

Global Remediation & Environmental Services, LLC

133 Peachtree Street NE Atlanta, Georgia 30303-1847 (281) 947-0083 office

February 6, 2023

Via Electronic Mail

Mr. Keld Lauridsen Hydrogeologist Remediation and Redevelopment Program Wisconsin Department of Natural Resources 2984 Shawano Avenue Green Bay, WI 54313-6727

Subject: Response to Request for Additional Information 2023 Supplemental Work Plan Submittal Ashview Terrace Apartments Ashwaubenon, Wisconsin BRRTS # 02-05-564043

Dear Mr. Lauridsen:

Please find attached for your review a brief work plan that was prepared by WSP USA Environment & Infrastructure (WSP). The work plan was prepared by WSP at the request of Global Remediation & Environmental Services, LLC (GRES) in response to discussions between GRES and WDNR in late 2022 (see Attachment A to the workplan). More specifically, preparation of the work plan was recommended by WDNR in its December 23, 2022 email to GRES.

We look forward to WDNR's concurrence with the work plan.

Should you have any questions, I can be reached by phone at (281) 947-0083.

Sincerely,

Michael Christopher

Michael Christopher Sr. Remediation Project Manager Global Remediation & Environmental Services, LLC

cc: Andrew Fiskness

Attachments: 2023 Supplemental Work Plan



February 1, 2023

Mr. Michael Christopher Global Remediation and Environmental Services 133 Peachtree St NE Atlanta, GA 30348

Subject: 2023 Supplemental Work Plan to the Revised Site Investigation and Remediation Work Plan Ashview Terrace Apartments Site 988-1020 Willard Drive Ashwaubenon, Brown County, Wisconsin WDNR Site # 02-05-564043

Dear Mr. Christopher:

WSP USA Environment & Infrastructure, Inc. (WSP), is pleased to submit this Work Plan for shallow soil investigation activities to be conducted at the Ashview Terrace Apartments (ATA) Site located at 988-1020 Willard Drive, in the Village of Ashwaubenon, Brown County, Wisconsin (Site). A Site location map is provided as Figure 1. The Site is being investigated under the Wisconsin Department of Natural Resources (WDNR) Site No. 02-05-564043. Prior assessment results were most recently documented in the 2021 Supplemental Site Investigation Report (2021 SSI) dated September 8, 2021.

This 2023 Work Plan has been prepared in general accordance with Wisconsin Administrative Code (Wis. Adm. Code) Chapter NR 716, specifically NR716.09 for Site Investigation Work Plans. More specifically, the Work Plan has been prepared for Global Remediation & Environmental Services (GRES) for work at the Site in response to recent discussions between GRES and WDNR in late 2022 (see Attachment A to this Work Plan).

The objective of the proposed investigation is to further define three specific areas where polychlorinated biphenyls (PCBs) may be present in the top 18 inches of Site soil.

Scope Of Work

Additional delineation will be performed at three locations at the Site:

- West of soil boring SB21-08 grid location 36.
- North of soil boring SB21-22 grid location 33.
- Southeast of soil boring SB21-44 grid location 7, within the Site greenspace area near 980 Willard Dr. As has been noted, WDNR performed soil sampling work at 980 Willard Dr. in 2015 and determined no further action was necessary.

Utility Clearance

Prior to mobilization to the Site, the Wisconsin one-call Diggers Hotline (1-800-242-8511) will be contacted for utility clearance and the Site will also be cleared by a private utility locator. In addition, WSP representatives will check with the property owner to determine the possible presence of underground utilities in the vicinity of the proposed borings. WSP will document the utility information obtained from the public and private locates as well as from the property owner and confirm that the proposed shallow hand push probe borings are at locations that are clear of utilities.

Shallow Soil Investigation

The shallow soil investigation will include performing three hand push probe borings within the three Site grid green spaces to a depth of 18 inches below ground surface (bgs) at the approximate locations shown on Figure 2. One soil sample will be collected at each boring location. Soil samples will be analyzed for PCBs using USEPA method 8082.

Hand Push Probes

WSP field technicians will utilize a portable sub-meter global positioning system (GPS) unit to locate the proposed hand push probe boring locations. WSP will conduct a minimum of one hand push probe boring in each of the three grid locations. The hand push probe borings will be completed to a depth of 18 inches bgs to support soil logging and soil sampling (for laboratory analyses). The grid layout with planned boring locations are presented on Figure 2.

Shallow Soil Sampling

Soil borings will be advanced to a total depth of 18 inches (1.5 ft bgs or refusal) with a 1-inch diameter, stainless steel hand push probe window sampler. Following insertion of the probe to total depth, the sampler will be extracted, and the core will be visually screened and logged. Soil samples will also be collected for laboratory analysis for PCB analysis using EPA Method 8082.

Hand push probe boring locations will be surveyed to the nearest 0.5 foot (horizontally) with GPS methods following completion of the field activities. No elevations will be collected. The proposed boring locations shown on Figure 2 may need to be adjusted in the field based on the presence of utilities or other obstructions.

Analytical Samples and Testing

Up to six soil samples will be collected during this investigation, including quality assurance/quality control (QA/QC) samples.

Soil samples will be submitted to the Pace Analytical Services (Pace) laboratory in Green Bay, Wisconsin and will be tested for PCBs (reported as individual Aroclors and total PCBs). The planned analytical parameters, and the associated analytical methods, are as follows:

<u> Parameter – Soil</u>

EPA or WI Method

• PCBs

8082 w/ 3541 Prep

QA/QC samples will be collected in accordance with the requirements of Wis. Adm, Code NR 716.13 and will include:

- Duplicate samples: 1 duplicate per 10 primary samples
- Matrix Spike (MS) and Matrix Spike Duplicates (MSD): 1 MS/MSD per 20 primary samples
- Equipment blank samples (one per piece of non-dedicated sampling equipment per day [or at a minimum of 1 equipment blank per 10 primary samples])

Equipment Decontamination

Decontamination of the hand push probe device and miscellaneous sampling equipment will be conducted prior to use at each boring, using the following procedure:

- Wash equipment with detergent (Alconox, Liquinox or equivalent) and potable water using brushes or paper towel
- Rinse/wash equipment with potable water
- Rinse equipment twice with distilled water and allow to air dry
- Collect all wash/rinse water, if generated

Investigation Derived Waste

Investigation-Derived Waste (IDW) generated during this investigation may include soil boring cuttings, equipment decontamination water, and used personal protective equipment (PPE).

If generated, IDW soils and water will be containerized in Department of Transportation (DOT) approved, locking, labeled 10-gallon or 16-gallon drums. The drums will be placed on a pallet, covered and stored in one of the vacant apartment building garage stalls. Labeling on the drums will include the date, type of material in the drum, the point of origin of the material (i.e., the Site), and the WSP project manager's telephone number.

IDW will be disposed of in accordance with appropriate state and federal regulations. To determine the method of IDW transportation and disposal, soil cuttings and decontamination water will be sampled and analyzed for parameters based on the profiling requirements of the selected disposal facility. It is assumed that one soil IDW sample and one water IDW sample will be collected and analyzed for the full list of toxicity characteristic leaching procedure (TCLP) parameters.

IDW will remain on-Site until the characterization analytical data is received to determine proper disposal. WSP assumes that water and soil IDW generated during this investigation

will be transported to and disposed of by Badger Disposal in Milwaukee, Wisconsin, consistent with previous work at the Site.

Soil Averaging and Reporting

In 2019, WSP (formerly Wood) prepared the document, *2019 Memo – Risk Analysis – Ashview Terrace Apartments Site, Ashwaubenon, Brown County, Wisconsin, for the Site* (2019 Risk Memo). In the memo, WSP performed an Upper Confidence Limit (UCL) calculation for comparison to the direct contact standards. In a September 2019 email response by WDNR, the WDNR indicated that the UCL calculations appeared to contain multiple sample populations, and for that reason, could not be accepted by WDNR. Since 2019, a significant number of additional soil samples in the 0 to 2 feet bgs range have been collected. To facilitate closure for the Site, WSP will prepare an updated risk report calculating the exposure point concentrations (EPC).

The EPCs represent the concentration of chemicals that a receptor may be exposed to. EPCs are generally expressed as the lower of the 95% UCL (calculated using USEPA ProUCL software) and the maximum detected concentration. Based on ProUCL guidance, UCLs are calculated where at least six detected results are available. Given the grid breakout presented in the 2021 SSI report, UCLs will be calculated for either a single grid or for a grouped number of adjacent/revised grids based on an evaluation showing they represent a single population of data (such as within the former pit area) and are within a single plausible exposure area. The UCL recommended by ProUCL (whether 95%, 97.5%, or 99%) will be used in the EPC selection process. The EPC will then be compared to the nonindustrial Direct Contact RCL to calculate the potential cancer risk.

Within the planned updated risk report, WSP will utilize the data generated during this planned 2023 field investigation, along with pertinent existing data, to document: the field methodologies and results; soil boring logs; tables and figures depicting analytical results; and IDW disposal manifests. The report will be submitted to the WDNR under the Other Technical Assistance review fee.

WSP will also prepare a sample results notifications letter for the ATA property owner, and for the WDNR, in accordance with the requirements of Wis. Adm. Code NR 716.14.

Schedule

WSP assumes execution of field work will be initiated within 60 days of WDNR approval of this Work Plan, provided ground conditions are favorable. WSP recognizes that the schedule for field investigation activities is weather dependent and will be contingent upon the ground conditions. Field work cannot be conducted while the ground is frozen. The WDNR requests the sample results notification letters be submitted to both the ATA property owner and to the WDNR within 10 business days of receipt of analytical results, we

request an extension to 30 days from receipt of analytical results for the submittals to allow for ample time to complete data validation.

The report will be prepared and submitted to the WDNR within 60 days after completion of the field investigation and receipt of analytical data.

Thank you for considering the information provided in this 2023 Work Plan. If you have questions, or require additional information, please contact Andrew Fiskness at 612-425-7016.

Regards,

WSP USA Environment & Infrastructure, Inc.

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Andrew Fiskness, PMP Project Manager Direct Tel.: (612) 425 7016 E-mail: <u>Andrew.fiskness@wsp.com</u>

Jonathan Murer, PG Associate Geologist Direct Tel.: (612) 325-8423 E-mail: jonathan.murer@wsp.com

Enclosure:

Figure 1 Site Location Map

Figure 2 Proposed Sample Locations

Attachment A Response to Request for Additional Information

CERTIFICATION STATEMENT

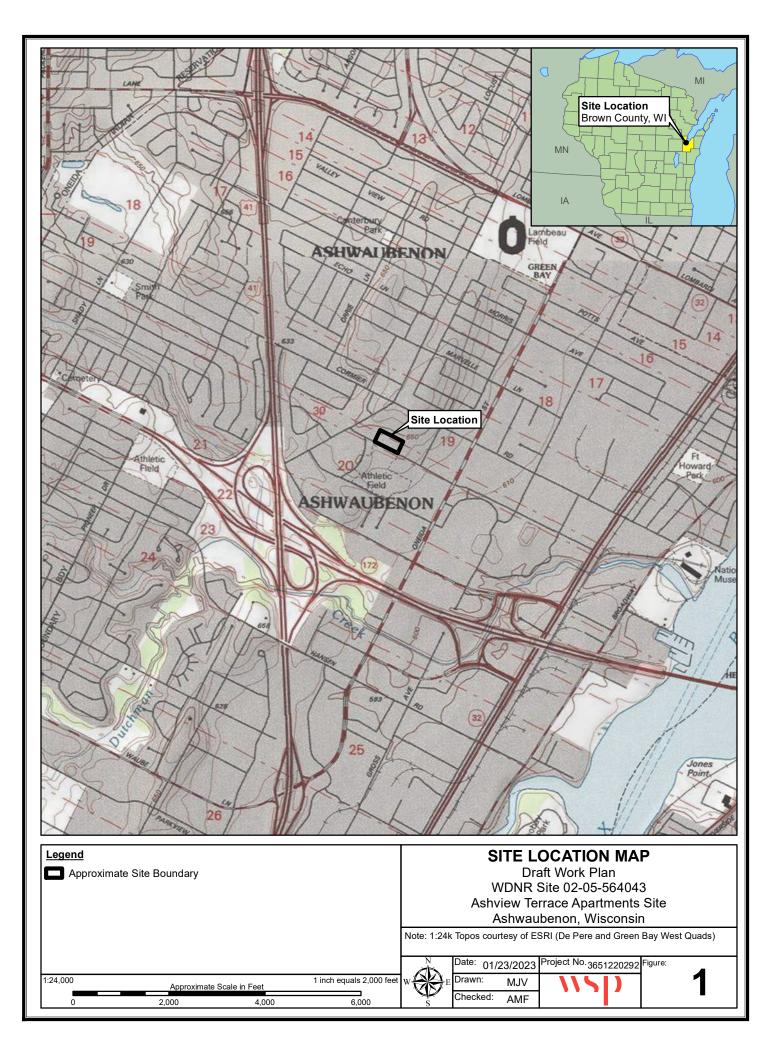
I, <u>Jonathan Murer (#668-13)</u>, hereby certify that I am a geologist as the term defined in s. NR 712.03 (I), Wis. Adm. Code, am registered in accordance with the requirements of ch. GHSS 2, Wis. Admin. Code, or licensed in accordance with requirements of ch. GHSS3, Wis. Adm. Code, and that to the best of my knowledge, all of the information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to NR 726, Wis. Adm. Code."

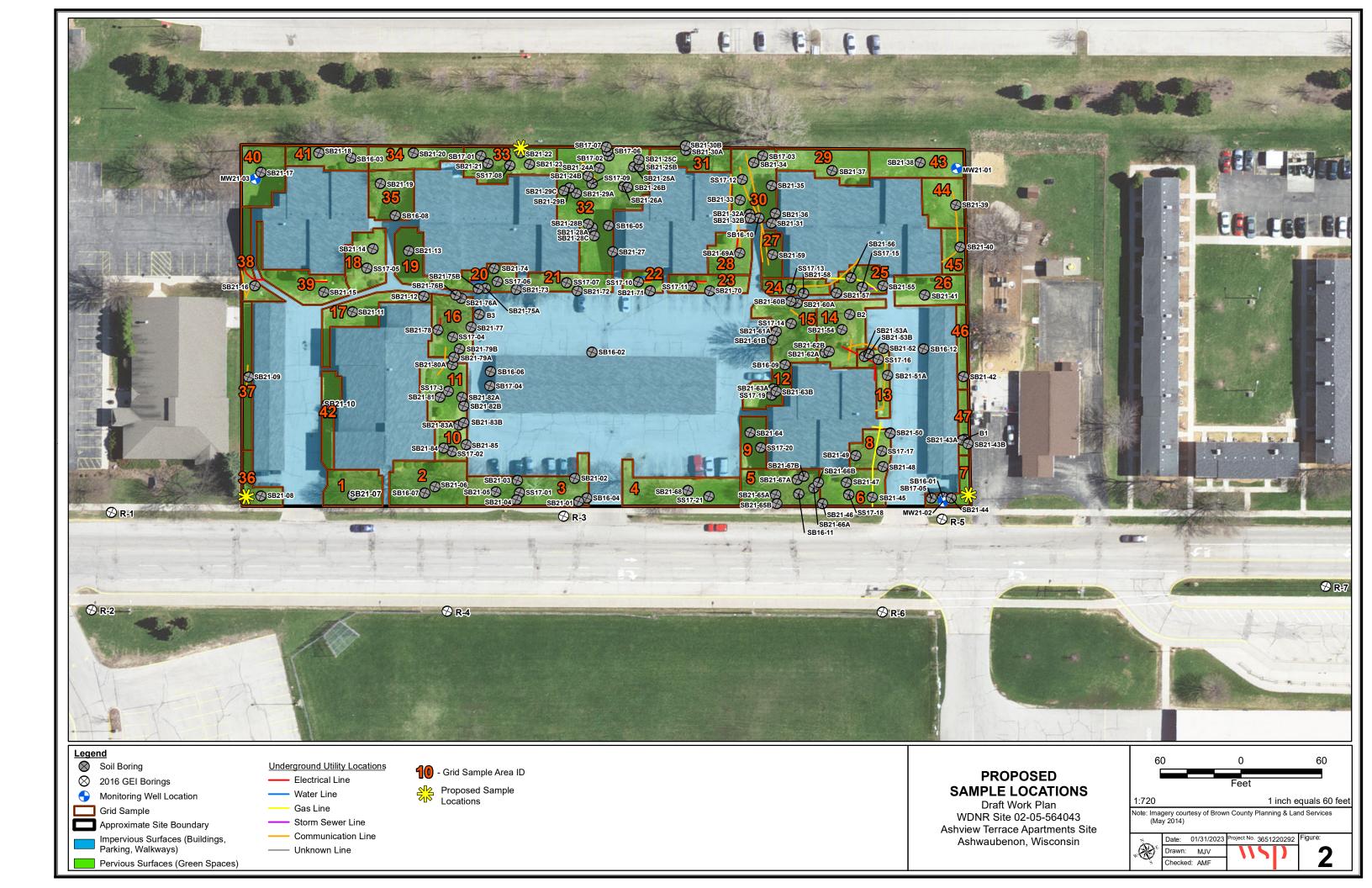
Project Geologist_

February 1, 2023

Signature and title

FIGURES





ATTACHMENT A



Global Remediation & Environmental Services, LLC

133 Peachtree Street NE Atlanta, Georgia 30303-1847 (281) 947-0083 office

October 21, 2022

Via Electronic Mail

Mr. Keld Lauridsen Hydrogeologist Remediation and Redevelopment Program Wisconsin Department of Natural Resources 2984 Shawano Avenue Green Bay, WI 54313-6727

Subject: Response to Request for Additional Information Ashview Terrace Apartments Ashwaubenon, Wisconsin BRRTS # 02-05-564043

Dear Mr. Lauridsen:

Thank you, and other members of the Wisconsin Department of Natural Resources (WDNR) team, for taking time on August 30, 2022 to discuss the referenced site (Site). As I discussed during our call, there is compelling evidence and data that support the conclusion that the source of the PCBs detected at the Site is not from historical carbonless copy paper (CCP) that may have originated at the former Fort Howard Paper Company (now Georgia-Pacific, LLC). The following is a brief overview of information discussed during our August call. Also, attached is copy of the material presented during our call (and referenced below where applicable).

Source Overview

Based on historical aerial photographs and prior reporting to WDNR, filling at the Site began in the 1930s. In November 1963, the town of Ashwaubenon closed the Site and opened a new landfill on Echo Lane (see Green Bay Press-Gazette Nov 17, 1963 article). Material other than paper sludge also clearly appears to have been deposited at the Site. This, in part, is supported by the 1963 article describing the Site as the "town dump". Although newspaper records describing the town dump practices prior to 1963 have not been identified, newspaper archives from 1969 clearly demonstrate the Ashwaubenon town dump disposal practices included unsupervised operations, receiving trash from Green Bay, Oneida, and other towns, and waste material being burned continuously (see Green Bay Press-Gazette October 26, 1969). These observations were made in 1969, the same year that Wisconsin enacted its solid waste disposal standards. It is reasonable to conclude that similar waste handling practices occurred at the Site prior to its closure in 1963.

Evidence of the burning and general debris appears in the description of fill material encountered in the Site area (cinders, concrete, wood, brick, glass) (MES Limited Environmental Assessment – October 31, 2012.). The MES Limited Environmental Assessment also indicates WDNR started a case file in 1985 due to potential for transformer oils to have been disposed of on the Site. According to an April 5, 2013 WDNR Findings of Fact associated with a Conditional Grant of Exemption for Development on a Property where Solid Waste has been Disposed, the 1985 transformer oil reference in the MES report appears to originate

from "[t]wo hand written pages of notes, one undated and one dated January 3, 1985, WNDR Bureau of Waste and Materials Management, File Number 405108660, Ashwaubenon Village Landfill, 2391 Ridge Road, Village of Ashwaubenon, Brown County, Wisconsin." Lastly, WDNR indicates in its November 16, 2012 notification letter to EPA (see attached) that "the landfill had received municipal wastes, paper sludge, and possible transformer oils".

The above discussion clearly demonstrates that the Site received material other than paper sludge from the Fort Howard Paper Company.

ССР

Aroclor 1242 was used in CCP during the time-period spanning from 1957 to 1971 (PCBs Involvement in the Pulp and Paper Industry; Feb 25, 1977). The total number of soil samples (not including duplicates) that have been collected to date at the Ashview Terrace Apartments property is 108. Of these samples, only 4 samples (at 3 boring locations) had detectable concentrations of Aroclor 1242, and those four detections all were in samples collected at sample depths greater than 5 feet below the ground surface (bgs) – well below the 0 to 18-inch depth interval associated with the direct contact pathway. A graphical representation illustrating Aroclor distribution -- and more importantly, the lack of Aroclor 1242 detected at the Site -- is shown on the figure included in the last page of the attached August 30, 2022 presentation material. The figure does not support the supposition that the source of all the PCBs is paper sludge containing CCP.

WDNR had previously mentioned that the 1242 may have "weathered" leaving only 1248 remaining, and, therefore, the detects of 1248 are indicative of CCP and have been "misidentified" 1242 by the laboratory (Pace Analytical Services, LLC).

Pace has been performing Aroclor analysis for years, and in the notes section in the analytical reports from Pace there is no mention of any issues with misidentification, shouldering, matrix interferences, or anything untoward during their analysis. Moreover, the identification of Aroclors is performed using many different congeners, some of which overlap with Aroclor 1248, but others are unique to Aroclor 1242. Importantly, Pace make no mention of possible concerns when identifying Aroclors 1242 and 1248. Therefore, Pace has identified Aroclors 1242 and 1248 accurately.

Concerning "weathering", this does not happen in an isolated manner impacting only a single Aroclor without also affecting any other Aroclors present. Aroclor 1248, which was also present in samples all over the Site, would also be prone to weathering, because, as mentioned above, some of the congeners used to identify Aroclor 1248 are also present in Aroclor 1242. Interestingly, where Aroclor 1242 is detected on the Site, there are no detects of Aroclor 1248, further calling into question the "weathering" argument. In addition, the concentrations of Aroclor 1248 related congeners present in Aroclor 1242 are low, and from a basic conservation of mass principle could not lead to the high concentrations of Aroclor 1248 seen in the analytical Site data. Therefore, given the concentrations of Aroclor 1248 detected in the Site data, and the lack of Aroclor 1248 with Aroclor 1242 in the sample detects, it is not feasible for all these data to be identified as "weathered" Aroclor 1242.

Additionally, a review of available data from other portions of the former landfill located on the Ashwaubenon School District site (BRRTS No. 02-05-559562) indicates a similar distribution of Aroclors across the Site. As presented in the Risk-Based Corrective Action Plan Athletic Fields report (July 2014), only 1 in 33 (3%) soil samples collected from 0 to 4 feet bgs had detectable concentrations of Aroclor 1242.

Lastly, the lack of Aroclor 1242 at the Site is in stark contrast to the observations associated with the Lower Fox River superfund site – of which the GP/Fort Howard Paper plant is considered one of the responsible parties, and which is the facility from which paper sludge was deposited at the Site. As indicated in the Record of Decision, the PCBs used in the production of CCP by manufacturing facilities on the Fox River from 1954 to 1971 consisted largely of Aroclor 1242. In the Lower Fox River, Aroclor 1242 was detected in over 90 percent of samples tested for Aroclor analysis. The fact that over 90% of samples at Lower Fox River contained Aroclor 1242 compared to 3% of samples at the Ashwaubenon landfill Site further supports the conclusion that paper sludge is not the source of detected PCBs at the Site.

Proposed Path Forward

As briefly summarized above, it is evident that the Site received other waste material besides the paper sludge from the Fort Howard Paper Company plant. The data also establish that the source of PCBs is not CCP sludge.

Nonetheless, GP has been and continues to be willing, on a voluntary basis, to perform remedial work to address the presence of paper residuals at the Site. As referenced above, GP has installed over 80 soil borings across 1.3 acres of land to delineate PCB concentrations and analyzed 119 samples (including duplicates). The results have shown that total PCB concentrations fall predominately below 1 ppm total PCB (EPA's unrestricted criterion for residential use). The investigation work conducted by GP to date has been extensive and yielded analytical results that demonstrate little to no risk. Accordingly, GP proposes the path forward below as a reasonable and practical means to verify that the Site has been adequately sampled and delineated, resolve the presence/absence of actionable risk, and finalize a remedial action.

Additional Delineation

GP understands that WNDR is requesting additional delineation at three locations at the Site:

- West of soil boring SB21-08
- North of soil boring SB21-22
- Southeast of soil boring SB21-44 within the greenspace area near 980 Willard Dr. between sidewalk and roadway. As has been noted, WDNR performed soil sampling work at 980 Willard Dr. in 2015 and determined no further action necessary.

GP will collect soil samples at the above locations within the 0 to 18-inch bgs interval for PCB analysis using EPA Method 8082. It should be noted that Aroclor 1242 was not detected at locations SB21-08, SB21-22, and SB21-44 and that the total concentration of detectable Aroclors (total PCB) slightly exceeded the default non-industrial total PCB RCL of 0.234 mg/kg. Where detected, the individual Aroclors at these locations were below the non-industrial RCL. Given the absence of Aroclor 1242 at these locations, GP is willing to continue the delineation only up to the Ashview Terrace Apartments property boundary. Should PCB concentrations of this additional delineation event still exceed the non-industrial RCL, WDNR may elect to continue its own off-Site delineation efforts like what it performed on the property east of the Site at 980 Willard Drive.

Soil Averaging

In 2019, Wood (Amec Foster Wheeler) prepared the document, 2019 Memo – Risk Analysis – Ashview Terrace Apartments Site, Ashwaubenon, Brown County, Wisconsin, for the Site (2019 Risk Memo). In the memo, Wood performed an Upper Confidence Limit (UCL) calculation for comparison to the direct contact standards. In a September 2019 email response by WDNR, the WDNR indicated that the upper confidence limit calculations appeared to contain multiple sample populations, and for that reason, could not be accepted by WDNR. Since 2019, a significant number of additional soil samples in the 0 to 2 ft bgs range have been collected. To facilitate closure for the Site, GP will prepare an updated risk memo calculating the exposure point concentrations (EPC).

The EPCs represent the concentration of chemicals that a receptor may be exposed to. EPCs are generally expressed as the lower of the 95% UCL (calculated using USEPA ProUCL software) and the maximum detected concentration. Based on ProUCL guidance, UCLs are calculated where at least six detected results are available. Given the grid breakout presented in the 2021 Supplemental Site Investigation report, UCLs will be calculated for either a single grid or for a grouped number of adjacent/revised grids based on an evaluation showing they represent a single population of data (such as within the former pit area) and are within a single plausible exposure area. The UCL recommended by ProUCL (whether 95%, 97.5%, or 99%) will be used in the EPC selection process. The EPC will then be compared to the non-industrial Direct Contact RCL to calculate the potential cancer risk.

Based on discussions during our call on August 30th, GP understands this methodology should be acceptable to determine if no further action is warranted or identify localized areas that may require remediation/soil cover.

Concluding Remarks

GP appreciates WDNR's willingness in past conference calls to discuss our concerns with regards to data associated with this Site. GP believes the path forward presented above is consistent with WDNR guidance and we look forward to your approval.

Should you have any questions, I can be reached by phone at (281) 947-0083.

Sincerely,

Michael Christopher Sr. Remediation Project Manager Global Remediation & Environmental Services, LLC

cc: Andrew Fiskness

Attachments: Presentation Material During August 30, 2022, Conference Call between WDNR and GRES

Presentation Material August 30, 2022 Conference Call WDNR and GRES





GREEN BAY PRESS-GAZETTE

Ashwaubenon's Garbage Dump Violates Nearly All Regulations

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Dumping Is Unsupervised, Nourishes Rat

BUY HUSH PUPPIES" SHOES

THIS WINTER

V4 Ct. Diamond V35 V2 Ct. Diamond V25 V4 Ct. Diamond V25 V4 Ct. Diamond V25 I Ct. Diamond V575

Green Bay Press Gazette Sunday, Oct. 26, 1969 F-1

SEE THE DIAMOND YOU

Green Bay Press-Gazette Sunday, Oct. 26, 1969 F-1

The Press-Gazette began its investigation of the dump several months ago, not long after the state enacted (May 1) its solid waste disposal standards.

Before the cleanup order was put in the mail Friday (it arrived Saturday), a DNR off1cial said Ashwaubenon would be told to make improvements or abandon the site.

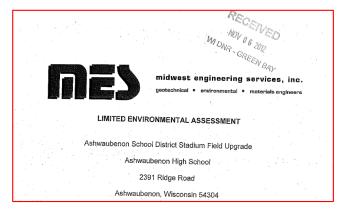
"If it is found a local government refuses or won't cooperate, other steps will be taken," said Avery Wells of Madison.

Municipalities ordered to improve their dumps are given time to comply, he said.

End use	Aroclor								
	1016	1221	1232	1242	1248	1254	1260	1262	1268
Capacitors	•	•				•			
Transformers				•		•	•		
Heat transfer				•					
Hydraulics/lubricants									
Hydraulic fluids			•	•	•	•	•		
Vacuum pumps					•	•			
Gas-transmission turbines		•		•					
Plasticizers:									
Rubbers		•	•	•	•	•			•
Synthetic resins					•	•	•	•	•
Carbonless paper				•					
Miscellaneous:									
Adhesives		•	•	•	•	•			
Wax extenders				•		•			•
Dedusting agents						•	•		
Inks						•			
Cutting oils						•			
Pesticide extenders						•			
Sealants and caulking compounds						•			

Table 5-1. Summary of Former End Uses for Various Aroclors

Source: IARC 1979



Background

A proposed renovation to the stadium is to include a new field and track, new lighting and new pavement areas. The limited environmental assessment was requested because the WDNR has identified the parcel as a "historic fill site". According to Mr. Alan Nass of the WDNR, a case file was started in 1985 due to the potential for transformer oils to have been disposed of on the site. The parcel is also believed to have possibly been filled with municipal waste and paper mill sludge. The waste was believed to have been disposed of on the site prior to 1964, when the school was constructed. As a result, the Limited Environmental Assessment described herein was performed. A summary of the subsurface conditions encountered in the geotechnical borings is also provided within a subsequent section of this report.

Soil samples collected from the soil borings and classified subsequent to the completion of the drilling indicated the presence of fill at B-1, B-3, B-6, B-8, B-9, and B-10 to depths of 2 to 18.5 feet below ground surface. The fill primarily consisted of brown silty clay or brown silty sand with varying amounts of gravel, cinders, concrete, wood, brick, and glass. Additionally, possible paper sludge was observed within B-1 at depths of 7.5 to 9, and 10 to 11.5 feet bgs. Natural soils at B-2, B-4, B-5, and B-7, and beneath the fill at the remaining borings, generally consisted of brown silty sand or brown silty clay.

The samples collected from B-1 at depths of 7.5 to 9 feet and 10 to 11.5 feet contained paper sludge. Additionally, petroleum type odors were observed within these samples. No unusual odors were observed within the remaining borings. Groundwater was observed within the geotechnical borings at depths ranging from 7.5 to 13.5 feet bgs.

State of Wisconsin DEPARTMENT OF NATURAL RESOURCES 2984 Shawano Avenue Green Bay WI 54313-6727



November 16, 2012

SENT ELECTRONICALLY

Peter Ramanauskas ramanauskas.peter@epa.gov Regional PCB Coordinator US EPA Region V (312) 886-7890

Subject: EPA Notification of PCB Contamination for OCP MOA

BRRTS Number:	02-05-559562
Start Date:	October 24, 2012
Site Name:	Ashwaubenon High School Football Field
Site Address:	2391 Ridge Road, Village of Ashwaubenon, Wisconsin
County:	Brown
DNR PM:	Alan Nass, 920-662-5161, alan.nass@wisconsin.gov
PCB Concentration:	15.6 PPM
PCB Site MOA Type:	Type B
Impact:	Soil (see submitted data)

The Wisconsin Department of Natural Resources (WDNR) hereby provides notice of discovered PCB contamination of a site. WDNR believes that this site meets the criteria of a "Type B" site per the OCP MOA (<u>http://dnr.wi.gov/org/aw/rr/cleanup/ocp.pdf</u>). According to the OCP, WDNR will take the lead on the site. The requirements of Wis Adm. Code series NR 700 will be followed along with appropriate TSCA sampling and disposal requirements.

Summary of Site: The site is a former unlicensed landfill on top of which a high school football field and lawn were established. The landfill had received municipal wastes, paper mill sludge, and possible transformer oils before being closed sometime around 1963. The high school was built between1964 and 1965 with the football field constructed about 1970. In the summer of 2012, the WDNR was contacted by Midwest Engineering Services, Inc. (MES) regarding the school's desire to upgrade the natural turf football field to a synthetic / natural turf surface. Because the site was a historic fill site, the WDNR directed MES to collect soil samples to determine the presence of contamination in the upper soil profile. Initial sampling found PCBs at a high of 15.6 mg/Kg at 3 to 4 feet. Additional soil sampling (upper 6 inches) was done on the football field and in an adjacent grassed area used for school activities. PCBs were found to be present in both locations but at concentrations below direct contact concerns. Additional investigation and some remediation will be needed.

Attached at the Responsible Party Letter sent to the Ashwaubenon School District, two tables showing the soil analysis results and three figures showing sampling locations.

Yours truly, Jun Well Hydrogeologist

Hydrogeologist 920-662-5161

State of Wisconsin DEPARTMENT OF NATURAL RESOURCES 2984 Shawano Avenue Green Bay WI 54313-6727



April 5, 2013

Mr. Brian Hanes, Superintendent Ashwaubenon School District 1055 Griffiths Lane Ashwaubenon, Wisconsin 54303 FID Number: 405108660 Brown County

Subject: Conditional Case-by-Case Grant of Exemption for the Development of a Property Where Solid Waste has been Disposed, and Low Hazard Exemption for the Beneficial Reuse of Contaminated Soil, Ashwaubenon High School Football Field, 2391 Ridge Road, Parcel Number VA-129-1, Ashwaubenon, Brown County, Wisconsin BRRTS Number: 02-05-559562

DRAFT - FOR DISCUSSION PURPOSES ONLY

BEFORE THE STATE OF WISCONSIN DEPARTMENT OF NATURAL RESOURCES

CONDITIONAL GRANT OF EXEMPTION FOR DEVELOPMENT ON A PROPERTY WHERE SOLID WASTE HAS BEEN DISPOSED

FINDINGS OF FACT

The Department finds that:

1. The Ashwaubenon School District (owner) currently owns the property located at 2391 Ridge Road, Parcel Number VA-291-1, Village of Ashwaubenon, Brown County, Wisconsin.

2. Solid waste (municipal waste, paper mill sludge, and unknown other debris) has been disposed of on this property and remains at this property.

3. Based on laboratory analysis, polychlorinated biphenyls (PCB) contamination exists in the soil and waste material under the existing football field and area proposed to receive the soil fill material from the existing football field. In the soil material under the football field, the known level of PCB contamination ranges from less than detection level to 27.3 milligrams per kilogram (mg/kg). With the exception of the area of GP-3, the upper 18 inches of soil material under the football field has not been shown to exceed residual contaminant concentrations.

4. Midwest Engineering Services, Inc. on the behalf of the Ashwaubenon School District has submitted to the Department a request for an exemption from the prohibition in NR 506.085, Wis. Adm. Code dated January 10, 2013. The fee for the request was received on February 4, 2013. The request has been submitted under the seal of a professional geologist.

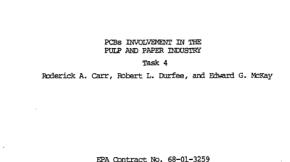
5. Midwest Engineering Services, Inc., on the behalf of the Ashwaubenon School District submitted *Request for PCB Affected Soil Reuse* on March 21, 2013 to the Department. The request was to reuse the top 18 inches of soil material removed from the football field as fill material in an area immediately northwest of the football field.

6. Based upon the information provided to the Department, the proposed football field development at the property is not expected to cause future exceedances of applicable soil and groundwater standards.

Additional documents considered in review of the exemption request include the following:

 Two hand written pages of notes, one undated and one dated January 3, 1985, WDNR, Bureau of Waste and Materials Management, File Number 405108660, Ashwaubenon Village Landfill, 2391 Ridge Road, Village of Ashwaubenon, Brown County, Wisconsin.

 Soil Survey of Brown County, Wisconsin, United States Department of Agriculture, Soil Conservation Service, June 1974.



EPA 560/6-77-005

EPA Contract No. 68-01-3259 EPA Project Officer: Thomas Kopp

1.2 Carbonless Copy Paper

Aroclor 1242, a mixture of PCBs containing an average of 42 per cent chlorine, was purchased from Monsanto and used in carbonless copy paper as an ink carrier or solvent during the period 1957-1971. The total amount used for this purpose was 44,162,000 pounds, approximately 28 per cent of the total estimated Monsanto sales for plasticizer applications and 6.3 per cent of Monsanto domestic sales of PCBs during 1957-1971. The average content of Aroclor 1242 in the carbonless copy paper was 3.4 per cent.

The National Cash Register Company (NCR) was the developer and sole marketer of the PCB-containing carbonless paper, although Appleton Coated Paper Co., Appleton, Wisconsin; Mead Corp., Dayton, Ohio; Combined Paper Mills, Combined Locks, Wisconsin; and Nekoosa-Edwards Paper Co., Port Edwards, Wisconsin, at one time or other performed the actual production under license from NCR.

Remedial Investigation Report

Lower Fox River and Green Bay, Wisconsin

Prepared for:

Wisconsin Dept. of Natural Resources



Prepared by: The RETEC Group, Inc. Natural Resource Technology, Inc.

December 2002

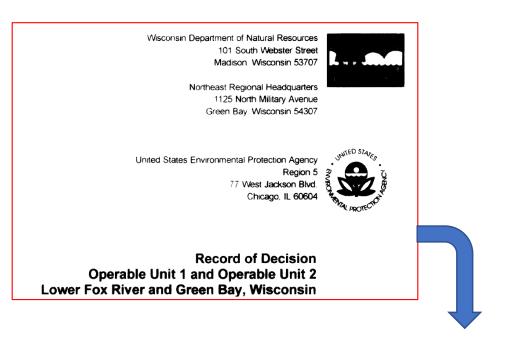




Aroclor 1242 was the PCB mixture used in the emulsion applied to the manufacture of carbonless copy paper. Approximately, 45 million pounds of this emulsion were reportedly used in the Lower Fox River valley between about 1954 and 1971 (WDNR, 1999a). In the Lower Fox River, Aroclor 1242 was detected in over 90 percent of the sediment samples tested by Aroclor analysis (Table 5-1). By comparison, Aroclors 1254, 1260, and 1268 were only detected in about 9 percent to 25 percent of all samples analyzed while the other five Aroclors (1016,

5-16

Nature and Extent of Detected Chemicals



Fox River and Green Bay ROD for OU 1 and OU 2

Commercially manufactured PCBs consisted of complex mixtures of congeners, known under various trade names. These PCBs were marketed under the general trade name "Aroclors." About 140 to 150 different congeners have been identified in the various commercial Aroclors, with about 60 to 90 different congeners present in each individual Aroclor.

The polychlorinated biphenyls (PCBs) used in the production of carbonless copy paper by paper manufacturing facilities on the Fox River from 1954 to 1971, consisted largely of the Aroclor identified as "1242." Carbonless copy paper produced during this time contained approximately 3.4 percent PCBs by weight.

Table 3 Summary Statistics for Soil (0 to 1 feet bgs) Human Health Risk Assessment Ashwaubenon High School Athletic Fields Ashwaubenon, Wisconsin

COPC	Sample Number	Detects	Detection Frequency	Maximum Detected Concentration	Wisconsin Background Threshold Value (BTV)	Exposure Point Concentration (1)		
				mg/kg	mg/kg	mg/kg		
Polychlorinated Biphenyls (PCB) (mg/kg)								
PCB-1242	23	0	0%			ND		
PCB-1248	23	20	87%	1.96		0.741		
PCB-1254	23	3	13%	0.25		0.059		
PCB-1260	23	8	35%	0.2		0.07		
PCB-1262	14	0	0%			ND		
PCB-Total	23	21	91%	2.15		0.831		

Table 4

Summary Statistics for Soil (0 to 4 feet bgs) Human Health Risk Assessment Ashwaubenon High School Athletic Fields Ashwaubenon, Wisconsin

COPC	Sample Number	Detects	Detection Frequency	Maximum Detected Concentration	Wisconsin Background Threshold Value (BTV)	Exposure Point Concentration (1)	
				mg/kg	mg/kg	mg/kg	
Polychlorinated Biphenyls (PCB) (mg/kg)							
PCB-1242	33	1	3%	75.7		2.41	
PCB-1248	33	25	76%	32.3		5.98	
PCB-1254	33	3	9%	0.25		0.049	
PCB-1260	33	10	30%	0.2		0.06	
PCB-1262	24	4	17%	9.25		1.4	
PCB-Total	33	27	82%	85		16.4	

Report of Additional Subsurface Investigation and

Risk-Based Corrective Action Plan Athletic Fields

Ashwaubenon School District, Ashwaubenon, Wisconsin

Submitted to:

Ashwaubenon School District 1055 Giffiths Lane Ashwaubenon, WI 54304

Submitted by:

GEI Consultants, Inc. 955 Challenger Drive, Suite A Green Bay, WI 54311 920-455-8200

July 2014







Pie charts indicate fractional contributions of individual Aroclors with non-detect values set to zero. Selecting a pie chart will pop-up a table showing the Aroclor concentrations in units of mg/kg. Grey points indicate locations where all Aroclors were non-detect.