

# ANNUAL PROGRESS REPORT FOR THE OPERATION, MAINTENANCE, AND MONITORING SERVICES

# FSMC RiverBend Site (Site No. V00619-9)

312 Abby Street Buffalo NY, 14210

# PROGRESS REPORT No. 22 REPORTING PERIOD ENDING DECEMBER 31, 2021

#### **Project Description**

This Annual Progress Report has been prepared for the Fort Schuyler Management Corporation's RiverBend Groundwater Pre-Treatment System (GWPTS) located at 312 Abby Street, Buffalo, NY in accordance with the requirements of the Site Management Plan and at the request of the NYSDEC. In accordance with a NYSDEC-approved Modification Request (dated April 25, 2011), this Progress Report covers one-year operation and maintenance of the GWPTS from January 1, 2021 through December 31, 2021.

#### 1.0 Treatment Statistics

- Approximately 10,783,826 gallons of groundwater was collected and treated over the current monitoring period averaging 29,514 gallons per day.
- System was on-line for approximately 96% of the time.
- System was off-line for approximately 4% of the time for routine repairs and maintenance as well as flexible pump hose procurement/replacement for pump station PS-1. On July 5, 2021, the cam lock fitting on the flexible pump hose to pump PS-2 failed which rendered the pump station inoperable. Due to an unusually long procurement time caused by the Covid-19 pandemic and subsequent supply chain disruptions, a replacement hose took much longer than anticipated to arrive. On August 20, 2021, the flexible pump hose at pump station PS-1 was replaced and the pump station resumed normal operation.
- Approximately 99.3 pounds of tar residuals were generated from the oil/water separator or approximately 8.3 pounds/month. Based on this monthly quantity (less than 220 pounds per calendar month), a Hazardous Waste Report is not required making FSMC's RiverBend Site a Very Small Quantity Generator (VSQG) in accordance with Part 371.1(f). For comparison, quantities of generated tar residuals during





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previous years of operation included:  $\pm659$  pounds in 2012,  $\pm910$  pounds in 2013,  $\pm149$  pounds in 2014,  $\pm310$  pounds in 2015,  $\pm1,175$  pounds in 2016,  $\pm2,535$  pounds in 2017,  $\pm157$  pounds in 2018,  $\pm285.4$  pounds in 2019 and  $\pm66.2$  pounds in 2020.

No tar material was transported and/or disposed off-site during 2021.

#### 2.0 General Schedule of Maintenance

- Regular Maintenance Items
  - 2 bag filter changes and bag filter canister cleaning per week, or as necessary, with periodic off-site remote monitoring via the internet.
  - Carbon filtration vessel back-washing: 2 times per week, or as necessary.
  - Decant tar from separator: 2 times per week, or as necessary
  - Influent tank, effluent tank, and oil/water separator checked monthly, and cleaning was not required
- January 4, 2021 Flow meter was calibrated and reset to zero.
- May 20, 2021 Annual certification/inspection (by Barton & Loguidice, DPC) associated with the Periodic Review Report (PRR) in accordance with DER-10 was performed for the May 1, 2020 to May 1, 2021 reporting period.
- May thru October 2021 Mowed grass area and weed trimmed fence line around the treatment building, as necessary.
- June 25, 2021 Changed the carbon in lead vessel #2. Lead and lag vessels were reversed at that time (vessel #1 became the lead and #2 the lag).
- June 14-17, 2021 ORC first semi-annual monitoring in Area III was performed.





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- June 30 thru July 2, 2021 Long-Term Groundwater Monitoring was performed in Areas I, II, and III by Barton & Loquidice, DPC.
- Summer 2021 Mowing and weed trimming performed on the final cover of the Area II Containment Cell, as necessary.
- December 13-16, 2021 ORC second semi-annual monitoring in Area III was performed.
- December 21, 2021 Changed the carbon in lead vessel #1. Lead and lag vessels were reversed at that time (vessel #1 became the lag and #2 the lead).
- The influent tank, effluent tank, and oil/water separator did not require cleaning in 2021.

#### 3.0 Attachments/Logs

- Attachment 1: Graph of monitored flows through the treatment system for 2021
- Attachment 2: Maintenance Logs for 2021 (01/02/21 thru 12/28/21)
- Attachment 3: Generated Volume of Tar Material for 2021



**MONITORED FLOWS VS. TIME** 





#### MONITORED FLOWS v. TIME 2021

Groundwater Pre-Treatment System (GWPTS)
FSMC - RiverBend Site
(Site No. V00619-9)
Buffalo, New York

#### 2021

Month	GPMo	GPD	GPM
January	1,059,166	34,167	24
February	814,251	29,080	20
March	1,742,563	56,212	39
April	899,780	29,993	21
May	887,163	28,618	20
June	430,680	14,356	10
July	667,510	21,533	15
August	671,601	21,665	15
September	789,605	26,320	18
October	782,941	25,256	18
November	1,123,624	37,454	26
December	914,942	29,514	20
Total	10,783,826		
Min. Max. Ave.	430,680 1,742,563 898,652	14,356 56,212 29,514	10 39 20

NA 0

77,104

27,042

Sept/Oct 2020

March 2010

Since August 2008: Total 13

Min.

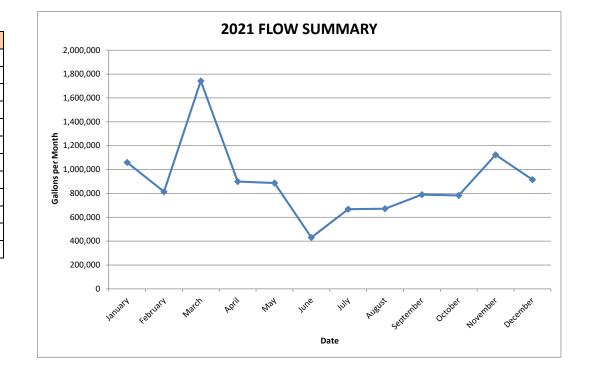
Max.

Ave.

130,847,897

2,318,235

822,943

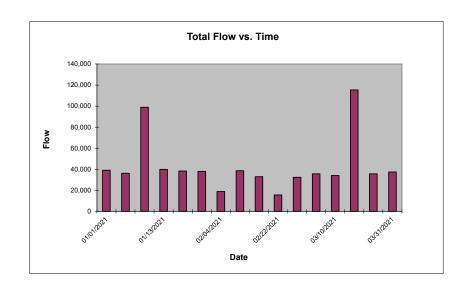




## MONITORED FLOWS v. TIME FIRST QUARTER 2021

Groundwater Pre-Treatment System (GWPTS)
FSMC - RiverBend Site
(Site No. V00619-9)
Buffalo, New York

Date	Total Flow	Daily Avg
01/01/2021	7,473,230	39,040
01/04/2021	7,581,676	36,149
01/06/2021	89,330	98,888
01/13/2021	368,685	39,908
01/20/2021	636,977	38,327
01/27/2021	903,007	38,004
02/04/2021	1,053,647	18,830
02/09/2021	1,246,610	38,593
02/17/2021	1,509,708	32,887
02/22/2021	1,587,665	15,591
02/26/2021	1,717,258	32,398
03/05/2021	1,966,615	35,622
03/10/2021	2,136,914	34,060
03/17/2021	2,944,941	115,432
03/22/2021	3,123,240	35,660
03/31/2021	3,459,821	37,398



Total Quarterly Flow: 3,615,980 gallons Ave. Quarterly Flow: 39,820 gallons/day

JANUARY	
1,059,166	gallons/month
31	days
34,167	gallons/day
24	gallons/min

FEBRUARY		
814,251	gallons/month	
28	days	
29,080	gallons/day	
20	gallons/min	

MARCH		
1,742,563	gallons/month	
31	days	
56,212	gallons/day	
39	gallons/min	

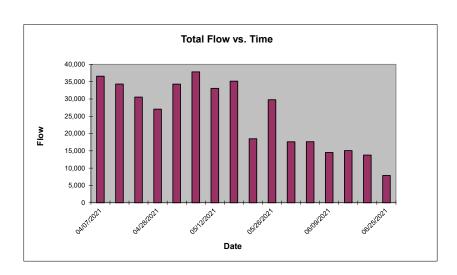
<sup>\* =</sup> flow meter calibrated and reset to zero on 01/04/21



## MONITORED FLOWS v. TIME SECOND QUARTER 2021

Groundwater Pre-Treatment System (GWPTS)
FSMC - RiverBend Site
(Site No. V00619-9)
Buffalo, New York

3,715,865 3,956,261 4,170,227 4,359,601 4,531,141 4,682,414 4,847,875 5,023,735 5,097,750 5,246,764 5,352,438 5,405,363 5,477,991 5,508,128 5,645,948 5,645,948	36,578 34,342 30,567 27,053 34,308 37,818 33,092 35,172 18,504 29,803 17,612 17,642 14,526 15,069 13,782 7,874
4,170,227 4,359,601 4,531,141 4,682,414 4,847,875 5,023,735 5,097,750 5,246,764 5,352,438 5,405,363 5,477,991 5,508,128 5,645,948	34,342 30,567 27,053 34,308 37,818 33,092 35,172 18,504 29,803 17,612 17,642 14,526 15,069 13,782
4,359,601 4,531,141 4,682,414 4,847,875 5,023,735 5,097,750 5,246,764 5,352,438 5,405,363 5,477,991 5,508,128 5,645,948	27,053 34,308 37,818 33,092 35,172 18,504 29,803 17,612 17,642 14,526 15,069 13,782
4,531,141 4,682,414 4,847,875 5,023,735 5,097,750 5,246,764 5,352,438 5,405,363 5,477,991 5,508,128 5,645,948	34,308 37,818 33,092 35,172 18,504 29,803 17,612 17,642 14,526 15,069 13,782
4,682,414 4,847,875 5,023,735 5,097,750 5,246,764 5,352,438 5,405,363 5,477,991 5,508,128 5,645,948	37,818 33,092 35,172 18,504 29,803 17,612 17,642 14,526 15,069 13,782
4,847,875 5,023,735 5,097,750 5,246,764 5,352,438 5,405,363 5,477,991 5,508,128 5,645,948	33,092 35,172 18,504 29,803 17,612 17,642 14,526 15,069 13,782
5,023,735 5,097,750 5,246,764 5,352,438 5,405,363 5,477,991 5,508,128 5,645,948	35,172 18,504 29,803 17,612 17,642 14,526 15,069 13,782
5,097,750 5,246,764 5,352,438 5,405,363 5,477,991 5,508,128 5,645,948	18,504 29,803 17,612 17,642 14,526 15,069 13,782
5,246,764 5,352,438 5,405,363 5,477,991 5,508,128 5,645,948	29,803 17,612 17,642 14,526 15,069 13,782
5,352,438 5,405,363 5,477,991 5,508,128 5,645,948	17,612 17,642 14,526 15,069 13,782
5,405,363 5,477,991 5,508,128 5,645,948	17,642 14,526 15,069 13,782
5,477,991 5,508,128 5,645,948	14,526 15,069 13,782
5,508,128 5,645,948	15,069 13,782
5,645,948	13,782
5,677,444	7,874



Total Quarterly Flow: 2,217,623 gallons Ave. Quarterly Flow: 24,322 gallons/day

APRIL		
899,780	gallons/month	
30	days	
29,993	gallons/day	
21	gallons/min	

MAY		
887,163	gallons/month	
31	days	
28,618	gallons/day	
20	gallons/min	

JUNE		
430,680	gallons/month	
30	days	
14,356	gallons/day	
10	gallons/min	

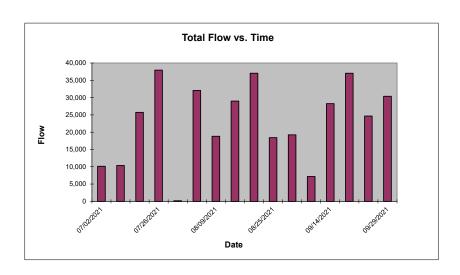
<sup>\* =</sup> flow meter calibrated and reset to zero on 01/04/21



## MONITORED FLOWS v. TIME THIRD QUARTER 2021

Groundwater Pre-Treatment System (GWPTS)
FSMC - RiverBend Site
(Site No. V00619-9)
Buffalo, New York

Date	<b>Total Flow</b>	Daily Avg
07/02/2021	5,748,548	10,158
07/09/2021	5,821,160	10,373
07/19/2021	6,078,585	25,743
07/26/2021	6,344,224	37,948
07/30/2021	6,344,954	183
08/03/2021	6,473,288	32,084
08/09/2021	6,586,248	18,827
08/13/2021	6,702,277	29,007
08/18/2021	6,887,474	37,039
08/25/2021	7,016,555	18,440
09/01/2021	7,151,289	19,248
09/08/2021	7,201,620	7,190
09/14/2021	7,371,169	28,258
09/16/2021	7,445,250	37,041
09/22/2021	7,593,349	24,683
09/29/2021	7,806,160	30,402



Total Quarterly Flow: 2,128,716 gallons Ave. Quarterly Flow: 23,172 gallons

JULY		
667,510	gallons/month	
31	days	
21,533	gallons/day	
15	gallons/min	

AUGUST		
671,601	gallons/month	
31	days	
21,665	gallons/day	
15	gallons/min	

SEPTEMBER								
789,605	gallons/month							
30	days							
26,320	gallons/day							
18	gallons/min							

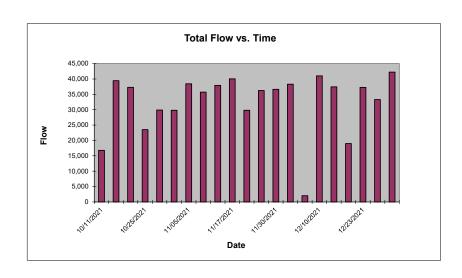
<sup>\* =</sup> flow meter calibrated and reset to zero on 01/04/21



## MONITORED FLOWS v. TIME FOURTH QUARTER 2021

Groundwater Pre-Treatment System (GWPTS)
FSMC - RiverBend Site
(Site No. V00619-9)
Buffalo, New York

Date	Total Flow	Daily Avg
10/11/2021	8,007,499	16,778
10/15/2021	8,165,368	39,467
10/20/2021	8,351,886	37,304
10/25/2021	8,469,459	23,515
10/29/2021	8,589,101	29,911
11/03/2021	8,738,173	29,814
11/05/2021	8,815,035	38,431
11/09/2021	8,957,970	35,734
11/12/2021	9,071,765	37,932
11/17/2021	9,272,009	40,049
11/22/2021	9,421,085	29,815
11/26/2021	9,566,111	36,257
11/30/2021	9,712,725	36,654
12/03/2021	9,827,691	38,322
12/07/2021	9,835,765	2,019
12/10/2021	9,958,756	40,997
12/14/2021	10,108,585	37,457
12/20/2021	10,222,586	19,000
12/23/2021	10,334,403	37,272
12/28/2021	10,501,008	33,321
12/31/2021	10,627,667	42,220



Total Quarterly Flow: 2,821,507 gallons Ave. Quarterly Flow: 30,742 gallons

OCTOBER									
782,941	gallons/month								
31	days								
25,256	gallons/day								
18	gallons/min								

NOVEMBER								
1,123,624	gallons/month							
30	days							
37,454	gallons/day							
26	gallons/min							

DECEMBER								
914,942	gallons/month							
31	days							
29,514	gallons/day							
20	gallons/min							

<sup>\* =</sup> flow meter calibrated and reset to zero on 01/04/21

FIELD LOGS





\*1/4/2021 Flow mater calibrated t reset to zero (max reading 7581676 gals)

# MAINTENANCE LOG Area II: Former Donner Hann Coke Plant Parcel

# Fort Schuyler Management Corporation RiverBend Site Buffalo, New York

						· · · · · · · · · · · · · · · · · · ·	Bag F	ilter	Pag Pros	sure (PSI)	Decant Oil	Tar in	Instantant	eous Flow	Sump Flow	PS Flow Check	
		Flow Meter	Lead	Tank	BackF	lush	Cha	nge	Marin Marin	AND THE RESERVE OF THE PARTY OF	Seperator	Drum (inches)	Before	After	Check	GHECK	
	Date	Reading	Tank 1	Tank 2	Tank 1	Tank 2	Tank 1	Tank 2	Before	After			474	77.2			
		1412726			1			/	23.1	21.9	-	1	77.4	76.7	V	0/	
*	141-41	4 11/20 80230				1/		1	2212	21.5	-	1	120	78.5			
	1-6-71	240100					0	//	23,3	2212	-	11	1129	78.9	1		
	1-15-21	1260		./	1	1	1/	1	25,3	24.	-	1	36.7	78.2			
	1-20-21	022001					//	1	24,0	21.7	1-1	11	31.2	74.3	/		
	1-2-2	1053147		1		1	1	1	2412	25.3	- V	4	64.6	75.9	/		
	9-4-1	1246610			1		/	1	23.0	211	1	4	540	77.0	1	1	
	2-17-21	1519708				//	1	1	250	1112	1	5	41.2	80.3	/		
	2 22 21	1507/15		1		/		/	25.5	1113	-	3	61.5	76.7		/	
	2-66-61	1712758		V	1	/	/	1	12.8	217	10-7-1-1	K	67.7	78,2			
1	2 - 2 1	101665		/	1	1	/		20 7	22	1	5	70,1	79.3	-		
	2 10 - 21	2121914			1	V	-	-	Zhab man di	213	1	5	42.7	80.2	/		
	7 17 21	29494		V	1	V-	<b>\</b>	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	2217	112		5	70.6	78,4	//		
	2 10-21	21237.40		V		//	1	91/	229	219	1	5	57.9	78.0		-	
	2 21-21	24 Ca 411		1	/	V	1	1	200	117	- 1	5	52.8	76.1	\\		
	1 7 - 71	2715865		V	/		1	1	2/0	77 0	a ./	6	22,0	75.			
	1 11 - 21	2956-26						1 1	26.7	117	-	6	22	73.0			
	1111	4130277		1	1	/	1	1	912	71 n		6	24.2	76.4			
	4-61-61	1369601		V	/	/	-	-	242	216	5 /	6	41.9	71,7	- /		
	2 2 291	431941		1	V	-	1	-	240	21:	1/	6	45.3	74,3			
	2 7 - 7	4/21/4114		1	/	V	1	/	24	7 21.	3	6	45.0	746	مندد	1/	
	7-12-7	1847775		1/	V	1	1	-	15	1 分	1/	6	265	5 67,6		_ /	
	217.71	5073735		/	1	1	1	1	75.	791	2/	6	Z4.C	70.	7		
	211-21	6697750	-34-	~		-	~	1	1956	1 714			19.2	71.9		1	
	3-11-11	27464			1	1	-	N/	228	2		7	40,0	1 71,5	~		
	2-10-71	5352438			/	/		- 1	234	2	4		39.	8 71.9	4		
	1 21	6415363		1	V	//	-	1	12	2 22	5	1	53.0	65.3	3		
	6-0-21	6177991			/				100	7 51	1	1	51.	4 19.	+		
	0 7 6	5500128		/		/		/	1 00	1 64	1	7	44.	9 64.	2		
	21-21	2142940		/			1	V	1 63.	1 21,	4	4	320	THE	7	1	
	6-6-6	2932,170					V	1	12	1 71	, 2	7		1 11	5		
	6-72-71	74777	-		A /	/	1	N	23.	† 22	10/	0	1 73,				
	4-2-21	5148 776		The second second			100		Tail	1127	e Lanan	don	175/2	9			

A Carbon in Tank #2 Changed on 6/25/21



# MAINTENANCE LOG Area II: Former Donner Hann Coke Plant Parcel

# Fort Schuyler Management Corporation RiverBend Site Buffalo, New York

	Flow Meter	Lead	Tank	Back	Flush	Bag F Chai		Bag Pres	sure (PSI)	Decant Oil	Decant Oil Tar in Drum		Instantaneous Flow		PS Flow
Date	Reading	Tank 1	Tank 2	Tank 1	Tank 2	Tank 1	Tank 2	Before	After	Seperator	(inches)	Before	After	Check	Check
7-9-7-1	5821160			19/		1	/	22,3	21.2		8	62.6	72,7		
7-19-21	6028585					/	/	24,7	22.	1	8	41.0	70.0		
7-26-21	6344224					/	/	13.6	22.6		9	13.4	31.1		
7-30-21	6344 954			V .	/	V	1	25.3	221	1	9	717	701 CR. R		5/
3-3-21	6473288	/		/	1	/	1	25.8	115		à	18.5	64.1		
8-9-21	6586248	N				/	/	25.7	217	-	a	15.7	71.0		
8-13-21	6402-44	N					~/	25.1	114		4	19,2	65.5	/	w/
8-18-21	508+444	-		/		~	/	24.9	21.5		9	14,2	66,9	/	/
0-15-1	7016 755					/	1	24.9	21.6		9	14.1	47.2		1
9 9 71	7701670	1		1	//	/	1	24.6	20,5		9	13.2	60.2	/	
0-14-71	7371/69	1		1				25.7	22.4	V	9	19.0	1		
9-16-7	7445750			N	/	/	1	23.4	27.6		9	61,1	+3.5	1	
9-21-21	7593349	V		/			/	29.9	23.3			76.5	30 7		
9-29-21	7866160	V		1	1		/	124, 4	12.3	1	a	179	70.7	1	
10-11-21	8007499	/		1		/	-	クラク	22.6	-	9	27.7	67.1		
18-15-21	8165368	/		N/	//		V	76.7	128		9	25.8	64.9	/	
10-20-21	8351886	1						11.6	24.3	. /	q	29,4	61,5	V/	
10-25-21	8464459	N		1	1	7		16.9	24.1		10	25.7	67.8	/	
10-29-21	8589191	~			./	1/	1	26.5	24.2		10	24.8	62,4	V	
11-3-21	8475 177	1			-	1/	1/	24.3	229		10	41.5	Glil		
11-5-21	38 13 9 35 17 9 35	1		/		1		26,5	23.6	/	10	22.8	64.8		
11-9-61	877775	1				1	/	25.8	23.9	<b>/</b>	10	24.6	64.	-	1
11 (7-21	9131009			1		/	/	26,3	24.4		10	2210	60.6		
11 77 - 71	au11085	/			/	/		765	25.7	4	10	2626	62 7		
11-21-7	45/1/11	/		/	1/	1	1/	76.	7 23.4	//	10	1016	6317		
11-39-2	9712 725	1		1		1	V	16.6	23,4		10	1277	619	./	1
10-7-71	9897691	V		N/	N	1	<b>/</b>	Zla, t	221		10	29 a	67 =	7	-1
12-7-21	9935 765			//	i/	/	1	2516	200		10	41.8	67	7	1
11-10-21	9958756			/		<b>V</b>	1/	24,4	12.		10	IAE	CES		
17-14-21	10108585		f p	V	100		<b>/</b>	161	123.1			177			



# MAINTENANCE LOG Area II: Former Donner Hann Coke Plant Parcel

# Fort Schuyler Management Corporation RiverBend Site Buffalo, New York

	Date	Flow Meter	Lead	Tank	Back	Flush	Bag F Cha	CONTROL OF THE PARTY OF THE PAR	Bag Press		Decant Oil Seperator	Diulii	Instantane	ESPERIENCE STATE OF THE SECOND STATE OF THE SE	Sump Flow Check	PS Flow Check
		Reading	Tank 1	Tank 2	Tank 1	Tank 2	Tank 1	Tank 2	Before 7	After 22/	Seperator	(inches)	Before //a	After		1/
ALCOHOLD DO	12-20-21	10222586			//				24,4	71.7	<b>&gt;</b>	10	44,2	92.0	/	
	2-28-21	10500008		1	/		/	1		22.8		10	15.2	66 3 12 11		1
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\* carbon in Tank #1 changed on 12/21/2021

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**GENERATED VOLUME OF TAR MATERIAL** 





#### GENERATED VOLUME OF TAR MATERIAL 2021

Groundwater Pre-Treatment System (GWPTS)
Riverbend, LLC
(Site No. V00619-9)
Buffalo, New York

Month	Volume of Tar (pounds)
January	0.0
February	16.5
March	0.0
April	16.5
May	16.5
June	0.0
July	16.5
August	16.5
September	0.0
October	16.5
November	0.0
December	0.0

Total: 99.3 pounds Drums: 0.21

> Min. 0.0 pounds Max. 16.5 pounds Ave. 8.3 pounds

