CORRESPONDENCE/MEMORANDUM **State of Wisconsin**

DATE: October 19, 2022

TO: PFAS Review Committee

FROM: Scott Inman, Water Resources Engineer, Remediation and Redevelopment

SUBJECT: Emerging Contaminants Scoping Statement for the Portage Canal Segments 1 through 4, City of Portage, Columbia County, WI, 02-11-543021 Segment 1, 02-11-577055 Segment 2, 02-11-577056 Segment 3, 02-11-577057 Segment 4

1 Introduction

The purpose of this memorandum is to meet the Bureau for Remediation and Redevelopment's (R&R) policy requirement that an Emerging Contaminants Scoping Statement (ECSS) needs to be completed to be able to close a site. The focus of this ECSS is on Per- and Polyfluoroalkyl Substances (PFAS), but a discussion of 1,4 -Dioxane is also included in Section 5. The ECSS is intended to be adequate to code the case as such, 115, in the Bureau for Remediation and Redevelopment's Tracking System (BRRTs). This scoping statement is applicable to all four Segments of the Portage Canal (Canal) tracked under the case numbers indicated in the subject line and as more thoroughly described in Section 2.1 (Site Description). Based on the analysis herein and non-detect analytical results for PFAS, emerging contaminants, PFAS and 1,4-Dioxane, are not contaminants of concern for the Portage Canal and no further testing is recommended.

1.1 Content

This ECSS includes the following sections:

- Section 1: Introduction, provides an introduction and background information as well as a description of the performed PFAS testing and results.
- Section 2: General Site Information, presents the site description, the sediment characteristics, a discussion of the site contaminants, stormwater, and the operation of the Canal.
- Section 3: PFAS Background, provides information on the PFAS timeline and potential obvious sources of PFAS.
- Section 4: Sites and Other Operations Around the Canal, describes known information from key sites around the Canal, including Rayovac, Portage Woolen Mills, the Portage MGP, Gruber Automotive, Alter Recycling, and the Portage Levee Shop.
- Section 5: 1,4 – Dioxane, describes the uses of 1,4 – Dioxane and the fate and transport characteristics of the contaminant.
- Section 6: Conclusions
- Section 7: References

The main text of this ECSS is follows by a set of supporting Attachments, including:

- Attachment 1: PFAS Testing Results
- Attachment 2: Storm Sewer System Map
- Attachment 3: City of Portage Storm Water Draining System Map
- Attachment 4: Documentation of Spill's Searches

1.2 Background

DNR remediated Segment 1 of the Portage Canal in 2016 by dredging approximately 1,000 cubic yards of contaminated sediment from the center of the Canal and capping remaining contamination, primarily adjacent to the existing walls which line the Canal. DNR remediated Segment 2 of the Portage Canal in 2021 by dredging approximately 30,631 cubic yards of contaminated sediment and capping remaining contamination, largely under the future trail. No remedial actions have been taken in Segments 3 and 4.

Specific to PFAS, in 2018, the then Environmental Management - Division Administrator - Darsi Foss made the decision to test the Canal's sediments, and only the sediments, for PFAS. The Division Administrator made the PFAS testing decision prior to the current policy and no scoping statement was developed at that time. However, this ECSS is being developed now per R&R Management's direction to provide supporting documentation for the non-detect sampling results. Segment 2 of the Portage Canal is currently coded in BRRTS as, 119, PFAS Sampling Completed – not detected on February 4, 2019.

1.3 PFAS Testing and Results

DNR's consultant, Anchor QEA (Anchor), performed PFAS testing in accordance with a 2018 Field Sampling Plan (Anchor, 2018) which is available on BRRTS on the web. Anchor implemented the sampling as part of the remedial design for Segment 2 in 2019. The PFAS sampling comprised of three sediment cores collected from evenly spaced locations in Segment 2 that represented the range of sediment conditions in Segment 2 and used PFAS free sampling techniques. The three cores were then composited and homogenized for a single sample.

Eurofins Lancaster Laboratories out of Lancaster, PA performed the PFAS analytical testing using method EPA 537 Version 1.1 Modified. The list of 32 PFAS compounds analyzed is included in Attachment 1. The results were non-detect for all of the PFAS compounds analyzed.

2 General Site Information

Site Name	Portage Canal – Segments 1 through 4
BRRTS Site Nos.	02-11-5430211, 02-11-577055, 02-11-577056, and 02-11-577057
Site Location	Portage Canal from Hwy 51 to the Fox River, City of Portage, Columbia County, Wisconsin

Site Owner	State of Wisconsin Wisconsin Department of Natural Resources 101 South Webster Street Madison, Wisconsin 53707
DNR Contact	Scott Inman, PE Water Resources Engineer 3911 Fish Hatchery Road Fitchburg, Wisconsin 53711 (608) 273-5613 scott.inman@wisconsin.gov

2.1 *Site Description*

The Portage Canal is a 2.5-mile-long and 17-acre canal in Portage, Columbia County, Wisconsin (Figure 1-1). The Canal begins at the Wisconsin River and flows northeast, through the City's downtown area before emptying into the Upper Fox River. The Canal project corridor includes four segments based on major road and rail crossings, shown in Table 1-1, each of which are tracked under a separate BRRTs Cases.

Table 1-1
Portage Canal Segments

Segment	From	To	BRRTS No.	Length (feet)
1	Wisconsin River/Highway 51	Adams Street	02-11-543021[1]	700/2,100
2	Adams Street	CPR crossing	02-11-577055	3,500
3	CPR crossing	Highway 33	02-11-577056	1,800
4	Highway 33	Fox River	02-11-577057	4,700

Note:
1. The transportation enhancement project refers to Segment 1 as including from the Wisconsin River to Adams Street. The BRRTS case for Segment 1 (BRRTS No. 02-11-543021) excludes the 1,400-foot section from the Wisconsin River to Highway 51 because sampling showed it was not contaminated and the City dredged it in 2006.

2.2 *Sediment Characteristics*

The sediment conditions prior to remediation in Segments 1 and 2, and the remaining sediments in Segments 3 and 4 are described as follows. Soft sediment material consists primarily of dark brown and grey to black silty sand, which contains variable amounts of organics and clay. Material under the sediment is native brown sand with fewer fines and is generally visually distinct from the overlying sediment. However, a transitional layer of silty sand is present between the soft sediment and sand in some areas. In some locations throughout the Canal, sediment deposits are comprised of multiple, alternating layers of soft sediment and poorly graded sand, with higher organic content observed in subsurface soft sediment deposits. Thicknesses of the soft sediment are estimated to be approximately 0.5 to 3.0 feet; however, in a small number of core locations, soft sediment deposits were identified at depths greater than 4 feet during the 2013 sampling events. Sediment characteristics are further described in the Site Investigation Report (Ramboll, 2017), which is available on BRRTS on the web.

2.3 Site Contaminants

The contaminants of concern tracked under the Canal BRRTS cases include metals, petroleum, Polychlorinated Biphenyls (PCBs), and poly aromatic hydrocarbons (PAHs) and are discussed in that order. A total of nine metals that exceed the Consensus Based Sediment Quality Guidelines (CBSQG) Threshold Effects Concentration (TECs), including cadmium, chromium, copper, iron, lead, mercury, nickel, silver, and zinc in the sediment. The TEC and the Probable Effects Concentration (PEC) are levels at which toxicity to benthic-dwelling organisms are predicted to be unlikely and probable, respectively. These levels are based on empirical evidence of matching hundreds of sediment chemistry and toxicity data from field studies for 28 chemicals of concern in freshwater sediments (MacDonald, et. all, 2000).

Petroleum constituents have been observed in the Canal, with elevated levels of oil and grease and diesel range organics (DRO). Note that a comparable CBSQG does not exist for petroleum constituents. PCBs have been detected in fish in the canal and the DNR issued site-specific fish consumption advice for carp and gamefish. However, PCB levels in the sediment are low, less then 1 part per million, and rarely detected. PAHs have been detected and exceed the PEC, but not consistently. Lead and mercury are the contaminants of concern that exceed consensus-based sediment quality guidelines most consistently and by the highest magnitude. Mercury and lead have been shown to be a hazard to microorganisms, aquatic plants, and aquatic invertebrates. Mercury is bioaccumulative and is the contaminant that DNR based the cleanup upon. DNR has not identified emerging contaminants such as PFAS and 1,4-Dioxane as a contaminant of concern for the Canal. Emerging contaminants do not appear to be related to the legacy sediment contamination in any way, as discussed further in Section 4.

2.4 Stormwater

The Canal is a major conduit for stormwater and drains a meaningful percentage of the City of Portage as shown in the Storm Sewer System Map in Attachment 2, and City of Portage Storm Water Draining System Map in Attachment 3. There are 18 stormwater outfalls to the Portage Canal in Segment 2.

Perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS) are typically detected in urban stormwater runoff (Stormwater, 2020) and rainwater around the world exceed most drinking water health advisories (Environ. Sci. Technolo., 2022). These research papers are supported by DNR's testing of Milwaukee Estuary Area of Concern PFAS Special Study Report (Anchor, 2020), which sampled the surface water of each of the three major rivers in Milwaukee and Milwaukee Bay and detected the shorter chain carbon compounds (C4 through C7 and C8) in 100% of the samples. Therefore, the likelihood that PFAS in surface water in the canal is at detectable concentrations is certain.

To-date, the DNR Stormwater Program has not established acceptable levels of PFAS in stormwater. The 2019 sediment sampling scope of work did not include any PFAS sampling of surface water or stormwater entering the Canal; only the sediments were tested. I am not aware of any local stormwater or surface water PFAS data that would be available for applicable analysis in this scoping statement. PFAS in rainwater, stormwater, and surface water is background and is not associated with the hazardous substance discharge at the Canal.

2.5 Operation of the Canal

Unlike the canals in Milwaukee or elsewhere in the world, the Portage Canal has not been used much by commercial shipping nor navigation and is part of why the Portage Canal was closed. The Canal has been in governmental control, both with the United States Army Corps of Engineers (USACE) and the Wisconsin Department of Natural Resources since the Canal's creation in in the 1800's, as further discussed in the Site Investigation Report (Ramboll, 2017). No government operations took place on the Canal other than dredging for flood control of the Wisconsin River. Further, the Canal has been closed to navigation and blocked off from the Wisconsin River by an earthen dam since the USACE closed the locks in 1959. No motorized boating occurs on the Canal due to the shallow water depths and lack of a public boat ramp to access the Canal. Due to the lack of use of the Canal by commercial shipping and the type of government operations, emerging contaminants are not expected to be a concern.

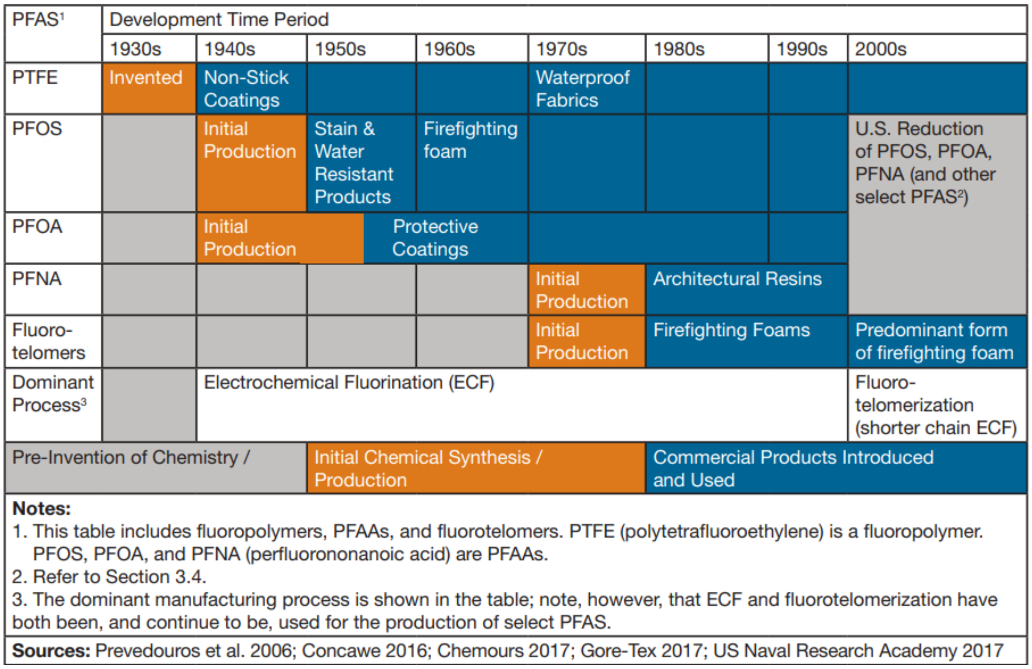
3 PFAS Background

3.1 PFAS Timeline

This section discusses the general timeline of PFAS invention and general use. This general timeline is relevant context for the sites and other operations around the Canal, as discussed in Section 4, compared to when the historic discharge(s) to the canal likely occurred.

PFAS was invented in the 1930's, but it was not until DuPont introduced nonstick cookware coated with Teflon in 1946 that use of this class of compounds started to expand. Water and stain resistant products with PFOS came out in 1950's. PFAS use started to ramp up as Manufactured Gas Plants were closing (Hatheway, 2022a). Some of the current uses of PFAS such as protective coatings, firefighting foam, and waterproof fabrics were used after sites stopped operations, as discussed in Section 4. This is showed in a visual format in the chart below from Interstate Technology and Regulatory Council's (ITRC)'s History and Use of PFAS (ITRC, 2020).

Table 2-1. Discovery and manufacturing history of select PFAS



PFAS[1]	Development Time Period							
	1930s	1940s	1950s	1960s	1970s	1980s	1990s	2000s
PTFE	Invented	Non-Stick Coatings			Waterproof Fabrics			
PFOS		Initial Production	Stain & Water Resistant Products	Firefighting foam				U.S. Reduction of PFOS, PFOA, PFNA (and other select PFAS[2])
PFOA		Initial Production	Protective Coatings					
PFNA					Initial Production	Architectural Resins		
Fluoro-telomers					Initial Production	Firefighting Foams		Predominant form of firefighting foam
Dominant Process[3]		Electrochemical Fluorination (ECF)						Fluoro-telomerization (shorter chain ECF)
Pre-Invention of Chemistry /			Initial Chemical Synthesis / Production		Commercial Products Introduced and Used			

Notes:
1. This table includes fluoropolymers, PFAAs, and fluorotelomers. PTFE (polytetrafluoroethylene) is a fluoropolymer. PFOS, PFOA, and PFNA (perfluorononanoic acid) are PFAAs.
2. Refer to Section 3.4.
3. The dominant manufacturing process is shown in the table; note, however, that ECF and fluorotelomerization have both been, and continue to be, used for the production of select PFAS.

Sources: Prevedouros et al. 2006; Concawe 2016; Chemours 2017; Gore-Tex 2017; US Naval Research Academy 2017

3.2 Potential Obvious Sources

Obvious and potentially significant sources of PFAS include those identified in ITRC's History and Use Table 2-1 above. Based on reasonably available information to-date, no known obvious or potentially significant industries are known to have been present in the Canal's watershed.

Another obvious and potentially significant source of PFAS would be at an airport or fire station that may have used PFAS for first response and/or fire training. The Portage Municipal Airport at 1011 Silver Lake Drive, is 1.9 miles northwest of the Portage Canal and per the stormwater maps in Attachment 1, does not drain to the Portage Canal and is therefore not a concern. The Portage Fire Department is located at 119 W. Pleasant Street, and it is 0.2 miles from the Canal. Although this is a close proximity, to-date, no one has reported a discharge of PFAS containing foam to the DNR R&R program, as documented in Attachment 4. The sampling and analytical results discussed in Section 1.3 indicate that a significant PFAS release has not occurred into the Canal that would contribute to sediment impacts.

Finally, another potentially obvious source could be a wastewater treatment plant outfall. The Portage City Waste Water Facility is located at 1600 E. Wisconsin Street, Portage, WI and discharges to the Wisconsin River about 1.5 miles downstream of the Portage Canal, which is cut off from the Wisconsin River by an earthen berm, and therefore is not a concern.

4 Sites and Other Operations around the Canal

Attempting to ascertain all the potential sources of PFAS to the Canal since the creation and use of PFAS is impracticable. PFAS could not be ruled out as a possibility due to the ubiquitous nature of the PFAS use in everyday consumer products and extremely sensitive analytical methods. Additionally, the extent of the watershed renders developing this ECSS inherently more difficult than it would be for an upland property. Unlike an upland property, the potential sources of PFAS contamination to the Portage Canal are not from operations on the Canal itself, as discussed in the Section 2.5, but rather, from the industry that operated around the Canal that may have historically discharged to it. Therefore, this section discusses the potential sources of contamination to the Portage Canal from sites and other operations around the Canal that may have been related to the hazardous substance discharge discussed in Section 2.3. The sites are discussed in an upstream to downstream order.

4.1 Rayovac

Rayovac owned and operated battery manufacturing factory located along the northern bank of the canal, in Segment 1, upstream of Hwy 51 and Dewitt Street. The facility was constructed in 1963 and started production in 1964, when it produced 2,000 batteries per day by hand (Mccoy, 2014). The facility operated at the canal location until 1977, when production demands grew beyond manufacturing capacity. In 1982, Rayovac moved to the current location at 2851 Portage Road Portage, WI 53901, which is out of the Canal's watershed. The Portage Public Library and the Two Rivers coffee now exist on the former battery factory property. It is not clear from historic documents regarding the type of battery that Rayovac produced near the canal.

There has been insufficient information to determine if Rayovac contributed to the Canal's contamination. In 2003, Soil and Engineering Services collected the only sediment sample adjacent to the former Rayovac facility and upstream of Hwy 51 (SS-1B). SS-1B did not show elevated levels of heavy metals. However, the sample did show elevated oil and grease and DRO. The City dredged the stretch from the Wisconsin River to DeWitt Street / Hwy 51 in 2006. Additionally, SS-1B differed from the rest of the Canal's sediment in that the sieve analysis indicated the material was 98% sand and gravel. The remainder of the samples and the canal sediments, in general, have much higher fines content. A higher fines content is associated with higher levels of contamination.

I reviewed four publications to determine the potential for the use of PFAS in batteries as a potential source, including:

1. ITRCs History and Use of PFAS found in the Environment (ITRC, 2020);
2. ITRC's History and Use of ITRC's Per- and Polyfluoroalkyl Substances (ITRC, 2021a);
3. ITRC's Per- and Polyfluoroalkyl Substances Technical and Regulatory Guidance (ITRC, 2021b); and
4. Environmental Science Processes & Impacts' An overview of the uses of PFAS (Environ. Sci. & Processes Impacts, 2020).

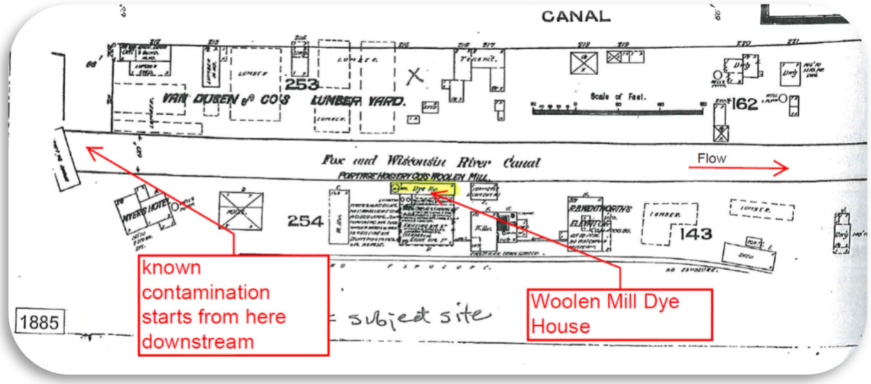
The Rayovac facility operated from 1964 to 1977 while PFAS use started to become more widespread, as discussed in Section 3.1. PFAS has been known to be used in lithium, zinc, and alkaline manganese batteries (Environ. Sci.: Processes Impacts, 2020). Therefore, PFAS could not be ruled out as a potential contaminant. However, there is no evidence of a hazardous substance discharge related to PFAS from former Rayovac operations.

4.2 Portage Woolen Mills BRRTS No. 02-11-272824

Downstream of the former Rayovac facility is the former Portage Woolen Mills (Mill), which is the most likely source of the contamination in the Canal's sediment and the hazardous substance discharge. This is due to the long operational history of the Mill before environmental regulations, that mercury and other metals are known to have been historically used in textile dying operations that were conducted at the Mill, the proximity of the dye house shown on Sanborn Maps to the start of sediment contamination, observations from local residents, and online pictures from the Historical Society which show dyed water leaving the Mill.

The Mill was located on the south bank of Segment 1 of the Canal between DeWitt and Adams Streets at 107-115 East Mullet Street, Portage, WI, and tracked under BRRTS No. 02-11-272824. The BRRTS case was closed on May 1, 2003, for the tetrachloroethylene groundwater plume with continuing obligations for contaminated soil and groundwater. Segment 1 is where the most upstream and known sediment contamination starts. Mead and Hunt conducted a Hazardous Material Assessment Phase I (Mead and Hunt, 2003) and focused on the storage tank and groundwater contamination, but did not discuss the likelihood of sources of sediment contamination.

The Mill operated 71 years from 1881 until the 1952 and produced mittens, boot socks, athletics socks, fine hosiery, and slipper socks and employed up to 220 people (McKay et. all, year unknown). Part of operations was a dye house, as shown on the Sanborn map from 1885 below:

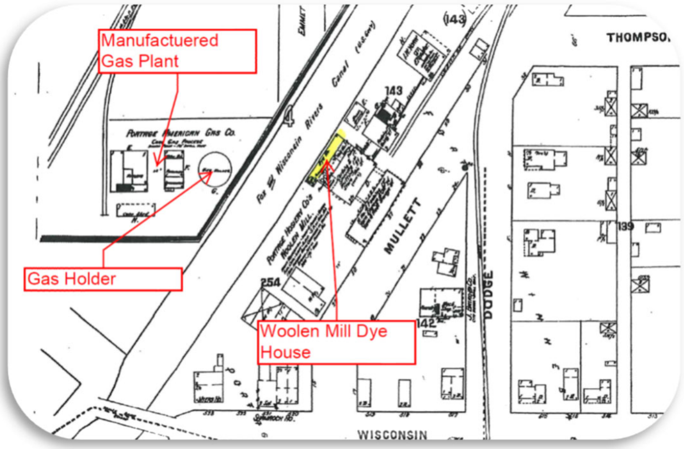


Accounts from local residents on the canal Ad Hoc committee indicate that the canal water became blue or red, depending on the color the mill was dying socks on a given day. Textile dyes can contain cadmium, chromium, copper, lead, mercury, and zinc based on publication EPA-600/2-78-098 *Textile Dyeing Wastewaters* (EPA, 1978).

Due to the Mill operating primarily before PFAS was invented and then closing or ramping down in the 1950's before PFAS use started in earnest (as discussed in Section 3.1). Therefore, it is unlikley that PFAS would relate to the discharges from the former Mill and the sediment contamination in general.

4.3 Portage MGP

Across the canal from the Mill was a former Manufactured Gas Plant (MGP). The 2016 Environment Assessments for Segment 1 parcels associated with Columbia County's moving the Human Health and Administrative Buildings to the canal location included Sanborn Fire Insurance maps. Inspection of those maps identified a former Manufactured Gas Plant and associated gas holders directly adjacent to the canal on the 1894, 1901, and 1910 maps. The 1894 Sanborn Map is shown below:



According to the Table below, provided from hardcopy files passed down from DNR's former employee, Jamie Dunn, the Portage MGP was a coal type plant that produced 6, 7, and 18 million cubic ft per year of gas in 1890, 1900, and 1910, respectively. Sometime between 1910 and 1920 the MGP moved from the canal location, approximately 0.5 miles north, to the E Emmett St & Railroad location in Portage, WI. The Emmett St. and Railroad location has a closed site BRRTS No. 02-11-001299.

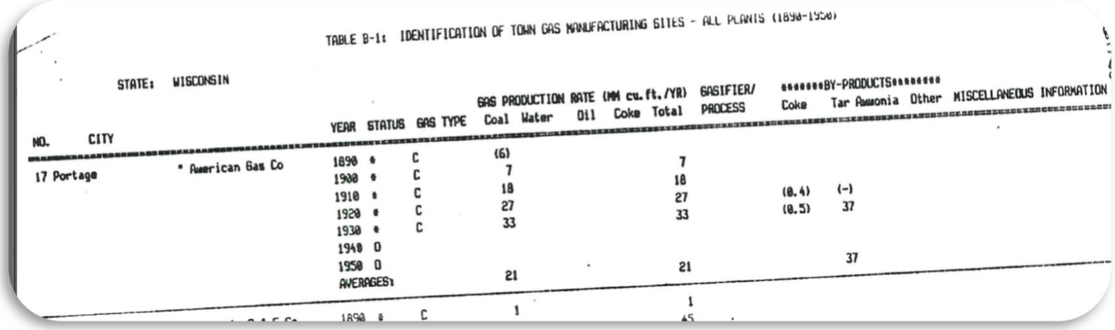
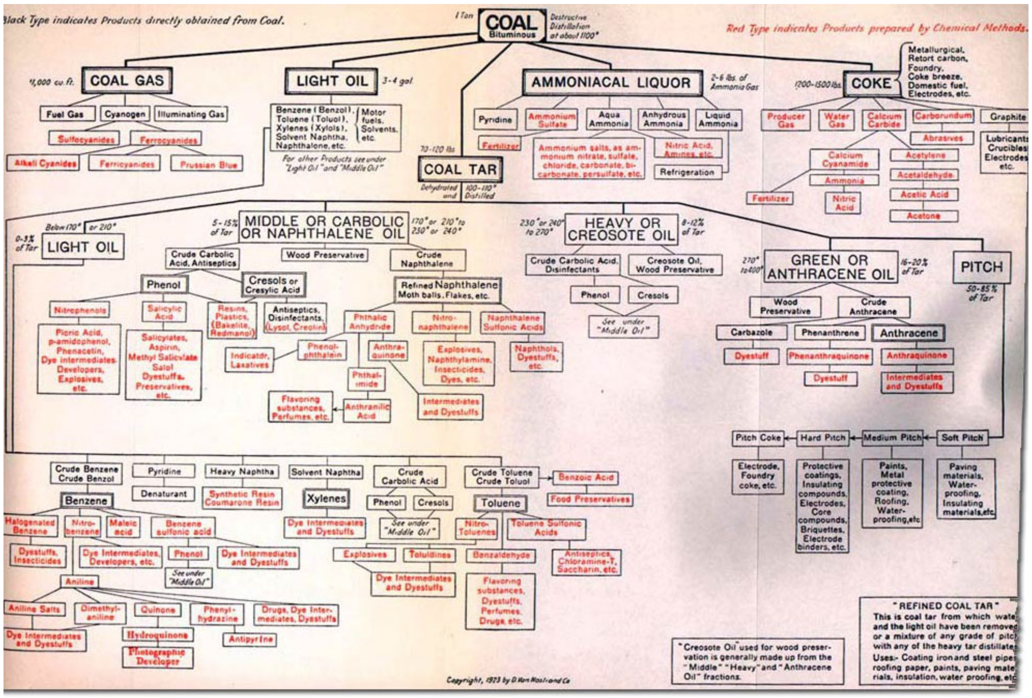


TABLE B-1: IDENTIFICATION OF TOWN GAS MANUFACTURING SITES - ALL PLANTS (1890-1950)

STATE: WISCONSIN

NO.	CITY		YEAR	STATUS	GAS TYPE	GAS PRODUCTION RATE (MM cu.ft./YR)					GASIFIER/ PROCESS	********BY-PRODUCTS********				MISCELLANEOUS INFORMATION
						Coal	Water	Oil	Coke	Total		Coke	Tar	Ammonia	Other	
17	Portage	* American Gas Co	1890	*	C	(6)				7						
			1900	*	C	7				18						
			1910	*	C	18				27		(0.4)	(-)			
			1920	*	C	27				33		(0.5)	37			
			1930	*	C	33										
			1940	O												
			1950	O												
			AVERAGES:			21				21			37			
			1890	*	C	1				1						

The main contaminates of concern from former MGPs include semi-volatiles, such as PAHs, volatiles mainly in the form of BTEX (benzene, toluene, ethylbenzene and xylene) and certain metals that would have naturally been in the coal, such as arsenic, lead, mercury, cadmium, chromium, and selenium. A flow chart showing the potential contaminants of concern for MGPs is shown below from (Hatheway, 2022b). The chart was developed in 1923 by coal-combustion expert Alexander Lowy and appeared in several editions of Rogers' Industrial Chemistry, edited in later revisions, by C.C. Furnas, here as Table 7, from the Sixth edition (1942)



As stated, an MGP would generally have resulted in elevated levels of PAHs, along with metals. However, the PAHs in the canal are not significantly elevated relative to what is typically seen at other MGP sites, which can be in the thousands of parts per million or exist as free product. This may have to do with previous dredging. The last known dredging of the canal by the USACE was in the early 1900's, after the MGP moved locations. However, I could not determine the extent of the dredging in the canal in either 1916 and 1927 from the Historic American Engineering Survey of the Portage canal source, which indicates simply that:

- The dredge known as the Winneconne cleared only a portion of the canal in 1927;
- some dredging of the Portage Canal between 1926 and 1927; and
- In 1916, considerable dredging was completed in the canal.

Further historical review of USACE documents would be required to determine the extent of dredging in relation to the MGP operation. Regardless, the MGP was unlikley to have contributed a significant portion of the metals contamination to the Canal. Additionally, because the MGP moved locations before 1920, before PFAS was invented, PFAS is not associated with the MGP and is therefore ruled out.

4.4 Gruber Automotive BRRTS No. 02-11-519588

The former Gruber Automotive property (Gruber property) is located on the northern bank of Segment 1 of the canal, adjacent to Adams Street, at 208 Edgewood Street, Portage, WI and is tracked under BRRTS No. 02-11-519588. The 2003 Phase II Environmental Site Exploration Report on the property indicated that the onsite soil and groundwater is contaminated with petroleum constituents. The soil is contaminated with lead, Diesel Range Organics (DRO), and PAHs. The field reconnaissance noted numerous drums and abandoned storage tanks located onsite, the drums were located approximately 15 to 75 feet from the canal.

DNR was notified of the release with a letter on January 5, 2004, and a responsible party letter was sent on January 8, 2004, for the on-site contamination. In the spring of 2016, the DNR received a complaint that Gruber Automotive was dumping used motor oil into the Canal via the storm sewer near Adam's Street. Since the contents of the dumping are not directly known, this could have also included anti-freeze, which could have contained 1,4-dioxane, which is discussed in Section 5.

The DNR issued Gruber Automotive a responsible party push letter on March 21, 2016. In 2016, Columbia County installed a series of groundwater dewatering wells to facilitate earthwork for the building foundations. Groundwater chemistry results from said wells indicated a distinct chlorinated concentration gradient emanating from the Gruber property; it is likely a source of a chlorinated solvent groundwater plume.

Relative to the potential petroleum product dumping, DNR observed sheen and odor when collecting certain sediment cores in Segment 1 in 2015 and 2016. The Gruber Automotive operations is likely associated with hazardous substance discharges that contaminated the canal, and PFAS may have been contained in automotive type products such as rain-x. Therefore, the potential for PFAS from Gruber Automotive cannot be ruled out. However, there is no evidence of a hazardous substance discharge of PFAS.

4.5 Alter Recycling

Alter Recycling, formerly Samuels Recycling, operates a recycling facility on the south side of Segment 2 of the canal. The portage location accepts:

> *"Ferrous and Non Ferrous material. From your old farm machinery, copper, and aluminum cans, to your car bodies and appliances. We do not accept appliances that contain Freon, unless they are professionally drained and the proper documentation is brought into this facility." (Alter, 2021).*

There are storm sewers directly adjacent to the facility that discharge to the canal. The recycling facility is 1,500 feet downstream of the known start of contamination in Segment 1, and downstream of the Adams Street stop log structure. Therefore, Alter Recycling is unlikley to have caused the contamination discussed in Section 2.3. Scrap yards are prone to catch on fire and PFAS foam could have been used to put out any potential fires. Therefore, the Alter Recycling facility could not be ruled out based on scrap yard operations. To-date, no one has reported a discharge of PFAS containing foam to the DNR R&R program associated with the Alter Recycling Facility, as documented in Attachment 4, and there is no evidence of a hazardous substance discharge of PFAS.

4.6 Battery Casing Site / Portage Levee Shop Property BRRTS No. 02-11-543971

The Portage Levee Shop battery casing site is located on the south bank of Segment 2, upstream of the Canadian Pacific railroad crossing and approximately 3,470 ft downstream of where the sediment contamination started. The address of the property is 700 East Mullet Street, Portage, WI, and is tracked under BRRTS No. 02-11-543971.

Approximately 75 to 100 battery casings were found along the bank of the canal which prompted soil and groundwater sampling on the site. The soil and groundwater sampling determined the property was used as a bulk petroleum dealer and that high concentrations of metals were found in the soils. Metals concentrations in the soil included arsenic, barium, cadmium, chromium, copper, iron, lead, manganese, nickel, and zinc.

Because the Portage Levee Shop property is approximately 3,400 feet downstream of the known start of contamination in Segment 1, it is unlikley that it is the main source of sediment contamination due to the flow of surface water in the Canal which is consistently to the north and does not flow south.

The same three publications I reviewed for Rayovac are also relevant to lead-acid batteries. None of these publications mentioned PFAS use in lead-acid batteries specifically. However, PFAS has been known to be used in lithium, zinc, and alkaline manganese batteries (Environ. Sci.: Processes Impacts, 2020,). With lithium batteries, PFAS is used as a binder for electrodes, to prevent thermal runaway reaction, to improve the oxygen transport of lithium-air batteries, and an electrolyte solvent for lithium-sulfur batteries. With zinc batteries, PFAS prevent formation of dendrites, hydrogen evolution and electrode corrosion due to adsorption onto the electrode surface. With alkaline manganese batteries the MnO2 cathodes containing carbon black are treated with a fluorinated surfactant. Given the level of detail in Environmental Science Processes & Impacts's regarding the use of PFAS in types of batteries other than lead-acid batteries and the absence of mention of lead-acid batteries leads me to believe the difference in battery chemistry means that PFAS was unlikely to be significant to lead-acid batteries.

Regarding operations on the Portage Levee Shop property, the primary known operations on this site are by the DNR for the mowing of the Portage Levee along the Wisconsin River. Additionally, various programs, such as the Warden's would use the Levee Shop to store boats and ATVs. Mowing and the storage of recreational vehicles such as boats and ATVs are not expected to result in PFAS contamination. The Portage Levee Shop property can be ruled out for potential PFAS contamination to the Canal.

5 1, 4-Dioxane

According to DNR's *Site Investigation Scoping: Identifying Contaminants of Concern Guidance*, Publication Number DNR-RR-101 (DNR 2019), 1,4-dioxane was used primarily as a stabilizer in chlorinated solvents, and as a solvent in lacquers, paints, resins, and in surfactants and detergents. 1,4-dioxane is known to be present in greases, dyes, paint stripping, and antifreeze. Of these uses, there may be a potential for 1,4-dioxane with three potential uses relevant to the canal. 1) The known trichloroethylene plumes emanating from the former Gruber Automotive to Segment 1 of the canal as discussed in Section 4.4 and the Mill discussed in Section 4.2. 2) the potential from dumping by Gruber, also discussed in Section 4.4. 3) the potential for use in dyes in the former Woolen Mill, as discussed in Section 4.2. There are no known 1,4-dioxane analytical data associated with the Gruber Automotive or the Portage Woolen Mill BRRTS cases.

The fate and transport characteristics of 1,4-dioxane suggest that it is not a contaminant of concern for sediments. According to the ITRC's *Environmental Fate, Transport, and Investigation strategies: 1, 4-Dioxane* (ITRC, 2021), 1, 4 -dioxane is a contaminant with low sorption potential with a log K_{oc} = 1.23 and is considered a mobile contaminant. K_{oc} is the organic carbon partition coefficient and it is a key environmental fate and transport parameter because almost all of the sorption of organic chemicals by a soil is due to the organic carbon component of the soil, even though the organic component is typically a minor amount of the mass (LaGrega et all, 2001). K_{oc} is the ratio of the concentration of the chemical in the organic carbon component of soil divided by the concertation of the came chemical in water. Additionally, 1, 4-dioxane has a high solubility and miscibility. These fate and transport characteristics (low sorption potential, high solubility, and miscibility) are the exact opposite characteristic of contaminants that are found in sediments. Contaminants found in sediments are typically significantly hydrophobic and have a high sorption potential to organic material. For instance, the log Koc of PCBs is typically greater than 5, depending on the type of Aroclor, and is considered immobile. If 1,4-dioxane were to have been used in any of the potential uses above, the advective flow of the canal would contribute to the migration through the surface water and the 1,4-dioxane would have been transient. Without a continuously discharging groundwater plume of 1,4-dioxane to the Canal, 1,4-dioxane, would not be expected to be found in the sediments nor surface water and is therefore not considered a contaminant of concern for sediment at the Canal.

6 Conclusion

Emerging contaminants are not a concern at the Portage Canal. 1,4-Dioxane is not a contaminant of concern at the Canal based on its fate and transport characteristics, as discussed in Section 5. PFAS are not contaminants of concern at the Canal based on the following lines of evidence:

1. Review of the operations that occurred on the Canal, discussed in Section 2.5, did not reveal any sources of PFAS.

2. The former Mill is the most likely source of the other contaminants (metals) detected in the Canal's sediment. Operations at the Mill were ending around the time of PFAS use beginning and therefore, there is a low potential for PFAS to be associated with the most likely discharge contributing to the metal contamination in the Canal.

3. The Portage MGP operations ended before the invention of PFAS; therefore, there is no potential for PFAS from the MGP.

4. Another site along the canal, the battery casing site, was ruled out due to the lack of use of PFAS in lead-acid batteries, as discussed in Section 4.6.

5. For three other sites along the canal (Grubber Automotive, Alter Recycling, and Rayovac) and a nearby fire station, the potential for PFAS use at these sites could not be ruled out; however, there is no evidence or reports of PFAS discharge from these sites.

6. Sampling for PFAS from three sediment cores in the canal in 2019 detected no PFAS in the Canal's sediment. Other contaminants detected in the sediment were found to have relatively uniform concentrations of metals throughout the canal; thus, the absence of PFAS from these three samples is likely representative of the pre-remediated sediment conditions in the Canal and that the results would be applicable to all four Segments.

7. Contaminated sediments in Segments 1 and 2 of the Canal have been remediated; the DNR removed contaminated sediment and capped remaining sediments.

Surface water has not been tested and is not recommended for testing, consistent with previous direction, and due to the ubiquitous nature of PFAS in rainwater, stormwater, and surface water discussed in Section 2.4. Based on the analysis herein and non-detect test results for PFAS, emerging contaminants, PFAS and 1,4-Dioxane, are not contaminants of concern for the Portage Canal and no further testing is recommended for any media.

7 References

Alter, 2021. *Our Locations.* Retrieved at: https://www.altertrading.com/locations/34

Anchor, 2018. *Field Sampling Plan. Portage Canal – Segment 2 Remedial Design.* November 2018.

Anchor, 2020a. *Final PFAS Special Study Report.* Prepared on behalf of DNR and EPA GLNPO. November 2020.

DNR, 2019. *Site Investigation Scoping: Identifying Contaminants of Concern*. Publication DNR-RR-101.

Environ. Sci. & Processes Impacts, 2020, 22, 2345. *An overview of the uses of per- and polyfluoroalkyl substances (PFAS).* Received 2nd July 2020 Accepted 23rd September 2020.

EPA, 1978. EPA-600/2-78-098 *Textile Dyeing Wastewaters* (USEPA, 1978).

Hatheway, A.W., 2022a. *History and Chronology of Manufactured Gas*. Available at: http://www.hatheway.net/01_history.htm

Hatheway, A.W., 2022b. *Gas Plant Wastes and Residuals.* Available at: www.hatheway.net/06_gas_plant_wastes.htm.

Historic American Engineering Survey, year unknown. *Portage Canal - HAER No. WI-104.* Retrieved from: http://portagecanal.org/documents/

ITRC, 2020. *History and Use of Per- and Polyfluoroalkyl Substances (PFAS) found in the Environment.* August. 2020. retrived from: https://pfas-1.itrcweb.org/wp-content/uploads/2020/10/history_and_use_508_2020Aug_Final.pdf

ITRC, 2021a. *History and Use of Per- and Polyfluoroalkly Substances*. November 2021. Retrieved from https://pfas-1.itrcweb.org/fact_sheets_page/PFAS_Fact_Sheet_History_and_Use_April2020.pdf

ITRC, 2021b. *Technical Resources for Addressing Environmental Releases of Per- and Polyfluoroalkyl Substances (PFAS)*. Retrieved from: https://pfas-1.itrcweb.org/#1_7

ITRC. 2021c. *Environmental Fate, Transport, and Investigation Strategies: 1, 4-Dioxane* Stormwater, 2020. *PFAS in Surface Water – The state of practice*. Retrieved at: https://www.stormh2o.com/home/article/21144763/pfas-in-stormwater-the-state-of-the-practice

LaGrega et. all, 2001. *Hazardous Waste Management*. 2nd Edition.

MacDonald, D.D., C.G. Ingersoll, and T.A. Berger. 2000. Development and evaluation of consensus-based sediment quality guidelines for freshwater ecosystems. Arch. Environ. Contam. Toxicol. 39:20-31.

Mccoy, 2014. *Here's to another 50 years: Rayovac celebrates milestone in Portage*. Portage Daily Register. August 1, 2014.

McKay et. all, year unknown. *Portage at the Fox-Wisconsin, A Sesqui-Centennial History of the Area. Chapter 7 Portage Crafts and Industry*. Retrieved from: http://portagecanal.org/documents/

Mead and Hunt, 2003. *Phase I Hazardous Materials Assessment – Portage Canal Restoration Project WisDOT Project I.D. 6996-05-06.*

Ramboll, 2017. *NR 716 Site Investigation Report – Portage Canal (Segments, 2, 3, and 4), Portage, Wisconsin.*

Stormwater, 2020. *PFAS in Surface Water – The state of the practice.* Aug. 10, 2020. Retrieved at: https://www.stormh2o.com/home/article/21144763/pfas-in-stormwater-the-state-of-the-practice

Attachment 1: PFAS Testing Results

eurofins
Lancaster Laboratories
Environmental

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Anchor QEA, LLC
720 Olive Way
Suite 1900
Seattle WA 98101

Report Date: February 04, 2019 12:34

Project: Portage Canal

Account #: 41773
Group Number: 2026128
SDG: ANC11
PO Number: 181779-03.01
State of Sample Origin: WI

Electronic Copy To Anchor QEA, LLC Attn: Delaney Peterson

Respectfully Submitted,

Megan Moeller

Megan A. Moeller
Senior Specialist

(717) 556-7261

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.

SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
2SDXX-01-190117-0-0 Sediment	01/17/2019 14:30	9972066
RB-201901171430 Solid	01/17/2019 14:30	9972067

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **2SDXX-01-190117-0-0 Sediment**
Portage Canal

Project Name: **Portage Canal**

Anchor QEA, LLC
ELLE Sample #: **SW 9972066**
ELLE Group #: **2026128**
Matrix: Sediment

Submittal Date/Time: 01/22/2019 10:00
Collection Date/Time: 01/17/2019 14:30
SDG#: ANC11-01

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1 Modified**		**ng/g**	**ng/g**	**ng/g**	
14027	10:2-fluorotelomersulfonate	120226-60-0	< 1.8	1.8	5.4	1
14027	4:2 fluorotelomersulfonate	757124-72-4	< 1.8	1.8	5.4	1
14027	6:2 fluorotelomersulfonate	27619-97-2	< 1.1	1.1	3.6	1
14027	8:2 fluorotelomersulfonate	39108-34-4	< 1.1	1.1	3.6	1
14027	NEtFOSAA	2991-50-6	< 0.90	0.90	3.6	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14027	NEtPFOSA	4151-50-2	< 0.90	0.90	3.6	1
	NEtPFOSA is the acronym for N-ethylperfluoro-1-octanesulfonamide					
14027	NEtPFOSAE	1691-99-2	< 0.90	0.90	3.6	1
	NEtPFOSAE is the acronym for 2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol					
14027	NMeFOSAA	2355-31-9	< 0.90	0.90	3.6	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14027	NMePFOSA	31506-32-8	< 0.90	0.90	3.6	1
	NMePFOSA is the acronym for N-methylperfluoro-1-octanesulfonamide					
14027	NMePFOSAE	24448-09-7	< 0.90	0.90	3.6	1
	NMePFOSAE is the acronym for 2-(N-methylperfluoro-1-octanesulfonamido)-ethanol					
14027	Perfluorobutanesulfonate	375-73-5	< 0.36	0.36	1.1	1
14027	Perfluorobutanoic acid	375-22-4	< 1.1	1.1	3.6	1
14027	Perfluorodecanesulfonate	335-77-3	< 0.54	0.54	1.8	1
14027	Perfluorodecanoic acid	335-76-2	< 0.36	0.36	1.1	1
14027	Perfluorododecanesulfonate	79780-39-5	< 0.54	0.54	1.6	1
14027	Perfluorododecanoic acid	307-55-1	< 0.36	0.36	1.1	1
14027	Perfluoroheptanesulfonate	375-92-8	< 0.36	0.36	1.1	1
14027	Perfluoroheptanoic acid	375-85-9	< 0.36	0.36	1.1	1
14027	Perfluorohexadecanoic acid	67905-19-5	< 0.36	0.36	1.1	1
14027	Perfluorohexanesulfonate	355-46-4	< 0.36	0.36	1.1	1
14027	Perfluorohexanoic acid	307-24-4	< 0.36	0.36	1.1	1
14027	Perfluorononanesulfonate	68259-12-1	< 0.36	0.36	1.1	1
14027	Perfluorononanoic acid	375-95-1	< 0.36	0.36	1.1	1
14027	Perfluorooctadecanoic acid	16517-11-6	< 0.36	0.36	1.1	1
14027	Perfluorooctanesulfonamide	754-91-6	< 0.36	0.36	1.1	1
14027	Perfluoro-octanesulfonate	1763-23-1	< 0.54	0.54	1.6	1
14027	Perfluorooctanoic acid	335-67-1	< 0.36	0.36	1.1	1
14027	Perfluoropentanesulfonate	2706-91-4	< 0.36	0.36	1.1	1
14027	Perfluoropentanoic acid	2706-90-3	< 0.36	0.36	1.1	1
14027	Perfluorotetradecanoic acid	376-06-7	< 0.36	0.36	1.1	1
14027	Perfluorotridecanoic acid	72629-94-8	< 0.36	0.36	1.1	1
14027	Perfluoroundecanoic acid	2058-94-8	< 0.36	0.36	1.1	1

The stated QC limits are advisory only until sufficient data points

*=This limit was used in the evaluation of the final result

Sample Description: **2SDXX-01-190117-0-0 Sediment Portage Canal**

Project Name: **Portage Canal**

Submittal Date/Time: 01/22/2019 10:00
Collection Date/Time: 01/17/2019 14:30
SDG#: ANC11-01

Anchor QEA, LLC
ELLE Sample #: **SW 9972066**
ELLE Group #: **2026128**
Matrix: Sediment

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor

can be obtained to calculate statistical limits.

A target analyte(s) in the opening continuing calibration verification standard is outside the QC acceptance limits. Since the result is high and the target analyte(s) is not detected in the sample, the data is reported.

Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	**%**	
00111	Moisture	n.a.	47.7	0.50	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

Sample Comments

WI Cert #998035060. Note: Reported MDL(aka LOD) & LOQ are adjusted for dilution.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14027	PFAS in Soil by LC/MS/MS	EPA 537 Version 1.1 Modified	1	19031006	01/31/2019 21:00	Jason W Knight	1
14090	PFAS Solid Prep	EPA 537 Version 1.1 Modified	2	19031006	01/31/2019 08:40	Courtney J Fatta	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	19023820001A	01/23/2019 12:20	William C Schwebel	1

*=This limit was used in the evaluation of the final result

Sample Description: **RB-201901171430 Solid**
Portage Canal

Project Name: **Portage Canal**

Anchor QEA, LLC
ELLE Sample #: **SW 9972067**
ELLE Group #: **2026128**
Matrix: Solid

Submittal Date/Time: 01/22/2019 10:00
Collection Date/Time: 01/17/2019 14:30
SDG#: ANC11-02

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1 Modified**		**ng/g**	**ng/g**	**ng/g**	
14027	10:2-fluorotelomersulfonate	120226-60-0	< 0.97	0.97	2.9	1
14027	4:2 fluorotelomersulfonate	757124-72-4	< 0.97	0.97	2.9	1
14027	6:2 fluorotelomersulfonate	27619-97-2	< 0.58	0.58	1.9	1
14027	8:2 fluorotelomersulfonate	39108-34-4	< 0.58	0.58	1.9	1
14027	NEtFOSAA	2991-50-6	< 0.49	0.49	1.9	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14027	NEtPFOSA	4151-50-2	< 0.49	0.49	1.9	1
	NEtPFOSA is the acronym for N-ethylperfluoro-1-octanesulfonamide					
14027	NEtPFOSAE	1691-99-2	< 0.49	0.49	1.9	1
	NEtPFOSAE is the acronym for 2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol					
14027	NMeFOSAA	2355-31-9	< 0.49	0.49	1.9	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14027	NMePFOSA	31506-32-8	< 0.49	0.49	1.9	1
	NMePFOSA is the acronym for N-methylperfluoro-1-octanesulfonamide					
14027	NMePFOSAE	24448-09-7	< 0.49	0.49	1.9	1
	NMePFOSAE is the acronym for 2-(N-methylperfluoro-1-octanesulfonamido)-ethanol					
14027	Perfluorobutanesulfonate	375-73-5	< 0.19	0.19	0.58	1
14027	Perfluorobutanoic acid	375-22-4	< 0.58	0.58	1.9	1
14027	Perfluorodecanesulfonate	335-77-3	< 0.29	0.29	0.97	1
14027	Perfluorodecanoic acid	335-76-2	< 0.19	0.19	0.58	1
14027	Perfluorododecanesulfonate	79780-39-5	< 0.29	0.29	0.87	1
14027	Perfluorododecanoic acid	307-55-1	< 0.19	0.19	0.58	1
14027	Perfluoroheptanesulfonate	375-92-8	< 0.19	0.19	0.58	1
14027	Perfluoroheptanoic acid	375-85-9	< 0.19	0.19	0.58	1
14027	Perfluorohexadecanoic acid	67905-19-5	< 0.19	0.19	0.58	1
14027	Perfluorohexanesulfonate	355-46-4	< 0.19	0.19	0.58	1
14027	Perfluorohexanoic acid	307-24-4	< 0.19	0.19	0.58	1
14027	Perfluorononanesulfonate	68259-12-1	< 0.19	0.19	0.58	1
14027	Perfluorononanoic acid	375-95-1	< 0.19	0.19	0.58	1
14027	Perfluorooctadecanoic acid	16517-11-6	< 0.19	0.19	0.58	1
14027	Perfluorooctanesulfonamide	754-91-6	< 0.19	0.19	0.58	1
14027	Perfluoro-octanesulfonate	1763-23-1	< 0.29	0.29	0.87	1
14027	Perfluorooctanoic acid	335-67-1	< 0.19	0.19	0.58	1
14027	Perfluoropentanesulfonate	2706-91-4	< 0.19	0.19	0.58	1
14027	Perfluoropentanoic acid	2706-90-3	< 0.19	0.19	0.58	1
14027	Perfluorotetradecanoic acid	376-06-7	< 0.19	0.19	0.58	1
14027	Perfluorotridecanoic acid	72629-94-8	< 0.19	0.19	0.58	1
14027	Perfluoroundecanoic acid	2058-94-8	< 0.19	0.19	0.58	1

The stated QC limits are advisory only until sufficient data points

---

*=This limit was used in the evaluation of the final result

Sample Description:	**RB-201901171430 Solid Portage Canal**	**Anchor QEA, LLC**	
		ELLE Sample #:	**SW 9972067**
		ELLE Group #:	**2026128**
Project Name:	**Portage Canal**	**Matrix: Solid**	
Submittal Date/Time:	01/22/2019 10:00		
Collection Date/Time:	01/17/2019 14:30		
SDG#:	ANC11-02		

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
	can be obtained to calculate statistical limits. A target analyte(s) in the opening continuing calibration verification standard is outside the QC acceptance limits. Since the result is high and the target analyte(s) is not detected in the sample, the data is reported.					
Wet Chemistry		**SM 2540 G-2011 %Moisture Calc**	**%**	**%**	**%**	
00111	Moisture	n.a.	< 0.50	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

Sample Comments

WI Cert #998035060. Note: Reported MDL(aka LOD) & LOQ are adjusted for dilution.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14027	PFAS in Soil by LC/MS/MS	EPA 537 Version 1.1 Modified	1	19031006	01/31/2019 21:18	Jason W Knight	1
14090	PFAS Solid Prep	EPA 537 Version 1.1 Modified	2	19031006	01/31/2019 08:40	Courtney J Fatta	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	19023820001A	01/23/2019 12:20	William C Schwebel	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: Anchor QEA, LLC Group Number: 2026128
Reported: 02/04/2019 12:34

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	**Result** **ng/g**	**MDL**** **ng/g**	**LOQ** **ng/g**
Batch number: 19031006	Sample number(s): 9972066-9972067		
10:2-fluorotelomersulfonate	< 1.0	1.0	3.0
4:2 fluorotelomersulfonate	< 1.0	1.0	3.0
6:2 fluorotelomersulfonate	< 0.60	0.60	2.0
8:2 fluorotelomersulfonate	< 0.60	0.60	2.0
NEtFOSAA	< 0.50	0.50	2.0
NEtPFOSA	< 0.50	0.50	2.0
NEtPFOSAE	< 0.50	0.50	2.0
NMeFOSAA	< 0.50	0.50	2.0
NMePFOSA	< 0.50	0.50	2.0
NMePFOSAE	< 0.50	0.50	2.0
Perfluorobutanesulfonate	< 0.20	0.20	0.60
Perfluorobutanoic acid	< 0.60	0.60	2.0
Perfluorodecanesulfonate	< 0.30	0.30	1.0
Perfluorodecanoic acid	< 0.20	0.20	0.60
Perfluorododecanesulfonate	< 0.30	0.30	0.90
Perfluorododecanoic acid	< 0.20	0.20	0.60
Perfluoroheptanesulfonate	< 0.20	0.20	0.60
Perfluoroheptanoic acid	< 0.20	0.20	0.60
Perfluorohexadecanoic acid	< 0.20	0.20	0.60
Perfluorohexanesulfonate	< 0.20	0.20	0.60
Perfluorohexanoic acid	< 0.20	0.20	0.60
Perfluorononanesulfonate	< 0.20	0.20	0.60
Perfluorononanoic acid	< 0.20	0.20	0.60
Perfluorooctadecanoic acid	< 0.20	0.20	0.60
Perfluorooctanesulfonamide	< 0.20	0.20	0.60
Perfluoro-octanesulfonate	< 0.30	0.30	0.90
Perfluorooctanoic acid	< 0.20	0.20	0.60
Perfluoropentanesulfonate	< 0.20	0.20	0.60
Perfluoropentanoic acid	< 0.20	0.20	0.60
Perfluorotetradecanoic acid	< 0.20	0.20	0.60
Perfluorotridecanoic acid	< 0.20	0.20	0.60
Perfluoroundecanoic acid	< 0.20	0.20	0.60

LCS/LCSD

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Anchor QEA, LLC
Group Number: 2026128
Reported: 02/04/2019 12:34

LCS/LCSD

Analysis Name	LCS Spike Added ng/g	LCS Conc ng/g	LCSD Spike Added ng/g	LCSD Conc ng/g	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 19031006	Sample number(s): 9972066-9972067								
10:2-fluorotelomersulfonate	3.86	3.03	3.86	3.36	79	87	54-150	10	30
4:2 fluorotelomersulfonate	3.74	3.23	3.74	3.10	87	83	77-143	4	30
6:2 fluorotelomersulfonate	3.79	2.81	3.79	2.99	74	79	58-148	6	30
8:2 fluorotelomersulfonate	3.83	3.03	3.83	2.91	79	76	65-147	4	30
NEtFOSAA	1.36	0.998	1.36	1.11	73	82	54-143	11	30
NEtPFOSA	1.36	0.985	1.36	0.873	72	64*	70-130	12	30
NEtPFOSAE	1.36	1.02	1.36	1.09	75	80	70-130	6	30
NMeFOSAA	1.36	1.18	1.36	1.11	87	82	51-157	6	30
NMePFOSA	1.36	1.01	1.36	1.11	75	81	70-130	9	30
NMePFOSAE	1.36	1.03	1.36	1.13	76	83	70-130	9	30
Perfluorobutanesulfonate	1.20	1.01	1.20	1.00	84	83	71-133	0	30
Perfluorobutanoic acid	1.36	1.16	1.36	1.15	85	85	75-148	1	30
Perfluorodecanesulfonate	1.31	0.936	1.31	0.993	71	76	63-153	6	30
Perfluorodecanoic acid	1.36	1.09	1.36	1.07	81	78	69-145	3	30
Perfluorododecanesulfonate	1.32	1.07	1.32	1.05	81	80	51-137	2	30
Perfluorododecanoic acid	1.36	1.11	1.36	1.16	81	86	76-137	5	30
Perfluoroheptanesulfonate	1.29	0.992	1.29	1.03	77	79	68-135	4	30
Perfluoroheptanoic acid	1.34	1.13	1.34	1.10	85	82	76-143	3	30
Perfluorohexadecanoic acid	1.36	1.30	1.36	1.08	95	79	63-153	19	30
Perfluorohexanesulfonate	1.29	0.975	1.29	1.00	76	78	68-132	3	30
Perfluorohexanoic acid	1.36	1.10	1.36	1.14	81	84	74-140	3	30
Perfluorononanesulfonate	1.36	1.14	1.36	1.03	84	76	58-141	10	30
Perfluorononanoic acid	1.36	1.23	1.36	1.16	90	85	71-146	6	30
Perfluorooctadecanoic acid	1.36	1.25	1.36	1.07	92	79	52-155	15	30
Perfluorooctanesulfonamide	1.36	1.04	1.36	1.14	76	84	70-131	9	30
Perfluoro-octanesulfonate	1.30	0.894	1.30	0.995	69	77	69-137	11	30
Perfluorooctanoic acid	1.36	1.11	1.36	1.16	82	85	74-146	4	30
Perfluoropentanesulfonate	1.28	1.20	1.28	1.21	94	95	67-146	1	30
Perfluoropentanoic acid	1.36	1.11	1.36	1.15	82	85	74-142	3	30
Perfluorotetradecanoic acid	1.36	1.14	1.37	1.16	84	84	76-138	1	30
Perfluorotridecanoic acid	1.36	1.13	1.36	1.15	83	84	62-153	2	30
Perfluoroundecanoic acid	1.36	1.14	1.36	1.06	84	78	71-143	7	30
	%	%	%	%					
Batch number: 19023820001A	Sample number(s): 9972066-9972067								
Moisture	89.5	89.43			100		99-101		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Anchor QEA, LLC Group Number: 2026128
Reported: 02/04/2019 12:34

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ng/g	MS Spike Added ng/g	MS Conc ng/g	MSD Spike Added ng/g	MSD Conc ng/g	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 19031006	Sample number(s): 9972066-9972067 UNSPK: 9972066									
10:2-fluorotelomersulfonate	< 0.94	3.78	3.16			84		51-142		
4:2 fluorotelomersulfonate	< 0.94	3.66	2.80			76*		81-131		
6:2 fluorotelomersulfonate	< 0.57	3.72	2.87			77		59-154		
8:2 fluorotelomersulfonate	< 0.57	3.76	3.12			83		63-153		
NEtFOSAA	< 0.47	1.33	0.968			73		70-130		
NEtPFOSA	< 0.47	1.33	0.994			75		51-146		
NEtPFOSAE	< 0.47	1.33	1.01			76		70-130		
NMeFOSAA	< 0.47	1.33	1.21			91		49-167		
NMePFOSA	< 0.47	1.33	1.06			79		70-130		
NMePFOSAE	< 0.47	1.33	1.12			84		70-130		
Perfluorobutanesulfonate	< 0.19	1.18	0.994			84		61-142		
Perfluorobutanoic acid	< 0.57	1.33	1.13			85		64-145		
Perfluorodecanesulfonate	< 0.28	1.28	0.880			69		42-148		
Perfluorodecanoic acid	< 0.19	1.33	1.00			75		53-160		
Perfluorododecanesulfonate	< 0.28	1.29	0.928			72		33-168		
Perfluorododecanoic acid	< 0.19	1.33	1.08			81		64-152		
Perfluoroheptanesulfonate	< 0.19	1.27	1.07			85		58-148		
Perfluoroheptanoic acid	< 0.19	1.31	1.11			84		66-154		
Perfluorohexadecanoic acid	< 0.19	1.33	1.01			76		45-158		
Perfluorohexanesulfonate	< 0.19	1.26	0.966			77		70-132		
Perfluorohexanoic acid	< 0.19	1.33	1.03			77		62-152		
Perfluorononanesulfonate	< 0.19	1.33	1.03			77		62-145		
Perfluorononanoic acid	< 0.19	1.33	1.11			83		49-153		
Perfluorooctadecanoic acid	< 0.19	1.33	0.936			70		58-143		
Perfluorooctanesulfonamide	< 0.19	1.33	1.09			82		76-127		
Perfluoro-octanesulfonate	< 0.28	1.28	1.14			90		52-160		
Perfluorooctanoic acid	< 0.19	1.33	1.15			86		35-182		
Perfluoropentanesulfonate	< 0.19	1.25	1.14			91		36-193		
Perfluoropentanoic acid	< 0.19	1.33	1.07			80		37-169		
Perfluorotetradecanoic acid	< 0.19	1.33	1.18			89		67-153		
Perfluorotridecanoic acid	< 0.19	1.33	1.12			84		46-169		
Perfluoroundecanoic acid	< 0.19	1.33	1.06			80		50-152		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Anchor QEA, LLC Group Number: 2026128
Reported: 02/04/2019 12:34

Labeled Isotope Quality Control

Labeled isotope recoveries which are outside of the QC window are confirmed unless otherwise noted on the analysis report.

Analysis Name: PFAS in Soil by LC/MS/MS
Batch number: 19031006

	13C4-PFBA	13C5-PFPeA	13C3-PFBS	13C2-4:2-FTS	13C5-PFHxA	13C3-PFHxS
9972066	79	79	81	95	78	86
9972067	86	86	89	81	89	95
Blank	91	89	92	104	96	106
LCS	88	89	89	100	90	98
LCSD	87	86	88	93	86	95
MS	77	73	79	90	75	81
Limits:	32-120	26-123	22-130	10-174	22-127	30-123

	13C4-PFHpA	13C2-6:2-FTS	13C8-PFOA	13C8-PFOS	13C9-PFNA	13C6-PFDA
9972066	78	128	77	80	79	80
9972067	85	119	89	94	86	91
Blank	93	129	96	91	85	95
LCS	90	122	90	88	80	87
LCSD	88	111	83	91	85	91
MS	73	121	74	81	79	82
Limits:	25-128	10-194	28-119	39-119	20-144	30-115

	13C2-8:2-FTS	d3-NMeFOSAA	13C7-PFUnDA	d5-NEtFOSAA	13C2-PFDoDA	13C2-PFTeDA
9972066	126	88	79	106	81	86
9972067	104	68	91	82	89	97
Blank	106	94	89	101	94	100
LCS	97	87	87	97	88	80
LCSD	94	93	92	99	88	99
MS	124	90	81	105	76	81
Limits:	10-200	10-140	24-124	10-150	17-124	11-123

	13C8-PFOSA	d7-NMePFOSAE	d9-NEtPFOSAE	d5-NEtPFOSA	d3-NMePFOSA
9972066	70	62	71	66	65
9972067	88	88	93	85	81
Blank	73	67	70	64	60
LCS	74	68	69	55	56
LCSD	76	70	76	65	59
MS	68	68	69	70	64
Limits:	16-113	10-134	10-126	10-115	10-112

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

41773/2026128/9972066-67

ANCHOR
QEA
720 Olive Way Suite 1900 Seattle, Wa 98101

ENVIRONMENTAL SAMPLE CHAIN OF CUSTODY

COC ID: ELLE-20190122-082755

POC: # Delaney Peterson (360-715-2707)
1605 Cornwall Avenue Bellingham, WA 98225

Project: Portage Canal

Client: Wisconsin DNR

Sample Custodian: JVANWIERINGEN

Lab: Eurofins Lancaster Lab

COC Sample Number	Field Sample ID	Sample Type	Matrix	Collected Date	Collected Time	# Containers	Lab QC*	Test Request	Method	TAT**	Preservative
001	2SDXX-01-190117-0-0	N	SE	01/17/2019	14:30	1	☐				
								PFAS	E537M	10	< 6°C
								Total solids	SM2540G	10	< 6°C
002	RB-201901171430	RB	SQ	01/17/2019	14:30	1	☐				
								PFAS	E537M	10	< 6°C
								Total solids	SM2540G	10	< 6°C

Comment:

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature	Signature	Signature	Signature	Signature	Signature
Print Name	Print Name	Print Name	Print Name	Print Name	Print Name
Company	Company	Company	Company	Company	Company
Date/Time	Date/Time	Date/Time	Date/Time	Date/Time	Date/Time

* Lab QC Requested for sample when box is checked ** TAT = Turn Around Time in DAYS # POC = Project Point of Contact

Date Printed: 1/22/2019

Page 1 of 1

Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

For Eurofins Lancaster Laboratories Environmental use only

Acct. # 41773 Group # 2026128 Sample # 9972066-67

COC # 572055

For Lab Use Only
FSC:
SCR#: 237358

Client Information

Client: Anchor QEA	Acct. #:
Project Name/#: Portage Canal	PWSID #:
Project Manager: Mike Conese	P.O. #:
Sampler:	Quote #:
State where samples were collected: Portage, WI	For Compliance: Yes ☐ No ☐

Matrix: Soil ☐ Sediment ☒ Tissue ☐ | Water: Potable ☐ Ground ☐ NPDES ☐ Surface ☐ | Other:

Analysis Requested — Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Soil / Sediment / Tissue	Water	Other	Total # of Containers	PFAS	Moisture								
2SDXX-01	1/17/19	2:30		X				2	X	X								
RB001-01	1/17/19	2:30	X					2	X	X								

Preservation Codes

H=HCl	T=Thiosulfate
N=HNO_3	B=NaOH
S=H_2SO_4	P=H_3PO_4
F=Field Filtered	O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)

[✓ Standard] Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: ______

E-mail address: ______

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)
Type III (Reduced non-CLP) NJ DKQP TX TRRP-13
NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
	1/9/19	3:00			
	1/21/19	9:30			
				1/22/19	1000

EDD Required? Yes No
If yes, format: ______

Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS ______ FedEx X Other ______

Temperature upon receipt 1.0 °C

Eurofins Lancaster Laboratories Environmental, LLC • 2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • FOR HELP COMPLETING FORM CHECK OUT https://www.eurofinsus.com/coc

The white copy should accompany samples to Eurofins Lancaster Laboratories Environmental. The yellow copy should be retained by the client.

7044 0718

Sample Administration
Receipt Documentation Log

Doc Log ID: 239168

Group Number(s): 2026128

Client: Anchor Qea

Portage Canal

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	01/22/2019 10:00
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	WI		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	No
Custody Seal Present:	Yes	Sample Date/Times match COC:	No
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	N/A
Samples Chilled:	Yes	Total Trip Blank Qty:	0
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Nicole Reiff (25684) at 13:22 on 01/22/2019

Samples Chilled Details: Portage Canal

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT146	1.0	DT	Wet	Y	Bagged	N

Sample ID Discrepancy Details: Portage Canal

Sample ID on COC	Sample ID on Label	Comments
RB001-01	RBSD01-00	

Sample Date/Time Discrepancy Details: Portage Canal

Sample ID on COC	Date/Time on Label	Comments
2SDXX-01	1/17/2019 12:55	
RBSD01-00	1/17/2019 12:50	

General Comments: Received a 1,000 ml plastic bottle PFC Free Blank Water.

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.

Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

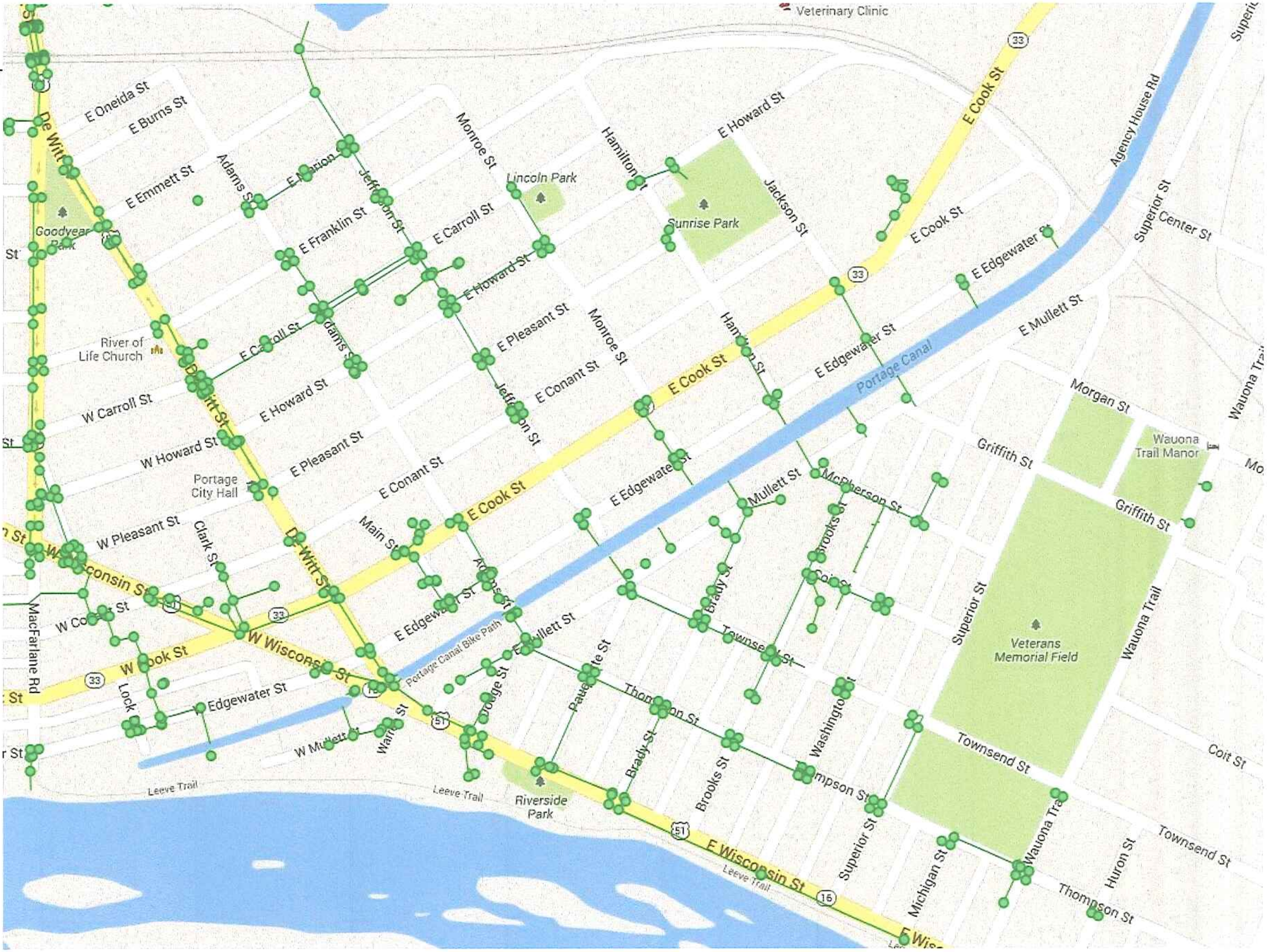
Attachment 2: Storm Sewer System Map

City of Portage

Created 08/05/2013

N
W E
S

cale = 1:700 FT



LEGEND:

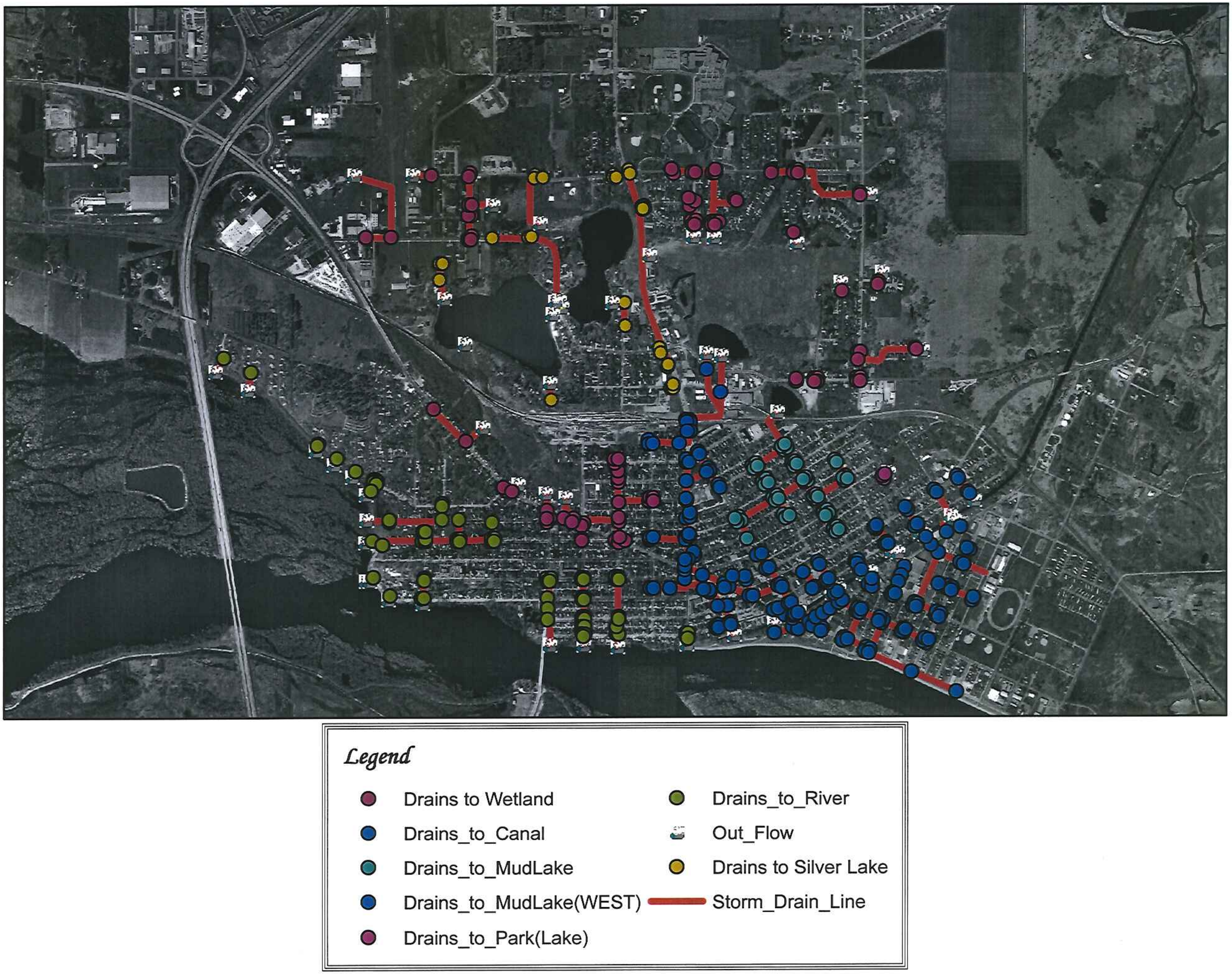
● = Storm Sewer Structure

▬ = Storm Sewer Conveyance

Storm Sewer System Map

Attachment 3: City of Portage Storm Water Draining System Map

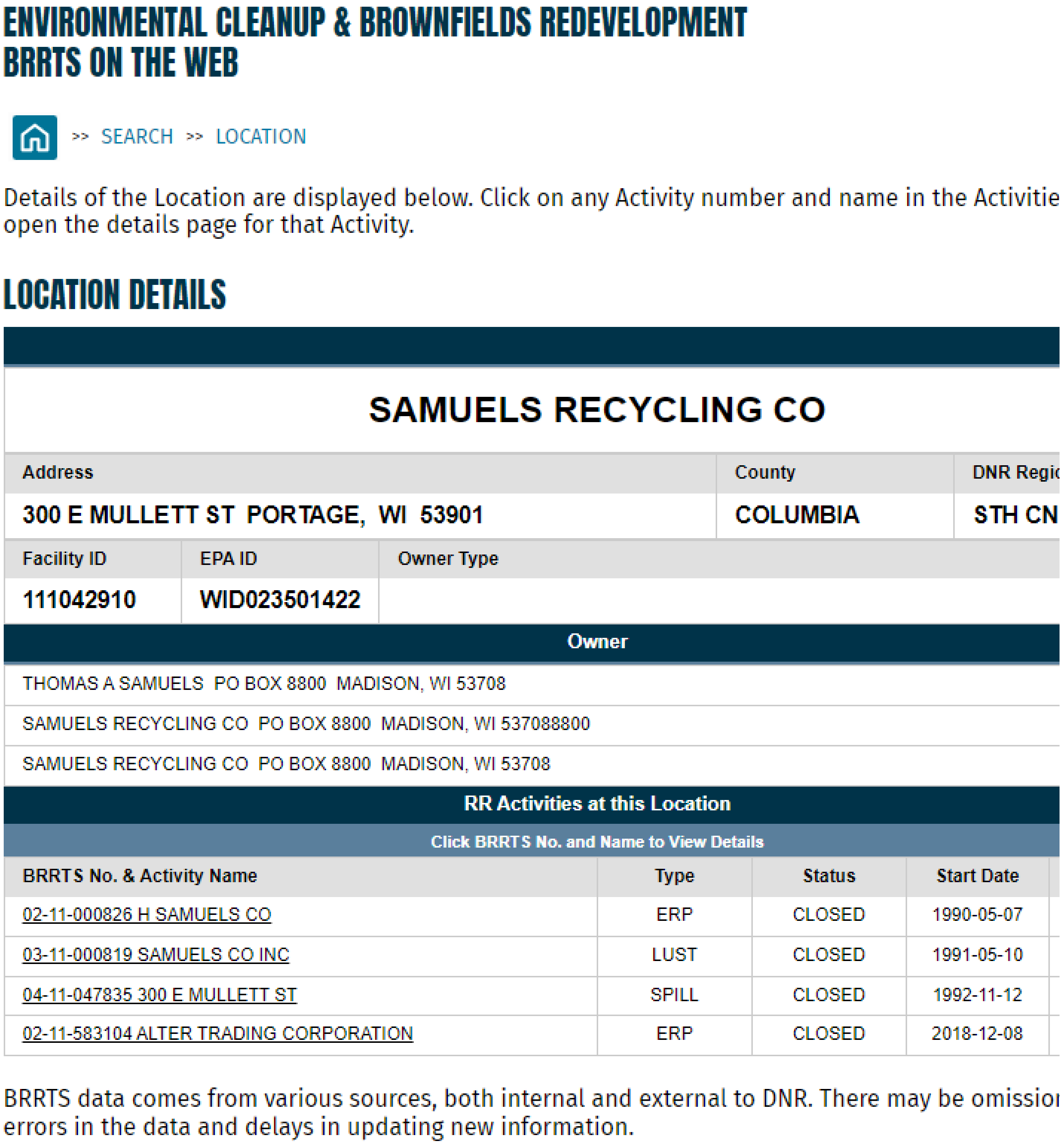
City of Portage Storm Water Draining System



Attachment 4: Documentation of Spill’s Searches

From: Bannister, Trevor A - DNR
Sent: Wednesday, September 28, 2022 11:21 AM
To: Inman, Scott T - DNR; Rice, Caroline M - DNR
Subject: RE: Portage Canal - Alter Recycling

We’re not aware of any historical firefighting activities at Alter. We show one spill: hydraulic oil, occurred and closed in 1992.



ENVIRONMENTAL CLEANUP & BROWNFIELDS REDEVELOPMENT
BRRTS ON THE WEB

Details of the Location are displayed below. Click on any Activity number and name in the Activitie
open the details page for that Activity.

LOCATION DETAILS

SAMUELS RECYCLING CO

Address	County	DNR Regi
300 E MULLETT ST PORTAGE, WI 53901	COLUMBIA	STH CN

Facility ID	EPA ID	Owner Type
111042910	WID023501422	

Owner

THOMAS A SAMUELS PO BOX 8800 MADISON, WI 53708
SAMUELS RECYCLING CO PO BOX 8800 MADISON, WI 537088800
SAMUELS RECYCLING CO PO BOX 8800 MADISON, WI 53708

RR Activities at this Location

Click BRRTS No. and Name to View Details

BRRTS No. & Activity Name	Type	Status	Start Date
02-11-000826 H SAMUELS CO	ERP	CLOSED	1990-05-07
03-11-000819 SAMUELS CO INC	LUST	CLOSED	1991-05-10
04-11-047835 300 E MULLETT ST	SPILL	CLOSED	1992-11-12
02-11-583104 ALTER TRADING CORPORATION	ERP	CLOSED	2018-12-08

BRRTS data comes from various sources, both internal and external to DNR. There may be omissio
errors in the data and delays in updating new information.

We are committed to service excellence.
Visit our survey at http://dnr.wi.gov/customersurvey to evaluate how I did.

Trevor Bannister
Hydrogeologist, Regional Spill Coordinator – Remediation and Redevelopment Program
Wisconsin Department of Natural Resources
3911 Fish Hatchery Road, Fitchburg, Wisconsin 53711
Mobile Phone: (608) 347-0058

TrevorA.Bannister@wisconsin.gov

dnr.wi.gov

From: Inman, Scott T - DNR <Scott.Inman@wisconsin.gov>
Sent: Wednesday, September 28, 2022 10:53 AM
To: Bannister, Trevor A - DNR <TrevorA.Bannister@wisconsin.gov>; Rice, Caroline M - DNR <caroline.rice@wisconsin.gov>
Subject: Portage Canal - Alter Recycling

Hi,

Similar to my email earlier today, are you aware of any spills or firefighting activity associated with the Alter Recycling Facility in Portage, WI?

-Scott

Scott Inman
Water Resources Engineer
Remediation and Redevelopment
Wisconsin Department of Natural Resources
3911 Fish Hatchery Road
Fitchburg, WI 53711
Phone: (608) 576-4912
Scott.Inman@wisconsin.gov

dnr.wi.gov

From: Rice, Caroline M - DNR
Sent: Wednesday, September 28, 2022 10:55 AM
To: Inman, Scott T - DNR
Cc: Bannister, Trevor A - DNR
Subject: RE: Portage Canal - Emerging Contaminant Scoping Statement - Spills

Hi Scott,

I did a search of all spills in Portage with various substances (“Other”, “Unknown”, “PFAS”) and did not turn up with anything that indicated a discharge of firefighting foam near the Portage Canal.

Thank you,
Caroline

We are committed to service excellence.
Visit our survey at http://dnr.wi.gov/customersurvey to evaluate how I did.

Caroline Rice
Phone number (608) 219-2182
caroline.rice@wisconsin.gov

From: Inman, Scott T - DNR <Scott.Inman@wisconsin.gov>
Sent: Wednesday, September 28, 2022 10:19 AM
To: Bannister, Trevor A - DNR <TrevorA.Bannister@wisconsin.gov>; Rice, Caroline M - DNR <caroline.rice@wisconsin.gov>
Subject: Portage Canal - Emerging Contaminant Scoping Statement - Spills

Hi,

I am writing an Emerging Contaminant scoping statement for the Portage Canal. I would like to be able to say that, to-date, no known discharge of PFAS containing foam to the Portage Canal has been reported to the DNR’s R&R program.

Please indicate if this is true from a Spill’s perspective.

-Scott

We are committed to service excellence.
Visit our survey at http://dnr.wi.gov/customersurvey to evaluate how I did.

Scott Inman
Water Resources Engineer
Remediation and Redevelopment
Wisconsin Department of Natural Resources
3911 Fish Hatchery Road
Fitchburg, WI 53711
Phone: (608) 576-4912
Scott.Inman@wisconsin.gov

dnr.wi.gov