date	04-20-06
Percent Solids, % w/w	96	Percent Solids, % w/w	93
Preparation Date	03-30-06	Preparation Date	03-30-06
Analysis Date	04-13-06	Analysis Date	04-13-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060582-07	Control Number	060582-08

TARGET PCBs, 8082			TARGET PCBs, 8082		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	92	84-122	Decachlorobiphenyl	85	82-121

NOTES:

TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By *Sll* Date *4/20/06* Data File 041306A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - NE Laydown Area	Our Project Number CHEM-06-0582

Sample Identification	NE-PCB-S9	**Sample Identification**	NE-PCB-S10
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	03-27-06	Sample Date	03-27-06
Received Date	03-29-06	Received Date	03-29-06
Report Date	04-20-06	Report Date	04-20-06
Percent Solids, % w/w	94	Percent Solids, % w/w	96
Preparation Date	03-30-06	Preparation Date	03-30-06
Analysis Date	04-13-06	Analysis Date	04-13-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060582-09	Control Number	060582-10

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	91	84-122	Decachlorobiphenyl	91	84-122

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By AM Date 4-20-06 Data File 041306A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - NE Laydown Area	Our Project Number CHEM-06-0582

Sample Identification	NE-PCB-S11	**Sample Identification**	NE-PCB-S12
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	03-27-06	Sample Date	03-27-06
Received Date	03-29-06	Received Date	03-29-06
Report Date	04-20-06	Report Date	04-20-06
Percent Solids, % w/w	97	Percent Solids, % w/w	93
Preparation Date	03-30-06	Preparation Date	03-30-06
Analysis Date	04-13-06	Analysis Date	04-13-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060582-11	Control Number	060582-12

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	93	84-122	Decachlorobiphenyl	91	84-122

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By Au Date 4/20/06 Data File 041306A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - NE Laydown Area	Our Project Number CHEM-06-0582

Sample Identification	NE-PCB-S13	**Sample Identification**	NE-PCB-S14
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	03-27-06	Sample Date	03-27-06
Received Date	03-29-06	Received Date	03-29-06
Report Date	04-20-06	Report Date	04-20-06
Percent Solids, % w/w	94	Percent Solids, % w/w	96
Preparation Date	03-30-06	Preparation Date	03-30-06
Analysis Date	04-13-06	Analysis Date	04-14-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060582-13	Control Number	060582-14

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	1,300	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	1,300	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	90	84-122	Decachlorobiphenyl	89	84-122

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
PCB Concentration & Type Confirmed For S14

Reviewed By _____ Date _____ Data File 041306A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - NE Laydown Area	Our Project Number CHEM-06-0582

Sample Identification	NE-PCB-S15	**Sample Identification**	NE-PCB-S16
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	03-27-06	Sample Date	03-27-06
Received Date	03-29-06	Received Date	03-29-06
Report Date	04-20-06	Report Date	04-20-06
Percent Solids, % w/w	96	Percent Solids, % w/w	93
Preparation Date	03-30-06	Preparation Date	03-30-06
Analysis Date	04-14-06	Analysis Date	04-14-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060582-15	Control Number	060582-16

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	85	84-122	Decachlorobiphenyl	85	82-121

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date 4-20-06 Data File 041306A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - NE Laydown Area	Our Project Number CHEM-06-0582

Sample Identification	NE-PCB-S17	**Sample Identification**	NE-PCB-S18
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	03-27-06	Sample Date	03-27-06
Received Date	03-29-06	Received Date	03-29-06
Report Date	04-20-06	Report Date	04-20-06
Percent Solids, % w/w	90	Percent Solids, % w/w	94
Preparation Date	03-30-06	Preparation Date	03-30-06
Analysis Date	04-14-06	Analysis Date	04-14-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060582-17	Control Number	060582-18

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	87	84-122	Decachlorobiphenyl	85	84-122

NOTES:

TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date _____ Data File 041306A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - NE Laydown Area	Our Project Number CHEM-06-0582

Sample Identification	NE-PCB-S19	**Sample Identification**	NE-PCB-S20
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	03-27-06	Sample Date	03-27-06
Received Date	03-29-06	Received Date	03-29-06
Report Date	04-20-06	Report Date	04-20-06
Percent Solids, % w/w	96	Percent Solids, % w/w	94
Preparation Date	03-30-06	Preparation Date	03-31-06
Analysis Date	04-14-06	Analysis Date	04-14-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060582-19	Control Number	060582-20

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	86	84-122	Decachlorobiphenyl	91	84-122

NOTES:

TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date _____ Data File 041406A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - NE Laydown Area	Our Project Number CHEM-06-0582

Sample Identification	NE-PCB-S21	**Sample Identification**	NE-PCB-S22
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	03-27-06	Sample Date	03-27-06
Received Date	03-29-06	Received Date	03-29-06
Report Date	04-20-06	Report Date	04-20-06
Percent Solids, % w/w	93	Percent Solids, % w/w	93
Preparation Date	03-31-06	Preparation Date	03-31-06
Analysis Date	04-14-06	Analysis Date	04-14-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060582-21	Control Number	060582-22

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	90	84-122	Decachlorobiphenyl	97	84-122

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By AM Date 4/20/06 Data File 041406A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - NE Laydown Area	Our Project Number CHEM-06-0582

Sample Identification	NE-PCB-S23	Sample Identification	NE-PCB-S24
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	03-27-06	Sample Date	03-27-06
Received Date	03-29-06	Received Date	03-29-06
Report Date	04-20-06	Report Date	04-20-06
Percent Solids, % w/w	94	Percent Solids, % w/w	94
Preparation Date	03-31-06	Preparation Date	03-31-06
Analysis Date	04-14-06	Analysis Date	04-14-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060582-23	Control Number	060582-24

TARGET PCBs, 8082			TARGET PCBs, 8082		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	95	84-122	Decachlorobiphenyl	95	84-122

NOTES:

TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date 4-20-06 Data File 041406A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - NE Laydown Area	Our Project Number CHEM-06-0582

Sample Identification	NE-PCB-S25	**Sample Identification**	NE-PCB-S26
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	03-27-06	Sample Date	03-27-06
Received Date	03-29-06	Received Date	03-29-06
Report Date	04-20-06	Report Date	04-20-06
Percent Solids, % w/w	95	Percent Solids, % w/w	94
Preparation Date	03-31-06	Preparation Date	03-31-06
Analysis Date	04-14-06	Analysis Date	04-14-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060582-25	Control Number	060582-26

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	89	84-122	Decachlorobiphenyl	91	84-122

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date _____ Data File 041406A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - NE Laydown Area	Our Project Number CHEM-06-0582

Sample Identification	NE-PCB-S27	Sample Identification	NE-PCB-S28
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	03-27-06	Sample Date	03-27-06
Received Date	03-29-06	Received Date	03-29-06
Report Date	04-20-06	Report Date	04-20-06
Percent Solids, % w/w	95	Percent Solids, % w/w	94
Preparation Date	03-31-06	Preparation Date	03-31-06
Analysis Date	04-14-06	Analysis Date	04-14-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060582-27	Control Number	060582-28

TARGET PCBs, 8082			TARGET PCBs, 8082		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	--	PCB-1016	nd	--
PCB-1221	nd	--	PCB-1221	nd	--
PCB-1232	nd	--	PCB-1232	nd	--
PCB-1242	nd	--	PCB-1242	nd	--
PCB-1248	nd	--	PCB-1248	nd	--
PCB-1254	nd	--	PCB-1254	nd	--
PCB-1260	nd	--	PCB-1260	nd	--
PCB-1262	nd	--	PCB-1262	nd	--
PCB-1268	nd	--	PCB-1268	nd	--
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	94	84-122	Decachlorobiphenyl	93	84-122

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By AM Date 4/20/06 Data File 041406A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - NE Laydown Area	Our Project Number CHEM-06-0582

Sample Identification	NE-PCB-S29	**Sample Identification**	NE-PCB-S30
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	03-27-06	Sample Date	03-27-06
Received Date	03-29-06	Received Date	03-29-06
Report Date	04-20-06	Report Date	04-20-06
Percent Solids, % w/w	95	Percent Solids, % w/w	95
Preparation Date	03-31-06	Preparation Date	03-31-06
Analysis Date	04-14-06	Analysis Date	04-14-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060582-29	Control Number	060582-30

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	88	82-121	Decachlorobiphenyl	92	84-122

NOTES:

TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date _____ Data File 041406A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - NE Laydown Area	Our Project Number CHEM-06-0582

Sample Identification	NE-PCB-S31	**Sample Identification**	NE-PCB-S32
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	03-27-06	Sample Date	03-27-06
Received Date	03-29-06	Received Date	03-29-06
Report Date	04-20-06	Report Date	04-20-06
Percent Solids, % w/w	95	Percent Solids, % w/w	96
Preparation Date	03-31-06	Preparation Date	03-31-06
Analysis Date	04-14-06	Analysis Date	04-14-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060582-31	Control Number	060582-32

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	92	84-122	Decachlorobiphenyl	90	84-122

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date _____ Data File 041406A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - NE Laydown Area	Our Project Number CHEM-06-0582

Sample Identification	NE-PCB-S33	Sample Identification	NE-PCB-S34
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	03-27-06	Sample Date	03-27-06
Received Date	03-29-06	Received Date	03-29-06
Report Date	04-20-06	Report Date	04-20-06
Percent Solids, % w/w	97	Percent Solids, % w/w	91
Preparation Date	03-31-06	Preparation Date	03-31-06
Analysis Date	04-15-06	Analysis Date	04-15-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060582-33	Control Number	060582-34

TARGET PCBs, 8082			TARGET PCBs, 8082		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	--	PCB-1016	nd	--
PCB-1221	nd	--	PCB-1221	nd	--
PCB-1232	nd	--	PCB-1232	nd	--
PCB-1242	nd	--	PCB-1242	nd	--
PCB-1248	nd	--	PCB-1248	nd	--
PCB-1254	nd	--	PCB-1254	nd	--
PCB-1260	nd	--	PCB-1260	nd	--
PCB-1262	nd	--	PCB-1262	nd	--
PCB-1268	nd	--	PCB-1268	nd	--
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	93	84-122	Decachlorobiphenyl	92	84-122

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date 4/20/06 Data File 041406A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - NE Laydown Area	Our Project Number CHEM-06-0582

Sample Identification	NE-PCB-S35	**Sample Identification**	NE-PCB-S36
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	03-27-06	Sample Date	03-27-06
Received Date	03-29-06	Received Date	03-29-06
Report Date	04-20-06	Report Date	04-20-06
Percent Solids, % w/w	93	Percent Solids, % w/w	96
Preparation Date	03-31-06	Preparation Date	03-31-06
Analysis Date	04-15-06	Analysis Date	04-15-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060582-35	Control Number	060582-36

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	90	84-122	Decachlorobiphenyl	95	84-122

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date 4/20/06 Data File 041406A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - NE Laydown Area	Our Project Number CHEM-06-0582

Sample Identification	NE-PCB-S37	**Sample Identification**	NE-PCB-S38
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	03-27-06	Sample Date	03-27-06
Received Date	03-29-06	Received Date	03-29-06
Report Date	04-20-06	Report Date	04-20-06
Percent Solids, % w/w	96	Percent Solids, % w/w	96
Preparation Date	03-31-06	Preparation Date	03-31-06
Analysis Date	04-15-06	Analysis Date	04-15-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060582-37	Control Number	060582-38

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	89	84-122	Decachlorobiphenyl	92	84-122

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date _____ Data File 041406A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - NE Laydown Area	Our Project Number CHEM-06-0582

Sample Identification	NE-PCB-S39	Sample Identification	NE-PCB-S40
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	03-27-06	Sample Date	03-27-06
Received Date	03-29-06	Received Date	03-29-06
Report Date	04-20-06	Report Date	04-20-06
Percent Solids, % w/w	89	Percent Solids, % w/w	92
Preparation Date	04-03-06	Preparation Date	04-03-06
Analysis Date	04-15-06	Analysis Date	04-15-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060582-39	Control Number	060582-40

TARGET PCBs, 8082			TARGET PCBs, 8082		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	--	PCB-1016	nd	--
PCB-1221	nd	--	PCB-1221	nd	--
PCB-1232	nd	--	PCB-1232	nd	--
PCB-1242	nd	--	PCB-1242	nd	--
PCB-1248	nd	--	PCB-1248	nd	--
PCB-1254	nd	--	PCB-1254	nd	--
PCB-1260	nd	--	PCB-1260	nd	--
PCB-1262	nd	--	PCB-1262	nd	--
PCB-1268	nd	--	PCB-1268	nd	--
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	87	84-122	Decachlorobiphenyl	75 *	84-122

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL. * = Lower Than Expected Recovery.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By [illegible] Date 4/20/06 Data File 041406A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - NE Laydown Area	Our Project Number CHEM-06-0582

Sample Identification	NE-PCB-S41	**Sample Identification**	NE-PCB-S42
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	03-27-06	Sample Date	03-27-06
Received Date	03-29-06	Received Date	03-29-06
Report Date	04-20-06	Report Date	04-20-06
Percent Solids, % w/w	95	Percent Solids, % w/w	94
Preparation Date	04-03-06	Preparation Date	04-03-06
Analysis Date	04-15-06	Analysis Date	04-15-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060582-41	Control Number	060582-42

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	83 *	84-122	Decachlorobiphenyl	90	84-122

NOTES:

TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL. * = Lower Than Expected Recovery.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date _____ Data File 041406A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - NE Laydown Area	Our Project Number CHEM-06-0582

Sample Identification	NE-PCB-S43	**Sample Identification**	NE-PCB-S44
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	03-27-06	Sample Date	03-27-06
Received Date	03-29-06	Received Date	03-29-06
Report Date	04-20-06	Report Date	04-20-06
Percent Solids, % w/w	95	Percent Solids, % w/w	94
Preparation Date	04-03-06	Preparation Date	04-03-06
Analysis Date	04-15-06	Analysis Date	04-15-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060582-43	Control Number	060582-44

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	80 *	84-122	Decachlorobiphenyl	86	84-122

NOTES:

TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL. * = Lower Than Expected Recovery.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date _____ Data File 041406A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - NE Laydown Area	Our Project Number CHEM-06-0582

Sample Identification	NE-PCB-S45	**Sample Identification**	NE-PCB-S46
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	03-27-06	Sample Date	03-27-06
Received Date	03-29-06	Received Date	03-29-06
Report Date	04-20-06	Report Date	04-20-06
Percent Solids, % w/w	90	Percent Solids, % w/w	94
Preparation Date	04-03-06	Preparation Date	04-03-06
Analysis Date	04-15-06	Analysis Date	04-15-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060582-45	Control Number	060582-46

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	85	84-122	Decachlorobiphenyl	98	84-122

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date _____ Data File 041406A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - NE Laydown Area	Our Project Number CHEM-06-0582

Sample Identification	NE-PCB-S47	Sample Identification	NE-PCB-S48
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	03-27-06	Sample Date	03-27-06
Received Date	03-29-06	Received Date	03-29-06
Report Date	04-20-06	Report Date	04-20-06
Percent Solids, % w/w	90	Percent Solids, % w/w	92
Preparation Date	04-03-06	Preparation Date	04-03-06
Analysis Date	04-15-06	Analysis Date	04-15-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060582-47	Control Number	060582-48

TARGET PCBs, 8082			TARGET PCBs, 8082		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	88	84-122	Decachlorobiphenyl	94	84-122

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date _____ Data File 041406A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - NE Laydown Area	Our Project Number CHEM-06-0582

Sample Identification	NE-PCB-S49	**Sample Identification**	NE-PCB-S50
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	03-27-06	Sample Date	03-27-06
Received Date	03-29-06	Received Date	03-29-06
Report Date	04-20-06	Report Date	04-20-06
Percent Solids, % w/w	93	Percent Solids, % w/w	94
Preparation Date	04-03-06	Preparation Date	04-03-06
Analysis Date	04-15-06	Analysis Date	04-15-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060582-49	Control Number	060582-50

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	91	84-122	Decachlorobiphenyl	103	84-122

NOTES:
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date _____ Data File 041406A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - NE Laydown Area	Our Project Number CHEM-06-0582

Sample Identification	NE-PCB-S51	**Sample Identification**	55 Gal-1-S1
Sample Depth, inches	3	Sample Depth, inches	3
Sample Type	soil	Sample Type	soil
Sample Date	03-27-06	Sample Date	03-28-06
Received Date	03-29-06	Received Date	03-29-06
Report Date	04-20-06	Report Date	04-20-06
Percent Solids, % w/w	94	Percent Solids, % w/w	80
Preparation Date	04-03-06	Preparation Date	04-03-06
Analysis Date	04-15-06	Analysis Date	04-16-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060582-51	Control Number	060582-52

TARGET PCBs, 8082			**TARGET PCBs, 8082**		
Primary Analytical Column	ug/kg	TDL	Primary Analytical Column	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	660 *
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	101	84-122	Decachlorobiphenyl	95	84-122

NOTES:

TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL. * = Elevated TDL Due To Matrix.
Results Are Reported On The Dry Weight Basis.
Confirming Analytical Column Was Not Required.

Reviewed By _____ Date 4/2006 Data File 041606A

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock Point - NE Laydown Area		Our Project Number CHEM-06-0582
Sample Identification	55 Gal-2-S1		
Sample Depth, inches	3		
Sample Type	soil		
Sample Date	03-28-06		
Received Date	03-29-06		
Report Date	04-20-06		
Percent Solids, % w/w	94		
Preparation Date	04-03-06		
Analysis Date	04-16-06		
Analyst	bek, glc		
Control Number	060582-53		
TARGET PCBs, 8082			
Primary Analytical Column	ug/kg	TDL	
PCB-1016	nd	--	
PCB-1221	nd	--	
PCB-1232	nd	--	
PCB-1242	nd	--	
PCB-1248	nd	--	
PCB-1254	nd	--	
PCB-1260	nd	--	
PCB-1262	nd	--	
PCB-1268	nd	--	
Sum of Aroclors	nd	660 *	
Surrogate Recovery	%Recovery	Criteria	
Decachlorobiphenyl	92	84-122	

NOTES:	TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1. nd = Parameter Not Detected At The TDL. * = Elevated TDL Due To Matrix. Results Are Reported On The Dry Weight Basis. Confirming Analytical Column Was Not Required.

Reviewed By _____ Date _____ Data File 041606A

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – LABORATORY SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: Consumers Energy Big Rock Point

PROJECT NUMBER: NE PCB Laydown Area

SAMPLING TEAM:

DATE SHIPPED:

SITE SKETCH ATTACHED? CIRCLE ONE: YES NO

PAGE 1 OF 5

SEND REPORT TO: Tracy Goble, Big Rock Point, PHONE: 231-547-8389

CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	ANALYSIS REQUESTED: PCB's							REMARKS
06-0382-01	3/27/06	10:29		NE-PCB-S1	3"	1	X							
-02	3/27/06	10:28		NE-PCB-S2	3"	1	X							
-03	3/27/06	10:11		NE-PCB-S3	3"	1	X							
-04	3/27/06	10:12		NE-PCB-S4	3"	1	X							
-05	3/27/06	10:27		NE-PCB-S5	3"	1	X							
-06	3/27/06	10:30		NE-PCB-S6	3"	1	X							
-07	3/27/06	10:52		NE-PCB-S7	3"	1	X							
-08	3/27/06	10:53		NE-PCB-S8	3"	1	X							
-09	3/27/06	10:51		NE-PCB-S9	3"	1	X							
-10	3/27/06	10:31		NE-PCB-S10	3"	1	X							
-11	3/27/06	10:26		NE-PCB-S11	3"	1	X							
-12	3/27/06	10:13		NE-PCB-S12	3"	1	X							

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
Jackie Reed	3-28-06 / 12:30	
RELINQUISHED BY: (SIGNATURE) FedEx	DATE / TIME 3/29/06 1000	RECEIVED BY: (SIGNATURE)
RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)

COMMENTS: 16°C Ice

ORIGINAL TO LAB COPY TO CUSTOMER

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – LABORATORY SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: Consumers Energy Big Rock Point

PROJECT NUMBER: NE PCB Laydown Area

SAMPLING TEAM:

DATE SHIPPED:

SITE SKETCH ATTACHED? CIRCLE ONE: YES NO

ANALYSIS REQUESTED: PCB's

PAGE 2 OF 5

SEND REPORT TO: Tracy Goble, Big Rock Point

PHONE: 231-547-8389

CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	PCB's							REMARKS
06052013	3/27/06	10:14		NE-PCB-S13	3"	1	X							
-14	3/27/06	10:25		NE-PCB-S14	3"	1	X							
-15	3/27/06	10:32		NE-PCB-S15	3"	1	X							
-16	3/27/06	10:50		NE-PCB-S16	3"	1	X							
-17	3/27/06	10:54		NE-PCB-S17	3"	1	X							
-18	3/27/06	11:03		NE-PCB-S18	3"	1	X							
-19	3/27/06	11:04		NE-PCB-S19	3"	1	X							
-20	3/27/06	11:02		NE-PCB-S20	3"	1	X							
-21	3/27/06	10:55		NE-PCB-S21	3"	1	X							
-22	3/27/06	10:49		NE-PCB-S22	3"	1	X							
-23	3/27/06	10:33		NE-PCB-S23	3"	1	X							
-24	3/27/06	10:24		NE-PCB-S24	3"	1	X							

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
Jodie L. Reed	3-28-06 / 12:30	
RELINQUISHED BY: (SIGNATURE) FedEx	DATE / TIME 4/4/06 10:00	RECEIVED BY: (SIGNATURE)
RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)

COMMENTS

ORIGINAL TO LAB COPY TO CUSTOMER

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – LABORATORY SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: Consumer's Energy Big Rock Point

PROJECT NUMBER: NE PCB Laydown Area

SAMPLING TEAM:

DATE SHIPPED:

SITE SKETCH ATTACHED? CIRCLE ONE: YES NO

PAGE 3 OF 5

SEND REPORT TO: Tracy Goble Big Rock Point

PHONE: 231-547-8387

CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	ANALYSIS REQUESTED: PCB's							REMARKS
06-0582-25	3/27/06	10:16		NE-PCB-S25	3"	1	X							
-26	3/27/06	10:18		NE-PCB-S26	3"	1	X							
-27	3/27/06	10:23		NE-PCB-S27	3"	1	X							
-28	3/27/06	10:34		NE-PCB-S28	3"	1	X							
-29	3/27/06	10:39		NE-PCB-S29	3"	1	X							
-30	3/27/06	10:56		NE-PCB-S30	3"	1	X							
-31	3/27/06	11:01		NE-PCB-S31	3"	1	X							
-32	3/27/06	11:05		NE-PCB-S32	3"	1	X							
-33	3/27/06	11:06		NE-PCB-S33	3"	1	X							
-34	3/27/06	11:00		NE-PCB-S34	3"	1	X							
-35	3/27/06	10:57		NE-PCB-S35	3"	1	X							
-36	3/27/06	10:38		NE-PCB-S36	3"	1	X							

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
Jackie L. Reed	3-28-06 / 12:30	
FedEx	3/28/06 1000	

COMMENTS

ORIGINAL TO LAB COPY TO CUSTOMER

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – LABORATORY SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: Consumer's Energy Big Rock Point

PROJECT NUMBER: NE PCB Laydown Area

SAMPLING TEAM:

DATE SHIPPED:

SITE SKETCH ATTACHED? CIRCLE ONE: YES NO

PAGE 4 OF 5

SEND REPORT TO: Tracy Goble, Big Rock Point, PHONE: 231-547-8389

CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	ANALYSIS REQUESTED: PCB's							REMARKS
060582-37	3/27/06	10:35		NE-PCB-S37	3"	1	X							
-38	3/27/06	10:22		NE-PCB-S38	3"	1	X							
-39	3/27/06	10:19		NE-PCB-S39	3"	1	X							
-40	3/27/06	10:20		NE-PCB-S40	3"	1	X							
-41	3/27/06	10:21		NE-PCB-S41	3"	1	X							
-42	3/27/06	10:36		NE-PCB-S42	3"	1	X							
-43	3/27/06	10:37		NE-PCB-S43	3"	1	X							
-44	3/27/06	10:58		NE-PCB-S44	3"	1	X							
-45	3/27/06	10:59		NE-PCB-S45	3"	1	X							
-46	3/27/06	11:07		NE-PCB-S46	3"	1	X							
-47	3/27/06	11:00		NE-PCB-S47	3"	1	X							
-48	3/27/06	10:54		NE-PCB-S48	3"	1	X							

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
Jordan L. Reed	3-28-06 / 12:30	
FedEx	3/29/06 1000	

COMMENTS

ORIGINAL TO LAB COPY TO CUSTOMER

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – LABORATORY SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: Consumer's Energy Big Rock Point

PROJECT NUMBER: NE PCB Laydown Area

SAMPLING TEAM:

DATE SHIPPED:

SITE SKETCH ATTACHED? CIRCLE ONE: YES (NO)

ANALYSIS REQUESTED

PAGE 5 OF 5

SEND REPORT TO: Tracy Goble Big Rock Point

PHONE: 231-547-8389

CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	PCB's							REMARKS
060582-49	3/27/06	10:56		NE-PCB-549	3"	1	X							
-50	3/27/06	10:11		NE-PCB-550	3"	1	X							
-51	3/27/06	10:30		NE-PCB-551	3"	1	X							
-52	3/28/06	09:35		55 Gal-1-51	3"	1	X							
-53	3/28/06	09:41		55 Gal-2-51	3"	1	X							

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
Joshua L. Read	3-28-06 / 12:30	
RELINQUISHED BY: (SIGNATURE) FedEx	DATE / TIME 3/29/06 1000	RECEIVED BY: (SIGNATURE)
RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)

COMMENTS

ORIGINAL TO LAB COPY TO CUSTOMER

PCB SURVEY PACKAGE CLOSE-OUT CHECKLIST

Package ID Number: 0011 Survey Area: SE PCB Laydown Area

The survey package is legible and complete and the following necessary information is in the package:

1. ✓ Survey Package Cover Sheet
2. ✓ Survey design documentation
3. ✓ Random number generator sheet for sample start location and QC sample numbers.
4. ✓ Completed survey map/data sheet
5. ✓ Completed PCB Survey Data Record Sheet
6. ✓ Copy of the Chain of Custody
7. ✓ Copy of sample results
8. _____ Other documentation:

Completed By: Jodie L. Reed Date: 5-10-06
(Environmental Technician)

Reviewed By: [illegible] Date: 5-11-06
(Environmental Supervisor)

PCB SURVEY PACKAGE COVER SHEET

Package ID Number : 0011	Survey Area: SE PCB Laydown Area	Size (m^2): ~458.8

Random Samples

# of Field Samples: 44
# of QC samples: 05

Random Start Location: X (4.5), Y (25.9)
Sample Spacing: 3.2 meters

Isolation Controls implemented ☐ List controls: Area posted as a PCB survey area.

Comments/specific directions[1]: -Random sample locations determined by random number generator.

-Sample analysis results acceptance criteria is <1 mg/Kg for soil samples.

ALL SAMPLES BELOW ACCEPTANCE CRITERIA.

([1] Address any inaccessible areas or sample points not included in survey).

SURVEY PACKAGE CLOSURE

Screening Survey Package is authorized for closure. All required reviews are completed and pertinent information is included in package (see Survey Package Close-Out Checklist).

ENV Technician Jodie L. Reed Date: 5-10-06

ENV Supervisor: [illegible] Date: 5-11-06

Package ID Number: 0011

PCB SURVEY DATA RECORD SHEET

Survey Area: SE PCB Laydown Area	Size (m^2): 458.8	# of Samples: 48

Sample ID Number	Sample Location (X)(Y)	Sample Result (ppm)	Sample ID Number	Sample Location (X)(Y)	Sample Result (ppm)
SE-PCB-S1	(1.3)(0.3)	nda	SE-PCB-S27	(14.1)(16.3)	nda
SE-PCB-S2	(4.5)(0.3)	nda	SE-PCB-S28	(10.9)(16.3)	nda
SE-PCB-S3	(7.7)(0.3)	nda	SE-PCB-S29	(7.7)(16.3)	nda
SE-PCB-S4	(10.9)(0.3)	nda	SE-PCB-S30	(7.7)(19.5)	nda
SE-PCB-S5	(14.1)(0.3)	nda	SE-PCB-S31	(10.9)(19.5)	nda
SE-PCB-S6	(17.3)(0.3)	nda	SE-PCB-S32	(14.1)(19.5)	nda
SE-PCB-S7	(17.3)(3.5)	nda	SE-PCB-S33	(17.3)(19.5)	nda
SE-PCB-S8	(14.1)(3.5)	0.003	SE-PCB-S34	(17.3)(22.7)	nda
SE-PCB-S9	(10.9)(3.5)	nda	SE-PCB-S35	(14.1)(22.7)	nda
SE-PCB-S10	(7.7(3.5)	nda	SE-PCB-S36	(10.9)(22.7)	nda
SE-PCB-S11	(4.5)(3.5)	nda	SE-PCB-S37	(7.7)(22.7)	nda
SE-PCB-S12	(4.5)(6.7)	nda	SE-PCB-S38	(10.9)(25.9)	nda
SE-PCB-S13	(7.7)(6.7)	nda	SE-PCB-S39	(14.1)(25.9)	nda
SE-PCB-S14	(10.9)(6.7)	13	SE-PCB-S40	(17.3)(25.9)	nda
SE-PCB-S15	(14.1)(6.7)	nda	SE-PCB-S41	(17.3)(29.1)	nda
SE-PCB-S16	(17.3)(6.7)	nda	SE-PCB-S42	(14.1)(29.1)	nda
SE-PCB-S17	(17.3)(9.9)	nda	SE-PCB-S43	(10.9)(29.1)	nda
SE-PCB-S18	(14.1)(9.9)	nda	SE-PCB-S44	(7.7)(19.5)	nda
SE-PCB-S19	(10.9)(9.9)	nda	SE-PCB-S45	(10.9)(13.1)	nda
SE-PCB-S20	(7.7)(9.9)	nda	SE-PCB-S46	(14.1)(6.7)	nda
SE-PCB-S21	(4.5)(9.9)	nda	SE-PCB-S47	(14.1)(16.3)	nda
SE-PCB-S22	(7.7)(13.1)	nda	SE-PCB-S48	(7.7)(3.5)	nda
SE-PCB-S23	(10.9)(13.1)	nda			
SE-PCB-S24	(14.1)(13.1)	nda			
SE-PCB-S25	(17.3)(13.1)	nda			
SE-PCB-S26	(17.3)(16.3)	nda			

Performed By: Jordan Read (Survey Technician) Date: 5-10-06

Reviewed By: (Environmental Supervisor) Date: 5-11-06

PCB Post Demolition Survey Design - SE Laydown Area

Survey Area Dimensions:

Xmax =	20.0 m
Ymax =	31.0 m
Area =	458.8 sq. m → based on actual survey area. See sketch.

Randon Start Location:

X =	4.5 m
Y =	25.9 m

Sample Spacing:

L=	(Area / No Samples) ^1/2	40 Samples Minimum Actual # of Samples= 45
L=	3.2 m	

Random X-Y start points		QC Samples
X	0.225741721	30
		23
Y	0.835965219	15
		27
		~~15~~
		10

Survey Design: Jodie L. Reed Date: 3-29-06

Reviewd By: [illegible] Date: 3-30-06

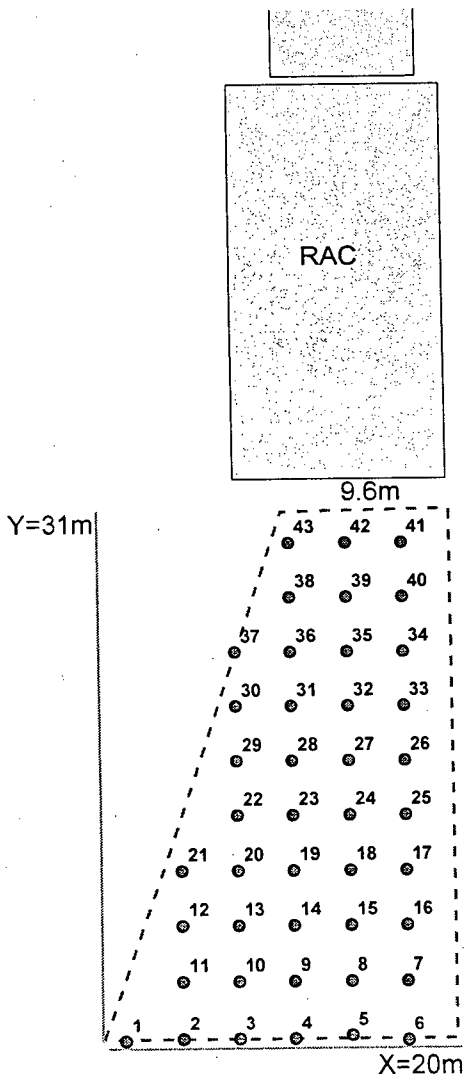
Sample Locations
SE PCB Laydown Area

Sample No.	X Coord.	Y Coord.	Sample No.	X Coord.	Y Coord.	Sample No.	X Coord.	Y Coord.	Sample No.	X Coord.	Y Coord.
1	1.3	0.3	16	17.3	6.7	31	10.9	19.5	46	14.1	6.7
2	4.5	0.3	17	17.3	9.9	32	14.1	19.5	47	14.1	16.3
3	7.7	0.3	18	14.1	9.9	33	17.3	19.5	48	7.7	3.5
4	10.9	0.3	19	10.9	9.9	34	17.3	22.7			
5	14.1	0.3	20	7.7	9.9	35	14.1	22.7			
6	17.3	0.3	21	4.5	9.9	36	10.9	22.7			
7	17.3	3.5	22	7.7	13.1	37	7.7	22.7			
8	14.1	3.5	23	10.9	13.1	38	10.9	25.9			
9	10.9	3.5	24	14.1	13.1	39	14.1	25.9			
10	7.7	3.5	25	17.3	13.1	40	17.3	25.9			
11	4.5	3.5	26	17.3	16.3	41	17.3	29.1			
12	4.5	6.7	27	14.1	16.3	42	14.1	29.1			
13	7.7	6.7	28	10.9	16.3	43	10.9	29.1			
14	10.9	6.7	29	7.7	16.3	44	7.7	19.5			
15	14.1	6.7	30	7.7	19.5	45	10.9	13.1			

** (4.5)(25.9) is the random start location*

Sample spacing is 3.2 meters

PCB Sample Map Locations
South East Laydown Area



Legend

PCB Impacted Area

Numbered Sample Locations

0 2.5 5 10 Meters

CONSUMERS ENERGY Memorandum

To: TGoble, Big Rock

From: GLCattell, T-254, Jackson

Date: April 25, 2006

Subject: SAMPLES FOR DETERMINATION OF PCBs
- Soils & Surface Wipes
- SE Corner
- Sampling Dates of March 28 & April 04, 2006

CC: WMHoaglund, Big Rock

File Index: 510617-784-644
Addendum 1

Additional Remark
Three soil samples identified as 'Container Soil' were extracted 2 days past the maximum recommended holding time.

CONSUMERS ENERGY Memorandum

To: TGoble, Big Rock

From: GLCattell, T-254, Jackson

Date: April 25, 2006

Subject: SAMPLES FOR DETERMINATION OF PCBs
- Soils & Surface Wipes
- SE Corner
- Sampling Dates of March 28 & April 04, 2006

CC: WMHoaglund, Big Rock

File Index: 510617-784-644

Five soil samples and 46 surface wipe samples were received on April 06 for determination of polychlorinated biphenyls (PCBs). All determinations were performed by the Chemistry Section of Laboratory Services and the results are attached for your review.

Analytical Methods

Unless otherwise specified, all methods are from SW-846, Test Methods For Evaluating Solid Waste - Physical / Chemical Methods, USEPA.

Polychlorinated Biphenyls

Sample Extraction; Soils: Method 3545, Pressurized Fluid Extraction.
Sample Extraction; Surface Wipes: Method 3550, Ultrasonic Extraction.
Extract Concentration: Nitrogen Evaporation Technique, Exhibit D, Aroclors, Section 10.
Multi-Media, Multi-Concentration Organics Analysis; SOM01.X; USEPA.
Extract Cleanup: Method 3620, Florisil Cleanup & Method 3665A, Sulfuric Acid/Permanganate Cleanup.
Analysis: Method 8082, Polychlorinated Biphenyls by Gas Chromatography.
Percent Solids (Dry Weight): Section 7.2 of Method 3545, Determination of Percent Dry Weight, Pressurized Fluid Extraction.

Analytical Remarks & Summary

Three items are listed.

a. Sample SE-PCB-8 is reported with a PCB concentration of 0.3 ug/100cm^2 as Aroclor 1254. All other samples are reported as 'nd' (not detected) for all Aroclors.
b. All surface wipe MDLs are listed as "<" for uniformity. The actual MDLs of individual Aroclors vary slightly amongst each other and detectors.
c. All surface wipe areas are assumed to be 100cm^2 .

TReport Package Contents

The report package consists of 32 pages: 1 cover page, 26 pages of Analytical Results & 5 Chain of Custody pages.

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - Sampling Dates of March 28 & April 04, 2006	Our Project Number CHEM-06-0644

Sample Identification	SE Corner Wipe SE-PCB-1	Sample Identification	SE Corner Wipe SE-PCB-2
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	04-04-06	Sample Date	04-04-06
Received Date	04-06-06	Received Date	04-06-06
Report Date	04-25-06	Report Date	04-25-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	04-13-06	Preparation Date	04-13-06
Analysis Date	04-16-06	Analysis Date	04-16-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060644-01	Control Number	060644-02

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	102	78-111	Decachlorobiphenyl	94	78-111

NOTES:	MDL = Method Detection Limit, ug/100cm^2 nd = Parameter Was Not Detected At The MDL Any Aroclors & Concentrations > MDL Were Confirmed On A Second Column

Reviewed By Au Date 4 25 06

Sequence 041606A	
SE-PCB-1	SE-PCB-2

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - Sampling Dates of March 28 & April 04, 2006	Our Project Number CHEM-06-0644

Sample Identification	SE Corner Wipe SE-PCB-3	Sample Identification	SE Corner Wipe SE-PCB-4
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	04-04-06	Sample Date	04-04-06
Received Date	04-06-06	Received Date	04-06-06
Report Date	04-25-06	Report Date	04-25-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	04-13-06	Preparation Date	04-13-06
Analysis Date	04-16-06	Analysis Date	04-16-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060644-03	Control Number	060644-04

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	97	78-111	Decachlorobiphenyl	96	78-111

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Was Not Detected At The MDL
Any Aroclors & Concentrations > MDL Were Confirmed On A Second Column

Reviewed By Sw Date 4250 6

Sequence 041606A	
SE-PCB-3	SE-PCB-4

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - Sampling Dates of March 28 & April 04, 2006	Our Project Number CHEM-06-0644

Sample Identification	SE Corner Wipe SE-PCB-5	Sample Identification	SE Corner Wipe SE-PCB-6
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	04-04-06	Sample Date	04-04-06
Received Date	04-06-06	Received Date	04-06-06
Report Date	04-25-06	Report Date	04-25-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	04-13-06	Preparation Date	04-13-06
Analysis Date	04-16-06	Analysis Date	04-16-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060644-05	Control Number	060644-06

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	92	78-111	Decachlorobiphenyl	91	78-111

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Was Not Detected At The MDL
Any Aroclors & Concentrations > MDL Were Confirmed On A Second Column

Reviewed By _____ Date _____

Sequence 041606A	
SE-PCB-5	SE-PCB-6

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - Sampling Dates of March 28 & April 04, 2006	Our Project Number CHEM-06-0644

Sample Identification	SE Corner Wipe SE-PCB-7	**Sample Identification**	SE Corner Wipe SE-PCB-8
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	04-04-06	Sample Date	04-04-06
Received Date	04-06-06	Received Date	04-06-06
Report Date	04-25-06	Report Date	04-25-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	04-13-06	Preparation Date	04-13-06
Analysis Date	04-16-06	Analysis Date	04-16-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060644-07	Control Number	060644-08

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	0.3	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	0.3	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	97	78-111	Decachlorobiphenyl	104	78-111

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Was Not Detected At The MDL
Any Aroclors & Concentrations > MDL Were Confirmed On A Second Column

Reviewed By _____ Date 4/25/06

Sequence 041606A	
SE-PCB-7	SE-PCB-8

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - Sampling Dates of March 28 & April 04, 2006	Our Project Number CHEM-06-0644

Sample Identification	SE Corner Wipe SE-PCB-9	Sample Identification	SE Corner Wipe SE-PCB-10
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	04-04-06	Sample Date	04-04-06
Received Date	04-06-06	Received Date	04-06-06
Report Date	04-25-06	Report Date	04-25-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	04-13-06	Preparation Date	04-13-06
Analysis Date	04-16-06	Analysis Date	04-16-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060644-09	Control Number	060644-10

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	100	78-111	Decachlorobiphenyl	100	78-111

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Was Not Detected At The MDL
Any Aroclors & Concentrations > MDL Were Confirmed On A Second Column

Reviewed By _____ Date 4/25/06

Sequence 041606A	
SE-PCB-9	SE-PCB-10

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - Sampling Dates of March 28 & April 04, 2006	Our Project Number CHEM-06-0644

Sample Identification	SE Corner Wipe SE-PCB-11	**Sample Identification**	SE Corner Wipe SE-PCB-12
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	04-04-06	Sample Date	04-04-06
Received Date	04-06-06	Received Date	04-06-06
Report Date	04-25-06	Report Date	04-25-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	04-13-06	Preparation Date	04-13-06
Analysis Date	04-16-06	Analysis Date	04-16-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060644-11	Control Number	060644-12

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	101	78-111	Decachlorobiphenyl	98	78-111

NOTES:	MDL = Method Detection Limit, ug/100cm^2 nd = Parameter Was Not Detected At The MDL Any Aroclors & Concentrations > MDL Were Confirmed On A Second Column

Reviewed By AU Date 4/25/06

Sequence 041606A	
SE-PCB-11	SE-PCB-12

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - Sampling Dates of March 28 & April 04, 2006	Our Project Number CHEM-06-0644

Sample Identification	SE Corner Wipe SE-PCB-13	Sample Identification	SE Corner Wipe SE-PCB-14
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	04-04-06	Sample Date	04-04-06
Received Date	04-06-06	Received Date	04-06-06
Report Date	04-25-06	Report Date	04-25-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	04-13-06	Preparation Date	04-13-06
Analysis Date	04-16-06	Analysis Date	04-16-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060644-13	Control Number	060644-14

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	96	78-111	Decachlorobiphenyl	100	78-111

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Was Not Detected At The MDL
Any Aroclors & Concentrations > MDL Were Confirmed On A Second Column

Reviewed By _____ Date 4-25-06

Sequence 041606A	
SE-PCB-13	SE-PCB-14

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - Sampling Dates of March 28 & April 04, 2006	Our Project Number CHEM-06-0644

Sample Identification	SE Corner Wipe SE-PCB-15	Sample Identification	SE Corner Wipe SE-PCB-16
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	04-04-06	Sample Date	04-04-06
Received Date	04-06-06	Received Date	04-06-06
Report Date	04-25-06	Report Date	04-25-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	04-13-06	Preparation Date	04-13-06
Analysis Date	04-16-06	Analysis Date	04-17-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060644-15	Control Number	060644-16

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	103	78-111	Decachlorobiphenyl	98	78-111

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Was Not Detected At The MDL
Any Aroclors & Concentrations > MDL Were Confirmed On A Second Column

Reviewed By _____ Date _____

Sequence 041606A	
SE-PCB-15	SE-PCB-16

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - Sampling Dates of March 28 & April 04, 2006	Our Project Number CHEM-06-0644

Sample Identification	SE Corner Wipe SE-PCB-17	Sample Identification	SE Corner Wipe SE-PCB-18
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	04-04-06	Sample Date	04-04-06
Received Date	04-06-06	Received Date	04-06-06
Report Date	04-25-06	Report Date	04-25-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	04-13-06	Preparation Date	04-13-06
Analysis Date	04-17-06	Analysis Date	04-17-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060644-17	Control Number	060644-18

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	99	78-111	Decachlorobiphenyl	102	78-111

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Was Not Detected At The MDL
Any Aroclors & Concentrations > MDL Were Confirmed On A Second Column

Reviewed By AH Date 4/25/06

Sequence 041606A	
SE-PCB-17	SE-PCB-18

PCBs

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - Sampling Dates of March 28 & April 04, 2006	Our Project Number CHEM-06-0644

Sample Identification	SE Corner Wipe SE-PCB-19	**Sample Identification**	SE Corner Wipe SE-PCB-20
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	04-04-06	Sample Date	04-04-06
Received Date	04-06-06	Received Date	04-06-06
Report Date	04-25-06	Report Date	04-25-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	04-13-06	Preparation Date	04-13-06
Analysis Date	04-17-06	Analysis Date	04-17-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060644-19	Control Number	060644-20

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	101	78-111	Decachlorobiphenyl	94	78-111

NOTES:	MDL = Method Detection Limit, ug/100cm^2 nd = Parameter Was Not Detected At The MDL Any Aroclors & Concentrations > MDL Were Confirmed On A Second Column

Reviewed By _____ Date _____

Sequence 041606A	
SE-PCB-19	SE-PCB-20

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - Sampling Dates of March 28 & April 04, 2006	Our Project Number CHEM-06-0644

Sample Identification	SE Corner Wipe SE-PCB-21	Sample Identification	SE Corner Wipe SE-PCB-22
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	04-04-06	Sample Date	04-04-06
Received Date	04-06-06	Received Date	04-06-06
Report Date	04-25-06	Report Date	04-25-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	04-13-06	Preparation Date	04-13-06
Analysis Date	04-17-06	Analysis Date	04-17-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060644-21	Control Number	060644-22

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	107	78-111	Decachlorobiphenyl	100	78-111

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Was Not Detected At The MDL
Any Aroclors & Concentrations > MDL Were Confirmed On A Second Column

Reviewed By _____ Date _____

Sequence 041606A	
SE-PCB-21	SE-PCB-22

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - Sampling Dates of March 28 & April 04, 2006	Our Project Number CHEM-06-0644

Sample Identification	SE Corner Wipe SE-PCB-23	**Sample Identification**	SE Corner Wipe SE-PCB-24
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	04-04-06	Sample Date	04-04-06
Received Date	04-06-06	Received Date	04-06-06
Report Date	04-25-06	Report Date	04-25-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	04-13-06	Preparation Date	04-13-06
Analysis Date	04-17-06	Analysis Date	04-17-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060644-23	Control Number	060644-24

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	104	78-111	Decachlorobiphenyl	102	78-111

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Was Not Detected At The MDL
Any Aroclors & Concentrations > MDL Were Confirmed On A Second Column

Reviewed By Gu Date 4/25/06

Sequence 041606A	
SE-PCB-23	SE-PCB-24

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - Sampling Dates of March 28 & April 04, 2006	Our Project Number CHEM-06-0644

Sample Identification	SE Corner Wipe SE-PCB-25	Sample Identification	SE Corner Wipe SE-PCB-26
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	04-04-06	Sample Date	04-04-06
Received Date	04-06-06	Received Date	04-06-06
Report Date	04-25-06	Report Date	04-25-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	04-13-06	Preparation Date	04-13-06
Analysis Date	04-17-06	Analysis Date	04-17-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060644-25	Control Number	060644-26

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	106	78-111	Decachlorobiphenyl	101	78-111

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Was Not Detected At The MDL
Any Aroclors & Concentrations > MDL Were Confirmed On A Second Column

Reviewed By Ad Date 4-25-06

Sequence 041606A	
SE-PCB-25	SE-PCB-26

PCBs

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - Sampling Dates of March 28 & April 04, 2006	Our Project Number CHEM-06-0644

Sample Identification	SE Corner Wipe SE-PCB-27	Sample Identification	SE Corner Wipe SE-PCB-28
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	04-04-06	Sample Date	04-04-06
Received Date	04-06-06	Received Date	04-06-06
Report Date	04-25-06	Report Date	04-25-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	04-13-06	Preparation Date	04-13-06
Analysis Date	04-17-06	Analysis Date	04-17-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060644-27	Control Number	060644-28

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	102	78-111	Decachlorobiphenyl	95	78-111

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Was Not Detected At The MDL
Any Aroclors & Concentrations > MDL Were Confirmed On A Second Column

Reviewed By _____ Date 4/25/06

Sequence 041606A	
SE-PCB-27	SE-PCB-28

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - Sampling Dates of March 28 & April 04, 2006	Our Project Number CHEM-06-0644

Sample Identification	SE Corner Wipe SE-PCB-29	Sample Identification	SE Corner Wipe SE-PCB-30
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	04-04-06	Sample Date	04-04-06
Received Date	04-06-06	Received Date	04-06-06
Report Date	04-25-06	Report Date	04-25-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	04-13-06	Preparation Date	04-13-06
Analysis Date	04-17-06	Analysis Date	04-17-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060644-29	Control Number	060644-30

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	102	78-111	Decachlorobiphenyl	105	78-111

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Was Not Detected At The MDL
Any Aroclors & Concentrations > MDL Were Confirmed On A Second Column

Reviewed By _____ Date _____

Sequence 041606A	
SE-PCB-29	SE-PCB-30

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - Sampling Dates of March 28 & April 04, 2006	Our Project Number CHEM-06-0644

Sample Identification	SE Corner Wipe SE-PCB-31	**Sample Identification**	SE Corner Wipe SE-PCB-32
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	04-04-06	Sample Date	04-04-06
Received Date	04-06-06	Received Date	04-06-06
Report Date	04-25-06	Report Date	04-25-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	04-13-06	Preparation Date	04-13-06
Analysis Date	04-17-06	Analysis Date	04-17-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060644-31	Control Number	060644-32

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	104	78-111	Decachlorobiphenyl	105	78-111

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Was Not Detected At The MDL
Any Aroclors & Concentrations > MDL Were Confirmed On A Second Column

Reviewed By _____ Date _____

Sequence 041606A	
SE-PCB-31	SE-PCB-32

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - Sampling Dates of March 28 & April 04, 2006	Our Project Number CHEM-06-0644

Sample Identification	SE Corner Wipe SE-PCB-33	Sample Identification	SE Corner Wipe SE-PCB-34
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	04-04-06	Sample Date	04-04-06
Received Date	04-06-06	Received Date	04-06-06
Report Date	04-25-06	Report Date	04-25-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	04-13-06	Preparation Date	04-13-06
Analysis Date	04-17-06	Analysis Date	04-17-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060644-33	Control Number	060644-34

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	105	78-111	Decachlorobiphenyl	103	78-111

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Was Not Detected At The MDL
Any Aroclors & Concentrations > MDL Were Confirmed On A Second Column

Reviewed By _____ Date 4/25/06

Sequence 041606B	
SE-PCB-33	SE-PCB-34

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - Sampling Dates of March 28 & April 04, 2006	Our Project Number CHEM-06-0644

Sample Identification	SE Corner Wipe SE-PCB-35	**Sample Identification**	SE Corner Wipe SE-PCB-36
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	04-04-06	Sample Date	04-04-06
Received Date	04-06-06	Received Date	04-06-06
Report Date	04-25-06	Report Date	04-25-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	04-13-06	Preparation Date	04-13-06
Analysis Date	04-17-06	Analysis Date	04-17-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060644-35	Control Number	060644-36

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	105	78-111	Decachlorobiphenyl	105	78-111

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Was Not Detected At The MDL
Any Aroclors & Concentrations > MDL Were Confirmed On A Second Column

Reviewed By AM Date 4/25/06

Sequence 041606B	
SE-PCB-35	SE-PCB-36

PCBs

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - Sampling Dates of March 28 & April 04, 2006	Our Project Number CHEM-06-0644

Sample Identification	SE Corner Wipe SE-PCB-37
Sample Type	surface wipe
Sample Date	04-04-06
Received Date	04-06-06
Report Date	04-25-06
Percent Solids, % w/w	- -
Preparation Date	04-13-06
Analysis Date	04-17-06
Analyst	bek, glc
Control Number	060644-37

PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1
PCB-1221	nd	<0.1
PCB-1232	nd	<0.1
PCB-1242	nd	<0.1
PCB-1248	nd	<0.1
PCB-1254	nd	<0.1
PCB-1260	nd	<0.1
PCB-1262	nd	<0.1
PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	101	78-111

Sample Identification	SE Corner Soil SE-PCB-38
Sample Type	soil
Sample Depth, inches	3
Sample Date	04-04-06
Received Date	04-06-06
Report Date	04-25-06
Percent Solids, % w/w	93
Preparation Date	04-13-06
Analysis Date	04-17-06
Analyst	bek, glc
Control Number	060644-38

PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/kg	TDL
PCB-1016	nd	- -
PCB-1221	nd	- -
PCB-1232	nd	- -
PCB-1242	nd	- -
PCB-1248	nd	- -
PCB-1254	nd	- -
PCB-1260	nd	- -
PCB-1262	nd	- -
PCB-1268	nd	- -
Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	90	84-122

NOTES:

MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Was Not Detected At The MDL (or TDL). Soils Reported On Dry Wt Basis.
Any Aroclors & Concentrations > MDL (or TDL) Were Confirmed On A Second Column.
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.

Reviewed By _____ Date 4-25-06

Sequence 041606B	
SE-PCB-37	SE-PCB-38

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - Sampling Dates of March 28 & April 04, 2006	Our Project Number CHEM-06-0644

Sample Identification	SE Corner Wipe SE-PCB-39	Sample Identification	SE Corner Wipe SE-PCB-40
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	04-04-06	Sample Date	04-04-06
Received Date	04-06-06	Received Date	04-06-06
Report Date	04-25-06	Report Date	04-25-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	04-13-06	Preparation Date	04-13-06
Analysis Date	04-17-06	Analysis Date	04-17-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060644-39	Control Number	060644-40

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	104	78-111	Decachlorobiphenyl	106	78-111

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Was Not Detected At The MDL
Any Aroclors & Concentrations > MDL Were Confirmed On A Second Column

Reviewed By _____ Date _____

Sequence 041606B	
SE-PCB-39	SE-PCB-40

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - Sampling Dates of March 28 & April 04, 2006	Our Project Number CHEM-06-0644

Sample Identification	SE Corner Wipe SE-PCB-41	Sample Identification	SE Corner Wipe SE-PCB-42
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	04-04-06	Sample Date	04-04-06
Received Date	04-06-06	Received Date	04-06-06
Report Date	04-25-06	Report Date	04-25-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	04-13-06	Preparation Date	04-13-06
Analysis Date	04-18-06	Analysis Date	04-18-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060644-41	Control Number	060644-42

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	104	78-111	Decachlorobiphenyl	101	78-111

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Was Not Detected At The MDL
Any Aroclors & Concentrations > MDL Were Confirmed On A Second Column

Reviewed By [signature] Date 4/25/06

Sequence 041606A	
SE-PCB-41	SE-PCB-42

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - Sampling Dates of March 28 & April 04, 2006	Our Project Number CHEM-06-0644

Sample Identification	SE Corner Soil SE-PCB-43	Sample Identification	SE Corner Wipe SE-PCB-44
Sample Type	soil		
Sample Depth, inches	3	Sample Type	surface wipe
Sample Date	04-04-06	Sample Date	04-04-06
Received Date	04-06-06	Received Date	04-06-06
Report Date	04-25-06	Report Date	04-25-06
Percent Solids, % w/w	95	Percent Solids, % w/w	- -
Preparation Date	04-13-06	Preparation Date	04-13-06
Analysis Date	04-18-06	Analysis Date	04-18-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060644-43	Control Number	060644-44

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/kg	TDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	- -	PCB-1016	nd	<0.1
PCB-1221	nd	- -	PCB-1221	nd	<0.1
PCB-1232	nd	- -	PCB-1232	nd	<0.1
PCB-1242	nd	- -	PCB-1242	nd	<0.1
PCB-1248	nd	- -	PCB-1248	nd	<0.1
PCB-1254	nd	- -	PCB-1254	nd	<0.1
PCB-1260	nd	- -	PCB-1260	nd	<0.1
PCB-1262	nd	- -	PCB-1262	nd	<0.1
PCB-1268	nd	- -	PCB-1268	nd	<0.1
Sum of Aroclors	nd	330	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	91	84-122	Decachlorobiphenyl	103	78-111

NOTES:

MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Was Not Detected At The MDL (or TDL). Soils Reported On Dry Wt Basis.
Any Aroclors & Concentrations > MDL (or TDL) Were Confirmed On A Second Column.
TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.

Reviewed By _____ Date _____

Sequence 041606B	
SE-PCB-43	SE-PCB-44

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - Sampling Dates of March 28 & April 04, 2006	Our Project Number CHEM-06-0644

Sample Identification	SE Corner Wipe SE-PCB-45	**Sample Identification**	SE Corner Wipe SE-PCB-46
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	04-04-06	Sample Date	04-04-06
Received Date	04-06-06	Received Date	04-06-06
Report Date	04-25-06	Report Date	04-25-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	04-13-06	Preparation Date	04-13-06
Analysis Date	04-18-06	Analysis Date	04-18-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060644-45	Control Number	060644-46

PRIMARY ANALYTICAL COLUMN			**PRIMARY ANALYTICAL COLUMN**		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	103	78-111	Decachlorobiphenyl	104	78-111

NOTES:	MDL = Method Detection Limit, ug/100cm^2 nd = Parameter Was Not Detected At The MDL Any Aroclors & Concentrations > MDL Were Confirmed On A Second Column

Reviewed By _____ Date 4/25/06

Sequence 041606B	
SE-PCB-45	SE-PCB-46

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - Sampling Dates of March 28 & April 04, 2006	Our Project Number CHEM-06-0644

Sample Identification	SE Corner Wipe SE-PCB-47	Sample Identification	SE Corner Wipe SE-PCB-48
Sample Type	surface wipe	Sample Type	surface wipe
Sample Date	04-04-06	Sample Date	04-04-06
Received Date	04-06-06	Received Date	04-06-06
Report Date	04-25-06	Report Date	04-25-06
Percent Solids, % w/w	- -	Percent Solids, % w/w	- -
Preparation Date	04-13-06	Preparation Date	04-13-06
Analysis Date	04-18-06	Analysis Date	04-18-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060644-47	Control Number	060644-48

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/100cm^2	MDL	TARGET PCBs, 8082	ug/100cm^2	MDL
PCB-1016	nd	<0.1	PCB-1016	nd	<0.1
PCB-1221	nd	<0.1	PCB-1221	nd	<0.1
PCB-1232	nd	<0.1	PCB-1232	nd	<0.1
PCB-1242	nd	<0.1	PCB-1242	nd	<0.1
PCB-1248	nd	<0.1	PCB-1248	nd	<0.1
PCB-1254	nd	<0.1	PCB-1254	nd	<0.1
PCB-1260	nd	<0.1	PCB-1260	nd	<0.1
PCB-1262	nd	<0.1	PCB-1262	nd	<0.1
PCB-1268	nd	<0.1	PCB-1268	nd	<0.1
Sum of Aroclors	nd	<0.1	Sum of Aroclors	nd	<0.1
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	101	78-111	Decachlorobiphenyl	103	78-111

NOTES:
MDL = Method Detection Limit, ug/100cm^2
nd = Parameter Was Not Detected At The MDL
Any Aroclors & Concentrations > MDL Were Confirmed On A Second Column

Reviewed By AM Date 4/25/06

Sequence 041606B	
SE-PCB-47	SE-PCB-48

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - Sampling Dates of March 28 & April 04, 2006	Our Project Number CHEM-06-0644

Sample Identification	Container Soil Intmgl-51	Sample Identification	Container Soil Intmgl-52
Sample Type	soil	Sample Type	soil
Sample Depth, inches	3	Sample Depth, inches	3
Sample Date	03-28-06	Sample Date	03-28-06
Received Date	04-06-06	Received Date	04-06-06
Report Date	04-25-06	Report Date	04-25-06
Percent Solids, % w/w	91	Percent Solids, % w/w	92
Preparation Date	04-13-06	Preparation Date	04-13-06
Analysis Date	04-18-06	Analysis Date	04-18-06
Analyst	bek, glc	Analyst	bek, glc
Control Number	060644-49	Control Number	060644-50

PRIMARY ANALYTICAL COLUMN			PRIMARY ANALYTICAL COLUMN		
TARGET PCBs, 8082	ug/kg	TDL	TARGET PCBs, 8082	ug/kg	TDL
PCB-1016	nd	- -	PCB-1016	nd	- -
PCB-1221	nd	- -	PCB-1221	nd	- -
PCB-1232	nd	- -	PCB-1232	nd	- -
PCB-1242	nd	- -	PCB-1242	nd	- -
PCB-1248	nd	- -	PCB-1248	nd	- -
PCB-1254	nd	- -	PCB-1254	nd	- -
PCB-1260	nd	- -	PCB-1260	nd	- -
PCB-1262	nd	- -	PCB-1262	nd	- -
PCB-1268	nd	- -	PCB-1268	nd	- -
Sum of Aroclors	nd	330	Sum of Aroclors	nd	330
Surrogate Recovery	%Recovery	Criteria	Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	86	84-122	Decachlorobiphenyl	89	84-122

NOTES:

TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Any Aroclors & Concentrations > TDL Were Confirmed On A Second Column

Reviewed By Ale Date 4/25/06

Sequence 041606B	
Intmgl-51	Intmgl-52

ANALYTICAL RESULTS

Consumers Energy - Laboratory Services
Chemistry Section

PROJECT IDENTIFICATION	Big Rock - Sampling Dates of March 28 & April 04, 2006	Our Project Number CHEM-06-0644

Sample Identification	Container Soil Intmgl-53
Sample Type	soil
Sample Depth, inches	3
Sample Date	03-28-06
Received Date	04-06-06
Report Date	04-25-06
Percent Solids, % w/w	91
Preparation Date	04-13-06
Analysis Date	04-18-06
Analyst	bek, glc
Control Number	060644-51

PRIMARY ANALYTICAL COLUMN

TARGET PCBs, 8082	ug/kg	TDL
PCB-1016	nd	- -
PCB-1221	nd	- -
PCB-1232	nd	- -
PCB-1242	nd	- -
PCB-1248	nd	- -
PCB-1254	nd	- -
PCB-1260	nd	- -
PCB-1262	nd	- -
PCB-1268	nd	- -
Sum of Aroclors	nd	330

Surrogate Recovery	%Recovery	Criteria
Decachlorobiphenyl	87	84-122

NOTES:

TDL = Target Detection Limit, ug/kg, parts-per-billion. Per MDEQ OM2 Att 1.
nd = Parameter Not Detected At The TDL.
Results Are Reported On The Dry Weight Basis.
Any Aroclors & Concentrations > TDL Were Confirmed On A Second Column

Reviewed By AM Date 4/25/06

Sequence 041606B
Intmgl-53

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – LABORATORY SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: Big Rock

PROJECT NUMBER:

SAMPLING TEAM:

DATE SHIPPED: 4-5-06

SITE SKETCH ATTACHED? CIRCLE ONE: YES NO

ANALYSIS REQUESTED: PCB

PAGE 1 OF 4

SEND REPORT TO: TA GOBLE

PHONE: 231 547-8389

CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	PCB	REMARKS
06-0444 SE-PCB-1	4-4-06	1300		SE CORNER WIPE	WIPE	1	✓	
-2 SE-PCB-2		1302				1	✓	
-3 SE-PCB-3		1304				1	✓	
-4 SE-PCB-4		1306				1	✓	
-5 SE-PCB-5		1308				1	✓	
-6 SE-PCB-6		1310				1	✓	
7 SE-PCB-7		1312				1	✓	
8 SE-PCB-8		1314				1	✓	
9 SE-PCB-9		1316				1	✓	
10 SE-PCB-10		1318				1	✓	
11 SE-PCB-11		1320				1	✓	
12 SE-PCB-12		1322				1	✓	

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
[signature]	4-5-06 / 1000	
Fed Exp	04-06-06 1300	[signature]

COMMENTS: Please send additional labels!

ORIGINAL TO LAB COPY TO CUSTOMER

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – LABORATORY SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: Big Rock

PROJECT NUMBER:

SAMPLING TEAM:

DATE SHIPPED: 4-5-06

SITE SKETCH ATTACHED? CIRCLE ONE: YES NO

ANALYSIS REQUESTED: PCB

PAGE 2 OF 4

SEND REPORT TO: TM GOBLE

PHONE: 231 547-8589

CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	PCB	REMARKS
0643 -13 SE-PCB-13	4-4-06	1324		SE CORNER WIPE	WIPE	1	✓	
-14 SE-PCB-14		1326				1	✓	
-15 SE-PCB-15		1328				1	✓	
-16 SE-PCB-16		1330				1	✓	
-17 SE-PCB-17		1332				1	✓	
-18 SE-PCB-18		1334				1	✓	
-19 SE-PCB-19		1336				1	✓	
-20 SE-PCB-20		1338				1	✓	
-21 SE-PCB-21		1340				1	✓	
-22 SE-PCB-22		1342				1	✓	
-23 SE-PCB-23		1344				1	✓	
-24 SE-PCB-24		1346				1	✓	

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
B Woodward	4-5-06 / 1020	
RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
[illegible]	04-06-06 1300	[illegible]
RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)

COMMENTS

ORIGINAL TO LAB COPY TO CUSTOMER

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – LABORATORY SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: Big Rock

PROJECT NUMBER:

SAMPLING TEAM:

DATE SHIPPED: 4-5-06

SITE SKETCH ATTACHED? CIRCLE ONE: YES NO

PAGE 3 OF 4

SEND REPORT TO: TA GOBLE

PHONE: 231 547-8389

06-0644

	CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	ANALYSIS REQUESTED: PCB	REMARKS
-25	SE-PCB-25	4-4-06	1348		SE CORNER WIPE	WIPE	1	✓	
-26	SE-PCB-26		1350				1	✓	
-27	SE-PCB-27		1352				1	✓	
-28	SE-PCB-28		1354				1	✓	
-29	SE-PCB-29		1356				1	✓	
-30	SE-PCB-30		1358				1	✓	
-31	SE-PCB-31		1400				1	✓	
-32	SE-PCB-32		1402				1	✓	
-33	SE-PCB-33		1404				1	✓	
-34	SE-PCB-34		1406				1	✓	
-35	SE-PCB-35		1408				1	✓	
-36	SE-PCB-36		1410				1	✓	

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
[signature]	4-5-06 / 1000	Relinquished [signature]
RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
Jerome [signature]	04-06-06 1300	Fed Exp
RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)

COMMENTS

ORIGINAL TO LAB COPY TO CUSTOMER

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – LABORATORY SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: Big Rock

PROJECT NUMBER:

SAMPLING TEAM:

DATE SHIPPED: 4-5-06

SITE SKETCH ATTACHED? CIRCLE ONE: YES NO

ANALYSIS REQUESTED: PCB

PAGE 4 OF 4

SEND REPORT TO: TA GOBLE

PHONE: 231 547-8359

06-0644

CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	PCB	REMARKS
-37 SE-PCB-37	4-4-06	1412		SE CORNER WIPE	WIPE	1	✓	
-38 SE-PCB-38		1414		SE CORNER SOIL	3"	1	✓	
-39 SE-PCB-39		1416		SE CORNER WIPE	WIPE	1	✓	
-40 SE-PCB-40		1418				1	✓	
-41 SE-PCB-41		1420				1	✓	
-42 SE-PCB-42		1422				1	✓	
-43 SE-PCB-43		1424		SE CORNER SOIL	3"	1	✓	
-44 SE-PCB-44		1426		SE CORNER WIPE	WIPE	1	✓	
-45 SE-PCB-45		1428				1	✓	
-46 SE-PCB-46		1430				1	✓	
-47 SE-PCB-47		1432				1	✓	
-48 SE-PCB-48		1434				1	✓	

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
[signature]	4-5-06 / 1000	Relinquished by [signature]
for Received [signature]	04-06-06 1300	FedExp

COMMENTS

ORIGINAL TO LAB COPY TO CUSTOMER

CHAIN OF CUSTODY

CONSUMERS ENERGY COMPANY – LABORATORY SERVICES

Consumers Energy

135 WEST TRAIL ST., JACKSON, MI 49201 • (517) 788-1251 • FAX (517) 788-2533

SAMPLING SITE: Big Rock Point

PROJECT NUMBER:

SAMPLING TEAM:

DATE SHIPPED: 4-5-06

SITE SKETCH ATTACHED? CIRCLE ONE: YES NO

PAGE 1 OF 1

SEND REPORT TO: TA GOBLE

PHONE: 231 547-8389

06-0644

CE CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	ANALYSIS REQUESTED: PCB	REMARKS
-49 INTMGL-51	3-28-06	0923		CONTAINER SOIL	3"	1	✓	
-50 INTMGL-52	3-28-06	0925		CONTAINER SOIL	3"	1	✓	
-51 INTMGL-53	3-28-06	0927		CONTAINER SOIL	3"	1	✓	

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
[signature]	4-5-06 / 1030	
RELINQUISHED BY: (SIGNATURE) Fed Exp	DATE / TIME 04-06-06 1300	RECEIVED BY: (SIGNATURE) [signature]
RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)

COMMENTS

ORIGINAL TO LAB COPY TO CUSTOMER

PCB SURVEY PACKAGE CLOSE-OUT CHECKLIST

Package ID Number: 0012 Survey Area: BMR Building

The survey package is legible and complete and the following necessary information is in the package:

1. √ Survey Package Cover Sheet
2. √ Survey design documentation
3. √ Random number generator sheet for sample start location and QC sample numbers.
4. √ Completed survey map/data sheet
5. √ Completed PCB Survey Data Record Sheet
6. √ Copy of the Chain of Custody
7. √ Copy of sample results
8. _____ Other documentation:

Completed By: Jodie L. Reed Date: 06-20-06
(Environmental Technician)

Reviewed By: _____ Date: 09-07-06
(Environmental Supervisor)

PCB SURVEY PACKAGE COVER SHEET

Package ID Number : 0012	Survey Area: BMR Building (PCB Bulk Product Waste Storage Area)	Size (m^2): 358.1

Random Samples

# of Field Samples: 40
# of QC samples: 4

Random Start Location: X, Y (27.6, 10.9)
Sample Spacing: 3.0 meters

Isolation Controls implemented [1] List controls: Area posted as a PCB survey area. Area also posted as a BMR survey area.

Comments/specific directions[1]:

This area was utilized to perform radiological surveys of Containment steel sections after removal.

Random sample locations determined by random number generator. Sample analysis results acceptance criteria is <10 mg/100 cm2 for wipe samples.

All results met acceptance criteria for PCB wipe samples.

([1] Address any inaccessible areas or sample points not included in survey).

SURVEY PACKAGE CLOSURE

Survey Package is authorized for closure. All required reviews are completed and pertinent information is included in package (see Survey Package Close-Out Checklist).

ENV Technician Jodie L. Reed Date: 06-07-06

ENV Supervisor: [signature] Date: 09-07-06

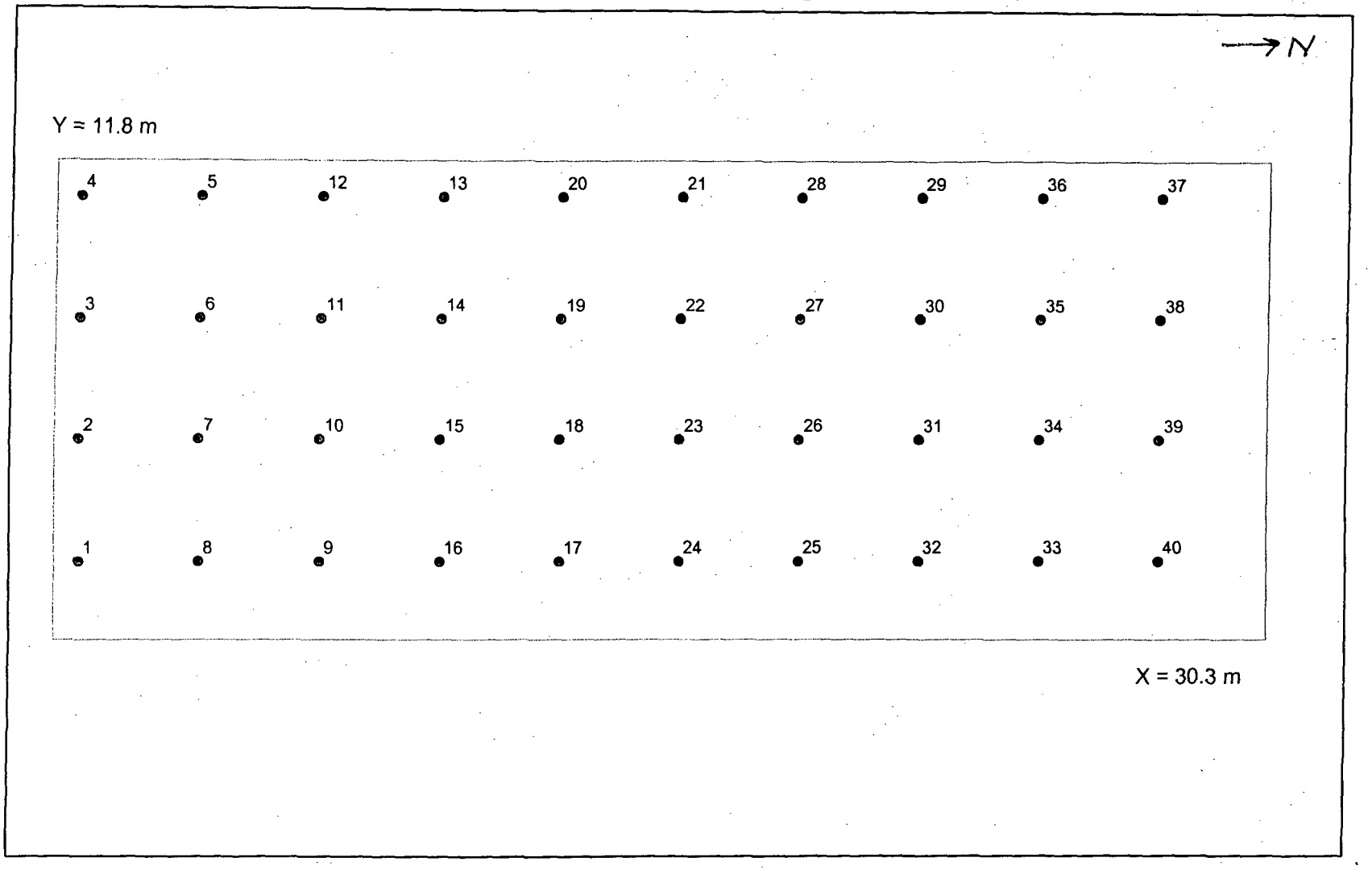
'ackage ID Number: 0012

PCB SURVEY DATA RECORD SHEET

Survey Area: BMR Building (PCB Storage Area)	Size (m^2): 358.1	# of Samples: 44

Sample ID Number	Sample Location (X)(Y)	Sample Result (ppm)	Sample ID Number	Sample Location (X)(Y)	Sample Result (ppm)
BMR-PCB-W1	(0.6)(1.9)	nda	BMR-PCB-W27	(18.6)(7.9)	nda
BMR-PCB-W2	(0.6)(4.9)	nda	BMR-PCB-W28	(18.6)(10.9)	nda
BMR-PCB-W3	(0.6)(7.9)	nda	BMR-PCB-W29	(21.6)(10.9)	nda
BMR-PCB-W4	(0.6)(10.9)	nda	BMR-PCB-W30	(21.6)(7.9)	nda
BMR-PCB-W5	(3.6)(10.9)	nda	BMR-PCB-W31	(21.6)(4.9)	nda
BMR-PCB-W6	(3.6)(7.9)	nda	BMR-PCB-W32	(21.6)(1.9)	nda
BMR-PCB-W7	(3.6)(4.9)	nda	BMR-PCB-W33	(24.6)(1.9)	nda
BMR-PCB-W8	(3.6)(1.9)	nda	BMR-PCB-W34	(24.6)(4.9)	nda
BMR-PCB-W9	(6.6)(1.9)	nda	BMR-PCB-W35	(24.6)(7.9)	nda
BMR-PCB-W10	(6.6)(4.9)	nda	BMR-PCB-W36	(24.6)(10.9)	nda
BMR-PCB-W11	(6.6)(7.9)	nda	BMR-PCB-W37	(27.6)(10.9)	nda
BMR-PCB-W12	(6.6)(10.9)	nda	BMR-PCB-W38	(27.6)(7.9)	nda
BMR-PCB-W13	(9.6)(10.9)	nda	BMR-PCB-W39	(27.6)(4.9)	nda
BMR-PCB-W14	(9.6)(7.9)	nda	BMR-PCB-W40	(27.9)(1.9)	nda
BMR-PCB-W15	(9.6)(4.9)	nda	BMR-PCB-W41	(0.6)(10.9)	nda
BMR-PCB-W16	(9.6)(1.9)	nda	BMR-PCB-W42	(27.6)(4.9)	nda
BMR-PCB-W17	(12.6)(1.9)	nda	BMR-PCB-W43	Field Blank	nda
BMR-PCB-W18	(12.6)(4.9)	nda	BMR-PCB-W44	Field Blank	nda
BMR-PCB-W19	(12.6)(7.9)	nda			
BMR-PCB-W20	(12.6)(10.9)	nda			
BMR-PCB-W21	(15.6)(10.9)	nda			
BMR-PCB-W22	(15.6)(7.9)	nda			
BMR-PCB-W23	(15.6)(4.9)	nda			
BMR-PCB-W24	(15.6)(1.9)	nda			
BMR-PCB-W25	(18.6)(1.9)	nda			
BMR-PCB-W26	(18.6)(4.9)	nda			

Performed By: _____ (Survey Technician) Date: 06-20-06

Reviewed By: _____ (Environmental Supervisor) Date: 09-07-06

PCB Sample Locations
BMR Building