

## Lauridsen, Keld B - DNR

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**From:** Lauridsen, Keld B - DNR  
**Sent:** Friday, December 23, 2022 3:19 PM  
**To:** Christopher, Michael L  
**Cc:** Hassett, Mike P; Fiskness, Andrew M; Endsley, Erin A - DNR  
**Subject:** RE: Ashview Terrace Apartments (BRRTS # 02-05-564043)

Hi Michael,

DNR has reviewed the document titled "Response to Request for Additional Information" received via email on October 21, 2022.

DNR is in general agreement with the proposed soil sampling locations except it is recommended to collect several samples along the eastern property boundary in grid areas 7 and 47 to confirm if direct contact exceedances exist. It is recommended that a brief workplan with proposed sampling locations be submitted for DNR review.

A proposal for soil averaging of PCB contamination in soil can be submitted for DNR review. This will be considered a fee review under Other Technical Assistance requiring a \$700 review fee. To facilitate our review, we request that the submittal includes all site data used in the averaging calculations, marked up figures depicting which grids or grouped grids are being averaged as a distinct population, and the outputs from ProUCL or other statistical software that is used to perform the calculations and analysis. Please describe any assumptions made or rationale behind decisions that could influence the analysis. Include a description of what grids or areas of the site comply with direct contact RCLs when averaging the soil data, and identify any areas that might need remedial action because they don't comply with direct contact RCLs.

DNR anticipates that a proposal for future PFAS groundwater sampling will be submitted for DNR concurrence soon.

Let me know if we need to discuss anything in more detail.

Happy holidays,

-Keld

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**Keld B. Lauridsen**

Phone: (920) 510 8294

Keld.Lauridsen@wisconsin.gov

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**From:** Christopher, Michael L <Michael.Christopher@GAPAC.com>  
**Sent:** Friday, October 21, 2022 9:05 AM  
**To:** Lauridsen, Keld B - DNR <Keld.Lauridsen@wisconsin.gov>  
**Cc:** Hassett, Mike P <Mike.Hassett@gapac.com>; Fiskness, Andrew M <andrew.fiskness@wsp.com>  
**Subject:** Ashview Terrace Apartments (BRRTS # 02-05-564043)

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Good morning Keld. Please find attached our response that summarizes and expands on our discussion we had during our conference call on August 30<sup>th</sup> where we discussed the referenced site. We look forward to your concurrence to the proposed path forward described in the letter.

Thank you.

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

☎ 281.947.0083 | E [michael.christopher@gapac.com](mailto:michael.christopher@gapac.com)





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.

## CCP

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 WDNR 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 30<sup>th</sup>, 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**

### Emotional Immaturity Called Major Problem

SAN FRANCISCO — One of the major problems facing the nation's industrial labor unions is the emotional immaturity of their members, according to a report by the National Labor Relations Board.



### Wagon Train Family Pickets Federal Barrier

WASHINGTON — The family members of a wagon train of federal employees are picketing a federal barrier to their return to work.

### Experiment With Pages, Editors Told

NEW YORK — Newspaper editors are being urged to experiment with new page layouts and designs to attract readers.

### Debate on Christian Unity Faces Council

MEMPHIS, Tenn. — A debate on Christian unity is set to take place at a meeting of the Southern Christian Leadership Conference.

### Larger Seaway Season Predicted

WASHINGTON — A larger seaway season is predicted for the coming year, according to officials at the U.S. Coast Guard.

### Former Lawrence Treasurer Dies

WASHINGTON — A former treasurer of the Lawrence, Kan., community died last week.

### Ashwaubenon Has New Town Dump

ASHWAUBENON, Wis. — A new town dump is set to be opened in Ashwaubenon, Wisconsin.

### Thesen Renamed To College Board

WASHINGTON — The Thesen family has been renamed to the College Board.

### Fear of Military Takeover Remains After Week of Near-Chaos in Iraq

BEIRUT, Lebanon — A week of chaos in Iraq has not allayed the fears of a military takeover, according to a report from Beirut.

### Accompanist Plans Monday Meeting

WASHINGTON — An accompanist is planning a meeting for Monday.

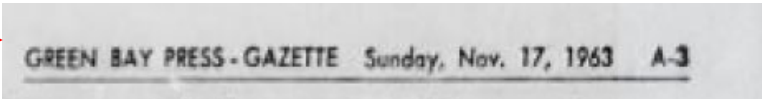
### Pick Fishing Fleet

WASHINGTON — A fishing fleet is being picked for a new project.

### Analysis of the News

WASHINGTON — An analysis of the news is provided in this section.

### Green Bay Press-Gazette Sunday, Nov. 17, 1963 A-3



published." Ashwaubenon Has New Town Dump Ashwaubenon will place a new town dump into operation Monday. The present dump on Ridge Road will be closed Monday and a new dump west of Ridge Road on Echo Lane will be opened.

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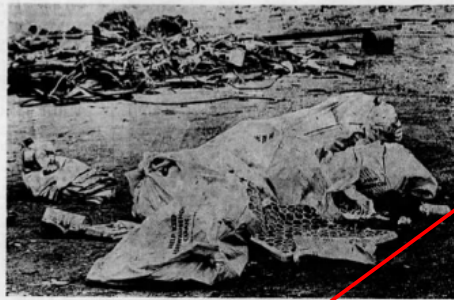
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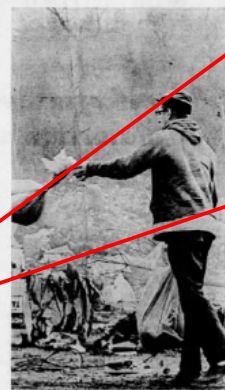




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# Ashwaubenon's Garbage Dump Violates Nearly All Regulations

By TOM KURY  
Ashwaubenon's open garbage dump which violates nearly every regulation of the state's new law on solid waste disposal.

Five tons of garbage were unloaded by the town and 500 Green Bay Press-Gazette reporters.

Swarms of flies from the dump by day, to give it up to down of trash after dark.

A worker's debris and solid waste garbage in areas permitted to accumulate before it is hauled away to the cover of dirt.

The dump never closes and trash is brought from not only from Ashwaubenon but from Green Bay, Oshkosh, and other towns.

There is no animal, no

## Devroys Open Alden Store On S. Military

Opening of an Alden Catalog Store Monday was followed by a fire. It opening of a Green Bay store have been announced by Mrs. and Mrs. Maria Devroy.

The store will be located in a new building erected by Management Enterprises, Inc., at 12th S. Military Ave.

The two stores will locate in the south end - half of the building with a Play - less store space in the north half.

The Alden Catalog Store will be located within the Green Bay Store.

Mrs. Devroy, who has been located in the location are registered by Green Bay, operated for Alden Catalog Store at 421 Main St. for six years. The store was closed last July because of the downtown street renewal program.

There has not been a Catalog Store in Green Bay since 1951.

The new facility, constructed by Frank G. Zales, general contractor, has a new building for approximately 40,000 sq. ft. in front and more than 20 behind the store.

Environment Watch

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

to catch blowing paper or sky writers and other trash blowing into a nearby woods.

Prohibited by a complaint from a Green Bay alderman and an investigation by the Press-Gazette, the Department of Natural Resources (DNR) has ordered Ashwaubenon to stop polluting the air and clean up its dump.

The DNR ordered burning stopped immediately, and garbage compacted and covered at the end of each dumping day.

Issued Orders

It ordered the dump fenced, and as effective insect and rodent control program begun, closing of an attendant, posting during hours, and requiring the dump be fenced after hours.

Ashwaubenon maintains the dump to save the cost of incinerating at the De Pere Incinerator, which it has an agreement for garbage disposal.

The incinerator operator said, "I haven't seen one town garbage truck in two years."

He said the De Pere Incinerator now loads of the Ashwaubenon trash from two loading firms, both of which had had fires.

Robert Rowen, DNR solid waste manager, asked the DNR to do something about the trash dump after complaints in the Southwest Side complained.

Inspected Dump

He and Harvey Duppelle, DNR inspector, went to the dump Oct. 1.

"I'm not a DNR inspector," Rowen said, "that they could permit something like this to exist. I'm not the responsible people in the town are really owners of the bad situation."

Southwest Side residents now circulating a petition which he drafted to protest the dump orders and work, Rowen said.

A resident on Valerius Lane said waste from the dump will spill away onto his property.

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

who lives there.

Shooting rats is encouraged by the town board to cut down the rat population.

Several persons have been bitten by rats at the dump over the past several years.

Sherrill Herbert French says state law prohibits shooting within 200 feet of a house. In the past, he said, towns have allowed shooting at the dump, but are now stopping the practice.

Friday a Press-Gazette reporter fired a rifle while a county policeman watched, without being said to stop.

Arthur Bonart, the town's part-time health officer, said he has received rat complaint calls from residents living near the dump. "They think (the rats) have been coming there from the dump," he said.

Has Mixed Feelings

He is concerned about rat harborage there, but said he has no power to order the town board.

Bonart said he himself has mixed feelings about the dump. "The town saves a lot of money by having garbage at the dump," he said. "But I think the dump should have a watchman and not let everybody bring his stuff out there."

Before the cleanup order was put in the mail Friday afternoon (Saturday), a local official 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.

main law requires the town to get a landfill license — cost: \$50. The town put no-bidding and economic information on its application.

Town officials listed Ashwaubenon's population at 2,600 — the figure of the 1960 census. Ashwaubenon's population is now closer to 3,000, it is estimated.

Open dumps and modified landfills are prohibited when more than 2,500 persons are served by it.

The town's application said burning occurred only weekly, instead of checking the spot marked "regularly." It said the dump has a gate, but the gate posts at the dump consist of two posts.

The application said dumping regulations were posted, but the only sign is one saying "Ashwaubenon people only."

And the sign is ignored.

Miss Devroy went to the dump with Rowen to get a check on present conditions.

Comments on Hunger

He commented that the fire hazard was "very dangerous."

Under landfills he wanted "not enough — not actually covered after enough."

Under rodent and insect control: "Not able to tell which there, because of fire and smoke."

Ashwaubenon pays an estimated \$20 a year to get one ton of the dump. The town needs a man to look once a month.

Rats are constant problem because of the amount of food, "stored among the waste and heaps of low dumps."

A Press-Gazette reporter shot more than 200 rats in five hours one night with a pellet rifle.

Shooting Encouraged

There is a sandy living in a house some 200 feet from the dump. Shooters hang away at the gun bar into the night, often until 3 a.m., says the man

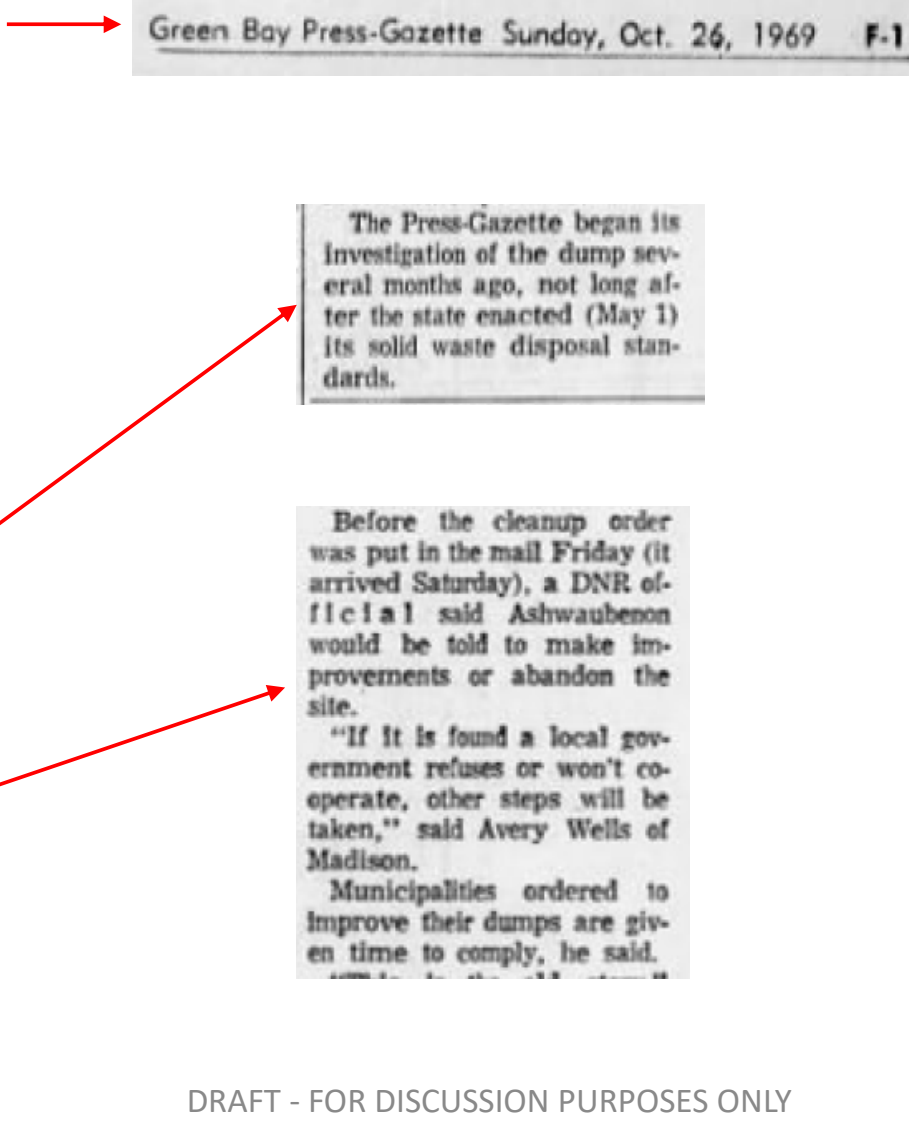
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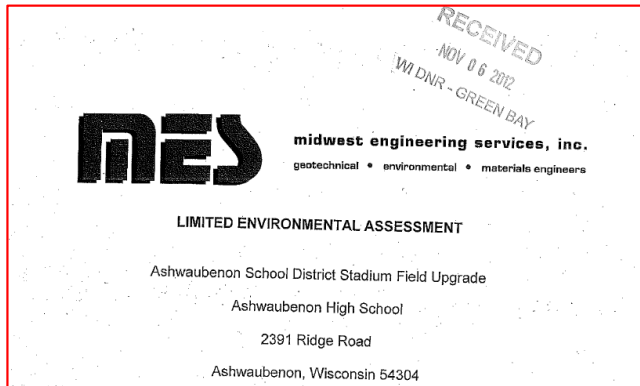
**Table 5-1. Summary of Former End Uses for Various Aroclors**

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						.			

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

Scott Walker, Governor  
Cathy Stepp, Secretary  
Telephone 608-266-2621  
Toll Free 1-888-936-7463  
TTY Access via relay - 711



November 16, 2012

**SENT ELECTRONICALLY**

Peter Ramanauskas  
ramanauskas.peter@epa.gov  
Regional PCB Coordinator  
US EPA Region V  
(312) 866-7890


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 (<http://dnr.wi.gov/org/aw/rr/cleanup/ocp.pdf>). 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 between 1964 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,  
  
Alan Thomas Nass, P.G., P.S.S.  
Hydrogeologist  
920-662-5161

DRAFT - FOR DISCUSSION PURPOSES ONLY

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

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BEFORE THE  
STATE OF WISCONSIN  
DEPARTMENT OF NATURAL RESOURCES

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

April 5, 2013

Mr. Brian Hanes, Superintendent  
Ashwaubenon School District  
1055 Griffiths Lane  
Ashwaubenon, Wisconsin 54303

FID Number: 405108660  
Brown County



FINDINGS OF FACT

The Department finds that:

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

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.
7. 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.

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PCBS INVOLVEMENT IN THE  
PULP AND PAPER INDUSTRY

Task 4

Roderick A. Carr, Robert L. Durfee, and Edward G. McKay

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,

Wisconsin Department of Natural Resources  
101 South Webster Street  
Madison Wisconsin 53707

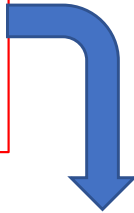


Northeast Regional Headquarters  
1125 North Military Avenue  
Green Bay Wisconsin 54307

United States Environmental Protection Agency  
Region 5  
77 West Jackson Blvd.  
Chicago, IL 60604



**Record of Decision  
Operable Unit 1 and Operable Unit 2  
Lower Fox River and Green Bay, Wisconsin**



*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.



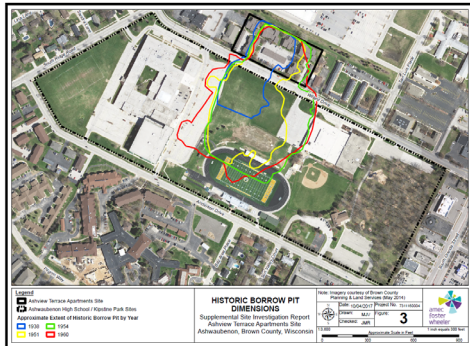
Report of Additional Subsurface Investigation and  
**Risk-Based Corrective Action Plan**  
**Athletic Fields**

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



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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
<b>Polychlorinated Biphenyls (PCB) (mg/kg)</b>						
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
<b>Polychlorinated Biphenyls (PCB) (mg/kg)</b>						
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



6297\_PieMap-AROCLORS\_2022-08-11.html



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