



444 21st Street South · La Crosse, Wisconsin · 54601

January 1, 2021

David Rozeboom
DNR Service Center
1300 W Clairemont Ave.
Eau Claire Wi 54701

**Re: Private Well Sampling Results Letters
La Crosse Municipal Wells 23 & 24
WDNR BRRTS # 02-32-00065**

Dear Mr. Rozeboom:

Please find attached 105 letters to property owners and occupants conveying the PFAS results of the private wells sampling in the target sampling area adjoining the La Crosse Regional Airport. This represents all lab reports received and letters sent through December 30, 2020. We have yet to receive the lab reports for ten (10) additional private well samples, the last of which was collected on December 23, 2020. A table of private well sampling points is attached. It provides the sampling point number keyed to tax parcel number, address, owner, occupant, well information, sampling date, lab report date, results letter and email dates, and the date of the occupant signed the bottled water agreement.

A status update describing the private well sampling, other public participation activities and recommendations for next steps is being prepared and should be submitted next week.

Please me let me know if you have any questions or require additional information.

Sincerely,

A handwritten signature in blue ink that reads "John C. Storlie".

John C. Storlie, PG
Principal Consultant
Direct: 608-433-9389
Cell: 608-769-2433

John.storlie@theOSgrp.com

Attachment: Table of Private Well Sampling Points
Private well results letters (through 12/30/2020)

Cc: Mayor Kabat (w/o letter attachments)
Randy Turtenwald (w/o letter attachments)

Table of Private Well Sampling Points, through 12/30/2020

Sampling Point Number	Tax Parcel Number	Owner Name	Property Address	Property City	Prope rty Zip	Owner Occupied?	Occupant Name (if dff from owner)	Completed Sampling Date	UWID	Well Screen interval (ft bgs)	Static water level (ft bgs)	Lab Report Date	Results e-mail Date	Results Letter Date	Bottled Water Ack. Date
10267-80	17-10267-80	[REDACTED]	2604 FANTA REED RD	LA CROSSE	54603-	No	Kathy Raymond	12/23/2020							
103-0	4-103-0	[REDACTED]	2606 FANTA REED RD	LA CROSSE	54603	Yes		10/27/2020	VD532	50-52		11/16/2020	na	11/17/2020	11/20/2020
104-0	4-104-0	[REDACTED]	2608 FANTA REED RD	LA CROSSE	54603	Yes		10/27/2020				11/16/2020	11/17/2020	11/17/2020	
106-0	4-106-0	[REDACTED]	2640 FANTA REED RD	LA CROSSE	54603	Yes	Nicole Burks	11/9/2020				12/9/2020	12/9/2020	12/9/2020	12/16/2020
110-1	4-110-1	[REDACTED]	2552 BAINBRIDGE ST	LA CROSSE	54603	Yes		10/27/2020	UV464	60-63	24	11/16/2020	11/18/2020	11/18/2020	11/19/2020
110-2	4-110-2	[REDACTED]	2556 BAINBRIDGE ST	LA CROSSE	54603	Yes		10/27/2020		X - 35'		11/16/2020	11/18/2020	11/18/2020	11/20/2020
115-0	4-115-0	[REDACTED]	2425 BAINBRIDGE ST	LA CROSSE	54603	Yes		10/27/2020				11/16/2020	na	11/17/2020	
116-0	4-116-0	[REDACTED]	2421 BAINBRIDGE ST	LA CROSSE	54603	Yes		10/29/2020				11/20/2020	11/23/2020	11/23/2020	
147-3	4-147-3	[REDACTED]	102 MITCHELL ST	LA CROSSE	54603	Yes		11/12/2020				11/30/2020	12/1/2020	12/1/2020	
178-0	4-178-0	[REDACTED]	2560 2ND AVE E	LA CROSSE	54603	Yes		11/19/2020	TG626	63-66	20	12/17/2020	12/17/2020	12/17/2020	
179-0	4-179-0	[REDACTED]	2556 2ND AVE E	LA CROSSE	54603	Yes		10/27/2020	XA025	60-63	25	11/16/2020	11/17/2020	11/17/2020	12/13/2020
181-0	4-181-0	[REDACTED]	2548 2ND AVE E	LA CROSSE	54603	Yes		11/2/2020				11/30/2020	12/1/2020	12/1/2020	
184-0	4-184-0	[REDACTED]	2532 2ND AVE E	LA CROSSE	54603	No	Fred Betthausen	11/2/2020	YW864	52-55	15	11/30/2020	12/1/2020	12/1/2020	
185-0	4-185-0	[REDACTED]	2530 2ND AVE E	LA CROSSE	54603	Yes		10/29/2020				11/20/2020	11/23/2020	11/23/2020	11/23/2020
186-0	4-186-0	[REDACTED]	2524 2ND AVE E	LA CROSSE	54603	Yes		10/29/2020				11/20/2020	11/23/2020	11/23/2020	11/23/2020
188-0	4-188-0	[REDACTED]	2512 2ND AVE E	LA CROSSE	54603	Yes		11/5/2020				12/1/2020	12/2/2020	12/2/2020	12/3/2020
189-0	4-189-0	[REDACTED]	2508 2ND AVE E	LA CROSSE	54603	Yes		12/2/2020				12/29/2020	12/30/2020	12/30/2020	12/30/2020
192-0	4-192-0	[REDACTED]	202 FANTA REED RD	LA CROSSE	54603	Yes		10/27/2020	ZH086	X - 63		11/16/2020	11/17/2020	11/17/2020	
193-0	4-193-0	[REDACTED]	2560 1ST AVE E	LA CROSSE	54603	No	Dave Forer	10/27/2020	ZH080	63-66	18	11/16/2020	na	11/17/2020	
194-0	4-194-0	[REDACTED]	2556 1ST AVE E	LA CROSSE	54603	Yes		11/2/2020				11/30/2020	12/1/2020	12/1/2020	

Sampling Point Number	Tax Parcel Number	Owner Name	Property Address	Property City	Prope rty Zip	Owner Occupied?	Occupant Name (if dff from owner)	Completed Sampling Date	UWID	Well Screen interval (ft bgs)	Static water level (ft bgs)	Lab Report Date	Results e-mail Date	Results Letter Date	Bottled Water Ack. Date
195-0	4-195-0	[REDACTED]	2548 1ST AVE E	LA CROSSE	54603	Yes		11/5/2020	RT826	62-65	17	12/1/2020	12/2/2020	12/2/2020	
197-0	4-197-0	[REDACTED]	2544 1ST AVE E	LA CROSSE	54603	Yes		12/17/2020	UV469	60-63	28				
200-0	4-200-0	[REDACTED]	2532 1ST AVE E	LA CROSSE	54603	Yes		12/8/2020							
202-0	4-202-0	[REDACTED]	2524 1ST AVE E	LA CROSSE	54603	Yes		11/2/2020	ER481	63-66	23	11/30/2020	12/1/2020	12/1/2020	12/5/2020
203-0	4-203-0	[REDACTED]	2520 1ST AVE E	LA CROSSE	54603	Yes		12/17/2020	CQ197	63-66	25				
204-0	4-204-0	[REDACTED]	2516 1ST AVE E	LA CROSSE	54603	Yes		11/9/2020				12/9/2020	na	12/9/2020	
205-0	4-205-0	[REDACTED]	2512 1ST AVE E	LA CROSSE	54603	Yes		10/27/2020	OW215	60-63	23	11/16/2020	11/17/2020	11/17/2020	
206-0	4-206-0	[REDACTED]	2508 1ST AVE E	LA CROSSE	54603	Yes		11/12/2020	KP591	60-63	25	11/30/2020	12/1/2020	12/1/2020	12/7/2020
207-0	4-207-0	[REDACTED]	2504 1ST AVE E	LA CROSSE	54603	Yes		10/27/2020				11/16/2020	11/17/2020	11/17/2020	
209-0	4-209-0	[REDACTED]	2500 1ST AVE E	LA CROSSE	54603	Yes		11/2/2020				11/30/2020	12/1/2020	12/1/2020	
210-0	4-210-0	[REDACTED]	2501 2ND AVE E	LA CROSSE	54603	No	Dawn & Adam Hansen	11/3/2020				11/30/2020	12/1/2020	12/1/2020	
211-0	4-211-0	[REDACTED]	2505 2ND AVE E	LA CROSSE	54603	Yes		11/5/2020				12/1/2020	12/2/2020	12/2/2020	
212-0	4-212-0	[REDACTED]	2509 2ND AVE E	LA CROSSE	54603	Yes		11/18/2020				12/23/2020	12/23/2020	12/23/2020	
215-0	4-215-0	[REDACTED]	2521 2ND AVE E	LA CROSSE	54603	Yes		11/3/2020	QT290	63-66	22	11/30/2020	12/1/2020	12/1/2020	
218-0	4-218-0	[REDACTED]	2525 2ND AVE E	LA CROSSE	54603	Yes		11/2/2020				11/30/2020	12/1/2020	12/1/2020	12/4/2020
219-0	4-219-0	[REDACTED]	2529 2ND AVE E	LA CROSSE	54603	Yes		11/3/2020 12/2/20	YY997	59-63	22	11/30/2020 12/29/20	12/1/2020 12/30/20	12/1/2020 12/30/20	12/23/2020
220-0	4-220-0	[REDACTED]	2531 2ND AVE E	LA CROSSE	54603	Yes		11/2/2020				11/30/2020	12/1/2020	12/1/2020	
221-0	4-221-0	[REDACTED]	2537 2ND AVE E	LA CROSSE	54603	Yes		10/27/2020				11/16/2020	11/18/2020	11/18/2020	
224-0	4-224-0	[REDACTED]	2549 2ND AVE E	LA CROSSE	54603	Yes		12/22/2020							
225-0	4-225-0	[REDACTED]	2553 2ND AVE E	LA CROSSE	54603	Yes		10/29/2020				11/20/2020	11/26/2020	11/23/2020	12/1/2020

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226-0	4-226-0	[REDACTED]	2557 2ND AVE E	LA CROSSE	54603	Yes		10/29/2020				11/20/2020	11/24/2020	11/23/2020	
227-0	4-227-0	[REDACTED]	2561 2ND AVE E	LA CROSSE	54603	Yes		11/17/2020				12/23/2020			
228-0	4-228-0	[REDACTED]	206 FANTA REED RD	LA CROSSE	54603	Yes		12/2/2020	XX699	63-66	23	12/29/2020	12/30/2020	12/30/2020	
229-0	4-229-0	[REDACTED]	2544 BAINBRIDGE ST	LA CROSSE	54603	Yes		11/3/2020		Shallow Driven		11/30/2020	12/1/2020	12/1/2020	12/8/2020
230-0	4-230-0	[REDACTED]	2540 BAINBRIDGE ST	LA CROSSE	54603	Yes		10/29/2020				11/20/2020	11/23/2020	11/23/2020	11/26/2020
233-0	4-233-0	[REDACTED]	2534 BAINBRIDGE ST	LA CROSSE	54603	Yes		11/3/2020				11/30/2020	12/1/2020	12/1/2020	
234-0	4-234-0	[REDACTED]	2528 BAINBRIDGE ST	LA CROSSE	54603	Yes		12/2/2020				12/29/2020	na	12/30/2020	
236-0	4-236-0	[REDACTED]	2524 BAINBRIDGE ST	LA CROSSE	54603	Yes		10/27/2020	TR311	60-64	25	11/16/2020	11/18/2020	11/18/2020	
237-0	4-237-0	[REDACTED]	2520 BAINBRIDGE ST	LA CROSSE	54603	Yes		10/29/2020		X-64		11/20/2020	11/23/2020	11/23/2020	
238-0	4-238-0	[REDACTED]	2514 BAINBRIDGE ST	LA CROSSE	54603	Yes		10/27/2020				11/16/2020	11/18/2020	11/18/2020	
239-0	4-239-0	[REDACTED]	2512 BAINBRIDGE ST	LA CROSSE	54603	Yes		11/3/2020	ZJ579	62-65	25	11/30/2020	na	12/1/2020	
240-0	4-240-0	[REDACTED]	2508 BAINBRIDGE ST	LA CROSSE	54603	Yes		10/27/2020				11/16/2020	11/18/2020	11/18/2020	
242-0	4-242-0	[REDACTED]	2500 BAINBRIDGE ST	LA CROSSE	54603	Yes		12/17/2020							
244-0	4-244-0	[REDACTED]	2505 1ST AVE E	LA CROSSE	54603	Yes		10/27/2020	CQ321	60-63	25	11/16/2020	11/18/2020	11/18/2020	
245-0	4-245-0	[REDACTED]	2507 1ST AVE E	LA CROSSE	54603	Yes		11/5/2020				12/1/2020	12/2/2020	12/2/2020	
246-0	4-246-0	[REDACTED]	2513 1ST AVE E	LA CROSSE	54603	Yes		10/29/2020				11/20/2020	na	11/23/2020	
247-0	4-247-0	[REDACTED]	2517 1ST AVE E	LA CROSSE	54603	Yes		11/3/2020	UO923	63-66	22	11/30/2020	12/1/2020	12/1/2020	
248-0	4-248-0	[REDACTED]	2521 1ST AVE E	LA CROSSE	54603	Yes		10/27/2020				11/16/2020	11/18/2020	11/18/2020	
250-0	4-250-0	[REDACTED]	2529 1ST AVE E	LA CROSSE	54603	No	Janice Bolstad	10/29/2020				11/20/2020	11/23/2020	11/23/2020	
251-0	4-251-0	[REDACTED]	2533 1ST AVE E	LA CROSSE	54603	Yes		10/29/2020	OE615	62-65	26	11/20/2020	12/3/2020	11/23/2020	12/3/2020

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252-0	4-252-0	[REDACTED]	2537 1ST AVE E	LA CROSSE	54603	NO	Donald & Kathleen Ferguson	11/3/2020				11/30/2020	12/1/2020	12/1/2020	12/2/2020
255-0	4-255-0	[REDACTED]	2545 1ST AVE E	LA CROSSE	54603	Yes		11/5/2020	XX691	63-66	21	12/1/2020	12/2/2020	12/2/2020	12/3/2020
256-0	4-256-0	[REDACTED]	2553 1ST AVE E	LA CROSSE	54603	Yes		10/27/2020				11/16/2020	11/18/2020	11/18/2020	11/19/2020
2717-FR	17-10253-20	[REDACTED]	2717 Fanta Reed Road			No	Colgan Air Services	11/17/2020				12/23/2020	12/23/2020	12/23/2020	na
328-0	4-328-0	[REDACTED]	2530 1ST AVE W	LA CROSSE	54603	Yes		11/3/2020	KU556	63-66	34	11/30/2020	na	12/1/2020	12/10/2020
329-0	4-329-0	[REDACTED]	2529 BAINBRIDGE ST	LA CROSSE	54603	Yes		10/29/2020	RI599	63-66	18	11/20/2020	11/23/2020	11/23/2020	12/12/2020
330-0	4-330-0	[REDACTED]	2533 BAINBRIDGE ST	LA CROSSE	54603	Yes		10/27/2020				11/16/2020	11/18/2020	11/18/2020	11/23/2020
332-0	4-332-0	[REDACTED]	2538 1ST AVE W	LA CROSSE	54603	Yes		12/23/2020							
333-0	4-333-0	[REDACTED]	2537 BAINBRIDGE ST	LA CROSSE	54603	No	Jaime Lenex	11/3/2020	IK401	60-63	30	11/30/2020	12/1/2020	12/1/2020	
334-0	4-334-0	[REDACTED]	2541 BAINBRIDGE ST	LA CROSSE	54603	Yes		11/3/2020	NX283	60-63	20	11/30/2020	na	12/1/2020	
337-0	4-337-0	[REDACTED]	2545 BAINBRIDGE ST	LA CROSSE	54603	Yes		12/2/2020	VD532	63-66	22	12/29/2020	12/30/2020	12/30/2020	
338-0	4-338-0	[REDACTED]	2549 BAINBRIDGE ST	LA CROSSE	54603	Yes		11/18/2020	XX704	63-66	25	12/23/2020	12/23/2020	12/23/2020	12/27/2020
339-0	4-339-0	[REDACTED]	2550 1ST AVE W	LA CROSSE	54603	Yes		10/27/2020				11/16/2020	11/17/2020	11/17/2020	
340-0	4-340-0	[REDACTED]	2554 1ST AVE W	LA CROSSE	54603	Yes		10/29/2020				11/20/2020	11/24/2020	11/24/2020	
341-0	4-341-0	[REDACTED]	2555 BAINBRIDGE ST	LA CROSSE	54603	Yes		10/29/2020				11/20/2020	11/24/2020	11/24/2020	11/24/2020
342-0	4-342-0	[REDACTED]	2559 BAINBRIDGE ST	LA CROSSE	54603	Yes		11/24/2020	UV497	60-63	28	12/23/2020	12/23/2020	12/23/2020	12/28/2020
343-0	4-343-0	[REDACTED]	2558 1ST AVE W	LA CROSSE	54603	Yes		11/3/2020				11/30/2020	12/1/2020	12/1/2020	
344-0	4-344-0	[REDACTED]	111 CALLAWAY BLVD	LA CROSSE	54603	Yes		10/29/2020				11/20/2020	na	11/24/2020	
345-0	4-345-0	[REDACTED]	2509 BAINBRIDGE ST	LA CROSSE	54603	Yes		10/27/2020				11/16/2020	11/18/2020	11/18/2020	
346-0	4-346-0	[REDACTED]	2504 1ST AVE W	LA CROSSE	54603	Yes		11/9/2020	TY398	60-63	20	12/9/2020	12/9/2020	12/9/2020	

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347-0	4-347-0	[REDACTED]	2510 1ST AVE W	LA CROSSE	54603	Yes		11/5/2020	RI582	63-66	30	12/1/2020	12/2/2020	12/2/2020	
349-0	4-349-0	[REDACTED]	2521 BAINBRIDGE ST	LA CROSSE	54603	Yes		12/8/2020							
350-0	4-350-0	[REDACTED]	2514 1ST AVE W	LA CROSSE	54603	Yes		11/2/2020				11/30/2020	12/1/2020	12/1/2020	
351-0	4-351-0	[REDACTED]	2518 1ST AVE W	LA CROSSE	54603	Yes		10/29/2020				11/20/2020	na	11/24/2020	
352-0	4-352-0	[REDACTED]	2526 1ST AVE W	LA CROSSE	54603	Yes		10/29/2020	ER442	63-66	27	11/20/2020	11/24/2020	11/24/2020	
360-0	4-360-0	[REDACTED]	208 CALLAWAY BLVD	LA CROSSE	54603	No	Christina Tanner-Sass	10/27/2020				11/16/2020	11/18/2020	11/18/2020	11/23/2020
361-0	4-361-0	[REDACTED]	204 CALLAWAY BLVD	LA CROSSE	54603	Yes		10/29/2020				11/20/2020	11/24/2020	11/24/2020	
363-0	4-363-0	[REDACTED]	2501 BAINBRIDGE ST	LA CROSSE	54603	Yes		11/3/2020	RK320	63-66	25	11/30/2020	12/1/2020	12/1/2020	
365-0	4-365-0	[REDACTED]	2501 1ST AVE W	LA CROSSE	54603	Yes		11/16/2020	XX703	63-63	25	12/23/2020	12/23/2020	12/23/2020	
366-0	4-366-0	[REDACTED]	2505 1ST AVE W	LA CROSSE	54603	Yes	Stacey's Adult Family Home	11/9/2020	TY391	60-63	19	12/9/2020	12/9/2020	12/9/2020	
369-0	4-369-0	[REDACTED]	2511 1ST AVE W	LA CROSSE	54603	Yes		10/27/2020	VD833	63-66	28	11/16/2020	11/18/2020	11/18/2020	
370-0	4-370-0	[REDACTED]	2515 1ST AVE W	LA CROSSE	54603	Yes		10/29/2020				11/20/2020	11/24/2020	11/24/2020	
373-0	4-373-0	[REDACTED]	2519 1ST AVE W	LA CROSSE	54603	Yes		10/29/2020	WU600	59-62	30	11/20/2020	na	11/24/2020	
383-0	4-383-0	[REDACTED]	2531 1ST AVE W	LA CROSSE	54603	Yes		11/17/2020				12/23/2020	12/23/2020	12/23/2020	
384-0	4-384-0	[REDACTED]	2535 1ST AVE W	LA CROSSE	54603	Yes		12/22/2020							
385-0	4-385-0	[REDACTED]	2539 1ST AVE W	LA CROSSE	54603	Yes		11/3/2020				11/30/2020	12/1/2020	12/1/2020	12/2/2020
386-0	4-386-0	[REDACTED]	2543 1ST AVE W	LA CROSSE	54603	Yes		10/27/2020	ZI581	62-65	25	11/16/2020	11/18/2020	11/18/2020	11/20/2020
387-0	4-387-0	[REDACTED]	2547 1ST AVE W	LA CROSSE	54603	Yes		12/22/2020							
388-0	4-388-0	[REDACTED]	2551 1ST AVE W	LA CROSSE	54603	Yes		10/29/2020				11/20/2020	11/24/2020	11/24/2020	11/27/2020
389-0-A	4-389-0	[REDACTED]	2557 1ST AVE W	LA CROSSE	54603	NO		11/2/2020				11/30/2020	12/1/2020	12/1/2020	

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389-0-B	4-389-0	[REDACTED]	2555 1ST AVE W	LA CROSSE	54603	No	Samantha Scott	11/2/2020				11/30/2020	12/1/2020	12/1/2020	12/2/2020
623-0	4-623-0	[REDACTED]	1820 Bainbridge St.	La Crosse	54601			11/19/2020				12/4/2020	12/4/2020	12/4/2020	
BG122	4-97-2	[REDACTED]	2630 FANTA REED RD	LA CROSSE	54603	Yes		10/28/2020	BG122 - Well House 1 - North			11/20/2020	11/23/2020	11/23/2020	na
BG123	4-97-2	[REDACTED]	2630 FANTA REED RD	LA CROSSE	54603	Yes		10/28/2020	BG123 - Well House 2 - Center			11/20/2020	11/23/2020	11/23/2020	na
BG124	4-97-2	[REDACTED]	2630 FANTA REED RD	LA CROSSE	54603	Yes		10/28/2020	BG124 - Well House 3 - South			11/20/2020	11/23/2020	11/23/2020	na
WR972	4-97-2	[REDACTED]	2630 FANTA REED RD	LA CROSSE	54603	Yes		10/28/2020	WR972 - Office			11/20/2020	11/23/2020	11/23/2020	



444 21st Street South · La Crosse, Wisconsin · 54601

November 30, 2020

[REDACTED]
2630 Fanta Reed Road
La Crosse, WI 54603

Subject: CORRECTED Summary of Private Well Sampling Results
[REDACTED]
2630 Fanta Reed Road
La Crosse, WI 54603
Tax parcel # 4-97-2
Sample ID # WR972, BG122, BG123 and BG124

Dear [REDACTED]:

This letter corrects and supplants our November 23, 2020 letter, which conveyed and summarized the test results for the samples collected on October 29, 2020 at the above address. In that letter, *Table 1 – Office (UWID WR972) Sample Results* erroneously contained results for four (4) PFAS compounds from another property altogether; it has been corrected below. **No PFAS compounds were detected in the samples collected from the potable well serving the office building (Unique Well ID # WR972).**

We apologize for the error in our summary table. The lab reports attached to the November 23, 2020 letter, and also attached to this letter, were correct. It was just an error, albeit a regrettable one, in the summary table. We apologize for any undue anxiety regarding the safety of your drinking water.

Some PFAS compounds were found at levels above the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in your wells are called the “Sample Result” in the tables below.

Please note that we collected a total of five (5) samples from the four (4) wells on the property. Four (4) of the samples were analyzed for thirty-six (36) compounds via isotope dilution; this is referred to the WI-36 method. In addition, a “split” sample was sample collected from the potable well serving the office building (Unique Well ID # WR972). It was sent to a different lab and analyzed for eighteen (18) PFAS compounds via EPA method 537.1, the Safe Drinking Water Act method. No PFAS compounds were detected in the potable well serving the office building by either method.

The following five tables summarize the results from the five (5) samples. **Bolded results** are above a current recommended level intended to protect health according to the Department of Health Services (DHS).

Table 1 – Office (UWID WR972) Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)	
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}	The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}	
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}	
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}	
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	Not Detected	20 ppt ^{a,b}	
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	Not Detected	20 ppt ^{a,b}	
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a	
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	Not Detected	300 ppt ^a	
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	Not Detected	300 ppt ^a	
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	Not Detected	300 ppt ^a	
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a	

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Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	Not Detected	300 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-heptanesulfonic acid (PFHpS) CAS # 375-92-8	Not Detected	None Established ^c
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS # 2706-91-4	Not Detected	None Established ^c
Perfluoro-n-heptanoic acid (PFHpA) CAS # 375-85-9	Not Detected	None Established ^c
Perfluoro-n-pentanoic acid (PFPeA) CAS #2706-90-3	Not Detected	None Established ^c

^a Public health enforcement standard (ES) recommended by DHS.

^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA.

^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation.

^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code.

^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L)

^{BL} Detected in the method blank. Possible lab contaminant.

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Table 2. Office (UWID WR972) "Split" Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Analyzed	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Analyzed	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Analyzed	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	Not detected	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	Not detected	20 ppt ^{a,b}
The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6		
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	Not detected	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	Not detected	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	Not Analyzed	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	Not detected	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not detected	3,000 ppt ^a

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Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Analyzed	400,000 ppt ^a
^a Public health enforcement standard (ES) recommended by DHS. ^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA. ^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation. ^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code. ^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L) ^{BL} Detected in the method blank. Possible lab contaminant.		

Table 3 – Wellhouse 1 (UWID BG122) Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)	
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}	The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}	
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}	
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}	
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	44 ppt	20 ppt ^{a,b}	
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	360 ppt	20 ppt ^{a,b}	
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a	
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	37 ppt	300 ppt ^a	
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	460 ppt	300 ppt ^a	
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	88 ppt	300 ppt ^a	
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a	
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a	

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Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	57 ppt	300 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	1.6 ppt	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
1H, 1H, 2H, 2H-perflorodecane sulfonic acid (8:2 FTS) CAS # 39108-34-4	2.9 ppt	None Established ^c
1H, 1H, 2H, 2H-perflurooctane sulfonic acid (6:2 FTS) CAS # 27619-97-2	16 ppt	None Established ^c
Perfluoro-1-heptanesulfonic acid (PFHpS) CAS # 375-92-8	13 ppt	None Established ^c
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS # 2706-91-4	55 ppt	None Established ^c
Perfluoro-n-heptanoic acid (PFHpA) CAS # 375-85-9	21 ppt	None Established ^c
Perfluoro-n-pentanoic acid (PFPeA) CAS #2706-90-3	49 ppt	None Established ^c

^a Public health enforcement standard (ES) recommended by DHS.^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA.^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation.^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code.^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L)^{BL} Detected in the method blank. Possible lab contaminant.

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Table 4 – Wellhouse 2 (UWID BG123) Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	11 ppt	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	53 ppt	20 ppt ^{a,b}
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	12 ppt	300 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	50 ppt	300 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	57 ppt	300 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	14 ppt	300 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a

The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6

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Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS) CAS # 27619-97-2	3.1 ppt	None Established ^c
Perfluoro-1-heptanesulfonic acid (PFHpS) CAS # 375-92-8	1.6 ppt	None Established ^c
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS # 2706-91-4	10 ppt	None Established ^c
Perfluoro-n-heptanoic acid (PFHpA) CAS # 375-85-9	5.3 ppt	None Established ^c
Perfluoro-n-pentanoic acid (PFPeA) CAS #2706-90-3	14 ppt	None Established ^c
^a Public health enforcement standard (ES) recommended by DHS. ^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA. ^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation. ^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code. ^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L) ^{BL} Detected in the method blank. Possible lab contaminant.		

Table 5 – Wellhouse 3 (UWID BG124) Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)	
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}	The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}	
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}	
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}	
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	37 ppt	20 ppt ^{a,b}	
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	63 ppt	20 ppt ^{a,b}	
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a	

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Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	7.9 ppt	300 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	62 ppt	300 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	20 ppt	300 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	41 ppt	300 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	1.1 ppt	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS) CAS # 27619-97-2	3.2 ppt	None Established ^c
Perfluoro-1-hetanesulfonic acid (PFHpS) CAS # 375-92-8	1.9 ppt	None Established ^c
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS # 2706-91-4	6.9 ppt	None Established ^c
Perfluoro-n-heptanoic acid (PFHpA) CAS # 375-85-9	19 ppt	None Established ^c
Perfluoro-n-pentanoic acid (PFPeA) CAS #2706-90-3	41 ppt	None Established ^c

^a Public health enforcement standard (ES) recommended by DHS.^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NET-FOSE, NET-FOSA, NetFOSAA, PFOS, and PFOA.^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation.^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code.^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L)^{BL} Detected in the method blank. Possible lab contaminant.

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As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

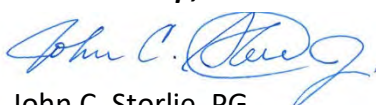
Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse,

The OS Group, LLC



John C. Storlie, PG
Principal Hydrogeologist

Attachment: Lab reports for your wells

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK03016-001
Description: WR972	Matrix: Aqueous
Date Sampled: 10/28/2020 0915	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/03/2020	Project Number: 40217496

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/13/2020 1626	MMM	11/11/2020 1108	73065

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9CI-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11CI-PF3...)	763051-92-9	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.5	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
Perfluoro-1-butanefluoro-1-sulfonic acid (PFBS)	375-73-5	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-butanefluoro-1-sulfonic acid (PFBA)	375-22-4	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	ND		3.5	0.87	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		96	25-150
13C2_6:2FTS		86	25-150
13C2_8:2FTS		99	25-150
13C2_PFDaA		86	25-150
13C2_PFHxDA		63	25-150
13C2_PFTeDA		87	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK03016-001
Description: WR972	Matrix: Aqueous
Date Sampled: 10/28/2020 0915	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/03/2020	Project Number: 40217496

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		89	25-150
13C3_PFHxS		83	25-150
13C3-HFPO-DA		103	25-150
13C4_PFBa		95	25-150
13C4_PFHpA		94	25-150
13C5_PFHxA		93	25-150
13C5_PFPeA		100	25-150
13C6_PFDa		90	25-150
13C7_PFUdA		87	25-150
13C8_PFOA		95	25-150
13C8_PFOS		73	25-150
13C8_PFOsA		101	10-150
13C9_PFNa		92	25-150
d-EtFOsA		86	10-150
d5-EtFOsAA		87	25-150
d9-EtFOsE		88	10-150
d-MeFOsA		81	10-150
d3-MeFOsAA		95	25-150
d7-MeFOsE		94	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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ANALYTICAL RESULTS

Project: LACROSSE WELL #23 & 24

Pace Project No.: 40217479

Sample: WR972 **Lab ID: 40217479001** Collected: 10/28/20 09:15 Received: 10/30/20 09:30 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
537.1 PFAS Compounds, Water									
Analytical Method: EPA 537.1 Preparation Method: EPA 537.1									
Pace Analytical Services - Ormond Beach									
11CI-PF3OUdS	<0.0015	ug/L	0.0019	0.0015	1	11/03/20 22:57	11/04/20 22:50	763051-92-9	
9CI-PF3ONS	<0.0011	ug/L	0.0019	0.0011	1	11/03/20 22:57	11/04/20 22:50	756426-58-1	
ADONA	<0.00069	ug/L	0.0019	0.00069	1	11/03/20 22:57	11/04/20 22:50	919005-14-4	
HFPO-DA	<0.0016	ug/L	0.0019	0.0016	1	11/03/20 22:57	11/04/20 22:50	13252-13-6	
NEtFOSAA	<0.00089	ug/L	0.0019	0.00089	1	11/03/20 22:57	11/04/20 22:50	2991-50-6	
NMeFOSAA	<0.0015	ug/L	0.0019	0.0015	1	11/03/20 22:57	11/04/20 22:50	2355-31-9	
Perfluorobutanesulfonic acid	<0.00063	ug/L	0.0019	0.00063	1	11/03/20 22:57	11/04/20 22:50	375-73-5	
Perfluorodecanoic acid	<0.0019	ug/L	0.0019	0.0019	1	11/03/20 22:57	11/04/20 22:50	335-76-2	
Perfluorohexanoic acid	<0.0012	ug/L	0.0019	0.0012	1	11/03/20 22:57	11/04/20 22:50	307-24-4	
Perfluorododecanoic acid	<0.0014	ug/L	0.0019	0.0014	1	11/03/20 22:57	11/04/20 22:50	307-55-1	
Perfluoroheptanoic acid	<0.00096	ug/L	0.0019	0.00096	1	11/03/20 22:57	11/04/20 22:50	375-85-9	
Perfluorohexanesulfonic acid	<0.00070	ug/L	0.0019	0.00070	1	11/03/20 22:57	11/04/20 22:50	355-46-4	
Perfluorononanoic acid	<0.0019	ug/L	0.0019	0.0019	1	11/03/20 22:57	11/04/20 22:50	375-95-1	
Perfluorooctanesulfonic acid	<0.0011	ug/L	0.0019	0.0011	1	11/03/20 22:57	11/04/20 22:50	1763-23-1	
Perfluorooctanoic acid	<0.00083	ug/L	0.0019	0.00083	1	11/03/20 22:57	11/04/20 22:50	335-67-1	
Perfluorotetradecanoic acid	<0.0018	ug/L	0.0019	0.0018	1	11/03/20 22:57	11/04/20 22:50	376-06-7	
Perfluorotridecanoic acid	<0.0017	ug/L	0.0019	0.0017	1	11/03/20 22:57	11/04/20 22:50	72629-94-8	
Perfluoroundecanoic acid	<0.0019	ug/L	0.0019	0.0019	1	11/03/20 22:57	11/04/20 22:50	2058-94-8	
Surrogates									
13C2-PFDA (S)	88	%	70-130		1	11/03/20 22:57	11/04/20 22:50		
13C2-PFHxA (S)	101	%	70-130		1	11/03/20 22:57	11/04/20 22:50		
NEtFOSAA-d5 (S)	72	%	70-130		1	11/03/20 22:57	11/04/20 22:50		
HFPO-DAS (S)	92	%	70-130		1	11/03/20 22:57	11/04/20 22:50		

REPORT OF LABORATORY ANALYSIS

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PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK03016-004
Description: BG122	Matrix: Aqueous
Date Sampled: 10/28/2020 0945	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/03/2020	Project Number: 40217496

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/12/2020 1418	MMM	11/11/2020 1108	73065

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	2.9	J	6.9	1.7	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	16		6.9	1.7	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.4	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	37		3.4	0.86	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	13		3.4	0.86	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	55		3.4	0.86	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	460		3.4	0.86	ng/L	1
Perfluoro-n-butyric acid (PFBA)	375-22-4	PFAS by ID SOP	88		3.4	0.86	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	21		3.4	0.86	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	57		3.4	0.86	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	1.6	J	3.4	0.86	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	44		3.4	0.86	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	49		3.4	0.86	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	360		3.4	0.86	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		111	25-150
13C2_6:2FTS		99	25-150
13C2_8:2FTS		86	25-150
13C2_PFDaA		83	25-150
13C2_PFHxDA		82	25-150
13C2_PFTeDA		87	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK03016-004
Description: BG122	Matrix: Aqueous
Date Sampled: 10/28/2020 0945	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/03/2020	Project Number: 40217496

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		90	25-150
13C3_PFHxS		83	25-150
13C3-HFPO-DA		94	25-150
13C4_PFBa		97	25-150
13C4_PFHpA		95	25-150
13C5_PFHxA		98	25-150
13C5_PFPeA		98	25-150
13C6_PFDa		97	25-150
13C7_PFUdA		95	25-150
13C8_PFOa		92	25-150
13C8_PFOs		83	25-150
13C8_PFOsA		99	10-150
13C9_PFNa		83	25-150
d-EtFOsA		81	10-150
d5-EtFOsAA		90	25-150
d9-EtFOsE		92	10-150
d-MeFOsA		89	10-150
d3-MeFOsAA		88	25-150
d7-MeFOsE		92	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
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PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK03016-003
Description: BG123	Matrix: Aqueous
Date Sampled: 10/28/2020 1000	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/03/2020	Project Number: 40217496

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/12/2020 1408	MMM	11/11/2020 1108	73065

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	3.1	J	7.0	1.7	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.5	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	12		3.5	0.87	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	1.6	J	3.5	0.87	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	10		3.5	0.87	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	50		3.5	0.87	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	57		3.5	0.87	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	5.3		3.5	0.87	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	14		3.5	0.87	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	11		3.5	0.87	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	14		3.5	0.87	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	53		3.5	0.87	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		99	25-150
13C2_6:2FTS		98	25-150
13C2_8:2FTS		86	25-150
13C2_PFDaA		88	25-150
13C2_PFHxDA		80	25-150
13C2_PFTeDA		84	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK03016-003
Description: BG123	Matrix: Aqueous
Date Sampled: 10/28/2020 1000	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/03/2020	Project Number: 40217496

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		86	25-150
13C3_PFHxS		82	25-150
13C3-HFPO-DA		110	25-150
13C4_PFBa		94	25-150
13C4_PFHpA		94	25-150
13C5_PFHxA		95	25-150
13C5_PFPeA		92	25-150
13C6_PFDa		93	25-150
13C7_PFUdA		89	25-150
13C8_PFOA		97	25-150
13C8_PFOS		77	25-150
13C8_PFOSA		99	10-150
13C9_PFNA		88	25-150
d-EtFOSA		80	10-150
d5-EtFOSAA		87	25-150
d9-EtFOSE		87	10-150
d-MeFOSA		86	10-150
d3-MeFOSAA		85	25-150
d7-MeFOSE		85	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK03016-002
Description: BG124	Matrix: Aqueous
Date Sampled: 10/28/2020 1015	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/03/2020	Project Number: 40217496

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/12/2020 1347	MMM	11/11/2020 1108	73065

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	3.2	J	6.9	1.7	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.5	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
Perfluoro-1-butanefluoride (PFBS)	375-73-5	PFAS by ID SOP	7.9		3.5	0.87	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	1.9	J	3.5	0.87	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	6.9		3.5	0.87	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	62		3.5	0.87	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	20		3.5	0.87	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	19		3.5	0.87	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	41		3.5	0.87	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	1.1	J	3.5	0.87	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	37		3.5	0.87	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	41		3.5	0.87	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	63		3.5	0.87	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		99	25-150
13C2_6:2FTS		90	25-150
13C2_8:2FTS		80	25-150
13C2_PFDa		80	25-150
13C2_PFHxDA		71	25-150
13C2_PFTeDA		78	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK03016-002
Description: BG124	Matrix: Aqueous
Date Sampled: 10/28/2020 1015	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/03/2020	Project Number: 40217496

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBS		84	25-150
13C3_PFHxS		78	25-150
13C3-HFPO-DA		86	25-150
13C4_PFBa		92	25-150
13C4_PFHpA		87	25-150
13C5_PFHxA		93	25-150
13C5_PFPeA		97	25-150
13C6_PFDA		88	25-150
13C7_PFUdA		84	25-150
13C8_PFOA		87	25-150
13C8_PFOS		73	25-150
13C8_PFOSA		97	10-150
13C9_PFNA		87	25-150
d-EtFOSA		79	10-150
d5-EtFOSAA		79	25-150
d9-EtFOSE		93	10-150
d-MeFOSA		82	10-150
d3-MeFOSAA		82	25-150
d7-MeFOSE		88	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com



444 21st Street South · La Crosse, Wisconsin · 54601

November 23, 2020

[REDACTED]
2630 Fanta Reed Road
La Crosse, WI 54603

Subject: Private Well Sampling Results
[REDACTED]
2630 Fanta Reed Road
La Crosse, WI 54603
Tax parcel # 4-97-2
Sample ID # WR972, BG122, BG123 and BG124

Dear [REDACTED]:

We have received and reviewed the test results for the samples collected on October 29, 2020 at the above address. Some PFAS compounds were found at levels above the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in your wells are called the “Sample Result” in the tables below.

Please note that we collected a total of five (5) samples from the wells on the property. Four (4) of the samples were analyzed for thirty-six (36) compounds via isotope dilution; This is referred to the WI-36 method. A “split” sample was sample collected from the potable well serving the office building (Unique Well ID # WR972). It was sent to a different lab an analyzed for eighteen (18) PFAS compounds via EPA method 537.1, the Safe Drinking Water Act method. No PFAS compounds were detected in the potable well serving the office building. The following tables summarize the results from the five (5) samples. **Bolded results are above a current recommended level intended to protect health according to the Department of Health Services (DHS).**

Table 1 – Office (UWID WR972) Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	Not Detected	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	Not Detected	20 ppt ^{a,b}
The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6		
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	Not Detected	300 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	Not Detected	300 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	Not Detected	300 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	Not Detected	300 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a

Private Well Sampling Results for

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Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-hetanesulfonic acid CAS # 375-92-8	46 ppt	None Established ^c
Perfluoro-1-pentanesulfonic acid CAS # 2706-91-4	44 ppt	None Established ^c
Perfluoro-n-heptanoic acid CAS # 375-85-9	2.5 ppt	None Established ^c
Perfluoro-n-pentanoic acid CAS #2706-90-3	4.1 ppt	None Established ^c
^a Public health enforcement standard (ES) recommended by DHS. ^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA. ^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation. ^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code. ^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L) ^{BL} Detected in the method blank. Possible lab contaminant.		

Table 2 - Office (UWID WR972) "Split" Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Analyzed	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Analyzed	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Analyzed	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	Not detected	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	Not detected	20 ppt ^{a,b}
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not detected	300 ppt ^a

The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6

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Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	Not detected	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	Not Analyzed	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	Not Analyzed	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	Not detected	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Analyzed	400,000 ppt ^a
^a Public health enforcement standard (ES) recommended by DHS. ^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA. ^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation. ^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code. ^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L) ^{BL} Detected in the method blank. Possible lab contaminant.		

Table 3 – Wellhouse 1 (UWID BG122) Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	44 ppt	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	360 ppt	20 ppt ^{a,b}
<i>The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6</i>		
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	37 ppt	300 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	460 ppt	300 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	88 ppt	300 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	57 ppt	300 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	1.6 ppt	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a

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4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
1H, 1H, 2H, 2H-perflorodecane sulfonic acid (8:2 FTS) CAS # 39108-34-4	2.9 ppt	None Established ^c
1H, 1H, 2H, 2H-perflurooctane sulfonic acid (6:2 FTS) CAS # 27619-97-2	16 ppt	None Established ^c
Perfluoro-1-hetanesulfonic acid CAS # 375-92-8	13 ppt	None Established ^c
Perfluoro-1-pentanesulfonic acid CAS # 2706-91-4	55 ppt	None Established ^c
Perfluoro-n-heptanoic acid CAS # 375-85-9	21 ppt	None Established ^c
Perfluoro-n-pentanoic acid CAS #2706-90-3	49 ppt	None Established ^c

^a Public health enforcement standard (ES) recommended by DHS.

^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA.

^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation.

^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code.

^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L)

^{BL} Detected in the method blank. Possible lab contaminant.

Table 4 – Wellhouse 2 (UWID BG123) Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	11 ppt	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	53 ppt	20 ppt ^{a,b}
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	12 ppt	300 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	50 ppt	300 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	57 ppt	300 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	14 ppt	300 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a

The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6

Private Well Sampling Results for

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Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS) CAS # 27619-97-2	3.1 ppt	None Established ^c
Perfluoro-1-hetanesulfonic acid (PFHpS) CAS # 375-92-8	1.6 ppt	None Established ^c
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS # 2706-91-4	10 ppt	None Established ^c
Perfluoro-n-heptanoic acid (PFHpA) CAS # 375-85-9	5.3 ppt	None Established ^c
Perfluoro-n-pentanoic acid (PFPeA) CAS #2706-90-3	14 ppt	None Established ^c
^a Public health enforcement standard (ES) recommended by DHS. ^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA. ^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation. ^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code. ^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L) ^{BL} Detected in the method blank. Possible lab contaminant.		

Table 5 – Wellhouse 3 (UWID BG124) Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	37 ppt	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	63 ppt	20 ppt ^{a,b}
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	7.9 ppt	300 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	62 ppt	300 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	20 ppt	300 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	41 ppt	300 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	1.1 ppt	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a

The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6

Private Well Sampling Results for

2630 Fanta Reed Road, La Crosse, WI 54603

Tax parcel # 4-97-2

November 23, 2020

Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS) CAS # 27619-97-2	3.2 ppt	None Established ^c
Perfluoro-1-hetanesulfonic acid (PFHpS) CAS # 375-92-8	1.9 ppt	None Established ^c
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS # 2706-91-4	6.9 ppt	None Established ^c
Perfluoro-n-heptanoic acid (PFHpA) CAS # 375-85-9	19 ppt	None Established ^c
Perfluoro-n-pentanoic acid (PFPeA) CAS #2706-90-3	41 ppt	None Established ^c
^a Public health enforcement standard (ES) recommended by DHS. ^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA. ^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation. ^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code. ^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L) ^{BL} Detected in the method blank. Possible lab contaminant.		

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse,
The OS Group, LLC



John C. Storlie, PG
Principal Hydrogeologist

Attachment: Lab report for your well

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK03016-001
Description: WR972	Matrix: Aqueous
Date Sampled: 10/28/2020 0915	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/03/2020	Project Number: 40217496

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/13/2020 1626	MMM	11/11/2020 1108	73065

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.5	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-butanefluoronic acid (PFBA)	375-22-4	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	ND		3.5	0.87	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		96	25-150
13C2_6:2FTS		86	25-150
13C2_8:2FTS		99	25-150
13C2_PFDaA		86	25-150
13C2_PFHxDA		63	25-150
13C2_PFTeDA		87	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK03016-001
Description: WR972	Matrix: Aqueous
Date Sampled: 10/28/2020 0915	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/03/2020	Project Number: 40217496

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		89	25-150
13C3_PFHxS		83	25-150
13C3-HFPO-DA		103	25-150
13C4_PFBa		95	25-150
13C4_PFHpA		94	25-150
13C5_PFHxA		93	25-150
13C5_PFPeA		100	25-150
13C6_PFDA		90	25-150
13C7_PFUdA		87	25-150
13C8_PFOA		95	25-150
13C8_PFOS		73	25-150
13C8_PFOSA		101	10-150
13C9_PFNA		92	25-150
d-EtFOSA		86	10-150
d5-EtFOSAA		87	25-150
d9-EtFOSE		88	10-150
d-MeFOSA		81	10-150
d3-MeFOSAA		95	25-150
d7-MeFOSE		94	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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ANALYTICAL RESULTS

Project: LACROSSE WELL #23 & 24

Pace Project No.: 40217479

Sample: WR972 **Lab ID: 40217479001** Collected: 10/28/20 09:15 Received: 10/30/20 09:30 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
537.1 PFAS Compounds, Water									
Analytical Method: EPA 537.1 Preparation Method: EPA 537.1									
Pace Analytical Services - Ormond Beach									
11CI-PF3OUdS	<0.0015	ug/L	0.0019	0.0015	1	11/03/20 22:57	11/04/20 22:50	763051-92-9	
9CI-PF3ONS	<0.0011	ug/L	0.0019	0.0011	1	11/03/20 22:57	11/04/20 22:50	756426-58-1	
ADONA	<0.00069	ug/L	0.0019	0.00069	1	11/03/20 22:57	11/04/20 22:50	919005-14-4	
HFPO-DA	<0.0016	ug/L	0.0019	0.0016	1	11/03/20 22:57	11/04/20 22:50	13252-13-6	
NEtFOSAA	<0.00089	ug/L	0.0019	0.00089	1	11/03/20 22:57	11/04/20 22:50	2991-50-6	
NMeFOSAA	<0.0015	ug/L	0.0019	0.0015	1	11/03/20 22:57	11/04/20 22:50	2355-31-9	
Perfluorobutanesulfonic acid	<0.00063	ug/L	0.0019	0.00063	1	11/03/20 22:57	11/04/20 22:50	375-73-5	
Perfluorodecanoic acid	<0.0019	ug/L	0.0019	0.0019	1	11/03/20 22:57	11/04/20 22:50	335-76-2	
Perfluorohexanoic acid	<0.0012	ug/L	0.0019	0.0012	1	11/03/20 22:57	11/04/20 22:50	307-24-4	
Perfluorododecanoic acid	<0.0014	ug/L	0.0019	0.0014	1	11/03/20 22:57	11/04/20 22:50	307-55-1	
Perfluoroheptanoic acid	<0.00096	ug/L	0.0019	0.00096	1	11/03/20 22:57	11/04/20 22:50	375-85-9	
Perfluorohexanesulfonic acid	<0.00070	ug/L	0.0019	0.00070	1	11/03/20 22:57	11/04/20 22:50	355-46-4	
Perfluorononanoic acid	<0.0019	ug/L	0.0019	0.0019	1	11/03/20 22:57	11/04/20 22:50	375-95-1	
Perfluorooctanesulfonic acid	<0.0011	ug/L	0.0019	0.0011	1	11/03/20 22:57	11/04/20 22:50	1763-23-1	
Perfluorooctanoic acid	<0.00083	ug/L	0.0019	0.00083	1	11/03/20 22:57	11/04/20 22:50	335-67-1	
Perfluorotetradecanoic acid	<0.0018	ug/L	0.0019	0.0018	1	11/03/20 22:57	11/04/20 22:50	376-06-7	
Perfluorotridecanoic acid	<0.0017	ug/L	0.0019	0.0017	1	11/03/20 22:57	11/04/20 22:50	72629-94-8	
Perfluoroundecanoic acid	<0.0019	ug/L	0.0019	0.0019	1	11/03/20 22:57	11/04/20 22:50	2058-94-8	
Surrogates									
13C2-PFDA (S)	88	%	70-130		1	11/03/20 22:57	11/04/20 22:50		
13C2-PFHxA (S)	101	%	70-130		1	11/03/20 22:57	11/04/20 22:50		
NEtFOSAA-d5 (S)	72	%	70-130		1	11/03/20 22:57	11/04/20 22:50		
HFPO-DAS (S)	92	%	70-130		1	11/03/20 22:57	11/04/20 22:50		

REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, LLC.

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK03016-004
Description: BG122	Matrix: Aqueous
Date Sampled: 10/28/2020 0945	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/03/2020	Project Number: 40217496

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/12/2020 1418	MMM	11/11/2020 1108	73065

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	2.9	J	6.9	1.7	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	16		6.9	1.7	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.4	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	37		3.4	0.86	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	13		3.4	0.86	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	55		3.4	0.86	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	460		3.4	0.86	ng/L	1
Perfluoro-n-butyric acid (PFBA)	375-22-4	PFAS by ID SOP	88		3.4	0.86	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	21		3.4	0.86	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	57		3.4	0.86	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	1.6	J	3.4	0.86	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	44		3.4	0.86	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	49		3.4	0.86	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	360		3.4	0.86	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		111	25-150
13C2_6:2FTS		99	25-150
13C2_8:2FTS		86	25-150
13C2_PFDaA		83	25-150
13C2_PFHxDA		82	25-150
13C2_PFTeDA		87	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK03016-004
Description: BG122	Matrix: Aqueous
Date Sampled: 10/28/2020 0945	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/03/2020	Project Number: 40217496

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		90	25-150
13C3_PFHxS		83	25-150
13C3-HFPO-DA		94	25-150
13C4_PFBa		97	25-150
13C4_PFHpA		95	25-150
13C5_PFHxA		98	25-150
13C5_PFPeA		98	25-150
13C6_PFDa		97	25-150
13C7_PFUdA		95	25-150
13C8_PFOA		92	25-150
13C8_PFOS		83	25-150
13C8_PFOSA		99	10-150
13C9_PFNA		83	25-150
d-EtFOSA		81	10-150
d5-EtFOSAA		90	25-150
d9-EtFOSE		92	10-150
d-MeFOSA		89	10-150
d3-MeFOSAA		88	25-150
d7-MeFOSE		92	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK03016-003
Description: BG123	Matrix: Aqueous
Date Sampled: 10/28/2020 1000	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/03/2020	Project Number: 40217496

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/12/2020 1408	MMM	11/11/2020 1108	73065

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	3.1	J	7.0	1.7	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.5	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
Perfluoro-1-butanefluoride (PFBS)	375-73-5	PFAS by ID SOP	12		3.5	0.87	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	1.6	J	3.5	0.87	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	10		3.5	0.87	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	50		3.5	0.87	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	57		3.5	0.87	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	5.3		3.5	0.87	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	14		3.5	0.87	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	11		3.5	0.87	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	14		3.5	0.87	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	53		3.5	0.87	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		99	25-150
13C2_6:2FTS		98	25-150
13C2_8:2FTS		86	25-150
13C2_PFDa		88	25-150
13C2_PFHxDA		80	25-150
13C2_PFTeDA		84	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK03016-003
Description: BG123	Matrix: Aqueous
Date Sampled: 10/28/2020 1000	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/03/2020	Project Number: 40217496

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		86	25-150
13C3_PFHxS		82	25-150
13C3-HFPO-DA		110	25-150
13C4_PFBa		94	25-150
13C4_PFHpA		94	25-150
13C5_PFHxA		95	25-150
13C5_PFPeA		92	25-150
13C6_PFDa		93	25-150
13C7_PFUdA		89	25-150
13C8_PFOa		97	25-150
13C8_PFOs		77	25-150
13C8_PFOsA		99	10-150
13C9_PFNa		88	25-150
d-EtFOsA		80	10-150
d5-EtFOsAA		87	25-150
d9-EtFOsE		87	10-150
d-MeFOsA		86	10-150
d3-MeFOsAA		85	25-150
d7-MeFOsE		85	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK03016-002
Description: BG124	Matrix: Aqueous
Date Sampled: 10/28/2020 1015	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/03/2020	Project Number: 40217496

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/12/2020 1347	MMM	11/11/2020 1108	73065

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	3.2	J	6.9	1.7	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.5	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	7.9		3.5	0.87	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	1.9	J	3.5	0.87	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	6.9		3.5	0.87	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	62		3.5	0.87	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	20		3.5	0.87	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	19		3.5	0.87	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	41		3.5	0.87	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	1.1	J	3.5	0.87	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	37		3.5	0.87	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	41		3.5	0.87	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	63		3.5	0.87	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		99	25-150
13C2_6:2FTS		90	25-150
13C2_8:2FTS		80	25-150
13C2_PFDaA		80	25-150
13C2_PFHxDA		71	25-150
13C2_PFTeDA		78	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK03016-002
Description: BG124	Matrix: Aqueous
Date Sampled: 10/28/2020 1015	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/03/2020	Project Number: 40217496

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		84	25-150
13C3_PFHxS		78	25-150
13C3-HFPO-DA		86	25-150
13C4_PFBa		92	25-150
13C4_PFHpA		87	25-150
13C5_PFHxA		93	25-150
13C5_PFPeA		97	25-150
13C6_PFDa		88	25-150
13C7_PFUdA		84	25-150
13C8_PFOA		87	25-150
13C8_PFOS		73	25-150
13C8_PFOSA		97	10-150
13C9_PFNA		87	25-150
d-EtFOSA		79	10-150
d5-EtFOSAA		79	25-150
d9-EtFOSE		93	10-150
d-MeFOSA		82	10-150
d3-MeFOSAA		82	25-150
d7-MeFOSE		88	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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444 21st Street South · La Crosse, Wisconsin · 54601

November 23, 2020

██████████
 2421 Bainbridge Street
 La Crosse, WI 54603

Subject: Private Well Sampling Results
 2421 Bainbridge Street, La Crosse, WI 54603
 Tax parcel # 4-116-0
 Well ID # 116-0

Dear ██████████ :

We have received and reviewed the test results for the sample collected on October 29, 2020 at the above address. Some PFAS compounds were found, but the levels found were **below** the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in *your* well are called the “Sample Result” in the table below.

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)	The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}	
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}	
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}	
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}	
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	2.2 ppt ^{BL}	20 ppt ^{a,b}	
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	2.9 ppt ^{BL}	20 ppt ^{a,b}	

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	2.1 ppt ^{BL}	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	2.0 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	4.4 ppt ^{BL}	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	Not Detected	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-n-pentanoic acid (PFPeA) CAS # 2706-90-3	1.1 ppt	None Established ^c

^a Public health enforcement standard (ES) recommended by DHS.

^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA.

^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation.

^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code.

^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L)

^{BL} Detected in the method blank. Possible lab contaminant.

Private Well Sampling Results for
2421 Bainbridge Street, La Crosse, WI 54603
Tax parcel # 4-116-0
Well ID # 116-0
November 23, 2020

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK03016-018
Description: 116-0	Matrix: Aqueous
Date Sampled: 10/29/2020 1105	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/03/2020	Project Number: 40217496

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/13/2020 1257	SES	11/11/2020 1636	73134

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.5	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	2.1	BJ	3.5	0.87	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	2.0	J	3.5	0.87	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	4.4	B	3.5	0.87	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	2.2	BJ	3.5	0.87	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	1.1	J	3.5	0.87	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	2.9	BJ	3.5	0.87	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		102	25-150
13C2_6:2FTS		93	25-150
13C2_8:2FTS		94	25-150
13C2_PFDaA		86	25-150
13C2_PFHxDA		91	25-150
13C2_PFTeDA		83	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK03016-018
Description: 116-0	Matrix: Aqueous
Date Sampled: 10/29/2020 1105	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/03/2020	Project Number: 40217496

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		87	25-150
13C3_PFHxS		90	25-150
13C3-HFPO-DA		96	25-150
13C4_PFBa		96	25-150
13C4_PFHpA		94	25-150
13C5_PFHxA		94	25-150
13C5_PFPeA		94	25-150
13C6_PFDa		93	25-150
13C7_PFUdA		83	25-150
13C8_PFOA		92	25-150
13C8_PFOS		86	25-150
13C8_PFOSA		98	10-150
13C9_PFNA		94	25-150
d-EtFOSA		88	10-150
d5-EtFOSAA		88	25-150
d9-EtFOSE		91	10-150
d-MeFOSA		85	10-150
d3-MeFOSAA		94	25-150
d7-MeFOSE		100	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
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444 21st Street South · La Crosse, Wisconsin · 54601

November 23, 2020

██████████
2530 2nd Avenue East
La Crosse, WI 54603

Subject: Private Well Sampling Results
2530 2nd Avenue East, La Crosse, WI 54603
Tax parcel # 4-185-0
Sample ID # 185-0

Dear ██████████:

We have received and reviewed the test results for the sample collected on October 29, 2020 at the above address. Some PFAS compounds were found at levels above the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the "Recommended Public Health Standard" in the table below. The levels found in your well are called the "Sample Result" in the table below.

Because some of the levels are above the recommended Public Health Standard, the City is offering to provide bottled water delivered to your home for drinking, cooking, and brushing your teeth. There will be no cost to you for the bottled water. Please complete the attached form and mail it to The OS Group to make arrangements for having a water dispenser and bottles delivered to your home. Call 608-668-2718 or email PFAS@theOSgrp.com . You may also complete this form on line at www.cityoflacrosse.org/bottledwater

The following table summarizes the test results from the sample. **Bolded results** are above a current recommended level intended to protect your health according to the Department of Health Services (DHS).

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	Not Detected	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	4.8 ppt	20 ppt ^{a,b}
The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6		
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	7.7 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	77 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	19 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	2.5 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a

Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS # 2706-91-4	6.6 ppt	None Established ^c
Perfluoro-n-pentanoic acid (PFPeA) CAS #2706-90-3	1.8 ppt	None Established ^c
^a Public health enforcement standard (ES) recommended by DHS. ^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA. ^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation. ^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code. ^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L) ^{BL} Detected in the method blank. Possible lab contaminant.		

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>	<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well
 Bottled Water Acknowledgement

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK03016-019
Description: 185-0	Matrix: Aqueous
Date Sampled: 10/29/2020 1130	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/03/2020	Project Number: 40217496

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	SOP SPE	PFAS by ID SOP	1	11/17/2020 2054	SES	11/16/2020 1613	73668

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.4	1.9	ng/L	2
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.4	1.9	ng/L	2
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.4	1.9	ng/L	2
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.4	1.9	ng/L	2
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.4	1.9	ng/L	2
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.4	1.9	ng/L	2
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.4	1.9	ng/L	2
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.4	1.9	ng/L	2
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.4	1.9	ng/L	2
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.4	1.9	ng/L	2
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.4	1.9	ng/L	2
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		15	3.7	ng/L	2
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.4	1.9	ng/L	2
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.4	1.9	ng/L	2
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	7.7		3.7	0.93	ng/L	2
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.7	0.93	ng/L	2
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.7	0.93	ng/L	2
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.7	0.93	ng/L	2
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.7	0.93	ng/L	2
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	6.6		3.7	0.93	ng/L	2
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.4	1.9	ng/L	2
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	77		3.7	0.93	ng/L	2
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	19		3.7	0.93	ng/L	2
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.7	0.93	ng/L	2
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.7	0.93	ng/L	2
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.7	0.93	ng/L	2
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.4	1.9	ng/L	2
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	2.5	J	3.7	0.93	ng/L	2
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.7	0.93	ng/L	2
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.4	1.9	ng/L	2
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		3.7	0.93	ng/L	2
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	1.8	J	3.7	0.93	ng/L	2
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.7	0.93	ng/L	2
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.7	0.93	ng/L	2
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.7	0.93	ng/L	2
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	4.8		3.7	0.93	ng/L	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
13C2_4:2FTS		90	25-150
13C2_6:2FTS		92	25-150
13C2_8:2FTS		87	25-150
13C2_PFDoA		84	25-150
13C2_PFHxDA		85	25-150
13C2_PFTeDA		74	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
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PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK03016-019
Description: 185-0	Matrix: Aqueous
Date Sampled: 10/29/2020 1130	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/03/2020	Project Number: 40217496

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
13C3_PFBs		79	25-150
13C3_PFHxS		82	25-150
13C3-HFPO-DA		90	25-150
13C4_PFBa		93	25-150
13C4_PFHpA		89	25-150
13C5_PFHxA		86	25-150
13C5_PFPeA		90	25-150
13C6_PFDa		90	25-150
13C7_PFUdA		84	25-150
13C8_PFOA		91	25-150
13C8_PFOS		84	25-150
13C8_PFOSA		96	10-150
13C9_PFNA		87	25-150
d-EtFOSA		75	10-150
d5-EtFOSAA		86	25-150
d9-EtFOSE		75	10-150
d-MeFOSA		73	10-150
d3-MeFOSAA		88	25-150
d7-MeFOSE		78	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
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BOTTLED WATER ACKNOWLEDGEMENT

2530 2nd Avenue East, La Crosse, WI 54603

If you desire to accept the bottled water delivery, please complete and sign this form and return it to The OS Group at PFAS@TheOSgrp.com or mail to 444 21st St. S, La Crosse, WI 54601. You may also complete this form electronically on line at www.cityoflacrosse.org/bottledwater . Call 608-668-2718 with any question you may have.

As pre-caution for the protection of human health, the City of La Crosse (The City) will provide, on a temporary basis, bottled water for drinking, cooking and toothbrushing purposes at the above referenced address. The water will be delivered to your home or business by a commercial water delivery service. At the City's cost, a dispenser / cooler and regular deliveries of 5-gallon containers of water will be provided. The City reserves the right to dictate the conditions of delivery, such as minimum and maximum number of containers per delivery, frequency and timing of deliveries. The City reserves the right to periodically review whether The City should continue to provide bottled water, considering factors such as State and Federal standards and guidance, evolving knowledge and understanding of the sources, cause and responsibility for the contamination, new or reinterpreted test results, and the availability of more permanent or cost-effective sources of water for the above purposes. The City of La Crosse makes no warranty or representation regarding the suitability of the bottled water beyond those made by the commercial water delivery service.

Check ownership:

_____ **Owner-Occupant**

_____ **Occupant Only**

Number of Occupants: _____

All reusable or returnable equipment and supplies, such as the containers and cooler/dispenser, are the property of the commercial water delivery service or the City of La Crosse. By signing below, the Occupant of the above referenced property acknowledges that all reusable or returnable equipment and supplies shall be returned to the commercial water delivery service or the City of La Crosse upon request. The Occupant agrees to provide reasonable access for delivery of bottled water and pick up of reusable or returnable equipment and supplies. Occupant(s) acknowledges that they may be required to sign an agreement with the commercial water delivery service as a condition of receiving bottled water.

Signed: _____ Dated: _____

Printed Name: _____

BOTTLED WATER ACKNOWLEDGEMENT

2530 2nd Avenue East, La Crosse, WI 54603

If you desire to accept the bottled water delivery, please complete and sign this form and return it to The OS Group at PFAS@TheOSgrp.com or mail to 444 21st St. S, La Crosse, WI 54601. You may also complete this form electronically on line at www.cityoflacrosse.org/bottledwater . Call 608-668-2718 with any question you may have.

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Signed: _____ Dated: _____

Printed Name: _____



444 21st Street South · La Crosse, Wisconsin · 54601

November 23, 2020

██████████
2524 2nd Avenue East
La Crosse, WI 54603

Subject: Private Well Sampling Results
2524 2nd Avenue East, La Crosse, WI 54603
Tax parcel # 4-186-0
Sample ID # 186-0

Dear ██████████:

We have received and reviewed the test results for the sample collected on October 29, 2020 at the above address. Some PFAS compounds were found at levels above the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in your well are called the “Sample Result” in the table below.

Because some of the levels are above the recommended Public Health Standard, the City is offering to provide bottled water delivered to your home for drinking, cooking, and brushing your teeth. There will be no cost to you for the bottled water. Please complete the attached form and mail it to The OS Group to make arrangements for having a water dispenser and bottles delivered to your home. Call 608-668-2718 or email PFAS@theOSgrp.com . You may also complete this form on line at www.cityoflacrosse.org/bottledwater

The following table summarizes the test results from the sample. **Bolded results** are above a current recommended level intended to protect your health according to the Department of Health Services (DHS).

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	5.2 ppt	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	22 ppt	20 ppt ^{a,b}
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	15 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	37 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	79 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	1.9 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a

The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6

Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-hetanesulfonic acid (PFHpS) CAS # 375-92-8	1.5 ppt	None Established ^c
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS # 2706-91-4	11 ppt	None Established ^c
Perfluoro-n-pentanoic acid (PFPeA) CAS #2706-90-3	1.8 ppt	None Established ^c
^a Public health enforcement standard (ES) recommended by DHS. ^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA. ^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation. ^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code. ^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L) ^{BL} Detected in the method blank. Possible lab contaminant.		

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>	<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well
 Bottled Water Acknowledgement

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK03016-020
Description: 186-0	Matrix: Aqueous
Date Sampled: 10/29/2020 1155	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/03/2020	Project Number: 40217496

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	SOP SPE	PFAS by ID SOP	1	11/17/2020 2104	SES	11/16/2020 1613	73668

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.1	1.8	ng/L	2
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.1	1.8	ng/L	2
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.1	1.8	ng/L	2
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.1	1.8	ng/L	2
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.1	1.8	ng/L	2
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.1	1.8	ng/L	2
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.1	1.8	ng/L	2
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.1	1.8	ng/L	2
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.1	1.8	ng/L	2
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.1	1.8	ng/L	2
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.1	1.8	ng/L	2
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.5	ng/L	2
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.1	1.8	ng/L	2
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.1	1.8	ng/L	2
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	15		3.5	0.88	ng/L	2
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.5	0.88	ng/L	2
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	1.5	J	3.5	0.88	ng/L	2
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.5	0.88	ng/L	2
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.5	0.88	ng/L	2
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	11		3.5	0.88	ng/L	2
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.1	1.8	ng/L	2
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	37		3.5	0.88	ng/L	2
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	79		3.5	0.88	ng/L	2
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.5	0.88	ng/L	2
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.5	0.88	ng/L	2
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.5	0.88	ng/L	2
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.1	1.8	ng/L	2
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	1.9	J	3.5	0.88	ng/L	2
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.5	0.88	ng/L	2
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.1	1.8	ng/L	2
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	5.2		3.5	0.88	ng/L	2
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	1.8	J	3.5	0.88	ng/L	2
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.5	0.88	ng/L	2
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.5	0.88	ng/L	2
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.5	0.88	ng/L	2
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	22		3.5	0.88	ng/L	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
13C2_4:2FTS		87	25-150
13C2_6:2FTS		88	25-150
13C2_8:2FTS		92	25-150
13C2_PFDaA		76	25-150
13C2_PFHxDA		76	25-150
13C2_PFTeDA		67	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK03016-020
Description: 186-0	Matrix: Aqueous
Date Sampled: 10/29/2020 1155	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/03/2020	Project Number: 40217496

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
13C3_PFBs		79	25-150
13C3_PFHxS		84	25-150
13C3-HFPO-DA		86	25-150
13C4_PFBa		88	25-150
13C4_PFHpA		83	25-150
13C5_PFHxA		86	25-150
13C5_PFPeA		80	25-150
13C6_PFDA		82	25-150
13C7_PFUdA		78	25-150
13C8_PFOA		82	25-150
13C8_PFOS		76	25-150
13C8_PFOSA		92	10-150
13C9_PFNA		86	25-150
d-EtFOSA		70	10-150
d5-EtFOSAA		85	25-150
d9-EtFOSE		70	10-150
d-MeFOSA		73	10-150
d3-MeFOSAA		79	25-150
d7-MeFOSE		66	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
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BOTTLED WATER ACKNOWLEDGEMENT

2524 2nd Avenue East, La Crosse, WI 54603

If you desire to accept the bottled water delivery, please complete and sign this form and return it to The OS Group at PFAS@TheOSgrp.com or mail to 444 21st St. S, La Crosse, WI 54601. You may also complete this form electronically on line at www.cityoflacrosse.org/bottledwater . Call 608-668-2718 with any question you may have.

As pre-caution for the protection of human health, the City of La Crosse (The City) will provide, on a temporary basis, bottled water for drinking, cooking and toothbrushing purposes at the above referenced address. The water will be delivered to your home or business by a commercial water delivery service. At the City's cost, a dispenser / cooler and regular deliveries of 5-gallon containers of water will be provided. The City reserves the right to dictate the conditions of delivery, such as minimum and maximum number of containers per delivery, frequency and timing of deliveries. The City reserves the right to periodically review whether The City should continue to provide bottled water, considering factors such as State and Federal standards and guidance, evolving knowledge and understanding of the sources, cause and responsibility for the contamination, new or reinterpreted test results, and the availability of more permanent or cost-effective sources of water for the above purposes. The City of La Crosse makes no warranty or representation regarding the suitability of the bottled water beyond those made by the commercial water delivery service.

Check ownership:

_____ **Owner-Occupant**

_____ **Occupant Only**

Number of Occupants: _____

All reusable or returnable equipment and supplies, such as the containers and cooler/dispenser, are the property of the commercial water delivery service or the City of La Crosse. By signing below, the Occupant of the above referenced property acknowledges that all reusable or returnable equipment and supplies shall be returned to the commercial water delivery service or the City of La Crosse upon request. The Occupant agrees to provide reasonable access for delivery of bottled water and pick up of reusable or returnable equipment and supplies. Occupant(s) acknowledges that they may be required to sign an agreement with the commercial water delivery service as a condition of receiving bottled water.

Signed: _____ Dated: _____

Printed Name: _____



444 21st Street South · La Crosse, Wisconsin · 54601

November 23, 2020

██████████
2553 2nd Avenue East
La Crosse, WI 54603

Subject: Private Well Sampling Results
2553 2nd Avenue East, La Crosse, WI 54603
Tax parcel # 4-225-0
Sample ID # 225-0

Dear ██████████:

We have received and reviewed the test results for the sample collected on October 29, 2020 at the above address. Some PFAS compounds were found at levels above the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in your well are called the “Sample Result” in the table below.

Because some of the levels are above the recommended Public Health Standard, the City is offering to provide bottled water delivered to your home for drinking, cooking, and brushing your teeth. There will be no cost to you for the bottled water. Please complete the attached form and mail it to The OS Group to make arrangements for having a water dispenser and bottles delivered to your home or business. Call 608-668-2718 or email PFAS@theOSgrp.com. You may also complete this form on line at www.cityoflacrosse.org/bottledwater

The following table summarizes the test results from the sample. **Bolded results** are above a current recommended level intended to protect your health according to the Department of Health Services (DHS).

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	7.5 ppt	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	21 ppt	20 ppt ^{a,b}
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	6.1 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	18 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	10 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	2.3 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	1.6 ppt	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a

The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6

Perfluoro-1-hetanesulfonic acid (PFHpS) CAS # 375-92-8	1.1 ppt	None Established ^c
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS # 2706-91-4	1.3 ppt	None Established ^c
Perfluoro-n-heptanoic acid (PFHpA) CAS # 375-85-9	2.0 ppt	None Established ^c
Perfluoro-n-pentanoic acid (PFPeA) CAS #2706-90-3	1.8 ppt	None Established ^c
^a Public health enforcement standard (ES) recommended by DHS. ^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA. ^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation. ^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code. ^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L) ^{BL} Detected in the method blank. Possible lab contaminant.		

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>	<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
 The OS Group, LLC

Attachment: Lab report for your well
 Bottled Water Acknowledgement

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK03016-021
Description: 225-0	Matrix: Aqueous
Date Sampled: 10/29/2020 1210	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/03/2020	Project Number: 40217496

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	SOP SPE	PFAS by ID SOP	1	11/17/2020 2115	SES	11/16/2020 1613	73668

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.5	1.9	ng/L	2
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.5	1.9	ng/L	2
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.5	1.9	ng/L	2
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.5	1.9	ng/L	2
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.5	1.9	ng/L	2
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.5	1.9	ng/L	2
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.5	1.9	ng/L	2
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.5	1.9	ng/L	2
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.5	1.9	ng/L	2
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.5	1.9	ng/L	2
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.5	1.9	ng/L	2
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		15	3.7	ng/L	2
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.5	1.9	ng/L	2
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.5	1.9	ng/L	2
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	6.1		3.7	0.93	ng/L	2
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.7	0.93	ng/L	2
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	1.1	J	3.7	0.93	ng/L	2
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.7	0.93	ng/L	2
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.7	0.93	ng/L	2
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	1.3	J	3.7	0.93	ng/L	2
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.5	1.9	ng/L	2
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	18		3.7	0.93	ng/L	2
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	10		3.7	0.93	ng/L	2
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.7	0.93	ng/L	2
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.7	0.93	ng/L	2
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	2.0	J	3.7	0.93	ng/L	2
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.5	1.9	ng/L	2
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	2.3	J	3.7	0.93	ng/L	2
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	1.6	J	3.7	0.93	ng/L	2
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.5	1.9	ng/L	2
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	7.5		3.7	0.93	ng/L	2
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	1.8	J	3.7	0.93	ng/L	2
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.7	0.93	ng/L	2
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.7	0.93	ng/L	2
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.7	0.93	ng/L	2
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	21		3.7	0.93	ng/L	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
13C2_4:2FTS		93	25-150
13C2_6:2FTS		90	25-150
13C2_8:2FTS		86	25-150
13C2_PFDa		78	25-150
13C2_PFHxDA		80	25-150
13C2_PFTeDA		70	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK03016-021
Description: 225-0	Matrix: Aqueous
Date Sampled: 10/29/2020 1210	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/03/2020	Project Number: 40217496

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
13C3_PFBs		78	25-150
13C3_PFHxS		83	25-150
13C3-HFPO-DA		86	25-150
13C4_PFBa		89	25-150
13C4_PFHpA		85	25-150
13C5_PFHxA		80	25-150
13C5_PFPeA		87	25-150
13C6_PFDa		87	25-150
13C7_PFUdA		81	25-150
13C8_PFOA		87	25-150
13C8_PFOS		82	25-150
13C8_PFOSA		88	10-150
13C9_PFNA		86	25-150
d-EtFOSA		80	10-150
d5-EtFOSAA		84	25-150
d9-EtFOSE		70	10-150
d-MeFOSA		75	10-150
d3-MeFOSAA		81	25-150
d7-MeFOSE		65	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

BOTTLED WATER ACKNOWLEDGEMENT

2553 2nd Avenue East, La Crosse, WI 54603

If you desire to accept the bottled water delivery, please complete and sign this form and return it to The OS Group at PFAS@TheOSgrp.com or mail to 444 21st St. S, La Crosse, WI 54601. You may also complete this form electronically on line at www.cityoflacrosse.org/bottledwater . Call 608-668-2718 with any question you may have.

As pre-caution for the protection of human health, the City of La Crosse (The City) will provide, on a temporary basis, bottled water for drinking, cooking and toothbrushing purposes at the above referenced address. The water will be delivered to your home or business by a commercial water delivery service. At the City's cost, a dispenser / cooler and regular deliveries of 5-gallon containers of water will be provided. The City reserves the right to dictate the conditions of delivery, such as minimum and maximum number of containers per delivery, frequency and timing of deliveries. The City reserves the right to periodically review whether The City should continue to provide bottled water, considering factors such as State and Federal standards and guidance, evolving knowledge and understanding of the sources, cause and responsibility for the contamination, new or reinterpreted test results, and the availability of more permanent or cost-effective sources of water for the above purposes. The City of La Crosse makes no warranty or representation regarding the suitability of the bottled water beyond those made by the commercial water delivery service.

Check ownership:

_____ **Owner-Occupant**

_____ **Occupant Only**

Number of Occupants: _____

All reusable or returnable equipment and supplies, such as the containers and cooler/dispenser, are the property of the commercial water delivery service or the City of La Crosse. By signing below, the Occupant of the above referenced property acknowledges that all reusable or returnable equipment and supplies shall be returned to the commercial water delivery service or the City of La Crosse upon request. The Occupant agrees to provide reasonable access for delivery of bottled water and pick up of reusable or returnable equipment and supplies. Occupant(s) acknowledges that they may be required to sign an agreement with the commercial water delivery service as a condition of receiving bottled water.

Signed: _____ Dated: _____

Printed Name: _____



444 21st Street South · La Crosse, Wisconsin · 54601

November 23, 2020

████████████████████
 2557 2nd Avenue East
 La Crosse, WI 54603

Subject: Private Well Sampling Results
 2557 2nd Avenue East, La Crosse, WI 54603
 Tax parcel # 4-226-0
 Sample ID # 226-0

Dear ██████████ :

We have received and reviewed the test results for the sample collected on October 29, 2020 at the above address. Some PFAS compounds were found, but the levels found were **below** the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in *your* well are called the “Sample Result” in the table below.

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)	
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}	The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}	
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}	
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}	
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	5.5 ppt	20 ppt ^{a,b}	
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	13 ppt	20 ppt ^{a,b}	

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	6.5 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	8.2 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	71 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	Not Detected	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS # 2706-91-4	4.8 ppt	None Established ^c

^a Public health enforcement standard (ES) recommended by DHS.

^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA.

^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation.

^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code.

^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L)

^{BL} Detected in the method blank. Possible lab contaminant.

Private Well Sampling Results for
2557 2nd Avenue East, La Crosse, WI 54603
Tax parcel # 4-226-0
Sample ID # 226-0
November 23, 2020

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK03016-022
Description: 226-0	Matrix: Aqueous
Date Sampled: 10/29/2020 1225	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/03/2020	Project Number: 40217496

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	SOP SPE	PFAS by ID SOP	1	11/17/2020 2125	SES	11/16/2020 1613	73668

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.2	1.8	ng/L	2
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.2	1.8	ng/L	2
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.2	1.8	ng/L	2
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.2	1.8	ng/L	2
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.2	1.8	ng/L	2
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.2	1.8	ng/L	2
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.2	1.8	ng/L	2
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.2	1.8	ng/L	2
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.2	1.8	ng/L	2
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.2	1.8	ng/L	2
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.2	1.8	ng/L	2
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.6	ng/L	2
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.2	1.8	ng/L	2
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.2	1.8	ng/L	2
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	6.5		3.6	0.90	ng/L	2
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.6	0.90	ng/L	2
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.6	0.90	ng/L	2
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.6	0.90	ng/L	2
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.6	0.90	ng/L	2
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	4.8		3.6	0.90	ng/L	2
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.2	1.8	ng/L	2
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	8.2		3.6	0.90	ng/L	2
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	71		3.6	0.90	ng/L	2
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.6	0.90	ng/L	2
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.6	0.90	ng/L	2
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.6	0.90	ng/L	2
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.2	1.8	ng/L	2
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		3.6	0.90	ng/L	2
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.6	0.90	ng/L	2
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.2	1.8	ng/L	2
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	5.5		3.6	0.90	ng/L	2
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		3.6	0.90	ng/L	2
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.6	0.90	ng/L	2
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.6	0.90	ng/L	2
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.6	0.90	ng/L	2
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	13		3.6	0.90	ng/L	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
13C2_4:2FTS		88	25-150
13C2_6:2FTS		89	25-150
13C2_8:2FTS		82	25-150
13C2_PFDaA		70	25-150
13C2_PFHxDA		71	25-150
13C2_PFTeDA		63	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK03016-022
Description: 226-0	Matrix: Aqueous
Date Sampled: 10/29/2020 1225	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/03/2020	Project Number: 40217496

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
13C3_PFBs		75	25-150
13C3_PFHxS		82	25-150
13C3-HFPO-DA		85	25-150
13C4_PFBa		88	25-150
13C4_PFHpA		82	25-150
13C5_PFHxA		82	25-150
13C5_PFPeA		84	25-150
13C6_PFDA		80	25-150
13C7_PFUdA		72	25-150
13C8_PFOA		82	25-150
13C8_PFOS		76	25-150
13C8_PFOSA		89	10-150
13C9_PFNA		82	25-150
d-EtFOSA		69	10-150
d5-EtFOSAA		76	25-150
d9-EtFOSE		66	10-150
d-MeFOSA		67	10-150
d3-MeFOSAA		76	25-150
d7-MeFOSE		59	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com



444 21st Street South · La Crosse, Wisconsin · 54601

November 23, 2020

[REDACTED]
2540 Bainbridge Street
La Crosse, WI 54603

Subject: Private Well Sampling Results
2540 Bainbridge Street, La Crosse, WI 54603
Tax parcel # 4-230-0
Sample ID # 230-0

Dear [REDACTED]:

We have received and reviewed the test results for the sample collected on October 29, 2020 at the above address. Some PFAS compounds were found at levels above the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in your well are called the “Sample Result” in the table below.

Because some of the levels are above the recommended Public Health Standard, the City is offering to provide bottled water delivered to your home for drinking, cooking, and brushing your teeth. There will be no cost to you for the bottled water. Please complete the attached form and mail it to The OS Group to make arrangements for having a water dispenser and bottles delivered to your home or business. Call 608-668-2718 or email PFAS@theOSgrp.com. You may also complete this form on line at www.cityoflacrosse.org/bottledwater

The following table summarizes the test results from the sample. **Bolded results** are above a current recommended level intended to protect your health according to the Department of Health Services (DHS).

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	8.2 ppt	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	140 ppt	20 ppt ^{a,b}
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	12 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	220 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	20 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	7.9 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a

The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6

Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS # 2706-91-4	6.3 ppt	None Established ^c
Perfluoro-n-heptanoic acid (PFHpA) CAS # 375-85-9	1.1 ppt	None Established ^c
Perfluoro-n-pentanoic acid (PFPeA) CAS #2706-90-3	0.95 ppt	None Established ^c
^a Public health enforcement standard (ES) recommended by DHS. ^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA. ^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation. ^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code. ^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L) ^{BL} Detected in the method blank. Possible lab contaminant.		

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well
 Bottled Water Acknowledgement

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK03016-026
Description: 230-0	Matrix: Aqueous
Date Sampled: 10/29/2020 1420	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/03/2020	Project Number: 40217496

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	SOP SPE	PFAS by ID SOP	1	11/17/2020 2208	SES	11/16/2020 1613	73668

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.1	1.8	ng/L	2
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.1	1.8	ng/L	2
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.1	1.8	ng/L	2
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.1	1.8	ng/L	2
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.1	1.8	ng/L	2
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.1	1.8	ng/L	2
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.1	1.8	ng/L	2
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.1	1.8	ng/L	2
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.1	1.8	ng/L	2
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.1	1.8	ng/L	2
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.1	1.8	ng/L	2
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.6	ng/L	2
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.1	1.8	ng/L	2
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.1	1.8	ng/L	2
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	12		3.6	0.89	ng/L	2
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.6	0.89	ng/L	2
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	7.6		3.6	0.89	ng/L	2
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.6	0.89	ng/L	2
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.6	0.89	ng/L	2
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	22		3.6	0.89	ng/L	2
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.1	1.8	ng/L	2
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	220		3.6	0.89	ng/L	2
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	20		3.6	0.89	ng/L	2
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.6	0.89	ng/L	2
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.6	0.89	ng/L	2
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	1.2	J	3.6	0.89	ng/L	2
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.1	1.8	ng/L	2
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	7.9		3.6	0.89	ng/L	2
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.6	0.89	ng/L	2
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.1	1.8	ng/L	2
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	8.2		3.6	0.89	ng/L	2
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	3.6		3.6	0.89	ng/L	2
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.6	0.89	ng/L	2
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.6	0.89	ng/L	2
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.6	0.89	ng/L	2
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	140		3.6	0.89	ng/L	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
13C2_4:2FTS		88	25-150
13C2_6:2FTS		92	25-150
13C2_8:2FTS		90	25-150
13C2_PFDaA		73	25-150
13C2_PFHxDA		78	25-150
13C2_PFTeDA		64	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK03016-026
Description: 230-0	Matrix: Aqueous
Date Sampled: 10/29/2020 1420	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/03/2020	Project Number: 40217496

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
13C3_PFBS		79	25-150
13C3_PFHxS		85	25-150
13C3-HFPO-DA		85	25-150
13C4_PFBa		90	25-150
13C4_PFHpA		82	25-150
13C5_PFHxA		83	25-150
13C5_PFPeA		88	25-150
13C6_PFDA		84	25-150
13C7_PFUdA		71	25-150
13C8_PFOA		86	25-150
13C8_PFOS		85	25-150
13C8_PFOSA		91	10-150
13C9_PFNA		83	25-150
d-EtFOSA		63	10-150
d5-EtFOSAA		81	25-150
d9-EtFOSE		66	10-150
d-MeFOSA		72	10-150
d3-MeFOSAA		74	25-150
d7-MeFOSE		69	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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BOTTLED WATER ACKNOWLEDGEMENT

2540 Bainbridge Street, La Crosse, WI 54603

If you desire to accept the bottled water delivery, please complete and sign this form and return it to The OS Group at PFAS@TheOSgrp.com or mail to 444 21st St. S, La Crosse, WI 54601. You may also complete this form electronically on line at www.cityoflacrosse.org/bottledwater . Call 608-668-2718 with any question you may have.

As pre-caution for the protection of human health, the City of La Crosse (The City) will provide, on a temporary basis, bottled water for drinking, cooking and toothbrushing purposes at the above referenced address. The water will be delivered to your home or business by a commercial water delivery service. At the City's cost, a dispenser / cooler and regular deliveries of 5-gallon containers of water will be provided. The City reserves the right to dictate the conditions of delivery, such as minimum and maximum number of containers per delivery, frequency and timing of deliveries. The City reserves the right to periodically review whether The City should continue to provide bottled water, considering factors such as State and Federal standards and guidance, evolving knowledge and understanding of the sources, cause and responsibility for the contamination, new or reinterpreted test results, and the availability of more permanent or cost-effective sources of water for the above purposes. The City of La Crosse makes no warranty or representation regarding the suitability of the bottled water beyond those made by the commercial water delivery service.

Check ownership:

_____ **Owner-Occupant**

_____ **Occupant Only**

Number of Occupants: _____

All reusable or returnable equipment and supplies, such as the containers and cooler/dispenser, are the property of the commercial water delivery service or the City of La Crosse. By signing below, the Occupant of the above referenced property acknowledges that all reusable or returnable equipment and supplies shall be returned to the commercial water delivery service or the City of La Crosse upon request. The Occupant agrees to provide reasonable access for delivery of bottled water and pick up of reusable or returnable equipment and supplies. Occupant(s) acknowledges that they may be required to sign an agreement with the commercial water delivery service as a condition of receiving bottled water.

Signed: _____ Dated: _____

Printed Name: _____



444 21st Street South · La Crosse, Wisconsin · 54601

November 23, 2020

████████████████████
 2520 Bainbridge Street
 La Crosse, WI 54603

Subject: Private Well Sampling Results
 2520 Bainbridge Street, La Crosse, WI 54603
 Tax parcel # 4-237-0
 Sample ID # 237-0

Dear ██████████ :

We have received and reviewed the test results for the sample collected on October 29, 2020 at the above address. Some PFAS compounds were found, but the levels found were **below** the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in *your* well are called the “Sample Result” in the table below.

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	2.2 ppt	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	11 ppt	20 ppt ^{a,b}
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	10 ppt	450,000 ppt ^a

The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	17 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	20 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	1.4 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS # 2706-91-4	6.3 ppt	None Established ^c
Perfluoro-n-heptanoic acid (PFHpA) CAS # 375-85-9	1.1 ppt	None Established ^c
Perfluoro-n-pentanoic acid (PFPeA) CAS # 2706-90-3	0.95 ppt	None Established ^c

^a Public health enforcement standard (ES) recommended by DHS.

^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NET-FOSE, NET-FOSA, NetFOSAA, PFOS, and PFOA.

^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation.

^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code.

^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L)

^{BL} Detected in the method blank. Possible lab contaminant.

Private Well Sampling Results for
2520 Bainbridge Street, La Crosse, WI 54603
Tax parcel # 4-237-0
Sample ID # 237-0
November 23, 2020

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK03016-025
Description: 237-0	Matrix: Aqueous
Date Sampled: 10/29/2020 1420	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/03/2020	Project Number: 40217496

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	SOP SPE	PFAS by ID SOP	1	11/17/2020 2157	SES	11/16/2020 1613	73668

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		6.8	1.7	ng/L	2
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		6.8	1.7	ng/L	2
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		6.8	1.7	ng/L	2
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		6.8	1.7	ng/L	2
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		6.8	1.7	ng/L	2
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		6.8	1.7	ng/L	2
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		6.8	1.7	ng/L	2
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		6.8	1.7	ng/L	2
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		6.8	1.7	ng/L	2
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		6.8	1.7	ng/L	2
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		6.8	1.7	ng/L	2
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.4	ng/L	2
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		6.8	1.7	ng/L	2
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		6.8	1.7	ng/L	2
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	10		3.4	0.86	ng/L	2
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.4	0.86	ng/L	2
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.4	0.86	ng/L	2
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.4	0.86	ng/L	2
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.4	0.86	ng/L	2
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	6.3		3.4	0.86	ng/L	2
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		6.8	1.7	ng/L	2
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	17		3.4	0.86	ng/L	2
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	20		3.4	0.86	ng/L	2
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.4	0.86	ng/L	2
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.4	0.86	ng/L	2
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	1.1	J	3.4	0.86	ng/L	2
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		6.8	1.7	ng/L	2
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	1.4	J	3.4	0.86	ng/L	2
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.4	0.86	ng/L	2
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		6.8	1.7	ng/L	2
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	2.2	J	3.4	0.86	ng/L	2
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	0.95	J	3.4	0.86	ng/L	2
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.4	0.86	ng/L	2
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.4	0.86	ng/L	2
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.4	0.86	ng/L	2
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	11		3.4	0.86	ng/L	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
13C2_4:2FTS		79	25-150
13C2_6:2FTS		89	25-150
13C2_8:2FTS		88	25-150
13C2_PFDa		74	25-150
13C2_PFHxDA		78	25-150
13C2_PFTeDA		70	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK03016-025
Description: 237-0	Matrix: Aqueous
Date Sampled: 10/29/2020 1420	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/03/2020	Project Number: 40217496

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
13C3_PFBs		80	25-150
13C3_PFHxS		80	25-150
13C3-HFPO-DA		84	25-150
13C4_PFBa		90	25-150
13C4_PFHpA		83	25-150
13C5_PFHxA		83	25-150
13C5_PFPeA		85	25-150
13C6_PFDa		82	25-150
13C7_PFUdA		81	25-150
13C8_PFOA		85	25-150
13C8_PFOs		77	25-150
13C8_PFOsA		88	10-150
13C9_PFNa		83	25-150
d-EtFOsA		72	10-150
d5-EtFOsAA		84	25-150
d9-EtFOsE		72	10-150
d-MeFOsA		79	10-150
d3-MeFOsAA		77	25-150
d7-MeFOsE		71	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
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444 21st Street South · La Crosse, Wisconsin · 54601

November 23, 2020

██████████
 2513 1st Avenue East
 La Crosse, WI 54603

Subject: Private Well Sampling Results
 2513 1st Avenue East, La Crosse, WI 54603
 Tax parcel # 4-246-0
 Well ID # 246-0

Dear ██████████ :

We have received and reviewed the test results for the sample collected on October 29, 2020 at the above address. Some PFAS compounds were found, but the levels found were **below** the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in *your* well are called the “Sample Result” in the table below.

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	4.0 ppt	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	12 ppt	20 ppt ^{a,b}
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a

The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	7.7 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	11 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	14 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	2.0 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS #2706-91-4	4.3 ppt	None Established ^c
Perfluoro-n-heptanoic acid (PFPeA) CAS # 375-85-9	1.3 ppt	None Established ^c
Perfluoro-n-pentanoic acid CAS # 2706-90-3	2.4 ppt	None Established ^c

^a Public health enforcement standard (ES) recommended by DHS.

^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA.

^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation.

^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code.

^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L)

^{BL} Detected in the method blank. Possible lab contaminant.

Private Well Sampling Results for
2513 1st Avenue East, La Crosse, WI 54603
Tax parcel # 4-246-0
Well ID # 246-0
November 23, 2020

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK03016-008
Description: 246-0	Matrix: Aqueous
Date Sampled: 10/29/2020 1510	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/03/2020	Project Number: 40217496

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/12/2020 1451	MMM	11/11/2020 1108	73065

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.6	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	7.7		3.6	0.90	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	4.3		3.6	0.90	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	11		3.6	0.90	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	14		3.6	0.90	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	1.3	J	3.6	0.90	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	2.0	J	3.6	0.90	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	4.0		3.6	0.90	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	2.4	J	3.6	0.90	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	12		3.6	0.90	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		101	25-150
13C2_6:2FTS		94	25-150
13C2_8:2FTS		84	25-150
13C2_PFDaA		95	25-150
13C2_PFHxDA		93	25-150
13C2_PFTeDA		93	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK03016-008
Description: 246-0	Matrix: Aqueous
Date Sampled: 10/29/2020 1510	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/03/2020	Project Number: 40217496

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		88	25-150
13C3_PFHxS		90	25-150
13C3-HFPO-DA		101	25-150
13C4_PFBa		97	25-150
13C4_PFHpA		104	25-150
13C5_PFHxA		98	25-150
13C5_PFPeA		99	25-150
13C6_PFDa		100	25-150
13C7_PFUdA		102	25-150
13C8_PFOA		94	25-150
13C8_PFOS		86	25-150
13C8_PFOSA		104	10-150
13C9_PFNA		94	25-150
d-EtFOSA		91	10-150
d5-EtFOSAA		98	25-150
d9-EtFOSE		92	10-150
d-MeFOSA		100	10-150
d3-MeFOSAA		94	25-150
d7-MeFOSE		92	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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444 21st Street South · La Crosse, Wisconsin · 54601

November 23, 2020

██████████
 2529 1st Avenue East
 La Crosse, WI 54603

Subject: Private Well Sampling Results
 2529 1st Avenue East, La Crosse, WI 54603
 Tax parcel # 4-250-0
 Well ID # 250-0

Dear ██████████ :

We have received and reviewed the test results for the sample collected on October 29, 2020 at the above address. Some PFAS compounds were found, but the levels found were **below** the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in *your* well are called the “Sample Result” in the table below. **PLEASE NOTE: At your residence we took a second “duplicate” sample for quality control / quality assurance purposes. The two samples’ tests confirmed each other, and there were only minor differences. The results in the table below are based on the highest concentration of contaminants observed in either of the two samples.**

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)	
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}	The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}	
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}	
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}	
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	Not Detected	20 ppt ^{a,b}	
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	7.0 ppt	20 ppt ^{a,b}	

Private Well Sampling Results for
 2529 1st Avenue East, La Crosse, WI 54603
 Tax parcel # 4-250-0
 Well ID # 250-0
 November 23, 2020

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	9.2 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	13 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	99 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	1.4 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS # 2706-91-4	6.6 ppt	None Established ^c

^a Public health enforcement standard (ES) recommended by DHS.

^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA.

^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation.

^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code.

^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L)

^{BL} Detected in the method blank. Possible lab contaminant.

Private Well Sampling Results for
2529 1st Avenue East, La Crosse, WI 54603
Tax parcel # 4-250-0
Well ID # 250-0
November 23, 2020

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK03016-011
Description: 250-0	Matrix: Aqueous
Date Sampled: 10/29/2020 1530	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/03/2020	Project Number: 40217496

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/13/2020 1636	MMM	11/11/2020 1108	73065

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		16	4.0	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	9.2		4.0	0.99	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		4.0	0.99	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		4.0	0.99	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		4.0	0.99	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		4.0	0.99	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	6.1		4.0	0.99	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	13		4.0	0.99	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	87		4.0	0.99	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		4.0	0.99	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		4.0	0.99	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		4.0	0.99	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	1.4	J	4.0	0.99	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		4.0	0.99	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		4.0	0.99	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		4.0	0.99	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		4.0	0.99	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		4.0	0.99	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		4.0	0.99	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	7.0		4.0	0.99	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		103	25-150
13C2_6:2FTS		105	25-150
13C2_8:2FTS		95	25-150
13C2_PFDaA		93	25-150
13C2_PFHxDA		90	25-150
13C2_PFTeDA		94	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK03016-011
Description: 250-0	Matrix: Aqueous
Date Sampled: 10/29/2020 1530	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/03/2020	Project Number: 40217496

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		90	25-150
13C3_PFHxS		93	25-150
13C3-HFPO-DA		106	25-150
13C4_PFBa		99	25-150
13C4_PFHpA		93	25-150
13C5_PFHxA		105	25-150
13C5_PFPeA		99	25-150
13C6_PFDa		105	25-150
13C7_PFUdA		100	25-150
13C8_PFOA		99	25-150
13C8_PFOS		86	25-150
13C8_PFOSA		109	10-150
13C9_PFNA		102	25-150
d-EtFOSA		86	10-150
d5-EtFOSAA		92	25-150
d9-EtFOSE		96	10-150
d-MeFOSA		85	10-150
d3-MeFOSAA		99	25-150
d7-MeFOSE		98	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK03016-013
Description: DUP #2	Matrix: Aqueous
Date Sampled: 10/29/2020 1535	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/03/2020	Project Number: 40217496

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/13/2020 1647	MMM	11/11/2020 1108	73065

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		15	3.8	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	9.0		3.8	0.95	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.8	0.95	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.8	0.95	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.8	0.95	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.8	0.95	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	6.6		3.8	0.95	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	12		3.8	0.95	ng/L	1
Perfluoro-n-butyric acid (PFBA)	375-22-4	PFAS by ID SOP	88		3.8	0.95	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.8	0.95	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.8	0.95	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.8	0.95	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	1.3	J	3.8	0.95	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.8	0.95	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		3.8	0.95	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		3.8	0.95	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.8	0.95	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.8	0.95	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.8	0.95	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	6.5		3.8	0.95	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		101	25-150
13C2_6:2FTS		104	25-150
13C2_8:2FTS		107	25-150
13C2_PFDaA		95	25-150
13C2_PFHxDA		94	25-150
13C2_PFTeDA		100	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK03016-013
Description: DUP #2	Matrix: Aqueous
Date Sampled: 10/29/2020 1535	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/03/2020	Project Number: 40217496

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		91	25-150
13C3_PFHxS		95	25-150
13C3-HFPO-DA		99	25-150
13C4_PFBa		98	25-150
13C4_PFHpA		95	25-150
13C5_PFHxA		101	25-150
13C5_PFPeA		100	25-150
13C6_PFDA		99	25-150
13C7_PFUdA		94	25-150
13C8_PFOA		103	25-150
13C8_PFOS		82	25-150
13C8_PFOsA		106	10-150
13C9_PFNA		96	25-150
d-EtFOSA		89	10-150
d5-EtFOSAA		91	25-150
d9-EtFOSE		90	10-150
d-MeFOSA		88	10-150
d3-MeFOSAA		98	25-150
d7-MeFOSE		95	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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444 21st Street South · La Crosse, Wisconsin · 54601

November 23, 2020

████████████████████
 1836 Aiken Road
 La Crosse, WI 54603

Subject: Private Well Sampling Results
 2529 1st Avenue East, La Crosse, WI 54603
 Tax parcel # 4-250-0
 Well ID # 250-0

Dear ██████████ :

We have received and reviewed the test results for the sample collected on October 29, 2020 at the above address. Some PFAS compounds were found, but the levels found were **below** the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in *your* well are called the “Sample Result” in the table below. **PLEASE NOTE: At your residence we took a second “duplicate” sample for quality control / quality assurance purposes. The two samples’ tests confirmed each other, and there were only minor differences. The results in the table below are based on the highest concentration of contaminants observed in either of the two samples.**

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)	
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}	The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}	
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}	
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}	
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	Not Detected	20 ppt ^{a,b}	
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	7.0 ppt	20 ppt ^{a,b}	

Private Well Sampling Results for
 2529 1st Avenue East, La Crosse, WI 54603
 Tax parcel # 4-250-0
 Well ID # 250-0
 November 23, 2020

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	9.2 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	13 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	99 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	1.4 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS # 2706-91-4	6.6 ppt	None Established ^c

^a Public health enforcement standard (ES) recommended by DHS.

^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA.

^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation.

^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code.

^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L)

^{BL} Detected in the method blank. Possible lab contaminant.

Private Well Sampling Results for
2529 1st Avenue East, La Crosse, WI 54603
Tax parcel # 4-250-0
Well ID # 250-0
November 23, 2020

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK03016-011
Description: 250-0	Matrix: Aqueous
Date Sampled: 10/29/2020 1530	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/03/2020	Project Number: 40217496

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/13/2020 1636	MMM	11/11/2020 1108	73065

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		16	4.0	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	9.2		4.0	0.99	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		4.0	0.99	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		4.0	0.99	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		4.0	0.99	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		4.0	0.99	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	6.1		4.0	0.99	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	13		4.0	0.99	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	87		4.0	0.99	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		4.0	0.99	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		4.0	0.99	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		4.0	0.99	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	1.4	J	4.0	0.99	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		4.0	0.99	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		4.0	0.99	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		4.0	0.99	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		4.0	0.99	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		4.0	0.99	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		4.0	0.99	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	7.0		4.0	0.99	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		103	25-150
13C2_6:2FTS		105	25-150
13C2_8:2FTS		95	25-150
13C2_PFDaA		93	25-150
13C2_PFHxDA		90	25-150
13C2_PFTeDA		94	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK03016-011
Description: 250-0	Matrix: Aqueous
Date Sampled: 10/29/2020 1530	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/03/2020	Project Number: 40217496

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		90	25-150
13C3_PFHxS		93	25-150
13C3-HFPO-DA		106	25-150
13C4_PFBa		99	25-150
13C4_PFHpA		93	25-150
13C5_PFHxA		105	25-150
13C5_PFPeA		99	25-150
13C6_PFDa		105	25-150
13C7_PFUdA		100	25-150
13C8_PFOA		99	25-150
13C8_PFOS		86	25-150
13C8_PFOsA		109	10-150
13C9_PFNAA		102	25-150
d-EtFOsA		86	10-150
d5-EtFOsAA		92	25-150
d9-EtFOSE		96	10-150
d-MeFOsA		85	10-150
d3-MeFOsAA		99	25-150
d7-MeFOSE		98	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK03016-013
Description: DUP #2	Matrix: Aqueous
Date Sampled: 10/29/2020 1535	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/03/2020	Project Number: 40217496

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/13/2020 1647	MMM	11/11/2020 1108	73065

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		15	3.8	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	9.0		3.8	0.95	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.8	0.95	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.8	0.95	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.8	0.95	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.8	0.95	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	6.6		3.8	0.95	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	12		3.8	0.95	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	88		3.8	0.95	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.8	0.95	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.8	0.95	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.8	0.95	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	1.3	J	3.8	0.95	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.8	0.95	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		3.8	0.95	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		3.8	0.95	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.8	0.95	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.8	0.95	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.8	0.95	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	6.5		3.8	0.95	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		101	25-150
13C2_6:2FTS		104	25-150
13C2_8:2FTS		107	25-150
13C2_PFDaA		95	25-150
13C2_PFHxDA		94	25-150
13C2_PFTeDA		100	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK03016-013
Description: DUP #2	Matrix: Aqueous
Date Sampled: 10/29/2020 1535	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/03/2020	Project Number: 40217496

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		91	25-150
13C3_PFHxS		95	25-150
13C3-HFPO-DA		99	25-150
13C4_PFBa		98	25-150
13C4_PFHpA		95	25-150
13C5_PFHxA		101	25-150
13C5_PFPeA		100	25-150
13C6_PFDA		99	25-150
13C7_PFUdA		94	25-150
13C8_PFOA		103	25-150
13C8_PFOS		82	25-150
13C8_PFOsA		106	10-150
13C9_PFNA		96	25-150
d-EtFOSA		89	10-150
d5-EtFOSAA		91	25-150
d9-EtFOSE		90	10-150
d-MeFOSA		88	10-150
d3-MeFOSAA		98	25-150
d7-MeFOSE		95	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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444 21st Street South · La Crosse, Wisconsin · 54601

November 23, 2020

[REDACTED]
2533 1st Avenue East
La Crosse, WI 54603

Subject: Private Well Sampling Results
2533 1st Avenue East, La Crosse, WI 54603
Tax parcel # 4-251-0
Sample ID # 251-0

Dear [REDACTED]:

We have received and reviewed the test results for the sample collected on October 29, 2020 at the above address. Some PFAS compounds were found at levels above the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the "Recommended Public Health Standard" in the table below. The levels found in your well are called the "Sample Result" in the table below.

Because some of the levels are above the recommended Public Health Standard, the City is offering to provide bottled water delivered to your home for drinking, cooking, and brushing your teeth. There will be no cost to you for the bottled water. Please complete the attached form and mail it to The OS Group to make arrangements for having a water dispenser and bottles delivered to your home. Call 608-668-2718 or email PFAS@theOSgrp.com . You may also complete this form on line at www.cityoflacrosse.org/bottledwater

The following table summarizes the test results from the sample. **Bolded results** are above a current recommended level intended to protect your health according to the Department of Health Services (DHS).

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	70 ppt	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	1300 ppt	20 ppt ^{a,b}
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	39 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	1900 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	33 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	37 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a

The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6

Private Well Sampling Results for
 2533 1st Avenue East, La Crosse, WI 54603
 Tax parcel # 4-251-0
 Sample ID # 251-0
 November 23, 2020

4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-hetanesulfonic acid (PFHpS) CAS # 375-92-8	110 ppt	None Established ^c
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS # 2706-91-4	120 ppt	None Established ^c
Perfluoro-n-heptanoic acid (PFHpA) CAS # 375-85-9	6.8 ppt	None Established ^c
Perfluoro-n-pentanoic acid (PFPeA) CAS #2706-90-3	8.9 ppt	None Established ^c
^a Public health enforcement standard (ES) recommended by DHS. ^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA. ^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation. ^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code. ^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L) ^{BL} Detected in the method blank. Possible lab contaminant.		

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

Private Well Sampling Results for
2533 1st Avenue East, La Crosse, WI 54603
Tax parcel # 4-251-0
Sample ID # 251-0
November 23, 2020

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well
Bottled Water Acknowledgement Form

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK03016-012
Description: 251-0	Matrix: Aqueous
Date Sampled: 10/29/2020 1530	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/03/2020	Project Number: 40217496

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/12/2020 1555	MMM	11/11/2020 1108	73065
2	SOP SPE	PFAS by ID SOP	5	11/13/2020 1907	KMM2	11/11/2020 1108	73065

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.5	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	39		3.5	0.87	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	110		3.5	0.87	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	120		3.5	0.87	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	1900		17	4.4	ng/L	2
Perfluoro-n-butyric acid (PFBA)	375-22-4	PFAS by ID SOP	33		3.5	0.87	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	6.8		3.5	0.87	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	37		3.5	0.87	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	70		3.5	0.87	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	8.9		3.5	0.87	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	1300		17	4.4	ng/L	2

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
13C2_4:2FTS		98	25-150		98	25-150
13C2_6:2FTS		89	25-150		111	25-150
13C2_8:2FTS		91	25-150		108	25-150
13C2_PFDaA		93	25-150		93	25-150
13C2_PFHxDA		93	25-150		100	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK03016-012
Description: 251-0	Matrix: Aqueous
Date Sampled: 10/29/2020 1530	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/03/2020	Project Number: 40217496

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
13C2_PFTeDA		90	25-150		102	25-150
13C3_PFBS		92	25-150		94	25-150
13C3_PFHxS		78	25-150		98	25-150
13C3-HFPO-DA		100	25-150		110	25-150
13C4_PFBA		96	25-150		99	25-150
13C4_PFHpA		92	25-150		92	25-150
13C5_PFHxA		95	25-150		97	25-150
13C5_PFPeA		99	25-150		98	25-150
13C6_PFDA		100	25-150		95	25-150
13C7_PFUdA		90	25-150		95	25-150
13C8_PFOA		93	25-150		93	25-150
13C8_PFOS		89	25-150		90	25-150
13C8_PFOSA		105	10-150		110	10-150
13C9_PFNA		92	25-150		96	25-150
d-EtFOSA		78	10-150		98	10-150
d5-EtFOSAA		95	25-150		98	25-150
d9-EtFOSE		97	10-150		101	10-150
d-MeFOSA		87	10-150		98	10-150
d3-MeFOSAA		99	25-150		105	25-150
d7-MeFOSE		87	10-150		99	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
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BOTTLED WATER ACKNOWLEDGEMENT

2533 1st Avenue East, La Crosse, WI 54603

If you desire to accept the bottled water delivery, please complete and sign this form and return it to The OS Group at PFAS@TheOSgrp.com or mail to 444 21st St. S, La Crosse, WI 54601. You may also complete this form electronically on line at www.cityoflacrosse.org/bottledwater . Call 608-668-2718 with any question you may have.

As pre-caution for the protection of human health, the City of La Crosse (The City) will provide, on a temporary basis, bottled water for drinking, cooking and toothbrushing purposes at the above referenced address. The water will be delivered to your home or business by a commercial water delivery service. At the City's cost, a dispenser / cooler and regular deliveries of 5-gallon containers of water will be provided. The City reserves the right to dictate the conditions of delivery, such as minimum and maximum number of containers per delivery, frequency and timing of deliveries. The City reserves the right to periodically review whether The City should continue to provide bottled water, considering factors such as State and Federal standards and guidance, evolving knowledge and understanding of the sources, cause and responsibility for the contamination, new or reinterpreted test results, and the availability of more permanent or cost-effective sources of water for the above purposes. The City of La Crosse makes no warranty or representation regarding the suitability of the bottled water beyond those made by the commercial water delivery service.

Check ownership:

_____ **Owner-Occupant**

_____ **Occupant Only**

Number of Occupants: _____

All reusable or returnable equipment and supplies, such as the containers and cooler/dispenser, are the property of the commercial water delivery service or the City of La Crosse. By signing below, the Occupant of the above referenced property acknowledges that all reusable or returnable equipment and supplies shall be returned to the commercial water delivery service or the City of La Crosse upon request. The Occupant agrees to provide reasonable access for delivery of bottled water and pick up of reusable or returnable equipment and supplies. Occupant(s) acknowledges that they may be required to sign an agreement with the commercial water delivery service as a condition of receiving bottled water.

Signed: _____ Dated: _____

Printed Name: _____



444 21st Street South · La Crosse, Wisconsin · 54601

November 23, 2020

██████████
2529 Bainbridge Street
La Crosse, WI 54603

Subject: Private Well Sampling Results
2529 Bainbridge Street, La Crosse, WI 54603
Tax parcel # 4-329-0
Sample ID # 329-0

Dear ██████████:

We have received and reviewed the test results for the sample collected on October 29, 2020 at the above address. Some PFAS compounds were found at levels above the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in your well are called the “Sample Result” in the table below.

Because some of the levels are above the recommended Public Health Standard, the City is offering to provide bottled water delivered to your home for drinking, cooking, and brushing your teeth. There will be no cost to you for the bottled water. Please complete the attached form and mail it to The OS Group to make arrangements for having a water dispenser and bottles delivered to your home or business. Call 608-668-2718 or email PFAS@theOSgrp.com. You may also complete this form on line at www.cityoflacrosse.org/bottledwater

The following table summarizes the test results from the sample. **Bolded results** are above a current recommended level intended to protect your health according to the Department of Health Services (DHS).

Private Well Sampling Results for
 2529 Bainbridge Street, La Crosse, WI 54603
 Tax parcel # 4-329-0
 Sample ID # 329-0
 November 23, 2020

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	13 ppt	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	8.2 ppt	20 ppt ^{a,b}
The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6		
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	4.1 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	10 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	37 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	1.2 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a

Private Well Sampling Results for
 2529 Bainbridge Street, La Crosse, WI 54603
 Tax parcel # 4-329-0
 Sample ID # 329-0
 November 23, 2020

4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS # 2706-91-4	2.7 ppt	None Established ^c

^a Public health enforcement standard (ES) recommended by DHS.
^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA.
^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation.
^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code.
^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L)
^{BL} Detected in the method blank. Possible lab contaminant.

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below:

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
 The OS Group, LLC

Attachment: Lab report for your well
 Bottled Water Acknowledgement Form

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK03016-024
Description: 329-0	Matrix: Aqueous
Date Sampled: 10/29/2020 1405	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/03/2020	Project Number: 40217496

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	SOP SPE	PFAS by ID SOP	1	11/17/2020 2147	SES	11/16/2020 1613	73668

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.4	1.8	ng/L	2
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.4	1.8	ng/L	2
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.4	1.8	ng/L	2
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.4	1.8	ng/L	2
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.4	1.8	ng/L	2
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.4	1.8	ng/L	2
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.4	1.8	ng/L	2
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.4	1.8	ng/L	2
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.4	1.8	ng/L	2
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.4	1.8	ng/L	2
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.4	1.8	ng/L	2
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		15	3.7	ng/L	2
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.4	1.8	ng/L	2
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.4	1.8	ng/L	2
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	4.1		3.7	0.92	ng/L	2
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.7	0.92	ng/L	2
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.7	0.92	ng/L	2
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.7	0.92	ng/L	2
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.7	0.92	ng/L	2
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	2.7	J	3.7	0.92	ng/L	2
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.4	1.8	ng/L	2
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	10		3.7	0.92	ng/L	2
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	37		3.7	0.92	ng/L	2
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.7	0.92	ng/L	2
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.7	0.92	ng/L	2
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.7	0.92	ng/L	2
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.4	1.8	ng/L	2
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	1.2	J	3.7	0.92	ng/L	2
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.7	0.92	ng/L	2
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.4	1.8	ng/L	2
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	13		3.7	0.92	ng/L	2
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		3.7	0.92	ng/L	2
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.7	0.92	ng/L	2
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.7	0.92	ng/L	2
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.7	0.92	ng/L	2
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	8.2		3.7	0.92	ng/L	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
13C2_4:2FTS		82	25-150
13C2_6:2FTS		91	25-150
13C2_8:2FTS		78	25-150
13C2_PFDaA		81	25-150
13C2_PFHxDA		77	25-150
13C2_PFTeDA		72	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK03016-024
Description: 329-0	Matrix: Aqueous
Date Sampled: 10/29/2020 1405	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/03/2020	Project Number: 40217496

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
13C3_PFBs		81	25-150
13C3_PFHxS		83	25-150
13C3-HFPO-DA		81	25-150
13C4_PFBa		87	25-150
13C4_PFHpA		84	25-150
13C5_PFHxA		80	25-150
13C5_PFPeA		85	25-150
13C6_PFDa		84	25-150
13C7_PFUdA		76	25-150
13C8_PFOA		86	25-150
13C8_PFOS		78	25-150
13C8_PFOSA		88	10-150
13C9_PFNA		85	25-150
d-EtFOSA		73	10-150
d5-EtFOSAA		84	25-150
d9-EtFOSE		72	10-150
d-MeFOSA		80	10-150
d3-MeFOSAA		82	25-150
d7-MeFOSE		74	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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BOTTLED WATER ACKNOWLEDGEMENT

2529 Bainbridge Street, La Crosse, WI 54603

If you desire to accept the bottled water delivery, please complete and sign this form and return it to The OS Group at PFAS@TheOSgrp.com or mail to 444 21st St. S, La Crosse, WI 54601. You may also complete this form electronically on line at www.cityoflacrosse.org/bottledwater . Call 608-668-2718 with any question you may have.

As pre-caution for the protection of human health, the City of La Crosse (The City) will provide, on a temporary basis, bottled water for drinking, cooking and toothbrushing purposes at the above referenced address. The water will be delivered to your home or business by a commercial water delivery service. At the City's cost, a dispenser / cooler and regular deliveries of 5-gallon containers of water will be provided. The City reserves the right to dictate the conditions of delivery, such as minimum and maximum number of containers per delivery, frequency and timing of deliveries. The City reserves the right to periodically review whether The City should continue to provide bottled water, considering factors such as State and Federal standards and guidance, evolving knowledge and understanding of the sources, cause and responsibility for the contamination, new or reinterpreted test results, and the availability of more permanent or cost-effective sources of water for the above purposes. The City of La Crosse makes no warranty or representation regarding the suitability of the bottled water beyond those made by the commercial water delivery service.

Check ownership:

_____ **Owner-Occupant**
_____ **Occupant Only**

Number of Occupants: _____

All reusable or returnable equipment and supplies, such as the containers and cooler/dispenser, are the property of the commercial water delivery service or the City of La Crosse. By signing below, the Occupant of the above referenced property acknowledges that all reusable or returnable equipment and supplies shall be returned to the commercial water delivery service or the City of La Crosse upon request. The Occupant agrees to provide reasonable access for delivery of bottled water and pick up of reusable or returnable equipment and supplies. Occupant(s) acknowledges that they may be required to sign an agreement with the commercial water delivery service as a condition of receiving bottled water.

Signed: _____ Dated: _____

Printed Name: _____



444 21st Street South · La Crosse, Wisconsin · 54601

November 24, 2020

██████████
2554 1st Avenue West
La Crosse, WI 54603

Subject: Private Well Sampling Results
2554 1st Avenue West, La Crosse, WI 54603
Tax parcel # 4-340-0
Sample ID # 340-0

Dear ██████████ :

We have received and reviewed the test results for the sample collected on October 29, 2020 at the above address. Some PFAS compounds were found, but the levels found were **below** the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in *your* well are called the “Sample Result” in the table below.

Also, please note, we collected two samples from your house for quality assurance / quality control purposes. The second sample is considered a “split” sample and was sent to a different laboratory for analysis. The “split” sample was analyzed by a different EPA method. That method analyzes for 18 compounds as compared to the 36 compounds under the other method. Thus, in the second table for the “Split” sample provided below, you will see some results listed as “Not Analyzed”.

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	5.8 ppt	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	4.0 ppt	20 ppt ^{a,b}
The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6		
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	6.9 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	32 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	48 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	2.4 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a

Private Well Sampling Results for
 2554 1st Avenue West, La Crosse, WI 54603
 Tax parcel # 4-340-0
 Sample ID # 340-0
 November 24, 2020

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS #2706-91-4	7.5 ppt	None Established ^c
Perfluoro-n-pentanoic acid (PFPeA) CAS # 2706-90-3	1.9 ppt	None Established ^c

^a Public health enforcement standard (ES) recommended by DHS.
^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA.
^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation.
^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code.
^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L)
^{BL} Detected in the method blank. Possible lab contaminant.

“Split” Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)	
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Analyzed	20 ppt ^{a,b}	The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}	
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Analyzed	20 ppt ^{a,b}	
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Analyzed	20 ppt ^{a,b}	
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	2.5 ppt	20 ppt ^{a,b}	
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	3.5 ppt	20 ppt ^{a,b}	

Private Well Sampling Results for
 2554 1st Avenue West, La Crosse, WI 54603
 Tax parcel # 4-340-0
 Sample ID # 340-0
 November 24, 2020

Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	7.1 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	32 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	Not Analyzed	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	1.7 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Analyzed	400,000 ppt ^a

^a Public health enforcement standard (ES) recommended by DHS.

^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA.

^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation.

^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code.

^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L)

^{BL} Detected in the method blank. Possible lab contaminant.

Private Well Sampling Results for
2554 1st Avenue West, La Crosse, WI 54603
Tax parcel # 4-340-0
Sample ID # 340-0
November 24, 2020

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK03016-009
Description: 340-0	Matrix: Aqueous
Date Sampled: 10/29/2020 1455	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/03/2020	Project Number: 40217496

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/12/2020 1512	MMM	11/11/2020 1108	73065

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		8.2	2.1	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		8.2	2.1	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		8.2	2.1	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		8.2	2.1	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		8.2	2.1	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		8.2	2.1	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		8.2	2.1	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		8.2	2.1	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		8.2	2.1	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		8.2	2.1	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		8.2	2.1	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		16	4.1	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		8.2	2.1	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		8.2	2.1	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	6.9		4.1	1.0	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		4.1	1.0	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		4.1	1.0	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		4.1	1.0	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		4.1	1.0	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	7.5		4.1	1.0	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		8.2	2.1	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	32		4.1	1.0	ng/L	1
Perfluoro-n-butyric acid (PFBA)	375-22-4	PFAS by ID SOP	48		4.1	1.0	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		4.1	1.0	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		4.1	1.0	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		4.1	1.0	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		8.2	2.1	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	2.4	J	4.1	1.0	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		4.1	1.0	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		8.2	2.1	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	5.8		4.1	1.0	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	1.9	J	4.1	1.0	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		4.1	1.0	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		4.1	1.0	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		4.1	1.0	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	4.0	J	4.1	1.0	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		111	25-150
13C2_6:2FTS		106	25-150
13C2_8:2FTS		92	25-150
13C2_PFDa		94	25-150
13C2_PFHxDA		93	25-150
13C2_PFTeDA		95	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK03016-009
Description: 340-0	Matrix: Aqueous
Date Sampled: 10/29/2020 1455	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/03/2020	Project Number: 40217496

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		95	25-150
13C3_PFHxS		91	25-150
13C3-HFPO-DA		105	25-150
13C4_PFBa		102	25-150
13C4_PFHpA		102	25-150
13C5_PFHxA		99	25-150
13C5_PFPeA		105	25-150
13C6_PFDa		102	25-150
13C7_PFUdA		98	25-150
13C8_PFOA		101	25-150
13C8_PFOS		86	25-150
13C8_PFOSA		106	10-150
13C9_PFNA		99	25-150
d-EtFOSA		83	10-150
d5-EtFOSAA		95	25-150
d9-EtFOSE		104	10-150
d-MeFOSA		88	10-150
d3-MeFOSAA		94	25-150
d7-MeFOSE		93	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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ANALYTICAL RESULTS

Project: LACROSSE WELL #23 & 24

Pace Project No.: 40217479

Sample: 340-0 **Lab ID: 40217479009** Collected: 10/29/20 14:55 Received: 10/30/20 09:30 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
537.1 PFAS Compounds, Water									
Analytical Method: EPA 537.1 Preparation Method: EPA 537.1									
Pace Analytical Services - Ormond Beach									
11CI-PF3OUdS	<0.0015	ug/L	0.0019	0.0015	1	11/04/20 08:14	11/06/20 06:50	763051-92-9	
9CI-PF3ONS	<0.0011	ug/L	0.0019	0.0011	1	11/04/20 08:14	11/06/20 06:50	756426-58-1	
ADONA	<0.00070	ug/L	0.0019	0.00070	1	11/04/20 08:14	11/06/20 06:50	919005-14-4	
HFPO-DA	<0.0016	ug/L	0.0019	0.0016	1	11/04/20 08:14	11/06/20 06:50	13252-13-6	
NEtFOSAA	<0.00090	ug/L	0.0019	0.00090	1	11/04/20 08:14	11/06/20 06:50	2991-50-6	
NMeFOSAA	<0.0015	ug/L	0.0019	0.0015	1	11/04/20 08:14	11/06/20 06:50	2355-31-9	
Perfluorobutanesulfonic acid	0.0071	ug/L	0.0019	0.00065	1	11/04/20 08:14	11/06/20 06:50	375-73-5	
Perfluorodecanoic acid	<0.0019	ug/L	0.0019	0.0019	1	11/04/20 08:14	11/06/20 06:50	335-76-2	
Perfluorohexanoic acid	0.0017J	ug/L	0.0019	0.0012	1	11/04/20 08:14	11/06/20 06:50	307-24-4	
Perfluorododecanoic acid	<0.0014	ug/L	0.0019	0.0014	1	11/04/20 08:14	11/06/20 06:50	307-55-1	
Perfluoroheptanoic acid	<0.00098	ug/L	0.0019	0.00098	1	11/04/20 08:14	11/06/20 06:50	375-85-9	
Perfluorohexanesulfonic acid	0.032	ug/L	0.0019	0.00071	1	11/04/20 08:14	11/06/20 06:50	355-46-4	
Perfluorononanoic acid	<0.0019	ug/L	0.0019	0.0019	1	11/04/20 08:14	11/06/20 06:50	375-95-1	
Perfluorooctanesulfonic acid	0.0035	ug/L	0.0019	0.0012	1	11/04/20 08:14	11/06/20 06:50	1763-23-1	
Perfluorooctanoic acid	0.0025	ug/L	0.0019	0.00085	1	11/04/20 08:14	11/06/20 06:50	335-67-1	
Perfluorotetradecanoic acid	<0.0018	ug/L	0.0019	0.0018	1	11/04/20 08:14	11/06/20 06:50	376-06-7	
Perfluorotridecanoic acid	<0.0017	ug/L	0.0019	0.0017	1	11/04/20 08:14	11/06/20 06:50	72629-94-8	
Perfluoroundecanoic acid	<0.0019	ug/L	0.0019	0.0019	1	11/04/20 08:14	11/06/20 06:50	2058-94-8	
Surrogates									
13C2-PFDA (S)	88	%	70-130		1	11/04/20 08:14	11/06/20 06:50		
13C2-PFHxA (S)	88	%	70-130		1	11/04/20 08:14	11/06/20 06:50		
NEtFOSAA-d5 (S)	87	%	70-130		1	11/04/20 08:14	11/06/20 06:50		
HFPO-DAS (S)	79	%	70-130		1	11/04/20 08:14	11/06/20 06:50		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.



444 21st Street South · La Crosse, Wisconsin · 54601

November 24, 2020

[REDACTED]
2555 Bainbridge Street
La Crosse, WI 54603

Subject: Private Well Sampling Results
2555 Bainbridge Street, La Crosse, WI 54603
Tax parcel # 4-341-0
Sample ID # 341-0

Dear [REDACTED]:

We have received and reviewed the test results for the sample collected on October 29, 2020 at the above address. Some PFAS compounds were found at levels above the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in your well are called the “Sample Result” in the table below.

Because some of the levels are above the recommended Public Health Standard, the City is offering to provide bottled water delivered to your home for drinking, cooking, and brushing your teeth. There will be no cost to you for the bottled water. Please complete the attached form and mail it to The OS Group to make arrangements for having a water dispenser and bottles delivered to your home or business. Call 608-668-2718 or email PFAS@theOSgrp.com. You may also complete this form on line at www.cityoflacrosse.org/bottledwater

The following table summarizes the test results from the sample. **Bolded results** are above a current recommended level intended to protect your health according to the Department of Health Services (DHS).

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	21 ppt	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	1400 ppt	20 ppt ^{a,b}
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	22 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	760 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	30 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	13 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a

The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6

Private Well Sampling Results for
 2555 Bainbridge Street, La Crosse, WI 54603
 Tax parcel # 4-341-0
 Sample ID # 341-0
 November 24, 2020

4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-hetanesulfonic acid CAS # 375-92-8	46 ppt	None Established ^c
Perfluoro-1-pentanesulfonic acid CAS # 2706-91-4	44 ppt	None Established ^c
Perfluoro-n-heptanoic acid CAS # 375-85-9	2.5 ppt	None Established ^c
Perfluoro-n-pentanoic acid CAS #2706-90-3	4.1 ppt	None Established ^c
^a Public health enforcement standard (ES) recommended by DHS. ^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA. ^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation. ^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code. ^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L) ^{BL} Detected in the method blank. Possible lab contaminant.		

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

Private Well Sampling Results for
2555 Bainbridge Street, La Crosse, WI 54603
Tax parcel # 4-341-0
Sample ID # 341-0
November 24, 2020

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well
Bottled Water Acknowledgement

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK03016-010
Description: 341-0	Matrix: Aqueous
Date Sampled: 10/29/2020 1510	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/03/2020	Project Number: 40217496

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/12/2020 1534	MMM	11/11/2020 1108	73065
2	SOP SPE	PFAS by ID SOP	5	11/13/2020 1856	KMM2	11/11/2020 1108	73065

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		8.3	2.1	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		8.3	2.1	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		8.3	2.1	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		8.3	2.1	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		8.3	2.1	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		8.3	2.1	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		8.3	2.1	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		8.3	2.1	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		8.3	2.1	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		8.3	2.1	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		8.3	2.1	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		17	4.2	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		8.3	2.1	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		8.3	2.1	ng/L	1
Perfluoro-1-butanefluoride (PFBS)	375-73-5	PFAS by ID SOP	22		4.2	1.0	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		4.2	1.0	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	46		4.2	1.0	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		4.2	1.0	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		4.2	1.0	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	44		4.2	1.0	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		8.3	2.1	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	760		4.2	1.0	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	30		4.2	1.0	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		4.2	1.0	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		4.2	1.0	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	2.5	J	4.2	1.0	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		8.3	2.1	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	13		4.2	1.0	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		4.2	1.0	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		8.3	2.1	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	21		4.2	1.0	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	4.1	J	4.2	1.0	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		4.2	1.0	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		4.2	1.0	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		4.2	1.0	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	1400		21	5.2	ng/L	2

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
13C2_4:2FTS		108	25-150		95	25-150
13C2_6:2FTS		104	25-150		103	25-150
13C2_8:2FTS		88	25-150		105	25-150
13C2_PFDa		96	25-150		91	25-150
13C2_PFHxDA		93	25-150		99	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK03016-010
Description: 341-0	Matrix: Aqueous
Date Sampled: 10/29/2020 1510	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/03/2020	Project Number: 40217496

Surrogate	Run 1			Run 2		
	Q	% Recovery	Acceptance Limits	Q	% Recovery	Acceptance Limits
13C2_PFTeDA		93	25-150		94	25-150
13C3_PFBs		95	25-150		92	25-150
13C3_PFHxS		88	25-150		96	25-150
13C3-HFPO-DA		116	25-150		99	25-150
13C4_PFBa		102	25-150		96	25-150
13C4_PFHpA		101	25-150		87	25-150
13C5_PFHxA		104	25-150		93	25-150
13C5_PFPeA		107	25-150		95	25-150
13C6_PFDA		102	25-150		91	25-150
13C7_PFUdA		102	25-150		92	25-150
13C8_PFOA		98	25-150		94	25-150
13C8_PFOS		84	25-150		85	25-150
13C8_PFOsA		107	10-150		111	10-150
13C9_PFNA		90	25-150		93	25-150
d-EtFOSA		96	10-150		94	10-150
d5-EtFOSAA		100	25-150		102	25-150
d9-EtFOSE		102	10-150		98	10-150
d-MeFOSA		101	10-150		92	10-150
d3-MeFOSAA		101	25-150		102	25-150
d7-MeFOSE		97	10-150		105	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

BOTTLED WATER ACKNOWLEDGEMENT

2555 Bainbridge Street, La Crosse, WI 54603

If you desire to accept the bottled water delivery, please complete and sign this form and return it to The OS Group at PFAS@TheOSgrp.com or mail to 444 21st St. S, La Crosse, WI 54601. You may also complete this form electronically on line at www.cityoflacrosse.org/bottledwater . Call 608-668-2718 with any question you may have.

As pre-caution for the protection of human health, the City of La Crosse (The City) will provide, on a temporary basis, bottled water for drinking, cooking and toothbrushing purposes at the above referenced address. The water will be delivered to your home or business by a commercial water delivery service. At the City's cost, a dispenser / cooler and regular deliveries of 5-gallon containers of water will be provided. The City reserves the right to dictate the conditions of delivery, such as minimum and maximum number of containers per delivery, frequency and timing of deliveries. The City reserves the right to periodically review whether The City should continue to provide bottled water, considering factors such as State and Federal standards and guidance, evolving knowledge and understanding of the sources, cause and responsibility for the contamination, new or reinterpreted test results, and the availability of more permanent or cost-effective sources of water for the above purposes. The City of La Crosse makes no warranty or representation regarding the suitability of the bottled water beyond those made by the commercial water delivery service.

Check ownership:

_____ **Owner-Occupant**
_____ **Occupant Only**

Number of Occupants: _____

All reusable or returnable equipment and supplies, such as the containers and cooler/dispenser, are the property of the commercial water delivery service or the City of La Crosse. By signing below, the Occupant of the above referenced property acknowledges that all reusable or returnable equipment and supplies shall be returned to the commercial water delivery service or the City of La Crosse upon request. The Occupant agrees to provide reasonable access for delivery of bottled water and pick up of reusable or returnable equipment and supplies. Occupant(s) acknowledges that they may be required to sign an agreement with the commercial water delivery service as a condition of receiving bottled water.

Signed: _____ Dated: _____

Printed Name: _____



444 21st Street South · La Crosse, Wisconsin · 54601

November 24, 2020

██████████
 111 Calloway Blvd
 La Crosse, WI 54603

Subject: Private Well Sampling Results
 111 Calloway Blvd, La Crosse, WI 54603
 Tax parcel # 4-344-0
 Sample ID # 344-0

Dear ██████████ :

We have received and reviewed the test results for the sample collected on October 29, 2020 at the above address. Some PFAS compounds were found, but the levels found were **below** the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in *your* well are called the “Sample Result” in the table below.

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)	
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}	The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}	
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}	
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}	
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	4.3 ppt	20 ppt ^{a,b}	
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	1.8 ppt	20 ppt ^{a,b}	

Private Well Sampling Results for
 111 Calloway Blvd, La Crosse, WI 54603
 Tax parcel # 4-344-0
 Sample ID # 344-0
 November 24, 2020

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	1.3 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	2.3 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	3.5 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	1.4 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-n-pentanoic acid (PFPeA) CAS # 2706-90-3	1.1 ppt	None Established ^c
<p>^a Public health enforcement standard (ES) recommended by DHS.</p> <p>^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NET-FOSE, NET-FOSA, NetFOSAA, PFOS, and PFOA.</p> <p>^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation.</p> <p>^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code.</p> <p>^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L)</p> <p>^{BL} Detected in the method blank. Possible lab contaminant.</p>		

Private Well Sampling Results for
111 Calloway Blvd, La Crosse, WI 54603
Tax parcel # 4-344-0
Sample ID # 344-0
November 24, 2020

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK03016-015
Description: 344-0	Matrix: Aqueous
Date Sampled: 10/29/2020 1010	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/03/2020	Project Number: 40217496

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/12/2020 1638	MMM	11/11/2020 1108	73065

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.5	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	1.3	J	3.5	0.88	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	2.3	J	3.5	0.88	ng/L	1
Perfluoro-n-butyric acid (PFBA)	375-22-4	PFAS by ID SOP	3.5		3.5	0.88	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	1.4	J	3.5	0.88	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	4.3		3.5	0.88	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	1.1	J	3.5	0.88	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	1.8	J	3.5	0.88	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		107	25-150
13C2_6:2FTS		103	25-150
13C2_8:2FTS		90	25-150
13C2_PFDaA		90	25-150
13C2_PFHxDA		95	25-150
13C2_PFTeDA		97	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK03016-015
Description: 344-0	Matrix: Aqueous
Date Sampled: 10/29/2020 1010	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/03/2020	Project Number: 40217496

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBS		100	25-150
13C3_PFHxS		94	25-150
13C3-HFPO-DA		92	25-150
13C4_PFBA		102	25-150
13C4_PFHpA		101	25-150
13C5_PFHxA		97	25-150
13C5_PFPeA		104	25-150
13C6_PFDA		101	25-150
13C7_PFUdA		98	25-150
13C8_PFOA		97	25-150
13C8_PFOS		87	25-150
13C8_PFOSA		110	10-150
13C9_PFNA		102	25-150
d-EtFOSA		80	10-150
d5-EtFOSAA		101	25-150
d9-EtFOSE		101	10-150
d-MeFOSA		97	10-150
d3-MeFOSAA		101	25-150
d7-MeFOSE		91	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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444 21st Street South · La Crosse, Wisconsin · 54601

November 24, 2020

██████████
 2518 1st Avenue West
 La Crosse, WI 54603

Subject: Private Well Sampling Results
 2518 1st Avenue West, La Crosse, WI 54603
 Tax parcel # 4-351-0
 Sample ID # 351-0

Dear ██████████:

We have received and reviewed the test results for the sample collected on October 29, 2020 at the above address. Some PFAS compounds were found, but the levels found were **below** the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in *your* well are called the “Sample Result” in the table below.

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	Not Detected	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	8.4 ppt	20 ppt ^{a,b}

The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6

Private Well Sampling Results for
 2518 1st Avenue West, La Crosse, WI 54603
 Tax parcel # 4-351-0
 Sample ID # 351-0
 November 24, 2020

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	5.4 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	6.7 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	34 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	Not Detected	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS #2706-91-4	3.5 ppt	None Established ^c

^a Public health enforcement standard (ES) recommended by DHS.
^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA.
^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation.
^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code.
^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L)
^{BL} Detected in the method blank. Possible lab contaminant.

Private Well Sampling Results for
2518 1st Avenue West, La Crosse, WI 54603
Tax parcel # 4-351-0
Sample ID # 351-0
November 24, 2020

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK03016-014
Description: 351-0	Matrix: Aqueous
Date Sampled: 10/29/2020 1000	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/03/2020	Project Number: 40217496

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/12/2020 1628	MMM	11/11/2020 1108	73065

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		15	3.7	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	5.4		3.7	0.93	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	3.5	J	3.7	0.93	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	6.7		3.7	0.93	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	34		3.7	0.93	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-undecanoic acid (PFUDA)	2058-94-8	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	8.4		3.7	0.93	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		101	25-150
13C2_6:2FTS		95	25-150
13C2_8:2FTS		86	25-150
13C2_PFDaA		87	25-150
13C2_PFHxDA		89	25-150
13C2_PFTeDA		88	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK03016-014
Description: 351-0	Matrix: Aqueous
Date Sampled: 10/29/2020 1000	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/03/2020	Project Number: 40217496

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		85	25-150
13C3_PFHxS		86	25-150
13C3-HFPO-DA		93	25-150
13C4_PFBa		93	25-150
13C4_PFHpA		92	25-150
13C5_PFHxA		88	25-150
13C5_PFPeA		93	25-150
13C6_PFDa		91	25-150
13C7_PFUdA		90	25-150
13C8_PFOA		95	25-150
13C8_PFOS		84	25-150
13C8_PFOsA		95	10-150
13C9_PFNa		87	25-150
d-EtFOSA		74	10-150
d5-EtFOSAA		90	25-150
d9-EtFOSE		92	10-150
d-MeFOSA		87	10-150
d3-MeFOSAA		94	25-150
d7-MeFOSE		81	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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444 21st Street South · La Crosse, Wisconsin · 54601

November 24, 2020

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 2526 1st Avenue West
 La Crosse, WI 54603

Subject: Private Well Sampling Results
 2526 1st Avenue West, La Crosse, WI 54603
 Tax Parcel # 4-352-0
 Sample ID # 352-0

Dear ██████████ :

We have received and reviewed the test results for the sample collected on October 29, 2020 at the above address. Some PFAS compounds were found, but the levels found were **below** the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in *your* well are called the “Sample Result” in the table below.

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)	
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}	The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}	
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}	
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}	
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	Not Detected	20 ppt ^{a,b}	
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	Not Detected	20 ppt ^{a,b}	

Private Well Sampling Results for
 2526 1st Avenue West, La Crosse, WI 54603
 Tax Parcel # 4-352-0
 Sample ID # 352-0
 November 24, 2020

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	4.3 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	6.2 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	34 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	Not Detected	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS #2706-91-4	3.2 ppt	None Established ^c

^a Public health enforcement standard (ES) recommended by DHS.

^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA.

^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation.

^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code.

^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L)

^{BL} Detected in the method blank. Possible lab contaminant.

Private Well Sampling Results for
2526 1st Avenue West, La Crosse, WI 54603
Tax Parcel # 4-352-0
Sample ID # 352-0
November 24, 2020

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK03016-007
Description: 352-0	Matrix: Aqueous
Date Sampled: 10/29/2020 1455	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/03/2020	Project Number: 40217496

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/12/2020 1440	MMM	11/11/2020 1108	73065

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.6	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	4.3		3.6	0.91	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	3.2	J	3.6	0.91	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	6.2		3.6	0.91	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	34		3.6	0.91	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	ND		3.6	0.91	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		110	25-150
13C2_6:2FTS		96	25-150
13C2_8:2FTS		90	25-150
13C2_PFDaA		95	25-150
13C2_PFHxDA		94	25-150
13C2_PFTeDA		93	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK03016-007
Description: 352-0	Matrix: Aqueous
Date Sampled: 10/29/2020 1455	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/03/2020	Project Number: 40217496

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		94	25-150
13C3_PFHxS		89	25-150
13C3-HFPO-DA		96	25-150
13C4_PFBa		102	25-150
13C4_PFHpA		99	25-150
13C5_PFHxA		90	25-150
13C5_PFPeA		102	25-150
13C6_PFDa		102	25-150
13C7_PFUdA		98	25-150
13C8_PFOA		102	25-150
13C8_PFOS		86	25-150
13C8_PFOsA		106	10-150
13C9_PFNa		98	25-150
d-EtFOsA		84	10-150
d5-EtFOsAA		98	25-150
d9-EtFOsE		100	10-150
d-MeFOsA		100	10-150
d3-MeFOsAA		99	25-150
d7-MeFOsE		96	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
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444 21st Street South · La Crosse, Wisconsin · 54601

November 24, 2020

██████████
 204 Calloway Blvd
 La Crosse, WI 54603

Subject: Private Well Sampling Results
 204 Calloway Blvd, La Crosse, WI 54603
 Tax Parcel # 4-361-0
 Sample ID # 361-0

Dear ██████████ :

We have received and reviewed the test results for the sample collected on October 29, 2020 at the above address. Some PFAS compounds were found, but the levels found were **below** the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in *your* well are called the “Sample Result” in the table below.

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)	
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}	The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}	
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}	
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}	
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	0.93 ppt ^{BL}	20 ppt ^{a,b}	
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	1.9 ppt ^{BL}	20 ppt ^{a,b}	

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	3.1 ppt ^{BL}	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	3.7 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	8.6 ppt ^{BL}	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	Not Detected	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-pentanesulfonic acid ((PFPeS) CAS # 2706-91-4	2.0 ppt	None Established ^c

^a Public health enforcement standard (ES) recommended by DHS.

^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA.

^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation.

^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code.

^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L)

^{BL} Detected in the method blank. Possible lab contaminant.

Private Well Sampling Results for
204 Calloway Blvd, La Crosse, WI 54603
Tax Parcel # 4-361-0
Sample ID # 361-0
November 24, 2020

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK03016-017
Description: 361-0	Matrix: Aqueous
Date Sampled: 10/29/2020 1045	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/03/2020	Project Number: 40217496

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/13/2020 1236	SES	11/11/2020 1636	73134

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.4	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	3.1	BJ	3.4	0.86	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	2.0	J	3.4	0.86	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	3.7		3.4	0.86	ng/L	1
Perfluoro-n-butyric acid (PFBA)	375-22-4	PFAS by ID SOP	8.6	B	3.4	0.86	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	0.93	BJ	3.4	0.86	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	1.9	BJ	3.4	0.86	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		96	25-150
13C2_6:2FTS		97	25-150
13C2_8:2FTS		91	25-150
13C2_PFDaA		86	25-150
13C2_PFHxDA		92	25-150
13C2_PFTeDA		81	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK03016-017
Description: 361-0	Matrix: Aqueous
Date Sampled: 10/29/2020 1045	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/03/2020	Project Number: 40217496

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		86	25-150
13C3_PFHxS		86	25-150
13C3-HFPO-DA		95	25-150
13C4_PFBa		98	25-150
13C4_PFHpA		90	25-150
13C5_PFHxA		97	25-150
13C5_PFPeA		95	25-150
13C6_PFDa		92	25-150
13C7_PFUdA		83	25-150
13C8_PFOA		93	25-150
13C8_PFOS		87	25-150
13C8_PFOSA		96	10-150
13C9_PFNA		89	25-150
d-EtFOSA		85	10-150
d5-EtFOSAA		87	25-150
d9-EtFOSE		89	10-150
d-MeFOSA		85	10-150
d3-MeFOSAA		94	25-150
d7-MeFOSE		92	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
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444 21st Street South · La Crosse, Wisconsin · 54601

November 24, 2020

[Redacted]

2515 1st Avenue West
La Crosse, WI 54603

Subject: Private Well Sampling Results
2515 1st Avenue West, La Crosse, WI 54603
Tax Parcel # 4-370-0
Sample ID # 370-0

Dear [Redacted] :

We have received and reviewed the test results for the sample collected on October 29, 2020 at the above address. Some PFAS compounds were found, but the levels found were **below** the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in *your* well are called the “Sample Result” in the table below.

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)	
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}	The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}	
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}	
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}	
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	Not Detected	20 ppt ^{a,b}	
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	1.8 ppt	20 ppt ^{a,b}	

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	1.9 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	3.9 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	6.1 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	Not Detected	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a

^a Public health enforcement standard (ES) recommended by DHS.

^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA.

^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation.

^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code.

^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L)

^{BL} Detected in the method blank. Possible lab contaminant.

Private Well Sampling Results for
2515 1st Avenue West, La Crosse, WI 54603
Tax Parcel # 4-370-0
Sample ID # 370-0
November 24, 2020

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK03016-005
Description: 370-0	Matrix: Aqueous
Date Sampled: 10/29/2020 1435	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/03/2020	Project Number: 40217496

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	SOP SPE	PFAS by ID SOP	1	11/16/2020 1617	MMM	11/13/2020 1523	73472

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.3	1.8	ng/L	2
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.3	1.8	ng/L	2
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.3	1.8	ng/L	2
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.3	1.8	ng/L	2
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.3	1.8	ng/L	2
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.3	1.8	ng/L	2
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.3	1.8	ng/L	2
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.3	1.8	ng/L	2
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.3	1.8	ng/L	2
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.3	1.8	ng/L	2
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.3	1.8	ng/L	2
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		15	3.6	ng/L	2
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.3	1.8	ng/L	2
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.3	1.8	ng/L	2
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	1.9	J	3.6	0.91	ng/L	2
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.6	0.91	ng/L	2
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.6	0.91	ng/L	2
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.6	0.91	ng/L	2
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.6	0.91	ng/L	2
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	ND		3.6	0.91	ng/L	2
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.3	1.8	ng/L	2
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	3.9		3.6	0.91	ng/L	2
Perfluoro-n-butyric acid (PFBA)	375-22-4	PFAS by ID SOP	6.1		3.6	0.91	ng/L	2
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.6	0.91	ng/L	2
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.6	0.91	ng/L	2
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.6	0.91	ng/L	2
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.3	1.8	ng/L	2
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		3.6	0.91	ng/L	2
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.6	0.91	ng/L	2
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.3	1.8	ng/L	2
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		3.6	0.91	ng/L	2
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		3.6	0.91	ng/L	2
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.6	0.91	ng/L	2
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.6	0.91	ng/L	2
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.6	0.91	ng/L	2
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	1.8	J	3.6	0.91	ng/L	2

Surrogate	Run 2 Q % Recovery	Acceptance Limits
13C2_4:2FTS	94	25-150
13C2_6:2FTS	85	25-150
13C2_8:2FTS	80	25-150
13C2_PFDaA	83	25-150
13C2_PFHxDA	84	25-150
13C2_PFTeDA	83	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK03016-005
Description: 370-0	Matrix: Aqueous
Date Sampled: 10/29/2020 1435	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/03/2020	Project Number: 40217496

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
13C3_PFBs		88	25-150
13C3_PFHxS		89	25-150
13C3-HFPO-DA		98	25-150
13C4_PFBa		93	25-150
13C4_PFHpA		93	25-150
13C5_PFHxA		100	25-150
13C5_PFPeA		98	25-150
13C6_PFDA		87	25-150
13C7_PFUdA		86	25-150
13C8_PFOA		98	25-150
13C8_PFOS		82	25-150
13C8_PFOSA		88	10-150
13C9_PFNA		92	25-150
d-EtFOSA		77	10-150
d5-EtFOSAA		88	25-150
d9-EtFOSE		86	10-150
d-MeFOSA		86	10-150
d3-MeFOSAA		87	25-150
d7-MeFOSE		82	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
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444 21st Street South · La Crosse, Wisconsin · 54601

November 24, 2020

████████████████████
 2519 1st Avenue West
 La Crosse, WI 54603

Subject: Private Well Sampling Results
 2519 1st Avenue West, La Crosse, WI 54603
 Tax parcel # 4-373-0
 Well ID # 373-0

Dear ████████████████████ :

We have received and reviewed the test results for the sample collected on October 29, 2020 at the above address. Some PFAS compounds were found, but the levels found were **below** the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in *your* well are called the “Sample Result” in the table below.

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)	
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}	The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}	
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}	
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}	
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	Not Detected	20 ppt ^{a,b}	
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	Not Detected	20 ppt ^{a,b}	

Private Well Sampling Results for
 2519 1st Avenue West, La Crosse, WI 54603
 Tax parcel # 4-373-0
 Well ID # 373-0
 November 24, 2020

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	2.0 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	2.3 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	4.7 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	Not Detected	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS #2706-91-4	1.2 ppt	None Established ^c

^a Public health enforcement standard (ES) recommended by DHS.

^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA.

^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation.

^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code.

^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L)

^{BL} Detected in the method blank. Possible lab contaminant.

Private Well Sampling Results for
2519 1st Avenue West, La Crosse, WI 54603
Tax parcel # 4-373-0
Well ID # 373-0
November 24, 2020

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK03016-006
Description: 373-0	Matrix: Aqueous
Date Sampled: 10/29/2020 1435	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/03/2020	Project Number: 40217496

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/12/2020 1429	MMM	11/11/2020 1108	73065

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.3	1.8	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.3	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.3	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.3	1.8	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.3	1.8	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.3	1.8	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.3	1.8	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.3	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.3	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.3	1.8	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.3	1.8	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		15	3.6	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.3	1.8	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.3	1.8	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	2.0	J	3.6	0.91	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	1.2	J	3.6	0.91	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.3	1.8	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	2.3	J	3.6	0.91	ng/L	1
Perfluoro-n-butyric acid (PFBA)	375-22-4	PFAS by ID SOP	4.7		3.6	0.91	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.3	1.8	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.3	1.8	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	ND		3.6	0.91	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		97	25-150
13C2_6:2FTS		103	25-150
13C2_8:2FTS		90	25-150
13C2_PFDaA		95	25-150
13C2_PFHxDA		92	25-150
13C2_PFTeDA		94	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK03016-006
Description: 373-0	Matrix: Aqueous
Date Sampled: 10/29/2020 1435	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/03/2020	Project Number: 40217496

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		93	25-150
13C3_PFHxS		94	25-150
13C3-HFPO-DA		104	25-150
13C4_PFBa		101	25-150
13C4_PFHpA		105	25-150
13C5_PFHxA		102	25-150
13C5_PFPeA		106	25-150
13C6_PFDa		100	25-150
13C7_PFUdA		100	25-150
13C8_PFOA		106	25-150
13C8_PFOS		87	25-150
13C8_PFOsA		108	10-150
13C9_PFNa		99	25-150
d-EtFOsA		92	10-150
d5-EtFOsAA		98	25-150
d9-EtFOsE		103	10-150
d-MeFOsA		95	10-150
d3-MeFOsAA		96	25-150
d7-MeFOsE		94	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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444 21st Street South · La Crosse, Wisconsin · 54601

December 1, 2020

██████████
 2741 Grand St
 La Crosse, WI 54603

Subject: Private Well Sampling Results
 102 Mitchell Street, La Crosse, WI 54603
 Tax parcel # 4-147-3
 Sample ID # 147-3

Dear ██████████:

We have received and reviewed the test results for the sample collected on November 12, 2020 at the above address. Some PFAS compounds were found, but the levels found were **below** the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in *your* well are called the “Sample Result” in the table below.

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	Not Detected	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	3.1 ppt	20 ppt ^{a,b}
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a

The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	1.7 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	2.0 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	7.9 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	1.6 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTEA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-n-pentanoic acid (PFPeA) CAS # 2706-90-3	1.6 ppt	None Established ^c

^a Public health enforcement standard (ES) recommended by DHS.

^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA.

^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation.

^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code.

^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L)

^{BL} Detected in the method blank. Possible lab contaminant.

Private Well Sampling Results for
102 Mitchell Street, La Crosse, WI 54603
Tax parcel # 4-147-3
Sample ID # 147-3
December 1, 2020

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK18030-002
Description: 147-3	Matrix: Aqueous
Date Sampled: 11/12/2020 1415	Project Name: LACROSSE WELLS 23 & 24
Date Received: 11/17/2020	Project Number: 40218362

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/19/2020 1700	MMM	11/18/2020 1701	73958

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.6	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	1.7	J	3.6	0.91	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	2.0	J	3.6	0.91	ng/L	1
Perfluoro-n-butyric acid (PFBA)	375-22-4	PFAS by ID SOP	7.9		3.6	0.91	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	1.6	J	3.6	0.91	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	1.6	J	3.6	0.91	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	3.1	J	3.6	0.91	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		98	25-150
13C2_6:2FTS		93	25-150
13C2_8:2FTS		91	25-150
13C2_PFDa		66	25-150
13C2_PFHxDA		81	25-150
13C2_PFTeDA		69	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK18030-002
Description: 147-3	Matrix: Aqueous
Date Sampled: 11/12/2020 1415	Project Name: LACROSSE WELLS 23 & 24
Date Received: 11/17/2020	Project Number: 40218362

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		74	25-150
13C3_PFHxS		75	25-150
13C3-HFPO-DA		89	25-150
13C4_PFBa		85	25-150
13C4_PFHpA		84	25-150
13C5_PFHxA		79	25-150
13C5_PFPeA		83	25-150
13C6_PFDA		74	25-150
13C7_PFUdA		74	25-150
13C8_PFOA		83	25-150
13C8_PFOS		71	25-150
13C8_PFOSA		93	10-150
13C9_PFNA		82	25-150
d-EtFOSA		68	10-150
d5-EtFOSAA		78	25-150
d9-EtFOSE		76	10-150
d-MeFOSA		76	10-150
d3-MeFOSAA		84	25-150
d7-MeFOSE		75	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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444 21st Street South · La Crosse, Wisconsin · 54601

December 1, 2020

[REDACTED]
2508 1st Avenue East
La Crosse, WI 54603

Subject: Private Well Sampling Results
2508 1st Avenue East, La Crosse, WI 54603
Tax parcel # 4-206-0
Sample ID # 206

Dear [REDACTED]:

We have received and reviewed the test results for the sample collected on November 12, 2020 at the above address. Some PFAS compounds were found at levels above the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in your well are called the “Sample Result” in the table below.

Because some of the levels are above the recommended Public Health Standard, the City is offering to provide bottled water delivered to your home for drinking, cooking, and brushing your teeth. There will be no cost to you for the bottled water. Please complete the attached form and mail it to The OS Group to make arrangements for having a water dispenser and bottles delivered to your home. Call 608-668-2718 or email PFAS@theOSgrp.com . You may also complete this form on line at www.cityoflacrosse.org/bottledwater

The following table summarizes the test results from the sample. **Bolded results** are above a current recommended level intended to protect your health according to the Department of Health Services (DHS).

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	49 ppt	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	19 ppt	20 ppt ^{a,b}
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	110 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	910 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	16 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	51 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a

The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6

Private Well Sampling Results for
 2508 1st Avenue East, La Crosse, WI 54603
 Tax Parcel # 4-206-0
 December 1, 2020

4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS # 2706-91-4	180 ppt	None Established ^c
Perfluoro-n-heptanoic acid (PFHpA) CAS # 375-85-9	15 ppt	None Established ^c
Perfluoro-n-pentanoic acid (PFPeA) CAS #2706-90-3	13 ppt	None Established ^c

^a Public health enforcement standard (ES) recommended by DHS.
^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA.
^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation.
^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code.
^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L)
^{Bl} Detected in the method blank. Possible lab contaminant.

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well
Bottled Water Acknowledgement

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK18030-001
Description: 206-0	Matrix: Aqueous
Date Sampled: 11/12/2020 1305	Project Name: LACROSSE WELLS 23 & 24
Date Received: 11/17/2020	Project Number: 40218362

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	5	11/20/2020 1714	MMM	11/18/2020 1701	73958

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		36	9.0	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		36	9.0	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		36	9.0	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		36	9.0	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		36	9.0	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		36	9.0	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		36	9.0	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		36	9.0	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		36	9.0	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		36	9.0	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		36	9.0	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		72	18	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		36	9.0	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		36	9.0	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	110		18	4.5	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		18	4.5	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		18	4.5	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		18	4.5	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		18	4.5	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	180		18	4.5	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		36	9.0	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	910		18	4.5	ng/L	1
Perfluoro-n-butyric acid (PFBA)	375-22-4	PFAS by ID SOP	16	J	18	4.5	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		18	4.5	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		18	4.5	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	15	J	18	4.5	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		36	9.0	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	51		18	4.5	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		18	4.5	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		36	9.0	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	49		18	4.5	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	13	J	18	4.5	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		18	4.5	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		18	4.5	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		18	4.5	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	19		18	4.5	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		94	25-150
13C2_6:2FTS		96	25-150
13C2_8:2FTS		83	25-150
13C2_PFDaA		88	25-150
13C2_PFHxDA		95	25-150
13C2_PFTeDA		86	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK18030-001
Description: 206-0	Matrix: Aqueous
Date Sampled: 11/12/2020 1305	Project Name: LACROSSE WELLS 23 & 24
Date Received: 11/17/2020	Project Number: 40218362

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		87	25-150
13C3_PFHxS		91	25-150
13C3-HFPO-DA		96	25-150
13C4_PFBa		91	25-150
13C4_PFHpA		90	25-150
13C5_PFHxA		94	25-150
13C5_PFPeA		94	25-150
13C6_PFDA		93	25-150
13C7_PFUdA		89	25-150
13C8_PFOA		90	25-150
13C8_PFOS		89	25-150
13C8_PFOSA		98	10-150
13C9_PFNA		89	25-150
d-EtFOSA		73	10-150
d5-EtFOSAA		90	25-150
d9-EtFOSE		85	10-150
d-MeFOSA		93	10-150
d3-MeFOSAA		89	25-150
d7-MeFOSE		100	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
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BOTTLED WATER ACKNOWLEDGEMENT

2508 1st Avenue East, La Crosse, WI 54603

If you desire to accept the bottled water delivery, please complete and sign this form and return it to The OS Group at PFAS@TheOSgrp.com or mail to 444 21st St. S, La Crosse, WI 54601. You may also complete this form electronically on line at www.cityoflacrosse.org/bottledwater . Call 608-668-2718 with any question you may have.

As pre-caution for the protection of human health, the City of La Crosse (The City) will provide, on a temporary basis, bottled water for drinking, cooking and toothbrushing purposes at the above referenced address. The water will be delivered to your home or business by a commercial water delivery service. At the City's cost, a dispenser / cooler and regular deliveries of 5-gallon containers of water will be provided. The City reserves the right to dictate the conditions of delivery, such as minimum and maximum number of containers per delivery, frequency and timing of deliveries. The City reserves the right to periodically review whether The City should continue to provide bottled water, considering factors such as State and Federal standards and guidance, evolving knowledge and understanding of the sources, cause and responsibility for the contamination, new or reinterpreted test results, and the availability of more permanent or cost-effective sources of water for the above purposes. The City of La Crosse makes no warranty or representation regarding the suitability of the bottled water beyond those made by the commercial water delivery service.

All reusable or returnable equipment and supplies, such as the containers and cooler/dispenser, are the property of the commercial water delivery service or the City of La Crosse. By signing below, the Occupant of the above referenced property acknowledges that all reusable or returnable equipment and supplies shall be returned to the commercial water delivery service or the City of La Crosse upon request. The Occupant agrees to provide reasonable access for delivery of bottled water and pick up of reusable or returnable equipment and supplies. Occupant(s) acknowledges that they may be required to sign an agreement with the commercial water delivery service as a condition of receiving bottled water.

Check ownership:

_____ Owner-Occupant

_____ Occupant Only

Number of Occupants: _____

Signed: _____ Dated: _____

Printed Name: _____



444 21st Street South · La Crosse, Wisconsin · 54601

November 24, 2020

██████████
2551 1st Avenue West
La Crosse, WI 54603

Subject: Private Well Sampling Results
2551 1st Avenue West, La Crosse, WI 54603
Tax Parcel # 4-388-0
Sample ID # 388-0

Dear ██████████:

We have received and reviewed the test results for the sample collected on October 29, 2020 at the above address. Some PFAS compounds were found at levels above the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the "Recommended Public Health Standard" in the table below. The levels found in your well are called the "Sample Result" in the table below.

Because some of the levels are above the recommended Public Health Standard, the City is offering to provide bottled water delivered to your home for drinking, cooking, and brushing your teeth. There will be no cost to you for the bottled water. Please complete the attached form and mail it to The OS Group to make arrangements for having a water dispenser and bottles delivered to your home or business. Call 608-668-2718 or email PFAS@theOSgrp.com. You may also complete this form on line at www.cityoflacrosse.org/bottledwater

The following table summarizes the test results from the sample. **Bolded results** are above a current recommended level intended to protect your health according to the Department of Health Services (DHS).

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	15 ppt	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	18 ppt	20 ppt ^{a,b}
<i>The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6</i>		
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	9.9 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	15 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	130 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	Not Detected	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a

Private Well Sampling Results for
 2551 1st Avenue West, La Crosse, WI 54603
 Tax Parcel # 4-388-0
 Sample ID # 388-0
 November 24, 2020

4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-hetanesulfonic acid (PFHpS) CAS # 375-92-8	1.3 ppt	None Established ^c
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS # 2706-91-4	7.0 ppt	None Established ^c

^a Public health enforcement standard (ES) recommended by DHS.
^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA.
^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation.
^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code.
^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L)
^{BL} Detected in the method blank. Possible lab contaminant.

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

Private Well Sampling Results for
2551 1st Avenue West, La Crosse, WI 54603
Tax Parcel # 4-388-0
Sample ID # 388-0
November 24, 2020

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well
Bottled Water Acknowledgement

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK03016-023
Description: 388-0	Matrix: Aqueous
Date Sampled: 10/29/2020 1345	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/03/2020	Project Number: 40217496

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	SOP SPE	PFAS by ID SOP	1	11/17/2020 2136	SES	11/16/2020 1613	73668

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		8.8	2.2	ng/L	2
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		8.8	2.2	ng/L	2
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		8.8	2.2	ng/L	2
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		8.8	2.2	ng/L	2
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		8.8	2.2	ng/L	2
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		8.8	2.2	ng/L	2
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		8.8	2.2	ng/L	2
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		8.8	2.2	ng/L	2
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		8.8	2.2	ng/L	2
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		8.8	2.2	ng/L	2
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		8.8	2.2	ng/L	2
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		18	4.4	ng/L	2
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		8.8	2.2	ng/L	2
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		8.8	2.2	ng/L	2
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	9.9		4.4	1.1	ng/L	2
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		4.4	1.1	ng/L	2
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	1.3	J	4.4	1.1	ng/L	2
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		4.4	1.1	ng/L	2
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		4.4	1.1	ng/L	2
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	7.0		4.4	1.1	ng/L	2
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		8.8	2.2	ng/L	2
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	15		4.4	1.1	ng/L	2
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	130		4.4	1.1	ng/L	2
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		4.4	1.1	ng/L	2
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		4.4	1.1	ng/L	2
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		4.4	1.1	ng/L	2
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		8.8	2.2	ng/L	2
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		4.4	1.1	ng/L	2
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		4.4	1.1	ng/L	2
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		8.8	2.2	ng/L	2
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	15		4.4	1.1	ng/L	2
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		4.4	1.1	ng/L	2
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		4.4	1.1	ng/L	2
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		4.4	1.1	ng/L	2
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		4.4	1.1	ng/L	2
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	18		4.4	1.1	ng/L	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
13C2_4:2FTS		91	25-150
13C2_6:2FTS		89	25-150
13C2_8:2FTS		91	25-150
13C2_PFDaA		78	25-150
13C2_PFHxDA		80	25-150
13C2_PFTeDA		74	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK03016-023
Description: 388-0	Matrix: Aqueous
Date Sampled: 10/29/2020 1345	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/03/2020	Project Number: 40217496

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
13C3_PFBs		81	25-150
13C3_PFHxS		86	25-150
13C3-HFPO-DA		88	25-150
13C4_PFBa		91	25-150
13C4_PFHpA		87	25-150
13C5_PFHxA		87	25-150
13C5_PFPeA		88	25-150
13C6_PFDa		88	25-150
13C7_PFUdA		84	25-150
13C8_PFOA		87	25-150
13C8_PFOS		85	25-150
13C8_PFOSA		92	10-150
13C9_PFNA		85	25-150
d-EtFOSA		73	10-150
d5-EtFOSAA		89	25-150
d9-EtFOSE		80	10-150
d-MeFOSA		80	10-150
d3-MeFOSAA		82	25-150
d7-MeFOSE		79	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
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BOTTLED WATER ACKNOWLEDGEMENT

2551 1st Avenue West, La Crosse, WI 54603

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As pre-caution for the protection of human health, the City of La Crosse (The City) will provide, on a temporary basis, bottled water for drinking, cooking and toothbrushing purposes at the above referenced address. The water will be delivered to your home or business by a commercial water delivery service. At the City's cost, a dispenser / cooler and regular deliveries of 5-gallon containers of water will be provided. The City reserves the right to dictate the conditions of delivery, such as minimum and maximum number of containers per delivery, frequency and timing of deliveries. The City reserves the right to periodically review whether The City should continue to provide bottled water, considering factors such as State and Federal standards and guidance, evolving knowledge and understanding of the sources, cause and responsibility for the contamination, new or reinterpreted test results, and the availability of more permanent or cost-effective sources of water for the above purposes. The City of La Crosse makes no warranty or representation regarding the suitability of the bottled water beyond those made by the commercial water delivery service.

Check ownership:

_____ **Owner-Occupant**
_____ **Occupant Only**

Number of Occupants: _____

All reusable or returnable equipment and supplies, such as the containers and cooler/dispenser, are the property of the commercial water delivery service or the City of La Crosse. By signing below, the Occupant of the above referenced property acknowledges that all reusable or returnable equipment and supplies shall be returned to the commercial water delivery service or the City of La Crosse upon request. The Occupant agrees to provide reasonable access for delivery of bottled water and pick up of reusable or returnable equipment and supplies. Occupant(s) acknowledges that they may be required to sign an agreement with the commercial water delivery service as a condition of receiving bottled water.

Signed: _____ Dated: _____

Printed Name: _____



444 21st Street South · La Crosse, Wisconsin · 54601

November 17, 2020

[REDACTED]
2606 FANTA REED RD
LA CROSSE, WI 54603

Subject: Private Well Sampling Results
2606 FANTA REED ROAD, La Crosse, WI 54603
Tax Parcel # 4-103-0
Sample ID # 103-0

Dear [REDACTED]

We have received and reviewed the test results for the sample collected on October 27, 2020 at the above address. Some PFAS compounds were found at levels above the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in your well are called the “Sample Result” in the table below.

Because some of the levels are above the recommended Public Health Standard, the City is offering to provide bottled water delivered to your home for drinking, cooking, and brushing your teeth. There will be no cost to you for the bottled water. Please complete the attached form and mail it to The OS Group to make arrangements for having a water dispenser and bottles delivered to your home or business. Call 608-668-2718 or email PFAS@theOSgrp.com . You may also complete this form on line at www.cityoflacrosse.org/bottledwater

The following table summarizes the test results from the sample. **Bolded results** are above a current recommended level intended to protect your health according to the Department of Health Services (DHS).

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	140 ppt	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	8.1 ppt	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	2.0 ppt ^{BL}	300 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	5.5 ppt	10,000 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	2.4 ppt	450,000 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	7.3 ppt	150,000 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	31 ppt	40 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a

The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS) CAS # 27619-97-2	1.9 ppt	None Established ^c
Perfluoro-1-heptanesulfonic acid (PFHpS) CAS # 375-92-8	2.2 ppt	None Established ^c
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS # 2706-91-4	2.8 ppt	None Established ^c
Perfluoro-n-heptanoic acid (PFHpA) CAS # 375-85-9	3.6 ppt	None Established ^c
Perfluoro-n-pentanoic acid (PFPeA) CAS # 2706-90-3	7.6 ppt	None Established ^c
^a Public health enforcement standard (ES) recommended by DHS. ^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA. ^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation. ^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code. ^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L) ^{BL} Detected in the method blank. Possible lab contaminant.		

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>	<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Water Testing	DNR David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Health Concerns	DHS Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse,
The OS Group, LLC

Attachment: Lab report for your well
 Bottled Water Acknowledgement

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	2606 FANTA REED ROAD Tax Parcel # 4-103-0	Laboratory ID: VJ29068-006
Description: 103-0		Matrix: Aqueous
Date Sampled: 10/27/2020 1340	Project Name: LACROSSE WELL #23 & 24	
Date Received: 10/29/2020	Project Number: 40217323	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/05/2020 1225	MMM	11/03/2020 1007	72053

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	1.9	J	7.4	1.9	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	2.0	BJ	7.4	1.9	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		15	3.7	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	2.4	J	3.7	0.93	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	2.2	J	3.7	0.93	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	2.8	J	3.7	0.93	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	31		3.7	0.93	ng/L	1
Perfluoro-n-butyric acid (PFBA)	375-22-4	PFAS by ID SOP	5.5		3.7	0.93	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	3.6	J	3.7	0.93	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	7.3		3.7	0.93	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	8.1		3.7	0.93	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	7.6		3.7	0.93	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	140		3.7	0.93	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		117	25-150
13C2_6:2FTS		101	25-150
13C2_8:2FTS		104	25-150
13C2_PFDa		95	25-150
13C2_PFHxDA		100	25-150
13C2_PFTeDA		96	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VJ29068-006
Description: 103-0	Matrix: Aqueous
Date Sampled: 10/27/2020 1340	Project Name: LACROSSE WELL #23 & 24
Date Received: 10/29/2020	Project Number: 40217323

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		94	25-150
13C3_PFHxS		94	25-150
13C3-HFPO-DA		119	25-150
13C4_PFBa		97	25-150
13C4_PFHpA		101	25-150
13C5_PFHxA		106	25-150
13C5_PFPeA		97	25-150
13C6_PFDa		99	25-150
13C7_PFUdA		99	25-150
13C8_PFOa		100	25-150
13C8_PFOs		88	25-150
13C8_PFOsA		108	10-150
13C9_PFNa		103	25-150
d-EtFOsA		88	10-150
d5-EtFOsAA		98	25-150
d9-EtFOsE		97	10-150
d-MeFOsA		91	10-150
d3-MeFOsAA		96	25-150
d7-MeFOsE		99	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
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BOTTLED WATER ACKNOWLEDGEMENT
2606 FANTA REED ROAD, LA CROSSE, WI 54603

If you desire to accept the bottled water delivery, please complete and sign this form and return it to The OS Group at PFAS@TheOSgrp.com or mail to 444 21st St. S, La Crosse, WI 54601. You may also complete this form electronically on line at www.cityoflacrosse.org/bottledwater . Call 608-668-2718 with any question you may have.

As pre-caution for the protection of human health, the City of La Crosse (The City) will provide, on a temporary basis, bottled water for drinking, cooking and toothbrushing purposes at the above referenced address. The water will be delivered to your home or business by a commercial water delivery service. At the City's cost, a dispenser / cooler and regular deliveries of 5-gallon containers of water will be provided. The City reserves the right to dictate the conditions of delivery, such as minimum and maximum number of containers per delivery, frequency and timing of deliveries. The City reserves the right to periodically review whether The City should continue to provide bottled water, considering factors such as State and Federal standards and guidance, evolving knowledge and understanding of the sources, cause and responsibility for the contamination, new or reinterpreted test results, and the availability of more permanent or cost-effective sources of water for the above purposes. The City of La Crosse makes no warranty or representation regarding the suitability of the bottled water beyond those made by the commercial water delivery service.

All reusable or returnable equipment and supplies, such as the containers and cooler/dispenser, are the property of the commercial water delivery service or the City of La Crosse. By signing below, the Occupant of the above referenced property acknowledges that all reusable or returnable equipment and supplies shall be returned to the commercial water delivery service or the City of La Crosse upon request. The Occupant agrees to provide reasonable access for delivery of bottled water and pick up of reusable or returnable equipment and supplies. Occupant(s) acknowledges that they may be required to sign an agreement with the commercial water delivery service as a condition of receiving bottled water.

Signed: _____ Dated: _____

Printed Name: _____

Check ownership:

_____ Owner-Occupant
_____ Occupant Only

BOTTLED WATER ACKNOWLEDGEMENT
2606 FANTA REED ROAD, LA CROSSE, WI 54603

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Signed: _____ Dated: _____

Printed Name: _____

Check ownership:

_____ **Owner-Occupant**
_____ **Occupant Only**



444 21st Street South · La Crosse, Wisconsin · 54601

November 17, 2020

████████████████████
 2608 Fanta Reed Road
 La Crosse, WI 54603

Subject: Private Well Sampling Results
 2608 Fanta Reed Road, La Crosse, WI 54603
 Tax Parcel # 4-104-0
 Sample ID # 104-0

Dear ██████████:

We have received and reviewed the test results for the sample collected on October 27, 2020 at the above address. Some PFAS compounds were found, but the levels found were **below** the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in *your* well are called the “Sample Result” in the table below.

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)	The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}	
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}	
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}	
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}	
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	Not Detected	20 ppt ^{a,b}	
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	12 ppt	20 ppt ^{a,b}	

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	1.7 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	31 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	10 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	Not Detected	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-pentanesulfonic acid CAS # 2706-91-4	2.6 ppt	None Established ^c
^a Public health enforcement standard (ES) recommended by DHS. ^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA. ^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation. ^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code. ^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L) ^{BL} Detected in the method blank. Possible lab contaminant.		

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Private Well Sampling Results for
2608 Fanta Reed Road, La Crosse, WI 54603
Tax Parcel # 4-104-0
Sample ID # 104-0

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
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Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	2608 Fanta Reed Road, La Crosse, WI 54603 Tax Parcel # 4-104-0	Laboratory ID: VJ29068-008
Description: 104-0		Matrix: Aqueous
Date Sampled: 10/27/2020 1400	Project Name: LACROSSE WELL #23 & 24	
Date Received: 10/29/2020	Project Number: 40217323	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	SOP SPE	PFAS by ID SOP	1	11/12/2020 1210	MMM	11/10/2020 1623	72960

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.2	1.8	ng/L	2
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.2	1.8	ng/L	2
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.2	1.8	ng/L	2
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.2	1.8	ng/L	2
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.2	1.8	ng/L	2
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.2	1.8	ng/L	2
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.2	1.8	ng/L	2
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.2	1.8	ng/L	2
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.2	1.8	ng/L	2
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.2	1.8	ng/L	2
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.2	1.8	ng/L	2
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.6	ng/L	2
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.2	1.8	ng/L	2
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.2	1.8	ng/L	2
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	1.7	J	3.6	0.90	ng/L	2
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.6	0.90	ng/L	2
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.6	0.90	ng/L	2
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.6	0.90	ng/L	2
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.6	0.90	ng/L	2
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	2.6	J	3.6	0.90	ng/L	2
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.2	1.8	ng/L	2
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	31		3.6	0.90	ng/L	2
Perfluoro-n-butyric acid (PFBA)	375-22-4	PFAS by ID SOP	1.0	J	3.6	0.90	ng/L	2
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.6	0.90	ng/L	2
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.6	0.90	ng/L	2
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.6	0.90	ng/L	2
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.2	1.8	ng/L	2
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		3.6	0.90	ng/L	2
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.6	0.90	ng/L	2
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.2	1.8	ng/L	2
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		3.6	0.90	ng/L	2
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		3.6	0.90	ng/L	2
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.6	0.90	ng/L	2
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.6	0.90	ng/L	2
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.6	0.90	ng/L	2
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	12		3.6	0.90	ng/L	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
13C2_4:2FTS		104	25-150
13C2_6:2FTS		101	25-150
13C2_8:2FTS		87	25-150
13C2_PFDaA		87	25-150
13C2_PFHxDA		89	25-150
13C2_PFTeDA		85	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VJ29068-008
Description: 104-0	Matrix: Aqueous
Date Sampled: 10/27/2020 1400	Project Name: LACROSSE WELL #23 & 24
Date Received: 10/29/2020	Project Number: 40217323

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
13C3_PFBs		90	25-150
13C3_PFHxS		87	25-150
13C3-HFPO-DA		90	25-150
13C4_PFBa		94	25-150
13C4_PFHpA		94	25-150
13C5_PFHxA		92	25-150
13C5_PFPeA		99	25-150
13C6_PFDA		95	25-150
13C7_PFUdA		95	25-150
13C8_PFOA		102	25-150
13C8_PFOS		93	25-150
13C8_PFOSA		96	10-150
13C9_PFNA		97	25-150
d-EtFOSA		78	10-150
d5-EtFOSAA		95	25-150
d9-EtFOSE		86	10-150
d-MeFOSA		93	10-150
d3-MeFOSAA		88	25-150
d7-MeFOSE		79	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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444 21st Street South · La Crosse, Wisconsin · 54601

November 18, 2020

██████████
2552 Bainbridge Street
La Crosse, WI 54603

Subject: Private Well Sampling Results
2552 Bainbridge Street, La Crosse, WI 54603
Tax Parcel #4-110-1
Sample ID # 110-1

Dear ██████████:

We have received and reviewed the test results for the sample collected on October 27, 2020 at the above address. Some PFAS compounds were found at levels above the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in your well are called the “Sample Result” in the table below.

Because some of the levels are above the recommended Public Health Standard, the City is offering to provide bottled water delivered to your home for drinking, cooking, and brushing your teeth. There will be no cost to you for the bottled water. Please complete the attached form and mail it to The OS Group to make arrangements for having a water dispenser and bottles delivered to your home or business. Call 608-668-2718 or email PFAS@theOSgrp.com. You may also complete this form on line at www.cityoflacrosse.org/bottledwater

The following table summarizes the test results from the sample. **Bolded results** are above a current recommended level intended to protect your health according to the Department of Health Services (DHS).

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	1.3 ppt	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	3.8 ppt	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	39 ppt	20 ppt ^{a,b}
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	12 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	70 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	40 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	1.7 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a

The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-hetanesulfonic acid (PFHpS) CAS # 375-92-8	2.4 ppt	None Established ^c
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS # 2706-91-4	11 ppt	None Established ^c
Perfluoro-n-pentanoic acid (PFPeA) CAS #2706-90-3	0.92 ppt	None Established ^c
^a Public health enforcement standard (ES) recommended by DHS. ^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA. ^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation. ^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code. ^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L) ^{BL} Detected in the method blank. Possible lab contaminant.		

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

Private Well Sampling Results for
2552 Bainbridge Street, La Crosse, WI 54603
Tax Parcel # 4-110-1
Sample ID # 110-1
November 18, 2020

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private Wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC
(608) 668-2718
PFAS@theOSgrp.com

Attachment: Lab report for your well
Bottled Water Acknowledgement

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VJ29090-012
Description: 110-1	Matrix: Aqueous
Date Sampled: 10/27/2020 1240	Project Name: LACROSSE WELL #23 & 24
Date Received: 10/29/2020	Project Number: 40217319

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/07/2020 0125	KMM2	11/05/2020 1030	72351

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		15	3.7	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	12		3.7	0.92	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	2.4	J	3.7	0.92	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	1.3	J	3.7	0.92	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	11		3.7	0.92	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	70		3.7	0.92	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	40		3.7	0.92	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	1.7	J	3.7	0.92	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	3.8		3.7	0.92	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	0.92	J	3.7	0.92	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	39		3.7	0.92	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		94	25-150
13C2_6:2FTS		86	25-150
13C2_8:2FTS		89	25-150
13C2_PFDaA		66	25-150
13C2_PFHxDA		79	25-150
13C2_PFTeDA		75	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VJ29090-012
Description: 110-1	Matrix: Aqueous
Date Sampled: 10/27/2020 1240	Project Name: LACROSSE WELL #23 & 24
Date Received: 10/29/2020	Project Number: 40217319

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		78	25-150
13C3_PFHxS		81	25-150
13C3-HFPO-DA		90	25-150
13C4_PFBa		87	25-150
13C4_PFHpA		87	25-150
13C5_PFHxA		85	25-150
13C5_PFPeA		85	25-150
13C6_PFDa		82	25-150
13C7_PFUdA		72	25-150
13C8_PFOA		84	25-150
13C8_PFOS		69	25-150
13C8_PFOSA		88	10-150
13C9_PFNA		86	25-150
d-EtFOSA		56	10-150
d5-EtFOSAA		81	25-150
d9-EtFOSE		71	10-150
d-MeFOSA		73	10-150
d3-MeFOSAA		73	25-150
d7-MeFOSE		80	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
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 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

BOTTLED WATER ACKNOWLEDGEMENT
2552 Bainbridge Street, LA CROSSE, WI 54603

If you desire to accept the bottled water delivery, please complete and sign this form and return it to The OS Group at PFAS@TheOSgrp.com or mail to 444 21st St. S, La Crosse, WI 54601. You may also complete this form electronically on line at www.cityoflacrosse.org/bottledwater . Call 608-668-2718 with any question you may have.

As pre-caution for the protection of human health, the City of La Crosse (The City) will provide, on a temporary basis, bottled water for drinking, cooking and toothbrushing purposes at the above referenced address. The water will be delivered to your home or business by a commercial water delivery service. At the City's cost, a dispenser / cooler and regular deliveries of 5-gallon containers of water will be provided. The City reserves the right to dictate the conditions of delivery, such as minimum and maximum number of containers per delivery, frequency and timing of deliveries. The City reserves the right to periodically review whether The City should continue to provide bottled water, considering factors such as State and Federal standards and guidance, evolving knowledge and understanding of the sources, cause and responsibility for the contamination, new or reinterpreted test results, and the availability of more permanent or cost-effective sources of water for the above purposes. The City of La Crosse makes no warranty or representation regarding the suitability of the bottled water beyond those made by the commercial water delivery service.

Check ownership:

_____ **Owner-Occupant**
_____ **Occupant Only**

Number of Occupants: _____

All reusable or returnable equipment and supplies, such as the containers and cooler/dispenser, are the property of the commercial water delivery service or the City of La Crosse. By signing below, the Occupant of the above referenced property acknowledges that all reusable or returnable equipment and supplies shall be returned to the commercial water delivery service or the City of La Crosse upon request. The Occupant agrees to provide reasonable access for delivery of bottled water and pick up of reusable or returnable equipment and supplies. Occupant(s) acknowledges that they may be required to sign an agreement with the commercial water delivery service as a condition of receiving bottled water.

Signed: _____ **Dated:** _____

Printed Name: _____

BOTTLED WATER ACKNOWLEDGEMENT
2552 Bainbridge Street, LA CROSSE, WI 54603

If you desire to accept the bottled water delivery, please complete and sign this form and return it to The OS Group at PFAS@TheOSgrp.com or mail to 444 21st St. S, La Crosse, WI 54601. You may also complete this form electronically on line at www.cityoflacrosse.org/bottledwater . Call 608-668-2718 with any question you may have.

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Signed: _____ **Dated:** _____

Printed Name: _____



444 21st Street South · La Crosse, Wisconsin · 54601

November 18, 2020

██████████
2556 Bainbridge Street
La Crosse, WI 54603

Subject: Private Well Sampling Results
2556 Bainbridge Street, La Crosse, WI 54603
Tax Parcel #4-110-2
Sample ID # 110-2

Dear ██████████:

We have received and reviewed the test results for the sample collected on October 27, 2020 at the above address. Some PFAS compounds were found at levels above the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the "Recommended Public Health Standard" in the table below. The levels found in your well are called the "Sample Result" in the table below.

Because some of the levels are above the recommended Public Health Standard, the City is offering to provide bottled water delivered to your home for drinking, cooking, and brushing your teeth. There will be no cost to you for the bottled water. Please complete the attached form and mail it to The OS Group to make arrangements for having a water dispenser and bottles delivered to your home or business. Call 608-668-2718 or email PFAS@theOSgrp.com. You may also complete this form on line at www.cityoflacrosse.org/bottledwater

The following table summarizes the test results from the sample. **Bolded results** are above a current recommended level intended to protect your health according to the Department of Health Services (DHS).

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	3.2 ppt	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	160 ppt	20 ppt ^{a,b}
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	5.5 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	64 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	6.7 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	4.9 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a

The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6

Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-hetanesulfonic acid (PFHpS) CAS # 375-92-8	5.3 ppt	None Established ^c
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS # 2706-91-4	4.0 ppt	None Established ^c
Perfluoro-n-heptanoic acid (PFHpA) CAS # 375-85-9	2.0 ppt	None Established ^c
Perfluoro-n-pentanoic acid (PFPeA) CAS #2706-90-3	6.2 ppt	None Established ^c
^a Public health enforcement standard (ES) recommended by DHS. ^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA. ^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation. ^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code. ^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L) ^{BL} Detected in the method blank. Possible lab contaminant.		

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>	<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private Wells	DNR Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse

The OS Group, LLC

Attachment: Lab report for your well
 Bottled Water Acknowledgement

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VJ29090-011
Description: 110-2	Matrix: Aqueous
Date Sampled: 10/27/2020 1240	Project Name: LACROSSE WELL #23 & 24
Date Received: 10/29/2020	Project Number: 40217319

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/07/2020 0114	KMM2	11/05/2020 1030	72351

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.6	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	5.5		3.6	0.90	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	5.3		3.6	0.90	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	4.0		3.6	0.90	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	64		3.6	0.90	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	6.7		3.6	0.90	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	2.0	J	3.6	0.90	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	4.9		3.6	0.90	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	3.2	J	3.6	0.90	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	6.2		3.6	0.90	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	160		3.6	0.90	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		98	25-150
13C2_6:2FTS		100	25-150
13C2_8:2FTS		91	25-150
13C2_PFDa		79	25-150
13C2_PFHxDA		80	25-150
13C2_PFTeDA		79	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VJ29090-011
Description: 110-2	Matrix: Aqueous
Date Sampled: 10/27/2020 1240	Project Name: LACROSSE WELL #23 & 24
Date Received: 10/29/2020	Project Number: 40217319

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		83	25-150
13C3_PFHxS		85	25-150
13C3-HFPO-DA		95	25-150
13C4_PFBa		90	25-150
13C4_PFHpA		93	25-150
13C5_PFHxA		90	25-150
13C5_PFPeA		89	25-150
13C6_PFDA		89	25-150
13C7_PFUdA		79	25-150
13C8_PFOA		88	25-150
13C8_PFOS		78	25-150
13C8_PFOSA		91	10-150
13C9_PFNA		88	25-150
d-EtFOSA		68	10-150
d5-EtFOSAA		84	25-150
d9-EtFOSE		80	10-150
d-MeFOSA		78	10-150
d3-MeFOSAA		78	25-150
d7-MeFOSE		80	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
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BOTTLED WATER ACKNOWLEDGEMENT

2556 Bainbridge Street, LA CROSSE, WI 54603

If you desire to accept the bottled water delivery, please complete and sign this form and return it to The OS Group at PFAS@TheOSgrp.com or mail to 444 21st St. S, La Crosse, WI 54601. You may also complete this form electronically on line at www.cityoflacrosse.org/bottledwater . Call 608-668-2718 with any question you may have.

As pre-caution for the protection of human health, the City of La Crosse (The City) will provide, on a temporary basis, bottled water for drinking, cooking and toothbrushing purposes at the above referenced address. The water will be delivered to your home or business by a commercial water delivery service. At the City's cost, a dispenser / cooler and regular deliveries of 5-gallon containers of water will be provided. The City reserves the right to dictate the conditions of delivery, such as minimum and maximum number of containers per delivery, frequency and timing of deliveries. The City reserves the right to periodically review whether The City should continue to provide bottled water, considering factors such as State and Federal standards and guidance, evolving knowledge and understanding of the sources, cause and responsibility for the contamination, new or reinterpreted test results, and the availability of more permanent or cost-effective sources of water for the above purposes. The City of La Crosse makes no warranty or representation regarding the suitability of the bottled water beyond those made by the commercial water delivery service.

Check ownership:

_____ **Owner-Occupant**

_____ **Occupant Only**

Number of Occupants: _____

All reusable or returnable equipment and supplies, such as the containers and cooler/dispenser, are the property of the commercial water delivery service or the City of La Crosse. By signing below, the Occupant of the above referenced property acknowledges that all reusable or returnable equipment and supplies shall be returned to the commercial water delivery service or the City of La Crosse upon request. The Occupant agrees to provide reasonable access for delivery of bottled water and pick up of reusable or returnable equipment and supplies. Occupant(s) acknowledges that they may be required to sign an agreement with the commercial water delivery service as a condition of receiving bottled water.

Signed: _____ Dated: _____

Printed Name: _____

BOTTLED WATER ACKNOWLEDGEMENT

2556 Bainbridge Street, LA CROSSE, WI 54603

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Signed: _____ Dated: _____

Printed Name: _____



444 21st Street South · La Crosse, Wisconsin · 54601

November 17, 2020

[Redacted]

2425 BAINBRIDGE ST
La Crosse, WI 54603

Subject: Private Well Sampling Results
2425 BAINBRIDGE ST, La Crosse, WI 54603
Tax Parcel Number 4-115-0
Sample Number 115-0

Dear [Redacted]:

We have received and reviewed the test results for the sample collected on October 27, 2020 at the above address. Some PFAS compounds were found, but the levels found were **below** the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in *your* well are called the “Sample Result” in the table below.

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)	
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	3.6 ppt	20 ppt ^{a,b}	The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	2.7 ppt	20 ppt ^{a,b}	
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not detected	20 ppt ^{a,b}	
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not detected	20 ppt ^{a,b}	
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not detected	20 ppt ^{a,b}	
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not detected	20 ppt ^{a,b}	

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not detected	300 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	3.7 ppt	10,000 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	2.0 ppt	450,000 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	2.2 ppt	150,000 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not detected	400,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	3.2 ppt	40 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not detected	30 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not detected	300 ppt ^a
Perfluoro-n-heptanoic acid (PFHpA) CAS # 375-85-9	1.1 ppt	None Established ^c
Perfluoro-n-pentanoic acid (PFPeA) CAS # 2706-90-3	1.8 ppt	None Established ^c
^a Public health enforcement standard (ES) recommended by DHS. ^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NET-FOSE, NET-FOSA, NetFOSAA, PFOS, and PFOA. ^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation. ^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code. ^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L)		

November 17, 2020
BRIAN L LIETHEN, LINDA K LIETHEN
Private Well Sampling Results for
2425 BAINBRIDGE ST, La Crosse, WI 54603

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Water Testing	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	BRIAN L LIETHEN, LINDA K LIETHEN	Laboratory ID: VJ29068-003
Description: 115-0	2425 BAINBRIDGE ST	Matrix: Aqueous
Date Sampled: 10/27/2020 1330	Project Name: LACROSSE WELL #23 & 24	
Date Received: 10/29/2020	Project Number: 40217323	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/07/2020 2041	MMM	11/03/2020 1007	72053

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		15	3.7	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	2.0	J	3.7	0.92	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	3.2	J	3.7	0.92	ng/L	1
Perfluoro-n-butyric acid (PFBA)	375-22-4	PFAS by ID SOP	3.7		3.7	0.92	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	1.1	J	3.7	0.92	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	2.2	J	3.7	0.92	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	2.7	J	3.7	0.92	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	1.8	J	3.7	0.92	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	3.6	J	3.7	0.92	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		110	25-150
13C2_6:2FTS		118	25-150
13C2_8:2FTS		98	25-150
13C2_PFDaA		94	25-150
13C2_PFHxDA		94	25-150
13C2_PFTeDA		93	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VJ29068-003
Description: 115-0	Matrix: Aqueous
Date Sampled: 10/27/2020 1330	Project Name: LACROSSE WELL #23 & 24
Date Received: 10/29/2020	Project Number: 40217323

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		95	25-150
13C3_PFHxS		94	25-150
13C3-HFPO-DA		99	25-150
13C4_PFBa		102	25-150
13C4_PFHpA		111	25-150
13C5_PFHxA		95	25-150
13C5_PFPeA		100	25-150
13C6_PFDA		96	25-150
13C7_PFUdA		102	25-150
13C8_PFOA		106	25-150
13C8_PFOS		96	25-150
13C8_PFOSA		105	10-150
13C9_PFNA		98	25-150
d-EtFOSA		91	10-150
d5-EtFOSAA		101	25-150
d9-EtFOSE		104	10-150
d-MeFOSA		96	10-150
d3-MeFOSAA		103	25-150
d7-MeFOSE		92	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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444 21st Street South · La Crosse, Wisconsin · 54601

November 17, 2020

[REDACTED]
2556 2nd Avenue East
La Crosse, WI 54603

Subject: Private Well Sampling Results
2556 2nd Avenue East, La Crosse, WI 54603
Tax Parcel #4-179-0
Sample ID # 179-0

Dear [REDACTED]:

We have received and reviewed the test results for the sample collected on October 27, 2020 at the above address. Some PFAS compounds were found at levels above the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the "Recommended Public Health Standard" in the table below. The levels found in your well are called the "Sample Result" in the table below.

Because some of the levels are above the recommended Public Health Standard, the City is offering to provide bottled water delivered to your home for drinking, cooking, and brushing your teeth. There will be no cost to you for the bottled water. Please complete the attached form and mail it to The OS Group to make arrangements for having a water dispenser and bottles delivered to your home or business. Call 608-668-2718 or email PFAS@theOSgrp.com. You may also complete this form on line at www.cityoflacrosse.org/bottledwater

Also, please note, we collected three samples from your home. One upstream of your granular activated carbon filter, one after the granular activated carbon filter (at your faucet in the kitchen), and a second "split" sample also after the granular activated carbon filter. The results from the two samples collected after the filter, were both below applicable standards. The results for these two samples are provided below in Tables 2 and 3. It should be noted that the "split" sample collected from the kitchen faucet was analyzed for a different EPA method and that method only analyzes for 18 compounds as compared to the 36 compounds analyze via the prior method. Thus, in Table 3 you will see some results listed as "Not Analyzed".

The following tables summarize the test results from the samples. **Bolded results** are above a current recommended level intended to protect your health according to the Department of Health Services (DHS).

Table 1. Sample Results – 179-0 PRE-FILTER

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not detected	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not detected	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	22 ppt	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	7.5 ppt	20 ppt ^{a,b}
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	5.2 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	7.3 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	130 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	2.1 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not detected	400,000 ppt ^a

The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6

Perfluoro-1-pentanesulfonic acid CAS # 2706-91-4	3.7 ppt	None Established ^c
Perfluoro-n-pentanoic acid CAS # 2706-90-3	8.0 ppt	None Established ^c
^a Public health enforcement standard (ES) recommended by DHS. ^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA. ^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation. ^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code. ^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L) ^{Bl} Detected in the method blank. Possible lab contaminant.		

Table 2. Sample Results – 179-0 POST-FILTER

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not detected	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not detected	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	Not detected	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	Not detected	20 ppt ^{a,b}
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	Not detected	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	Not detected	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	23 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not detected	500 ppt ^a

The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6

Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	Not detected	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not detected	400,000 ppt ^a

Table 3. Sample Results – 179-0 POST-FILTER “Split”

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)	
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Analyzed	20 ppt ^{a,b}	The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not detected	20 ppt ^{a,b}	
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Analyzed	20 ppt ^{a,b}	
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Analyzed	20 ppt ^{a,b}	
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	0.95 ppt	20 ppt ^{a,b}	
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	Not detected	20 ppt ^{a,b}	
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not detected	300 ppt ^a	
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	Not detected	450,000 ppt ^a	
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	Not Analyzed	40 ppt ^a	
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	Not Analyzed	10,000 ppt ^a	
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not detected	300 ppt ^a	

Private Well Sampling Results for
2556 2nd Avenue East, La Crosse, WI 54603
Tax Parcel # 4-179-0
Sample ID # 179-0 Pre-Filter and 179-0 Post-Filter

Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	Not detected	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Analyzed	400,000 ppt ^a

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>	<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Water Testing	DNR David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Health Concerns	DHS Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well
Bottled Water Acknowledgement

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	2556 2 nd Avenue East	Laboratory ID: VJ29068-004
Description: 179-0 PRE-FILTER	Tax Parcel #4-179-0	Matrix: Aqueous
Date Sampled: 10/27/2020 1345	Project Name: LACROSSE WELL #23 & 24	
Date Received: 10/29/2020	Project Number: 40217323	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/05/2020 1203	MMM	11/03/2020 1007	72053

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		15	3.7	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	5.2		3.7	0.94	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.7	0.94	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.7	0.94	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.7	0.94	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.7	0.94	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	3.7		3.7	0.94	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	7.3		3.7	0.94	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	130		3.7	0.94	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.7	0.94	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.7	0.94	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.7	0.94	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	2.1	J	3.7	0.94	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.7	0.94	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	22		3.7	0.94	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	8.0		3.7	0.94	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.7	0.94	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.7	0.94	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.7	0.94	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	7.5		3.7	0.94	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		118	25-150
13C2_6:2FTS		104	25-150
13C2_8:2FTS		97	25-150
13C2_PFDaA		89	25-150
13C2_PFHxDA		79	25-150
13C2_PFTeDA		83	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VJ29068-004
Description: 179-0 PRE-FILTER	Matrix: Aqueous
Date Sampled: 10/27/2020 1345	Project Name: LACROSSE WELL #23 & 24
Date Received: 10/29/2020	Project Number: 40217323

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		86	25-150
13C3_PFHxS		84	25-150
13C3-HFPO-DA		97	25-150
13C4_PFBa		98	25-150
13C4_PFHpA		101	25-150
13C5_PFHxA		102	25-150
13C5_PFPeA		89	25-150
13C6_PFDA		92	25-150
13C7_PFUdA		92	25-150
13C8_PFOA		95	25-150
13C8_PFOS		79	25-150
13C8_PFOSA		98	10-150
13C9_PFNA		94	25-150
d-EtFOSA		79	10-150
d5-EtFOSAA		91	25-150
d9-EtFOSE		89	10-150
d-MeFOSA		80	10-150
d3-MeFOSAA		94	25-150
d7-MeFOSE		94	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VJ29068-005
Description: 179-0 POST-FILTER	Matrix: Aqueous
Date Sampled: 10/27/2020 1350	Project Name: LACROSSE WELL #23 & 24
Date Received: 10/29/2020	Project Number: 40217323

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/05/2020 1214	MMM	11/03/2020 1007	72053

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.8	2.0	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.8	2.0	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.8	2.0	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.8	2.0	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.8	2.0	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.8	2.0	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.8	2.0	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.8	2.0	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.8	2.0	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.8	2.0	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.8	2.0	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		16	3.9	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.8	2.0	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.8	2.0	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.8	2.0	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	23		3.9	0.98	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.8	2.0	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.8	2.0	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	ND		3.9	0.98	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		107	25-150
13C2_6:2FTS		115	25-150
13C2_8:2FTS		103	25-150
13C2_PFDaA		99	25-150
13C2_PFHxDA		109	25-150
13C2_PFTeDA		99	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
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PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VJ29068-005
Description: 179-0 POST-FILTER	Matrix: Aqueous
Date Sampled: 10/27/2020 1350	Project Name: LACROSSE WELL #23 & 24
Date Received: 10/29/2020	Project Number: 40217323

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBS		102	25-150
13C3_PFHxS		101	25-150
13C3-HFPO-DA		117	25-150
13C4_PFBA		104	25-150
13C4_PFHpA		98	25-150
13C5_PFHxA		103	25-150
13C5_PFPeA		100	25-150
13C6_PFDA		102	25-150
13C7_PFUdA		102	25-150
13C8_PFOA		104	25-150
13C8_PFOS		100	25-150
13C8_PFOSA		111	10-150
13C9_PFNA		108	25-150
d-EtFOSA		86	10-150
d5-EtFOSAA		107	25-150
d9-EtFOSE		101	10-150
d-MeFOSA		96	10-150
d3-MeFOSAA		102	25-150
d7-MeFOSE		107	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
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ANALYTICAL RESULTS

Project: LACROSSE WELL #23 & 24

Pace Project No.: 40217323

Sample: 179-0 POST-FILTER **Lab ID: 40217323005** Collected: 10/27/20 13:50 Received: 10/28/20 09:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
537.1 PFAS Compounds, Water									
Analytical Method: EPA 537.1 Preparation Method: EPA 537.1									
Pace Analytical Services - Ormond Beach									
11CI-PF3OUdS	<0.0016	ug/L	0.0019	0.0016	1	11/03/20 09:49	11/05/20 23:34	763051-92-9	
9CI-PF3ONS	<0.0011	ug/L	0.0019	0.0011	1	11/03/20 09:49	11/05/20 23:34	756426-58-1	
ADONA	<0.00071	ug/L	0.0019	0.00071	1	11/03/20 09:49	11/05/20 23:34	919005-14-4	
HFPO-DA	<0.0016	ug/L	0.0019	0.0016	1	11/03/20 09:49	11/05/20 23:34	13252-13-6	
NEtFOSAA	<0.00091	ug/L	0.0019	0.00091	1	11/03/20 09:49	11/05/20 23:34	2991-50-6	
NMeFOSAA	<0.0015	ug/L	0.0019	0.0015	1	11/03/20 09:49	11/05/20 23:34	2355-31-9	
Perfluorobutanesulfonic acid	<0.00065	ug/L	0.0019	0.00065	1	11/03/20 09:49	11/05/20 23:34	375-73-5	
Perfluorodecanoic acid	<0.0019	ug/L	0.0019	0.0019	1	11/03/20 09:49	11/05/20 23:34	335-76-2	
Perfluorohexanoic acid	<0.0012	ug/L	0.0019	0.0012	1	11/03/20 09:49	11/05/20 23:34	307-24-4	
Perfluorododecanoic acid	<0.0014	ug/L	0.0019	0.0014	1	11/03/20 09:49	11/05/20 23:34	307-55-1	
Perfluoroheptanoic acid	<0.00099	ug/L	0.0019	0.00099	1	11/03/20 09:49	11/05/20 23:34	375-85-9	
Perfluorohexanesulfonic acid	<0.00072	ug/L	0.0019	0.00072	1	11/03/20 09:49	11/05/20 23:34	355-46-4	
Perfluorononanoic acid	<0.0019	ug/L	0.0019	0.0019	1	11/03/20 09:49	11/05/20 23:34	375-95-1	
Perfluorooctanesulfonic acid	<0.0012	ug/L	0.0019	0.0012	1	11/03/20 09:49	11/05/20 23:34	1763-23-1	
Perfluorooctanoic acid	0.00095J	ug/L	0.0019	0.00086	1	11/03/20 09:49	11/05/20 23:34	335-67-1	
Perfluorotetradecanoic acid	<0.0018	ug/L	0.0019	0.0018	1	11/03/20 09:49	11/05/20 23:34	376-06-7	
Perfluorotridecanoic acid	<0.0017	ug/L	0.0019	0.0017	1	11/03/20 09:49	11/05/20 23:34	72629-94-8	
Perfluoroundecanoic acid	<0.0019	ug/L	0.0019	0.0019	1	11/03/20 09:49	11/05/20 23:34	2058-94-8	
Surrogates									
13C2-PFDA (S)	101	%	70-130		1	11/03/20 09:49	11/05/20 23:34		
13C2-PFHxA (S)	101	%	70-130		1	11/03/20 09:49	11/05/20 23:34		
NEtFOSAA-d5 (S)	96	%	70-130		1	11/03/20 09:49	11/05/20 23:34		
HFPO-DAS (S)	93	%	70-130		1	11/03/20 09:49	11/05/20 23:34		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

BOTTLED WATER ACKNOWLEDGEMENT

2556 2nd Avenue East, LA CROSSE, WI 54603

If you desire to accept the bottled water delivery, please complete and sign this form and return it to The OS Group at PFAS@TheOSgrp.com or mail to 444 21st St. S, La Crosse, WI 54601. You may also complete this form electronically on line at www.cityoflacrosse.org/bottledwater . Call 608-668-2718 with any question you may have.

As pre-caution for the protection of human health, the City of La Crosse (The City) will provide, on a temporary basis, bottled water for drinking, cooking and toothbrushing purposes at the above referenced address. The water will be delivered to your home or business by a commercial water delivery service. At the City's cost, a dispenser / cooler and regular deliveries of 5-gallon containers of water will be provided. The City reserves the right to dictate the conditions of delivery, such as minimum and maximum number of containers per delivery, frequency and timing of deliveries. The City reserves the right to periodically review whether The City should continue to provide bottled water, considering factors such as State and Federal standards and guidance, evolving knowledge and understanding of the sources, cause and responsibility for the contamination, new or reinterpreted test results, and the availability of more permanent or cost-effective sources of water for the above purposes. The City of La Crosse makes no warranty or representation regarding the suitability of the bottled water beyond those made by the commercial water delivery service.

All reusable or returnable equipment and supplies, such as the containers and cooler/dispenser, are the property of the commercial water delivery service or the City of La Crosse. By signing below, the Occupant of the above referenced property acknowledges that all reusable or returnable equipment and supplies shall be returned to the commercial water delivery service or the City of La Crosse upon request. The Occupant agrees to provide reasonable access for delivery of bottled water and pick up of reusable or returnable equipment and supplies. Occupant(s) acknowledges that they may be required to sign an agreement with the commercial water delivery service as a condition of receiving bottled water.

Signed: _____ Dated: _____

Printed Name: _____

Check ownership:

_____ Owner-Occupant

_____ Occupant Only



444 21st Street South · La Crosse, Wisconsin · 54601

November 17, 2020

[REDACTED]
202 FANTA REED RD
La Crosse, WI 54603

Subject: Private Well Sampling Results
202 FANTA REED RD, La Crosse, WI 54603
Tax Parcel Number 4-192-0
Sample Number 192-0

Dear [REDACTED]:

We have received and reviewed the test results for the sample collected on October 27, 2020 at the above address. Some PFAS compounds were found, but the levels found were **below** the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the "Recommended Public Health Standard" in the table below. The levels found in *your* well are called the "Sample Result" in the table below.

While none of the levels are above the recommended Public Health Standard, to be cautious the City is offering to provide bottled water delivered to your home for drinking, cooking, and brushing your teeth. There will be no cost to you for the bottled water. Please complete the attached form and mail it to The OS Group to make arrangements for having a water dispenser and bottles delivered to your home or business. Call 608-668-2718 or email PFAS@theOSgrp.com . You may also complete this form on line at www.cityoflacrosse.org/bottledwater

The following table summarizes the test results from the sample.

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	7.7 ppt	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	10 ppt	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not detected	20 ppt ^{a,b}
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not detected	20 ppt ^{a,b}
The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6		
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not detected	300 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	83 ppt	10,000 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	6.0 ppt	450,000 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	Not detected	150,000 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not detected	400,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	7.4 ppt	40 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not detected	30 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not detected	300 ppt ^a

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS # 2706-91-4	3.9 ppt	None Established ^c
<p>^a Public health enforcement standard (ES) recommended by DHS.</p> <p>^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA.</p> <p>^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation.</p> <p>^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code.</p> <p>^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L)</p>		

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>	<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Water Testing	DNR David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Health Concerns	DHS Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well
 Bottled Water Acknowledgement

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	WILLIAM S AMUNRUD, BARBARA M AMUNRUD	Laboratory ID: VJ29068-001
Description: 192-0	202 FANTA REED RD	Matrix: Aqueous
Date Sampled: 10/27/2020 1300	Project Name: LACROSSE WELL #23 & 24	
Date Received: 10/29/2020	Project Number: 40217323	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/05/2020 1131	MMM	11/03/2020 1007	72053

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.3	1.8	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.3	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.3	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.3	1.8	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.3	1.8	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.3	1.8	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.3	1.8	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.3	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.3	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.3	1.8	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.3	1.8	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		15	3.6	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.3	1.8	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.3	1.8	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	6.0		3.6	0.91	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	3.9		3.6	0.91	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.3	1.8	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	7.4		3.6	0.91	ng/L	1
Perfluoro-n-butyric acid (PFBA)	375-22-4	PFAS by ID SOP	83		3.6	0.91	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.3	1.8	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.3	1.8	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	10		3.6	0.91	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	7.7		3.6	0.91	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		90	25-150
13C2_6:2FTS		87	25-150
13C2_8:2FTS		75	25-150
13C2_PFDaA		70	25-150
13C2_PFHxDA		59	25-150
13C2_PFTeDA		65	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
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 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VJ29068-001
Description: 192-0	Matrix: Aqueous
Date Sampled: 10/27/2020 1300	Project Name: LACROSSE WELL #23 & 24
Date Received: 10/29/2020	Project Number: 40217323

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		69	25-150
13C3_PFHxS		68	25-150
13C3-HFPO-DA		87	25-150
13C4_PFBa		82	25-150
13C4_PFHpA		80	25-150
13C5_PFHxA		82	25-150
13C5_PFPeA		81	25-150
13C6_PFDA		69	25-150
13C7_PFUdA		72	25-150
13C8_PFOA		79	25-150
13C8_PFOS		61	25-150
13C8_PFOSA		82	10-150
13C9_PFNA		80	25-150
d-EtFOSA		75	10-150
d5-EtFOSAA		73	25-150
d9-EtFOSE		81	10-150
d-MeFOSA		78	10-150
d3-MeFOSAA		71	25-150
d7-MeFOSE		82	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
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BOTTLED WATER ACKNOWLEDGEMENT
202 FANTA REED ROAD, LA CROSSE, WI 54603

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All reusable or returnable equipment and supplies, such as the containers and cooler/dispenser, are the property of the commercial water delivery service or the City of La Crosse. By signing below, the Occupant of the above referenced property acknowledges that all reusable or returnable equipment and supplies shall be returned to the commercial water delivery service or the City of La Crosse upon request. The Occupant agrees to provide reasonable access for delivery of bottled water and pick up of reusable or returnable equipment and supplies. Occupant(s) acknowledges that they may be required to sign an agreement with the commercial water delivery service as a condition of receiving bottled water.

Signed: _____ Dated: _____

Printed Name: _____

Check ownership:

_____ **Owner-Occupant**

_____ **Occupant Only**

BOTTLED WATER ACKNOWLEDGEMENT
202 FANTA REED ROAD, LA CROSSE, WI 54603

If you desire to accept the bottled water delivery, please complete and sign this form and return it to The OS Group at PFAS@TheOSgrp.com or mail to 444 21st St. S, La Crosse, WI 54601. You may also complete this form electronically on line at www.cityoflacrosse.org/bottledwater . Call 608-668-2718 with any question you may have.

As pre-caution for the protection of human health, the City of La Crosse (The City) will provide, on a temporary basis, bottled water for drinking, cooking and toothbrushing purposes at the above referenced address. The water will be delivered to your home or business by a commercial water delivery service. At the City's cost, a dispenser / cooler and regular deliveries of 5-gallon containers of water will be provided. The City reserves the right to dictate the conditions of delivery, such as minimum and maximum number of containers per delivery, frequency and timing of deliveries. The City reserves the right to periodically review whether The City should continue to provide bottled water, considering factors such as State and Federal standards and guidance, evolving knowledge and understanding of the sources, cause and responsibility for the contamination, new or reinterpreted test results, and the availability of more permanent or cost-effective sources of water for the above purposes. The City of La Crosse makes no warranty or representation regarding the suitability of the bottled water beyond those made by the commercial water delivery service.

All reusable or returnable equipment and supplies, such as the containers and cooler/dispenser, are the property of the commercial water delivery service or the City of La Crosse. By signing below, the Occupant of the above referenced property acknowledges that all reusable or returnable equipment and supplies shall be returned to the commercial water delivery service or the City of La Crosse upon request. The Occupant agrees to provide reasonable access for delivery of bottled water and pick up of reusable or returnable equipment and supplies. Occupant(s) acknowledges that they may be required to sign an agreement with the commercial water delivery service as a condition of receiving bottled water.

Signed: _____ Dated: _____

Printed Name: _____

Check ownership:

_____ **Owner-Occupant**

_____ **Occupant Only**



444 21st Street South · La Crosse, Wisconsin · 54601

November 17, 2020

[Redacted]

2560 1st Avenue East
La Crosse, WI 54603

Subject: Private Well Sampling Results
2560 1st Avenue East, La Crosse, WI 54603
Tax Parcel # 4-193-0
Sample ID # 193-0

Dear [Redacted]:

We have received and reviewed the test results for the sample collected on October 27, 2020 at the above address. Some PFAS compounds were found, but the levels found were **below** the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in *your* well are called the “Sample Result” in the table below.

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)	
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}	The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}	
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}	
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}	
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	1.8 ppt	20 ppt ^{a,b}	
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	8.2 ppt	20 ppt ^{a,b}	

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	6.9 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	9.7 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	73 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	Not Detected	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-pentanesulfonic acid CAS #2706-91-4	4.5 ppt	None Established ^c
^a Public health enforcement standard (ES) recommended by DHS. ^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA. ^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation. ^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code. ^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L) ^{BL} Detected in the method blank. Possible lab contaminant.		

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Private Well Sampling Results for
2560 1st Avenue East, La Crosse, WI 54603
Tax Parcel # 4-193-0
Sample ID # 193-0

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Water Testing	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VJ29090-013
Description: 193-0	Matrix: Aqueous
Date Sampled: 10/27/2020 1300	Project Name: LACROSSE WELL #23 & 24
Date Received: 10/29/2020	Project Number: 40217319

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/07/2020 0135	KMM2	11/05/2020 1030	72351

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.5	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	6.9		3.5	0.88	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	4.5		3.5	0.88	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	9.7		3.5	0.88	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	73		3.5	0.88	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	1.8	J	3.5	0.88	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	8.2		3.5	0.88	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		106	25-150
13C2_6:2FTS		98	25-150
13C2_8:2FTS		98	25-150
13C2_PFDaA		78	25-150
13C2_PFHxDA		83	25-150
13C2_PFTeDA		79	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VJ29090-013
Description: 193-0	Matrix: Aqueous
Date Sampled: 10/27/2020 1300	Project Name: LACROSSE WELL #23 & 24
Date Received: 10/29/2020	Project Number: 40217319

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		86	25-150
13C3_PFHxS		88	25-150
13C3-HFPO-DA		98	25-150
13C4_PFBa		95	25-150
13C4_PFHpA		95	25-150
13C5_PFHxA		90	25-150
13C5_PFPeA		92	25-150
13C6_PFDa		91	25-150
13C7_PFUdA		83	25-150
13C8_PFOA		90	25-150
13C8_PFOS		81	25-150
13C8_PFOSA		101	10-150
13C9_PFNA		91	25-150
d-EtFOSA		79	10-150
d5-EtFOSAA		90	25-150
d9-EtFOSE		78	10-150
d-MeFOSA		85	10-150
d3-MeFOSAA		81	25-150
d7-MeFOSE		75	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
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444 21st Street South · La Crosse, Wisconsin · 54601

November 17, 2020

████████████████████
 2512 1st Avenue East
 La Crosse, WI 54603

Subject: Private Well Sampling Results
 2512 1st Avenue East, La Crosse, WI 54603
 Tax Parcel # 4-205-0
 Sample ID # 205-0

Dear ██████████:

We have received and reviewed the test results for the sample collected on October 27, 2020 at the above address. Some PFAS compounds were found, but the levels found were **below** the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in *your* well are called the “Sample Result” in the table below.

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)	
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}	The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}	
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}	
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}	
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	Not Detected	20 ppt ^{a,b}	
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	4.5 ppt	20 ppt ^{a,b}	

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	6.4 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	8.6 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	5.9 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	1.0 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-pentanesulfonic acid CAS #2706-91-4	4.0 ppt	None Established ^c
Perfluoro-n-pentanoic acid CAS # 2706-90-3	1.0 ppt	None Established ^c
^a Public health enforcement standard (ES) recommended by DHS. ^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA. ^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation. ^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code. ^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L) ^{BL} Detected in the method blank. Possible lab contaminant.		

Private Well Sampling Results for
2512 1st Avenue East, La Crosse, WI 54603
Tax Parcel # 4-205-0
Sample ID # 205-0

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Water Testing	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	2512 1st Avenue East Tax Parcel # 4-205-0	Laboratory ID: VJ29090-007
Description: 205-0		Matrix: Aqueous
Date Sampled: 10/27/2020 1150	Project Name: LACROSSE WELL #23 & 24	
Date Received: 10/29/2020	Project Number: 40217319	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/07/2020 0021	KMM2	11/05/2020 1030	72351

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		15	3.8	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	6.4		3.8	0.95	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.8	0.95	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.8	0.95	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.8	0.95	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.8	0.95	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	4.0		3.8	0.95	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	8.6		3.8	0.95	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	5.9		3.8	0.95	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.8	0.95	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.8	0.95	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.8	0.95	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	1.0	J	3.8	0.95	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.8	0.95	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		3.8	0.95	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	1.0	J	3.8	0.95	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.8	0.95	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.8	0.95	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.8	0.95	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	4.5		3.8	0.95	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		94	25-150
13C2_6:2FTS		99	25-150
13C2_8:2FTS		89	25-150
13C2_PFDa		85	25-150
13C2_PFHxDA		91	25-150
13C2_PFTeDA		84	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VJ29090-007
Description: 205-0	Matrix: Aqueous
Date Sampled: 10/27/2020 1150	Project Name: LACROSSE WELL #23 & 24
Date Received: 10/29/2020	Project Number: 40217319

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		84	25-150
13C3_PFHxS		88	25-150
13C3-HFPO-DA		97	25-150
13C4_PFBa		97	25-150
13C4_PFHpA		96	25-150
13C5_PFHxA		89	25-150
13C5_PFPeA		94	25-150
13C6_PFDa		90	25-150
13C7_PFUdA		80	25-150
13C8_PFOa		92	25-150
13C8_PFOs		83	25-150
13C8_PFOsA		95	10-150
13C9_PFNa		91	25-150
d-EtFOsA		73	10-150
d5-EtFOsAA		88	25-150
d9-EtFOsE		79	10-150
d-MeFOsA		89	10-150
d3-MeFOsAA		85	25-150
d7-MeFOsE		81	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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444 21st Street South · La Crosse, Wisconsin · 54601

November 17, 2020

██████████
 2504 1st Avenue East
 La Crosse, WI 54603

Subject: Private Well Sampling Results
 2504 1st Avenue East, La Crosse, WI 54603
 Tax Parcel # 4-207-0
 Sample ID # 207-0

Dear ██████████:

We have received and reviewed the test results for the sample collected on October 27, 2020 at the above address. Some PFAS compounds were found, but the levels found were **below** the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in *your* well are called the “Sample Result” in the table below.

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)	
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}	The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}	
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}	
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	2.2 ppt	20 ppt ^{a,b}	
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	2.6 ppt	20 ppt ^{a,b}	
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	5.1 ppt	20 ppt ^{a,b}	

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	4.5 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	6.8 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	9.7 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	Not Detected	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-pentanesulfonic acid CAS # 2706-91-4	2.3 ppt	None Established ^c
^a Public health enforcement standard (ES) recommended by DHS. ^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA. ^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation. ^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code. ^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L) ^{BL} Detected in the method blank. Possible lab contaminant.		

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Private Well Sampling Results for
2504 1st Avenue East, La Crosse, WI 54603
Tax Parcel # 4-207-0
Sample ID # 207-0

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Water Testing	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VJ29090-004
Description: 207-0	Matrix: Aqueous
Date Sampled: 10/27/2020 1130	Project Name: LACROSSE WELL #23 & 24
Date Received: 10/29/2020	Project Number: 40217319

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/06/2020 2349	KMM2	11/05/2020 1030	72351

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.5	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	4.5		3.5	0.88	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	2.2	J	3.5	0.88	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	2.3	J	3.5	0.88	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	6.8		3.5	0.88	ng/L	1
Perfluoro-n-butyric acid (PFBA)	375-22-4	PFAS by ID SOP	9.7		3.5	0.88	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	2.6	J	3.5	0.88	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	5.1		3.5	0.88	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		94	25-150
13C2_6:2FTS		95	25-150
13C2_8:2FTS		90	25-150
13C2_PFDaA		77	25-150
13C2_PFHxDA		80	25-150
13C2_PFTeDA		73	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VJ29090-004
Description: 207-0	Matrix: Aqueous
Date Sampled: 10/27/2020 1130	Project Name: LACROSSE WELL #23 & 24
Date Received: 10/29/2020	Project Number: 40217319

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		78	25-150
13C3_PFHxS		78	25-150
13C3-HFPO-DA		92	25-150
13C4_PFBa		90	25-150
13C4_PFHpA		86	25-150
13C5_PFHxA		81	25-150
13C5_PFPeA		88	25-150
13C6_PFDa		89	25-150
13C7_PFUdA		83	25-150
13C8_PFOA		85	25-150
13C8_PFOS		70	25-150
13C8_PFOSA		89	10-150
13C9_PFNA		86	25-150
d-EtFOSA		65	10-150
d5-EtFOSAA		85	25-150
d9-EtFOSE		70	10-150
d-MeFOSA		68	10-150
d3-MeFOSAA		81	25-150
d7-MeFOSE		71	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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444 21st Street South · La Crosse, Wisconsin · 54601

November 18, 2020

[REDACTED]
 2537 2nd Avenue East
 La Crosse, WI 54603

Subject: Private Well Sampling Results
 2537 2nd Avenue East, La Crosse, WI 54603
 Tax Parcel # 4-221-0
 Sample ID # 221-0

Dear [REDACTED],

We have received and reviewed the test results for the sample collected on October 27, 2020 at the above address. Some PFAS compounds were found, but the levels found were **below** the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in *your* well are called the “Sample Result” in the table below.

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)	
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}	The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}	
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}	
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}	
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	Not Detected	20 ppt ^{a,b}	
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	5.0 ppt	20 ppt ^{a,b}	

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	7.7 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	36 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	13 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	2.2 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid CAS # 27619-97-2	5.7 ppt ^{BL}	None Established ^c
Perfluoro-1-pentanesulfonic acid CAS # 2706-91-4	6.2 ppt	None Established ^c
Perfluoro-n-pentanoic acid CAS # 2706-90-3	1.9 ppt	None Established ^c

^a Public health enforcement standard (ES) recommended by DHS.

^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA.

^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation.

^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code.

^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L)

^{BL} Detected in the method blank. Possible lab contaminant.

Private Well Sampling Results for
2537 2nd Avenue East, La Crosse, WI 54603
Tax Parcel # 4-221-0
Sample ID # 221-0
November 18, 2020

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS, drinking water or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VJ29068-009
Description: 221-0	Matrix: Aqueous
Date Sampled: 10/27/2020 1425	Project Name: LACROSSE WELL #23 & 24
Date Received: 10/29/2020	Project Number: 40217323

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	SOP SPE	PFAS by ID SOP	1	11/11/2020 2050	MMM	11/10/2020 1623	72960

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.2	1.8	ng/L	2
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.2	1.8	ng/L	2
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.2	1.8	ng/L	2
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	5.7	BJ	7.2	1.8	ng/L	2
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.2	1.8	ng/L	2
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.2	1.8	ng/L	2
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.2	1.8	ng/L	2
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.2	1.8	ng/L	2
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.2	1.8	ng/L	2
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.2	1.8	ng/L	2
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.2	1.8	ng/L	2
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.6	ng/L	2
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.2	1.8	ng/L	2
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.2	1.8	ng/L	2
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	7.7		3.6	0.90	ng/L	2
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.6	0.90	ng/L	2
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.6	0.90	ng/L	2
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.6	0.90	ng/L	2
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.6	0.90	ng/L	2
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	6.2		3.6	0.90	ng/L	2
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.2	1.8	ng/L	2
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	36		3.6	0.90	ng/L	2
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	13		3.6	0.90	ng/L	2
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.6	0.90	ng/L	2
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.6	0.90	ng/L	2
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.6	0.90	ng/L	2
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.2	1.8	ng/L	2
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	2.2	J	3.6	0.90	ng/L	2
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.6	0.90	ng/L	2
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.2	1.8	ng/L	2
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		3.6	0.90	ng/L	2
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	1.9	J	3.6	0.90	ng/L	2
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.6	0.90	ng/L	2
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.6	0.90	ng/L	2
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.6	0.90	ng/L	2
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	5.0		3.6	0.90	ng/L	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
13C2_4:2FTS		100	25-150
13C2_6:2FTS		105	25-150
13C2_8:2FTS		101	25-150
13C2_PFDaA		92	25-150
13C2_PFHxDA		87	25-150
13C2_PFTeDA		91	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VJ29068-009
Description: 221-0	Matrix: Aqueous
Date Sampled: 10/27/2020 1425	Project Name: LACROSSE WELL #23 & 24
Date Received: 10/29/2020	Project Number: 40217323

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
13C3_PFBs		95	25-150
13C3_PFHxS		99	25-150
13C3-HFPO-DA		87	25-150
13C4_PFBa		105	25-150
13C4_PFHpA		100	25-150
13C5_PFHxA		91	25-150
13C5_PFPeA		99	25-150
13C6_PFDa		101	25-150
13C7_PFUdA		97	25-150
13C8_PFOA		102	25-150
13C8_PFOS		87	25-150
13C8_PFOSA		93	10-150
13C9_PFNA		96	25-150
d-EtFOSA		76	10-150
d5-EtFOSAA		95	25-150
d9-EtFOSE		88	10-150
d-MeFOSA		87	10-150
d3-MeFOSAA		85	25-150
d7-MeFOSE		84	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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444 21st Street South · La Crosse, Wisconsin · 54601

November 18, 2020

██████████
 2524 Bainbridge Street
 La Crosse, WI 54603

Subject: Private Well Sampling Results
 2524 Bainbridge Street, La Crosse, WI 54603
 Tax Parcel # 4-236-0
 Sample ID # 236-0

Dear ██████████:

We have received and reviewed the test results for the sample collected on October 27, 2020 at the above address. Some PFAS compounds were found, but the levels found were **below** the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in *your* well are called the “Sample Result” in the table below.

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)	
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}	The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}	
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}	
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}	
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	4.4 ppt	20 ppt ^{a,b}	
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	7.1 ppt	20 ppt ^{a,b}	

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	4.5 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	8.1 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	12 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	1.2 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-pentanesulfonic acid CAS #2706-91-4	1.7 ppt	None Established ^c
Perfluoro-n-heptanoic acid CAS # 375-85-9	1.2 ppt	None Established ^c
Perfluoro-n-pentanoic acid CAS # 2706-90-3	1.2 ppt	None Established ^c

^a Public health enforcement standard (ES) recommended by DHS.

^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA.

^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation.

^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code.

^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L)

^{BL} Detected in the method blank. Possible lab contaminant.

Private Well Sampling Results for
2524 Bainbridge Street, La Crosse, WI 54603
Tax Parcel # 4-236-0
Sample ID # 236-0
November 18, 2020

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC
(608) 668-2718
PFAS@theOSgrp.com

Attachment: Lab report for your well

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VJ29090-009
Description: 236-0	Matrix: Aqueous
Date Sampled: 10/27/2020 1210	Project Name: LACROSSE WELL #23 & 24
Date Received: 10/29/2020	Project Number: 40217319

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/07/2020 0042	KMM2	11/05/2020 1030	72351

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		16	3.9	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	4.5		3.9	0.98	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	1.7	J	3.9	0.98	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	8.1		3.9	0.98	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	12		3.9	0.98	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	1.2	J	3.9	0.98	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	1.2	J	3.9	0.98	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	4.4		3.9	0.98	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	1.2	J	3.9	0.98	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	7.1		3.9	0.98	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		103	25-150
13C2_6:2FTS		96	25-150
13C2_8:2FTS		86	25-150
13C2_PFDaA		79	25-150
13C2_PFHxDA		85	25-150
13C2_PFTeDA		81	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VJ29090-009
Description: 236-0	Matrix: Aqueous
Date Sampled: 10/27/2020 1210	Project Name: LACROSSE WELL #23 & 24
Date Received: 10/29/2020	Project Number: 40217319

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		82	25-150
13C3_PFHxS		85	25-150
13C3-HFPO-DA		97	25-150
13C4_PFBa		89	25-150
13C4_PFHpA		92	25-150
13C5_PFHxA		89	25-150
13C5_PFPeA		87	25-150
13C6_PFDa		89	25-150
13C7_PFUdA		78	25-150
13C8_PFOA		86	25-150
13C8_PFOS		75	25-150
13C8_PFOSA		94	10-150
13C9_PFNA		88	25-150
d-EtFOSA		71	10-150
d5-EtFOSAA		90	25-150
d9-EtFOSE		71	10-150
d-MeFOSA		82	10-150
d3-MeFOSAA		79	25-150
d7-MeFOSE		77	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
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444 21st Street South · La Crosse, Wisconsin · 54601

November 18, 2020

██████████
 2514 Bainbridge Street
 La Crosse, WI 54603

Subject: Private Well Sampling Results
 2514 Bainbridge Street, La Crosse, WI 54603
 Tax Parcel # 4-238-0
 Sample ID # 238-0

Dear ██████████:

We have received and reviewed the test results for the sample collected on October 27, 2020 at the above address. Some PFAS compounds were found, but the levels found were **below** the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in *your* well are called the “Sample Result” in the table below.

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)	
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}	The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}	
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}	
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	0.96	20 ppt ^{a,b}	
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	Not Detected	20 ppt ^{a,b}	
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	7.6 ppt	20 ppt ^{a,b}	

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	9.6 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	12 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	9.6 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	Not Detected	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS #2706-91-4	6.1 ppt	None Established ^c
^a Public health enforcement standard (ES) recommended by DHS. ^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA. ^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation. ^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code. ^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L) ^{BL} Detected in the method blank. Possible lab contaminant.		

Private Well Sampling Results for
2514 Bainbridge Street, La Crosse, WI 54603
Tax Parcel # 4-238-0
Sample ID # 238-0
November 18, 2020

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC
(608) 668-2718
PFAS@theOSgrp.com

Attachment: Lab report for your well

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VJ29090-008
Description: 238-0	Matrix: Aqueous
Date Sampled: 10/27/2020 1205	Project Name: LACROSSE WELL #23 & 24
Date Received: 10/29/2020	Project Number: 40217319

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/07/2020 0031	KMM2	11/05/2020 1030	72351

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.5	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	9.6		3.5	0.89	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	0.96	J	3.5	0.89	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	6.1		3.5	0.89	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	12		3.5	0.89	ng/L	1
Perfluoro-n-butyric acid (PFBA)	375-22-4	PFAS by ID SOP	9.6		3.5	0.89	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	7.6		3.5	0.89	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		103	25-150
13C2_6:2FTS		96	25-150
13C2_8:2FTS		94	25-150
13C2_PFDaA		80	25-150
13C2_PFHxDA		87	25-150
13C2_PFTeDA		81	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VJ29090-008
Description: 238-0	Matrix: Aqueous
Date Sampled: 10/27/2020 1205	Project Name: LACROSSE WELL #23 & 24
Date Received: 10/29/2020	Project Number: 40217319

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		78	25-150
13C3_PFHxS		85	25-150
13C3-HFPO-DA		92	25-150
13C4_PFBa		93	25-150
13C4_PFHpA		92	25-150
13C5_PFHxA		89	25-150
13C5_PFPeA		93	25-150
13C6_PFDa		85	25-150
13C7_PFUdA		77	25-150
13C8_PFOA		89	25-150
13C8_PFOS		79	25-150
13C8_PFOSA		94	10-150
13C9_PFNA		89	25-150
d-EtFOSA		74	10-150
d5-EtFOSAA		87	25-150
d9-EtFOSE		78	10-150
d-MeFOSA		78	10-150
d3-MeFOSAA		84	25-150
d7-MeFOSE		78	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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444 21st Street South · La Crosse, Wisconsin · 54601

November 18, 2020

[REDACTED]
 2508 Bainbridge Street
 La Crosse, WI 54603

Subject: Private Well Sampling Results
 2508 Bainbridge, La Crosse, WI 54603
 Tax Parcel # 4-240-0
 Sample ID # 240-0

Dear [REDACTED]:

We have received and reviewed the test results for the sample collected on October 27, 2020 at the above address. Some PFAS compounds were found, but the levels found were **below** the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in *your* well are called the “Sample Result” in the table below.

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)	
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}	The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}	
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}	
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}	
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	4.7 ppt	20 ppt ^{a,b}	
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	4.6 ppt	20 ppt ^{a,b}	

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	2.3 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	3.7 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	8.4 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	1.6 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-n-heptanoic acid (PFHpA) CAS #375-85-9	1.6 ppt	None Established ^c
Perfluoro-n-pentanoic acid (PFPeA) CAS # 2706-90-3	2.5 ppt	None Established ^c

^a Public health enforcement standard (ES) recommended by DHS.

^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA.

^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation.

^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code.

^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L)

^{BL} Detected in the method blank. Possible lab contaminant.

Private Well Sampling Results for
2508 Bainbridge, La Crosse, WI 54603
Tax Parcel # 4-240-0
Sample ID # 240-0
November 18, 2020

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC
(608) 668-2718
PFAS@theOSgrp.com

Attachment: Lab report for your well

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VJ29090-006
Description: 240-0	Matrix: Aqueous
Date Sampled: 10/27/2020 1150	Project Name: LACROSSE WELL #23 & 24
Date Received: 10/29/2020	Project Number: 40217319

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/07/2020 0010	KMM2	11/05/2020 1030	72351

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		8.1	2.0	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		8.1	2.0	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		8.1	2.0	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		8.1	2.0	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		8.1	2.0	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		8.1	2.0	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		8.1	2.0	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		8.1	2.0	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		8.1	2.0	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		8.1	2.0	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		8.1	2.0	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		16	4.0	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		8.1	2.0	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		8.1	2.0	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	2.3	J	4.0	1.0	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		4.0	1.0	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		4.0	1.0	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		4.0	1.0	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		4.0	1.0	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	ND		4.0	1.0	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		8.1	2.0	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	3.7	J	4.0	1.0	ng/L	1
Perfluoro-n-butyric acid (PFBA)	375-22-4	PFAS by ID SOP	8.4		4.0	1.0	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		4.0	1.0	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		4.0	1.0	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	1.6	J	4.0	1.0	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		8.1	2.0	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	1.6	J	4.0	1.0	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		4.0	1.0	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		8.1	2.0	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	4.7		4.0	1.0	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	2.5	J	4.0	1.0	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		4.0	1.0	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		4.0	1.0	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		4.0	1.0	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	4.6		4.0	1.0	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		94	25-150
13C2_6:2FTS		91	25-150
13C2_8:2FTS		89	25-150
13C2_PFDaA		74	25-150
13C2_PFHxDA		82	25-150
13C2_PFTeDA		74	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VJ29090-006
Description: 240-0	Matrix: Aqueous
Date Sampled: 10/27/2020 1150	Project Name: LACROSSE WELL #23 & 24
Date Received: 10/29/2020	Project Number: 40217319

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		75	25-150
13C3_PFHxS		77	25-150
13C3-HFPO-DA		89	25-150
13C4_PFBa		88	25-150
13C4_PFHpA		83	25-150
13C5_PFHxA		82	25-150
13C5_PFPeA		85	25-150
13C6_PFDA		82	25-150
13C7_PFUdA		75	25-150
13C8_PFOA		83	25-150
13C8_PFOS		72	25-150
13C8_PFOSA		87	10-150
13C9_PFNA		82	25-150
d-EtFOSA		71	10-150
d5-EtFOSAA		83	25-150
d9-EtFOSE		76	10-150
d-MeFOSA		67	10-150
d3-MeFOSAA		80	25-150
d7-MeFOSE		74	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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444 21st Street South · La Crosse, Wisconsin · 54601

November 18, 2020

██████████
 2505 1st Avenue East
 La Crosse, WI 54603

Subject: Private Well Sampling Results
 2505 1st Avenue East, La Crosse, WI 54603
 Tax Parcel # 4-244-0
 Sample ID # 244-0

Dear ██████████:

We have received and reviewed the test results for the sample collected on October 27, 2020 at the above address. Some PFAS compounds were found, but the levels found were **below** the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in *your* well are called the “Sample Result” in the table below.

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)	
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}	The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}	
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}	
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}	
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	Not Detected	20 ppt ^{a,b}	
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	Not Detected	20 ppt ^{a,b}	

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	2.2 ppt ^{BL}	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	6.4 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	13 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	17 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	1.1 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS # 2706-91-4	4.3 ppt	None Established ^c

^a Public health enforcement standard (ES) recommended by DHS.

^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA.

^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation.

^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code.

^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L)

^{BL} Detected in the method blank. Possible lab contaminant.

Private Well Sampling Results for
2505 1st Avenue East, La Crosse, WI 54603
Tax Parcel # 4-244-0
Sample ID # 244-0
November 18., 2020

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC
(608) 668-2718
PFAS@theOSgrp.com

Attachment: Lab report for your well

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VJ29068-011
Description: 244-0	Matrix: Aqueous
Date Sampled: 10/27/2020 1430	Project Name: LACROSSE WELL #23 & 24
Date Received: 10/29/2020	Project Number: 40217323

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/05/2020 1329	MMM	11/03/2020 1007	72053

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.8	2.0	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.8	2.0	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.8	2.0	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.8	2.0	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.8	2.0	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.8	2.0	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	2.2	BJ	7.8	2.0	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.8	2.0	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.8	2.0	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.8	2.0	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.8	2.0	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		16	3.9	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.8	2.0	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.8	2.0	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	6.4		3.9	0.98	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	4.3		3.9	0.98	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.8	2.0	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	13		3.9	0.98	ng/L	1
Perfluoro-n-butanofluoronic acid (PFBA)	375-22-4	PFAS by ID SOP	17		3.9	0.98	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.8	2.0	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	1.1	J	3.9	0.98	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.8	2.0	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	ND		3.9	0.98	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		108	25-150
13C2_6:2FTS		110	25-150
13C2_8:2FTS		110	25-150
13C2_PFDaA		99	25-150
13C2_PFHxDA		104	25-150
13C2_PFTeDA		98	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VJ29068-011
Description: 244-0	Matrix: Aqueous
Date Sampled: 10/27/2020 1430	Project Name: LACROSSE WELL #23 & 24
Date Received: 10/29/2020	Project Number: 40217323

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		98	25-150
13C3_PFHxS		93	25-150
13C3-HFPO-DA		107	25-150
13C4_PFBa		107	25-150
13C4_PFHpA		105	25-150
13C5_PFHxA		99	25-150
13C5_PFPeA		99	25-150
13C6_PFDa		94	25-150
13C7_PFUdA		102	25-150
13C8_PFOA		104	25-150
13C8_PFOS		97	25-150
13C8_PFOsA		111	10-150
13C9_PFNa		107	25-150
d-EtFOsA		77	10-150
d5-EtFOsAA		107	25-150
d9-EtFOsE		100	10-150
d-MeFOsA		92	10-150
d3-MeFOsAA		96	25-150
d7-MeFOsE		105	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
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444 21st Street South · La Crosse, Wisconsin · 54601

November 18, 2020

██████████
 2521 1st Avenue East
 La Crosse, WI 54603

Subject: Private Well Sampling Results
 2521 1st Avenue East, La Crosse, WI 54603
 Tax Parcel # 4-248-0
 Sample ID # 248-0

Dear ██████████:

We have received and reviewed the test results for the sample collected on October 27, 2020 at the above address. Some PFAS compounds were found, but the levels found were **below** the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in *your* well are called the “Sample Result” in the table below. **PLEASE NOTE: At your residence we took a second “duplicate” sample for quality control / quality assurance purposes. The two samples’ tests confirmed each other, and there were only minor differences. The results in the table below are based on the highest concentration of contaminants observed in either of the two samples.**

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)	
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}	The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}	
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}	
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}	
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	Not Detected	20 ppt ^{a,b}	
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	2.1 ppt	20 ppt ^{a,b}	

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	2.4 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	7.7 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	7.4 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	Not Detected	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS # 2706-91-4	1.4 ppt	None Established ^c

^a Public health enforcement standard (ES) recommended by DHS.

^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA.

^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation.

^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code.

^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L)

^{BL} Detected in the method blank. Possible lab contaminant.

Private Well Sampling Results for
2521 1st Avenue East, La Crosse, WI 54603
Tax Parcel # 4-248-0
Sample ID # 248-0
November 18, 2020

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC
(608) 668-2718
PFAS@theOSgrp.com

Attachment: Lab report for your well

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VJ29068-010
Description: 248-0	Matrix: Aqueous
Date Sampled: 10/27/2020 1420	Project Name: LACROSSE WELL #23 & 24
Date Received: 10/29/2020	Project Number: 40217323

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/05/2020 1318	MMM	11/03/2020 1007	72053

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		15	3.7	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	2.4	J	3.7	0.93	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	1.4	J	3.7	0.93	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	7.7		3.7	0.93	ng/L	1
Perfluoro-n-butyric acid (PFBA)	375-22-4	PFAS by ID SOP	6.9		3.7	0.93	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	2.1	J	3.7	0.93	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		115	25-150
13C2_6:2FTS		100	25-150
13C2_8:2FTS		98	25-150
13C2_PFDaA		94	25-150
13C2_PFHxDA		102	25-150
13C2_PFTeDA		95	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VJ29068-010
Description: 248-0	Matrix: Aqueous
Date Sampled: 10/27/2020 1420	Project Name: LACROSSE WELL #23 & 24
Date Received: 10/29/2020	Project Number: 40217323

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		94	25-150
13C3_PFHxS		96	25-150
13C3-HFPO-DA		112	25-150
13C4_PFBa		102	25-150
13C4_PFHpA		98	25-150
13C5_PFHxA		100	25-150
13C5_PFPeA		99	25-150
13C6_PFDa		96	25-150
13C7_PFUdA		97	25-150
13C8_PFOa		97	25-150
13C8_PFOs		98	25-150
13C8_PFOsA		106	10-150
13C9_PFNa		97	25-150
d-EtFOsA		87	10-150
d5-EtFOsAA		102	25-150
d9-EtFOsE		96	10-150
d-MeFOsA		92	10-150
d3-MeFOsAA		96	25-150
d7-MeFOsE		101	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VJ29068-012
Description: DUP#1	Matrix: Aqueous
Date Sampled: 10/27/2020 1425	Project Name: LACROSSE WELL #23 & 24
Date Received: 10/29/2020	Project Number: 40217323

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/05/2020 1340	MMM	11/03/2020 1007	72053

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.6	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	2.3	J	3.6	0.91	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	1.1	J	3.6	0.91	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	6.6		3.6	0.91	ng/L	1
Perfluoro-n-butyric acid (PFBA)	375-22-4	PFAS by ID SOP	7.4		3.6	0.91	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	1.9	J	3.6	0.91	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		105	25-150
13C2_6:2FTS		96	25-150
13C2_8:2FTS		93	25-150
13C2_PFDaA		96	25-150
13C2_PFHxDA		96	25-150
13C2_PFTeDA		93	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VJ29068-012
Description: DUP#1	Matrix: Aqueous
Date Sampled: 10/27/2020 1425	Project Name: LACROSSE WELL #23 & 24
Date Received: 10/29/2020	Project Number: 40217323

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		91	25-150
13C3_PFHxS		93	25-150
13C3-HFPO-DA		93	25-150
13C4_PFBa		95	25-150
13C4_PFHpA		91	25-150
13C5_PFHxA		98	25-150
13C5_PFPeA		91	25-150
13C6_PFDA		94	25-150
13C7_PFUdA		89	25-150
13C8_PFOA		94	25-150
13C8_PFOS		90	25-150
13C8_PFOSA		96	10-150
13C9_PFNA		93	25-150
d-EtFOSA		86	10-150
d5-EtFOSAA		95	25-150
d9-EtFOSE		89	10-150
d-MeFOSA		86	10-150
d3-MeFOSAA		91	25-150
d7-MeFOSE		101	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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444 21st Street South · La Crosse, Wisconsin · 54601

November 18, 2020

██████████
2553 1ST AVE E
La Crosse, WI 54603

Subject: Private Well Sampling Results
2553 1ST AVE E, La Crosse, WI 54603
Tax Parcel Number 4-256-0
Sample Number 256-0

Dear ██████████:

We have received and reviewed the test results for the sample collected on October 27, 2020 at the above address. Some PFAS compounds were found at levels above the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in your well are called the “Sample Result” in the table below.

Because some of the levels are above the recommended Public Health Standard, the City is offering to provide bottled water delivered to your home for drinking, cooking, and brushing your teeth. There will be no cost to you for the bottled water. Please complete the attached form and mail it to The OS Group to make arrangements for having a water dispenser and bottles delivered to your home or business. Call 608-668-2718 or email PFAS@theOSgrp.com. You may also complete this form on line at www.cityoflacrosse.org/bottledwater

The following table summarizes the test results from the sample. **Bolded results** are above a current recommended level intended to protect your health according to the Department of Health Services (DHS).

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)	
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	970 ppt	20 ppt ^{a,b}	The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	19 ppt	20 ppt ^{a,b}	
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not detected	20 ppt ^{a,b}	
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not detected	20 ppt ^{a,b}	
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not detected	20 ppt ^{a,b}	
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not detected	20 ppt ^{a,b}	
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not detected	300 ppt ^a	
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	16 ppt	10,000 ppt ^a	
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	19 ppt	450,000 ppt ^a	
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not detected	500 ppt ^a	
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	23 ppt	150,000 ppt ^a	
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not detected	10,000 ppt ^a	
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not detected	3,000 ppt ^a	
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not detected	3,000 ppt ^a	
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not detected	400,000 ppt ^a	
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	600 ppt	40 ppt ^a	
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a	
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not detected	300 ppt ^a	

Private Well Sampling Results for
 2553 1ST AVE E
 Tax Parcel Number 4-256-0
 Sample Number 256-0
 November 18, 2020

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS) CAS # 27619-97-2	18 ppt ^{BL}	None Established ^c
Perfluoro-1-heptanesulfonic acid (PFHpS) CAS # 375-92-8	32 ppt	None Established ^c
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS # 2706-91-4	35 ppt	None Established ^c
Perfluoro-n-heptanoic acid (PFHpA) CAS # 375-85-9	8.1 ppt	None Established ^c
Perfluoro-n-pentanoic acid (PFPeA) CAS # 2706-90-3	13 ppt	None Established ^c
^a Public health enforcement standard (ES) recommended by DHS. ^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA. ^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation. ^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code. ^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L) ^{BL} Detected in the method blank. Possible lab contaminant.		

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>	<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Water Testing	DNR David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Health Concerns	DHS Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse,
The OS Group, LLC

Attachment: Lab report for your well
 Bottled Water Acknowledgement

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	JESSE R NOKKEN 2553 1ST AVE E	Laboratory ID: VJ29068-002
Description: 256-0		Matrix: Aqueous
Date Sampled: 10/27/2020 1315	Project Name: LACROSSE WELL #23 & 24	
Date Received: 10/29/2020	Project Number: 40217323	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
3	SOP SPE	PFAS by ID SOP	1	11/11/2020 2029	MMM	11/10/2020 1623	72960
4	SOP SPE	PFAS by ID SOP	5	11/12/2020 1159	MMM	11/10/2020 1623	72960

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.1	1.8	ng/L	3
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.1	1.8	ng/L	3
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.1	1.8	ng/L	3
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	18	B	7.1	1.8	ng/L	3
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.1	1.8	ng/L	3
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.1	1.8	ng/L	3
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.1	1.8	ng/L	3
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.1	1.8	ng/L	3
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.1	1.8	ng/L	3
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.1	1.8	ng/L	3
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.1	1.8	ng/L	3
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.5	ng/L	3
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.1	1.8	ng/L	3
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.1	1.8	ng/L	3
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	19		3.5	0.89	ng/L	3
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.5	0.89	ng/L	3
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	32		3.5	0.89	ng/L	3
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.5	0.89	ng/L	3
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.5	0.89	ng/L	3
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	35		3.5	0.89	ng/L	3
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.1	1.8	ng/L	3
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	600		3.5	0.89	ng/L	3
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	16		3.5	0.89	ng/L	3
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.5	0.89	ng/L	3
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.5	0.89	ng/L	3
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	8.1		3.5	0.89	ng/L	3
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.1	1.8	ng/L	3
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	23		3.5	0.89	ng/L	3
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.5	0.89	ng/L	3
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.1	1.8	ng/L	3
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	19		3.5	0.89	ng/L	3
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	13		3.5	0.89	ng/L	3
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.5	0.89	ng/L	3
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.5	0.89	ng/L	3
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.5	0.89	ng/L	3
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	970		18	4.4	ng/L	4

Surrogate	Q	Run 3 % Recovery	Acceptance Limits	Q	Run 4 % Recovery	Acceptance Limits
13C2_4:2FTS		98	25-150		105	25-150
13C2_6:2FTS		100	25-150		98	25-150
13C2_8:2FTS		90	25-150		81	25-150
13C2_PFDa		97	25-150		85	25-150
13C2_PFHxDA		86	25-150		96	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VJ29068-002
Description: 256-0	Matrix: Aqueous
Date Sampled: 10/27/2020 1315	Project Name: LACROSSE WELL #23 & 24
Date Received: 10/29/2020	Project Number: 40217323

Surrogate	Run 3			Run 4		
	Q	% Recovery	Acceptance Limits	Q	% Recovery	Acceptance Limits
13C2_PFTeDA		93	25-150		92	25-150
13C3_PFBs		94	25-150		93	25-150
13C3_PFHxS		94	25-150		89	25-150
13C3-HFPO-DA		87	25-150		100	25-150
13C4_PFBa		102	25-150		92	25-150
13C4_PFHpA		93	25-150		93	25-150
13C5_PFHxA		97	25-150		89	25-150
13C5_PFPeA		89	25-150		94	25-150
13C6_PFDa		102	25-150		93	25-150
13C7_PFUdA		92	25-150		94	25-150
13C8_PFOA		94	25-150		95	25-150
13C8_PFOs		89	25-150		89	25-150
13C8_PFOsA		90	10-150		101	10-150
13C9_PFNa		90	25-150		86	25-150
d-EtFOSA		73	10-150		101	10-150
d5-EtFOSAA		94	25-150		99	25-150
d9-EtFOSE		80	10-150		97	10-150
d-MeFOSA		82	10-150		95	10-150
d3-MeFOSAA		84	25-150		95	25-150
d7-MeFOSE		79	10-150		94	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
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 H = Out of holding time W = Reported on wet weight basis

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BOTTLED WATER ACKNOWLEDGEMENT

2553 1ST AVE E, LA CROSSE, WI 54603

If you desire to accept the bottled water delivery, please complete and sign this form and return it to The OS Group at PFAS@TheOSgrp.com or mail to 444 21st St. S, La Crosse, WI 54601. You may also complete this form electronically on line at www.cityoflacrosse.org/bottledwater . Call 608-668-2718 with any question you may have.

As pre-caution for the protection of human health, the City of La Crosse (The City) will provide, on a temporary basis, bottled water for drinking, cooking and toothbrushing purposes at the above referenced address. The water will be delivered to your home or business by a commercial water delivery service. At the City's cost, a dispenser / cooler and regular deliveries of 5-gallon containers of water will be provided. The City reserves the right to dictate the conditions of delivery, such as minimum and maximum number of containers per delivery, frequency and timing of deliveries. The City reserves the right to periodically review whether The City should continue to provide bottled water, considering factors such as State and Federal standards and guidance, evolving knowledge and understanding of the sources, cause and responsibility for the contamination, new or reinterpreted test results, and the availability of more permanent or cost-effective sources of water for the above purposes. The City of La Crosse makes no warranty or representation regarding the suitability of the bottled water beyond those made by the commercial water delivery service.

All reusable or returnable equipment and supplies, such as the containers and cooler/dispenser, are the property of the commercial water delivery service or the City of La Crosse. By signing below, the Occupant of the above referenced property acknowledges that all reusable or returnable equipment and supplies shall be returned to the commercial water delivery service or the City of La Crosse upon request. The Occupant agrees to provide reasonable access for delivery of bottled water and pick up of reusable or returnable equipment and supplies. Occupant(s) acknowledges that they may be required to sign an agreement with the commercial water delivery service as a condition of receiving bottled water.

Check ownership:

_____ Owner-Occupant

_____ Occupant Only

Number of Occupants: _____

Signed: _____ Dated: _____

Printed Name: _____

BOTTLED WATER ACKNOWLEDGEMENT

2553 1ST AVE E, LA CROSSE, WI 54603

If you desire to accept the bottled water delivery, please complete and sign this form and return it to The OS Group at PFAS@TheOSgrp.com or mail to 444 21st St. S, La Crosse, WI 54601. You may also complete this form electronically on line at www.cityoflacrosse.org/bottledwater . Call 608-668-2718 with any question you may have.

As pre-caution for the protection of human health, the City of La Crosse (The City) will provide, on a temporary basis, bottled water for drinking, cooking and toothbrushing purposes at the above referenced address. The water will be delivered to your home or business by a commercial water delivery service. At the City's cost, a dispenser / cooler and regular deliveries of 5-gallon containers of water will be provided. The City reserves the right to dictate the conditions of delivery, such as minimum and maximum number of containers per delivery, frequency and timing of deliveries. The City reserves the right to periodically review whether The City should continue to provide bottled water, considering factors such as State and Federal standards and guidance, evolving knowledge and understanding of the sources, cause and responsibility for the contamination, new or reinterpreted test results, and the availability of more permanent or cost-effective sources of water for the above purposes. The City of La Crosse makes no warranty or representation regarding the suitability of the bottled water beyond those made by the commercial water delivery service.

All reusable or returnable equipment and supplies, such as the containers and cooler/dispenser, are the property of the commercial water delivery service or the City of La Crosse. By signing below, the Occupant of the above referenced property acknowledges that all reusable or returnable equipment and supplies shall be returned to the commercial water delivery service or the City of La Crosse upon request. The Occupant agrees to provide reasonable access for delivery of bottled water and pick up of reusable or returnable equipment and supplies. Occupant(s) acknowledges that they may be required to sign an agreement with the commercial water delivery service as a condition of receiving bottled water.

Check ownership:

_____ Owner-Occupant

_____ Occupant Only

Number of Occupants: _____

Signed: _____ Dated: _____

Printed Name: _____



444 21st Street South · La Crosse, Wisconsin · 54601

November 18, 2020

██████████
2533 Bainbridge Street
La Crosse, WI 54603

Subject: Private Well Sampling Results
2533 Bainbridge Street, La Crosse, WI 54603
Tax Parcel #4-330-0
Sample ID # 330-0

Dear ██████████:

We have received and reviewed the test results for the sample collected on October 27, 2020 at the above address. Some PFAS compounds were found at levels above the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in your well are called the “Sample Result” in the table below.

Because some of the levels are above the recommended Public Health Standard, the City is offering to provide bottled water delivered to your home for drinking, cooking, and brushing your teeth. There will be no cost to you for the bottled water. Please complete the attached form and mail it to The OS Group to make arrangements for having a water dispenser and bottles delivered to your home or business. Call 608-668-2718 or email PFAS@theOSgrp.com. You may also complete this form on line at www.cityoflacrosse.org/bottledwater

The following table summarizes the test results from the sample. **Bolded results** are above a current recommended level intended to protect your health according to the Department of Health Services (DHS).

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	9.5 ppt	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	11 ppt	20 ppt ^{a,b}
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	4.0 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	9.7 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	36 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	0.91 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a

The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS # 2706-91-4	2.4 ppt	None Established ^c
^a Public health enforcement standard (ES) recommended by DHS. ^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA. ^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation. ^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code. ^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L) ^{BL} Detected in the method blank. Possible lab contaminant.		

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com. You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>	<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well
 Bottled water acknowledgement

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VJ29090-010
Description: 330-0	Matrix: Aqueous
Date Sampled: 10/27/2020 1225	Project Name: LACROSSE WELL #23 & 24
Date Received: 10/29/2020	Project Number: 40217319

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/07/2020 0053	KMM2	11/05/2020 1030	72351

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.6	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	4.0		3.6	0.90	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	2.4	J	3.6	0.90	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	9.7		3.6	0.90	ng/L	1
Perfluoro-n-butyric acid (PFBA)	375-22-4	PFAS by ID SOP	36		3.6	0.90	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	0.91	J	3.6	0.90	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	9.5		3.6	0.90	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	11		3.6	0.90	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		90	25-150
13C2_6:2FTS		94	25-150
13C2_8:2FTS		102	25-150
13C2_PFDaA		74	25-150
13C2_PFHxDA		79	25-150
13C2_PFTeDA		78	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VJ29090-010
Description: 330-0	Matrix: Aqueous
Date Sampled: 10/27/2020 1225	Project Name: LACROSSE WELL #23 & 24
Date Received: 10/29/2020	Project Number: 40217319

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		80	25-150
13C3_PFHxS		82	25-150
13C3-HFPO-DA		92	25-150
13C4_PFBa		88	25-150
13C4_PFHpA		90	25-150
13C5_PFHxA		83	25-150
13C5_PFPeA		87	25-150
13C6_PFDa		87	25-150
13C7_PFUdA		78	25-150
13C8_PFOA		85	25-150
13C8_PFOS		68	25-150
13C8_PFOSA		96	10-150
13C9_PFNA		83	25-150
d-EtFOSA		62	10-150
d5-EtFOSAA		83	25-150
d9-EtFOSE		76	10-150
d-MeFOSA		72	10-150
d3-MeFOSAA		83	25-150
d7-MeFOSE		81	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
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Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

BOTTLED WATER ACKNOWLEDGEMENT
2533 Bainbridge Street, LA CROSSE, WI 54603

If you desire to accept the bottled water delivery, please complete and sign this form and return it to The OS Group at PFAS@TheOSgrp.com or mail to 444 21st St. S, La Crosse, WI 54601. You may also complete this form electronically on line at www.cityoflacrosse.org/bottledwater . Call 608-668-2718 with any question you may have.

As pre-caution for the protection of human health, the City of La Crosse (The City) will provide, on a temporary basis, bottled water for drinking, cooking and toothbrushing purposes at the above referenced address. The water will be delivered to your home or business by a commercial water delivery service. At the City's cost, a dispenser / cooler and regular deliveries of 5-gallon containers of water will be provided. The City reserves the right to dictate the conditions of delivery, such as minimum and maximum number of containers per delivery, frequency and timing of deliveries. The City reserves the right to periodically review whether The City should continue to provide bottled water, considering factors such as State and Federal standards and guidance, evolving knowledge and understanding of the sources, cause and responsibility for the contamination, new or reinterpreted test results, and the availability of more permanent or cost-effective sources of water for the above purposes. The City of La Crosse makes no warranty or representation regarding the suitability of the bottled water beyond those made by the commercial water delivery service.

All reusable or returnable equipment and supplies, such as the containers and cooler/dispenser, are the property of the commercial water delivery service or the City of La Crosse. By signing below, the Occupant of the above referenced property acknowledges that all reusable or returnable equipment and supplies shall be returned to the commercial water delivery service or the City of La Crosse upon request. The Occupant agrees to provide reasonable access for delivery of bottled water and pick up of reusable or returnable equipment and supplies. Occupant(s) acknowledges that they may be required to sign an agreement with the commercial water delivery service as a condition of receiving bottled water.

Check ownership:

_____ **Owner-Occupant**

_____ **Occupant Only**

Number of Occupants: _____

Signed: _____ Dated: _____

Printed Name: _____

BOTTLED WATER ACKNOWLEDGEMENT
2533 Bainbridge Street, LA CROSSE, WI 54603

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Check ownership:

_____ **Owner-Occupant**

_____ **Occupant Only**

Number of Occupants: _____

Signed: _____ Dated: _____

Printed Name: _____



444 21st Street South · La Crosse, Wisconsin · 54601

November 17, 2020

██████████
 2550 1st Avenue West
 La Crosse, WI 54603

Subject: Private Well Sampling Results
 2550 1st Avenue West, La Crosse, WI 54603
 Tax Parcel # 4-339-0
 Sample ID # 339-0

Dear ██████████,

We have received and reviewed the test results for the sample collected on October 27, 2020 at the above address. Some PFAS compounds were found, but the levels found were **below** the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in *your* well are called the “Sample Result” in the table below.

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)	
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}	The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}	
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}	
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}	
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	2.9 ppt	20 ppt ^{a,b}	
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	4.4 ppt	20 ppt ^{a,b}	

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	2.2 ppt ^{BL}	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	6.3 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	18 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	48 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	3.2 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-pentanesulfonic acid CAS # 2706-91-4	5.0 ppt	None Established ^c
Perfluoro-n-pentanoic acid CAS # 2706-90-3	3.5 ppt	None Established ^c
^a Public health enforcement standard (ES) recommended by DHS. ^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA. ^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation. ^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code. ^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L) ^{BL} Detected in the method blank. Possible lab contaminant.		

Private Well Sampling Results for
2550 1st Avenue West, La Crosse, WI 54603
Tax Parcel # 4-339-0
Sample ID # 339-0

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Water Testing	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Wardwell, 2550 1 st Ave W Tax Parcel # 4-339-0	Laboratory ID: VJ29068-007
Description: 339-0		Matrix: Aqueous
Date Sampled: 10/27/2020 1400	Project Name: LACROSSE WELL #23 & 24	
Date Received: 10/29/2020	Project Number: 40217323	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/05/2020 1235	MMM	11/03/2020 1007	72053

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	2.2	BJ	7.4	1.9	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		15	3.7	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	6.3		3.7	0.93	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	5.0		3.7	0.93	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	18		3.7	0.93	ng/L	1
Perfluoro-n-butyric acid (PFBA)	375-22-4	PFAS by ID SOP	48		3.7	0.93	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	3.2	J	3.7	0.93	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	2.9	J	3.7	0.93	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	3.5	J	3.7	0.93	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	4.4		3.7	0.93	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		110	25-150
13C2_6:2FTS		105	25-150
13C2_8:2FTS		105	25-150
13C2_PFDaA		101	25-150
13C2_PFHxDA		104	25-150
13C2_PFTeDA		103	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VJ29068-007
Description: 339-0	Matrix: Aqueous
Date Sampled: 10/27/2020 1400	Project Name: LACROSSE WELL #23 & 24
Date Received: 10/29/2020	Project Number: 40217323

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		97	25-150
13C3_PFHxS		101	25-150
13C3-HFPO-DA		112	25-150
13C4_PFBa		105	25-150
13C4_PFHpA		105	25-150
13C5_PFHxA		105	25-150
13C5_PFPeA		101	25-150
13C6_PFDa		99	25-150
13C7_PFUdA		105	25-150
13C8_PFOA		99	25-150
13C8_PFOS		97	25-150
13C8_PFOSA		105	10-150
13C9_PFNA		105	25-150
d-EtFOSA		92	10-150
d5-EtFOSAA		105	25-150
d9-EtFOSE		99	10-150
d-MeFOSA		99	10-150
d3-MeFOSAA		103	25-150
d7-MeFOSE		102	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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444 21st Street South · La Crosse, Wisconsin · 54601

November 18, 2020

[REDACTED]
 2509 Bainbridge Street
 La Crosse, WI 54603

Subject: Private Well Sampling Results
 2509 Bainbridge, La Crosse, WI 54603
 Tax Parcel # 4-345-0
 Sample ID # 345-0

Dear [REDACTED]:

We have received and reviewed the test results for the sample collected on October 27, 2020 at the above address. Some PFAS compounds were found, but the levels found were **below** the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in *your* well are called the “Sample Result” in the table below.

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)	
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}	The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}	
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}	
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	0.88 ppt	20 ppt ^{a,b}	
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	2.0 ppt	20 ppt ^{a,b}	
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	3.0 ppt	20 ppt ^{a,b}	

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	2.3 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	1.9 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	4.7 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	Not Detected	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS # 2706-91-4	0.90 ppt	None Established ^c
^a Public health enforcement standard (ES) recommended by DHS. ^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA. ^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation. ^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code. ^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L) ^{BL} Detected in the method blank. Possible lab contaminant.		

Private Well Sampling Results for
2509 Bainbridge, La Crosse, WI 54603
Tax Parcel # 4-345-0
Sample ID # 345-0
November 18, 2020

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC
(608) 668-2718
PFAS@theOSgrp.com

Attachment: Lab report for your well

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VJ29090-005
Description: 345-0	Matrix: Aqueous
Date Sampled: 10/27/2020 1150	Project Name: LACROSSE WELL #23 & 24
Date Received: 10/29/2020	Project Number: 40217319

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/06/2020 2359	KMM2	11/05/2020 1030	72351

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.4	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	2.3	J	3.4	0.86	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	0.88	J	3.4	0.86	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	0.90	J	3.4	0.86	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	1.9	J	3.4	0.86	ng/L	1
Perfluoro-n-butyric acid (PFBA)	375-22-4	PFAS by ID SOP	4.7		3.4	0.86	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	2.0	J	3.4	0.86	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	3.0	J	3.4	0.86	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		99	25-150
13C2_6:2FTS		96	25-150
13C2_8:2FTS		97	25-150
13C2_PFDaA		75	25-150
13C2_PFHxDA		83	25-150
13C2_PFTeDA		77	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VJ29090-005
Description: 345-0	Matrix: Aqueous
Date Sampled: 10/27/2020 1150	Project Name: LACROSSE WELL #23 & 24
Date Received: 10/29/2020	Project Number: 40217319

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		84	25-150
13C3_PFHxS		81	25-150
13C3-HFPO-DA		94	25-150
13C4_PFBa		90	25-150
13C4_PFHpA		92	25-150
13C5_PFHxA		86	25-150
13C5_PFPeA		90	25-150
13C6_PFDA		86	25-150
13C7_PFUdA		76	25-150
13C8_PFOA		90	25-150
13C8_PFOS		79	25-150
13C8_PFOSA		94	10-150
13C9_PFNA		89	25-150
d-EtFOSA		64	10-150
d5-EtFOSAA		88	25-150
d9-EtFOSE		73	10-150
d-MeFOSA		74	10-150
d3-MeFOSAA		85	25-150
d7-MeFOSE		73	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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444 21st Street South · La Crosse, Wisconsin · 54601

November 18, 2020

[REDACTED]
208 Callaway Blvd
La Crosse, WI 54603

Subject: Private Well Sampling Results
208 Callaway Blvd, La Crosse, WI 54603
Tax Parcel #4-360-0
Sample ID # 360-0

Dear [REDACTED]:

We have received and reviewed the test results for the sample collected on October 27, 2020 at the above address. Some PFAS compounds were found at levels above the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in your well are called the “Sample Result” in the table below.

Because some of the levels are above the recommended Public Health Standard, the City is offering to provide bottled water delivered to your home for drinking, cooking, and brushing your teeth. There will be no cost to you for the bottled water. Please complete the attached form and mail it to The OS Group to make arrangements for having a water dispenser and bottles delivered to your home or business. Call 608-668-2718 or email PFAS@theOSgrp.com. You may also complete this form on line at www.cityoflacrosse.org/bottledwater

The following table summarizes the test results from the sample. **Bolded results** are above a current recommended level intended to protect your health according to the Department of Health Services (DHS).

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	26 ppt	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	11 ppt	20 ppt ^{a,b}
The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6		
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	2.2 ppt ^{BL}	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	7.9 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	15 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	150 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	1.8 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-pentanesulfonic acid CAS # 2706-91-4	5.9 ppt	None Established ^c

^a Public health enforcement standard (ES) recommended by DHS.
^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA.
^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation.
^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code.
^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L)
^{BL} Detected in the method blank. Possible lab contaminant.

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>	<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well
 Bottled Water Acknowledgement

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VJ29090-003
Description: 360-0	Matrix: Aqueous
Date Sampled: 10/27/2020 1120	Project Name: LACROSSE WELL #23 & 24
Date Received: 10/29/2020	Project Number: 40217319

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/05/2020 1422	MMM	11/03/2020 1007	72053

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	2.2	BJ	7.6	1.9	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		15	3.8	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	7.9		3.8	0.95	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.8	0.95	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.8	0.95	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.8	0.95	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.8	0.95	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	5.9		3.8	0.95	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	15		3.8	0.95	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	150		3.8	0.95	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.8	0.95	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.8	0.95	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.8	0.95	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	1.8	J	3.8	0.95	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.8	0.95	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	26		3.8	0.95	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		3.8	0.95	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.8	0.95	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.8	0.95	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.8	0.95	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	11		3.8	0.95	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		100	25-150
13C2_6:2FTS		101	25-150
13C2_8:2FTS		100	25-150
13C2_PFDaA		95	25-150
13C2_PFHxDA		101	25-150
13C2_PFTeDA		93	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VJ29090-003
Description: 360-0	Matrix: Aqueous
Date Sampled: 10/27/2020 1120	Project Name: LACROSSE WELL #23 & 24
Date Received: 10/29/2020	Project Number: 40217319

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		96	25-150
13C3_PFHxS		97	25-150
13C3-HFPO-DA		106	25-150
13C4_PFBa		97	25-150
13C4_PFHpA		99	25-150
13C5_PFHxA		95	25-150
13C5_PFPeA		95	25-150
13C6_PFDa		95	25-150
13C7_PFUdA		96	25-150
13C8_PFOA		99	25-150
13C8_PFOS		94	25-150
13C8_PFOSA		104	10-150
13C9_PFNA		101	25-150
d-EtFOSA		78	10-150
d5-EtFOSAA		97	25-150
d9-EtFOSE		96	10-150
d-MeFOSA		82	10-150
d3-MeFOSAA		93	25-150
d7-MeFOSE		107	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
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BOTTLED WATER ACKNOWLEDGEMENT

208 Callaway Blvd, LA CROSSE, WI 54603

If you desire to accept the bottled water delivery, please complete and sign this form and return it to The OS Group at PFAS@TheOSgrp.com or mail to 444 21st St. S, La Crosse, WI 54601. You may also complete this form electronically on line at www.cityoflacrosse.org/bottledwater . Call 608-668-2718 with any question you may have.

As pre-caution for the protection of human health, the City of La Crosse (The City) will provide, on a temporary basis, bottled water for drinking, cooking and toothbrushing purposes at the above referenced address. The water will be delivered to your home or business by a commercial water delivery service. At the City's cost, a dispenser / cooler and regular deliveries of 5-gallon containers of water will be provided. The City reserves the right to dictate the conditions of delivery, such as minimum and maximum number of containers per delivery, frequency and timing of deliveries. The City reserves the right to periodically review whether The City should continue to provide bottled water, considering factors such as State and Federal standards and guidance, evolving knowledge and understanding of the sources, cause and responsibility for the contamination, new or reinterpreted test results, and the availability of more permanent or cost-effective sources of water for the above purposes. The City of La Crosse makes no warranty or representation regarding the suitability of the bottled water beyond those made by the commercial water delivery service.

All reusable or returnable equipment and supplies, such as the containers and cooler/dispenser, are the property of the commercial water delivery service or the City of La Crosse. By signing below, the Occupant of the above referenced property acknowledges that all reusable or returnable equipment and supplies shall be returned to the commercial water delivery service or the City of La Crosse upon request. The Occupant agrees to provide reasonable access for delivery of bottled water and pick up of reusable or returnable equipment and supplies. Occupant(s) acknowledges that they may be required to sign an agreement with the commercial water delivery service as a condition of receiving bottled water.

Signed: _____ Dated: _____

Printed Name: _____

Check ownership:

_____ Owner-Occupant

_____ Occupant Only

BOTTLED WATER ACKNOWLEDGEMENT

208 Callaway Blvd, LA CROSSE, WI 54603

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Check ownership:

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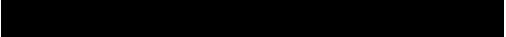
444 21st Street South · La Crosse, Wisconsin · 54601

November 18, 2020



1784 CRESCENT HILLS DR
LA CRESCENT, MN 55947

Subject: Private Well Sampling Results
208 Callaway Blvd, La Crosse, WI 54603
Tax Parcel #4-360-0
Sample ID # 360-0

Dear :

We have received and reviewed the test results for the sample collected on October 27, 2020 at the above address. Some PFAS compounds were found at levels above the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the "Recommended Public Health Standard" in the table below. The levels found in your well are called the "Sample Result" in the table below.

Because some of the levels are above the recommended Public Health Standard, the City is offering to provide bottled water delivered to your home for drinking, cooking, and brushing your teeth. There will be no cost to you for the bottled water. Please complete the attached form and mail it to The OS Group to make arrangements for having a water dispenser and bottles delivered to your home or business. Call 608-668-2718 or email PFAS@theOSgrp.com. You may also complete this form on line at www.cityoflacrosse.org/bottledwater

The following table summarizes the test results from the sample. **Bolded results** are above a current recommended level intended to protect your health according to the Department of Health Services (DHS).

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	26 ppt	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	11 ppt	20 ppt ^{a,b}
The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6		
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	2.2 ppt ^{BL}	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	7.9 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	15 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	150 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	1.8 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-pentanesulfonic acid CAS # 2706-91-4	5.9 ppt	None Established ^c

^a Public health enforcement standard (ES) recommended by DHS.
^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA.
^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation.
^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code.
^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L)
^{BL} Detected in the method blank. Possible lab contaminant.

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>	<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
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On behalf of The City of La Crosse
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PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VJ29090-003
Description: 360-0	Matrix: Aqueous
Date Sampled: 10/27/2020 1120	Project Name: LACROSSE WELL #23 & 24
Date Received: 10/29/2020	Project Number: 40217319

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
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1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
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N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		15	3.8	ng/L	1
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Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	7.9		3.8	0.95	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.8	0.95	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.8	0.95	ng/L	1
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Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	1.8	J	3.8	0.95	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.8	0.95	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	26		3.8	0.95	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		3.8	0.95	ng/L	1
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Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		100	25-150
13C2_6:2FTS		101	25-150
13C2_8:2FTS		100	25-150
13C2_PFDaA		95	25-150
13C2_PFHxDA		101	25-150
13C2_PFTeDA		93	25-150

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Date Sampled: 10/27/2020 1120	Project Name: LACROSSE WELL #23 & 24
Date Received: 10/29/2020	Project Number: 40217319

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		96	25-150
13C3_PFHxS		97	25-150
13C3-HFPO-DA		106	25-150
13C4_PFBa		97	25-150
13C4_PFHpA		99	25-150
13C5_PFHxA		95	25-150
13C5_PFPeA		95	25-150
13C6_PFDa		95	25-150
13C7_PFUdA		96	25-150
13C8_PFOA		99	25-150
13C8_PFOS		94	25-150
13C8_PFOsA		104	10-150
13C9_PFNa		101	25-150
d-EtFOsA		78	10-150
d5-EtFOsAA		97	25-150
d9-EtFOSE		96	10-150
d-MeFOsA		82	10-150
d3-MeFOsAA		93	25-150
d7-MeFOSE		107	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

BOTTLED WATER ACKNOWLEDGEMENT

208 Callaway Blvd, LA CROSSE, WI 54603

If you desire to accept the bottled water delivery, please complete and sign this form and return it to The OS Group at PFAS@TheOSgrp.com or mail to 444 21st St. S, La Crosse, WI 54601. You may also complete this form electronically on line at www.cityoflacrosse.org/bottledwater . Call 608-668-2718 with any question you may have.

As pre-caution for the protection of human health, the City of La Crosse (The City) will provide, on a temporary basis, bottled water for drinking, cooking and toothbrushing purposes at the above referenced address. The water will be delivered to your home or business by a commercial water delivery service. At the City's cost, a dispenser / cooler and regular deliveries of 5-gallon containers of water will be provided. The City reserves the right to dictate the conditions of delivery, such as minimum and maximum number of containers per delivery, frequency and timing of deliveries. The City reserves the right to periodically review whether The City should continue to provide bottled water, considering factors such as State and Federal standards and guidance, evolving knowledge and understanding of the sources, cause and responsibility for the contamination, new or reinterpreted test results, and the availability of more permanent or cost-effective sources of water for the above purposes. The City of La Crosse makes no warranty or representation regarding the suitability of the bottled water beyond those made by the commercial water delivery service.

Check ownership:

_____ **Owner-Occupant**

_____ **Occupant Only**

Number of Occupants: _____

All reusable or returnable equipment and supplies, such as the containers and cooler/dispenser, are the property of the commercial water delivery service or the City of La Crosse. By signing below, the Occupant of the above referenced property acknowledges that all reusable or returnable equipment and supplies shall be returned to the commercial water delivery service or the City of La Crosse upon request. The Occupant agrees to provide reasonable access for delivery of bottled water and pick up of reusable or returnable equipment and supplies. Occupant(s) acknowledges that they may be required to sign an agreement with the commercial water delivery service as a condition of receiving bottled water.

Signed: _____ Dated: _____

Printed Name: _____

BOTTLED WATER ACKNOWLEDGEMENT

208 Callaway Blvd, LA CROSSE, WI 54603

If you desire to accept the bottled water delivery, please complete and sign this form and return it to The OS Group at PFAS@TheOSgrp.com or mail to 444 21st St. S, La Crosse, WI 54601. You may also complete this form electronically on line at www.cityoflacrosse.org/bottledwater . Call 608-668-2718 with any question you may have.

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Signed: _____ Dated: _____

Printed Name: _____



444 21st Street South · La Crosse, Wisconsin · 54601

November 18, 2020

██████████
 2511 1st Avenue West
 La Crosse, WI 54603

Subject: Private Well Sampling Results
 2511 1st Avenue West, La Crosse, WI 54603
 Tax Parcel # 4-369-0
 Sample ID # 369-0

Dear ██████████:

We have received and reviewed the test results for the sample collected on October 27, 2020 at the above address. Some PFAS compounds were found, but the levels found were **below** the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in *your* well are called the “Sample Result” in the table below.

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)	
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}	The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}	
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}	
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}	
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	Not Detected	20 ppt ^{a,b}	
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	6.2 ppt	20 ppt ^{a,b}	

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	5.7 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	10 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	46 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	Not Detected	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS # 2706-91-4	4.3 ppt	None Established ^c

^a Public health enforcement standard (ES) recommended by DHS.

^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA.

^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation.

^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code.

^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L)

^{BL} Detected in the method blank. Possible lab contaminant.

Private Well Sampling Results for
2511 1st Avenue West, La Crosse, WI 54603
Tax Parcel # 4-369-0
Sample ID # 369-0
November 18, 2020

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VJ29090-002
Description: 369-0	Matrix: Aqueous
Date Sampled: 10/27/2020 1100	Project Name: LACROSSE WELL #23 & 24
Date Received: 10/29/2020	Project Number: 40217319

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/05/2020 1412	MMM	11/03/2020 1007	72053

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.5	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	5.7		3.5	0.88	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	4.3		3.5	0.88	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	10		3.5	0.88	ng/L	1
Perfluoro-n-butyric acid (PFBA)	375-22-4	PFAS by ID SOP	46		3.5	0.88	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	6.2		3.5	0.88	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		107	25-150
13C2_6:2FTS		103	25-150
13C2_8:2FTS		107	25-150
13C2_PFDaA		91	25-150
13C2_PFHxDA		101	25-150
13C2_PFTeDA		100	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VJ29090-002
Description: 369-0	Matrix: Aqueous
Date Sampled: 10/27/2020 1100	Project Name: LACROSSE WELL #23 & 24
Date Received: 10/29/2020	Project Number: 40217319

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		96	25-150
13C3_PFHxS		98	25-150
13C3-HFPO-DA		106	25-150
13C4_PFBa		103	25-150
13C4_PFHpA		95	25-150
13C5_PFHxA		101	25-150
13C5_PFPeA		94	25-150
13C6_PFDa		98	25-150
13C7_PFUdA		95	25-150
13C8_PFOA		99	25-150
13C8_PFOS		93	25-150
13C8_PFOsA		102	10-150
13C9_PFNa		104	25-150
d-EtFOSA		88	10-150
d5-EtFOSAA		105	25-150
d9-EtFOSE		98	10-150
d-MeFOSA		90	10-150
d3-MeFOSAA		101	25-150
d7-MeFOSE		107	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
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444 21st Street South · La Crosse, Wisconsin · 54601

November 18, 2020

[REDACTED]
2543 1st Avenue West
La Crosse, WI 54603

Subject: Private Well Sampling Results
2543 1st Avenue West, La Crosse, WI 54603
Tax Parcel #4-386-0
Sample ID # 386-0

Dear [REDACTED]:

We have received and reviewed the test results for the sample collected on October 27, 2020 at the above address. Some PFAS compounds were found at levels above the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the "Recommended Public Health Standard" in the table below. The levels found in your well are called the "Sample Result" in the table below.

Because some of the levels are above the recommended Public Health Standard, the City is offering to provide bottled water delivered to your home for drinking, cooking, and brushing your teeth. There will be no cost to you for the bottled water. Please complete the attached form and mail it to The OS Group to make arrangements for having a water dispenser and bottles delivered to your home or business. Call 608-668-2718 or email PFAS@theOSgrp.com. You may also complete this form on line at www.cityoflacrosse.org/bottledwater

The following table summarizes the test results from the sample. **Bolded results** are above a current recommended level intended to protect your health according to the Department of Health Services (DHS).

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	19 ppt	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	13 ppt	20 ppt ^{a,b}
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	6.3 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	8.9 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	100 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	Not Detected	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a

The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS # 2706-91-4	4.9 ppt	None Established ^c
Perfluoro-n-pentanoic acid (PFPeA) CAS # 2706-90-3	1.9 ppt	None Established ^c

^a Public health enforcement standard (ES) recommended by DHS.
^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA.
^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation.
^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code.
^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L)
^{BL} Detected in the method blank. Possible lab contaminant.

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>	<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private Wells	DNR Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well
 Bottled Water Acknowledgement

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VJ29090-001
Description: 386-0	Matrix: Aqueous
Date Sampled: 10/27/2020 1040	Project Name: LACROSSE WELL #23 & 24
Date Received: 10/29/2020	Project Number: 40217319

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/05/2020 1401	MMM	11/03/2020 1007	72053

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.8	2.0	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.8	2.0	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.8	2.0	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.8	2.0	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.8	2.0	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.8	2.0	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.8	2.0	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.8	2.0	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.8	2.0	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.8	2.0	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.8	2.0	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		16	3.9	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.8	2.0	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.8	2.0	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	6.3		3.9	0.98	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	4.9		3.9	0.98	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.8	2.0	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	8.9		3.9	0.98	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	100		3.9	0.98	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.8	2.0	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.8	2.0	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	19		3.9	0.98	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	1.9	J	3.9	0.98	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	13		3.9	0.98	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		105	25-150
13C2_6:2FTS		111	25-150
13C2_8:2FTS		101	25-150
13C2_PFDaA		97	25-150
13C2_PFHxDA		101	25-150
13C2_PFTeDA		95	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VJ29090-001
Description: 386-0	Matrix: Aqueous
Date Sampled: 10/27/2020 1040	Project Name: LACROSSE WELL #23 & 24
Date Received: 10/29/2020	Project Number: 40217319

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		97	25-150
13C3_PFHxS		98	25-150
13C3-HFPO-DA		109	25-150
13C4_PFBa		105	25-150
13C4_PFHpA		99	25-150
13C5_PFHxA		98	25-150
13C5_PFPeA		96	25-150
13C6_PFDa		96	25-150
13C7_PFUdA		96	25-150
13C8_PFOA		96	25-150
13C8_PFOs		98	25-150
13C8_PFOsA		105	10-150
13C9_PFNa		101	25-150
d-EtFOsA		84	10-150
d5-EtFOsAA		99	25-150
d9-EtFOsE		102	10-150
d-MeFOsA		88	10-150
d3-MeFOsAA		95	25-150
d7-MeFOsE		102	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
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BOTTLED WATER ACKNOWLEDGEMENT

2543 1st Avenue West, LA CROSSE, WI 54603

If you desire to accept the bottled water delivery, please complete and sign this form and return it to The OS Group at PFAS@TheOSgrp.com or mail to 444 21st St. S, La Crosse, WI 54601. You may also complete this form electronically on line at www.cityoflacrosse.org/bottledwater . Call 608-668-2718 with any question you may have.

As pre-caution for the protection of human health, the City of La Crosse (The City) will provide, on a temporary basis, bottled water for drinking, cooking and toothbrushing purposes at the above referenced address. The water will be delivered to your home or business by a commercial water delivery service. At the City's cost, a dispenser / cooler and regular deliveries of 5-gallon containers of water will be provided. The City reserves the right to dictate the conditions of delivery, such as minimum and maximum number of containers per delivery, frequency and timing of deliveries. The City reserves the right to periodically review whether The City should continue to provide bottled water, considering factors such as State and Federal standards and guidance, evolving knowledge and understanding of the sources, cause and responsibility for the contamination, new or reinterpreted test results, and the availability of more permanent or cost-effective sources of water for the above purposes. The City of La Crosse makes no warranty or representation regarding the suitability of the bottled water beyond those made by the commercial water delivery service.

All reusable or returnable equipment and supplies, such as the containers and cooler/dispenser, are the property of the commercial water delivery service or the City of La Crosse. By signing below, the Occupant of the above referenced property acknowledges that all reusable or returnable equipment and supplies shall be returned to the commercial water delivery service or the City of La Crosse upon request. The Occupant agrees to provide reasonable access for delivery of bottled water and pick up of reusable or returnable equipment and supplies. Occupant(s) acknowledges that they may be required to sign an agreement with the commercial water delivery service as a condition of receiving bottled water.

Check ownership:

_____ Owner-Occupant

_____ Occupant Only

Number of Occupants: _____

Signed: _____ Dated: _____

Printed Name: _____

BOTTLED WATER ACKNOWLEDGEMENT

2543 1st Avenue West, LA CROSSE, WI 54603

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Check ownership:

_____ Owner-Occupant

_____ Occupant Only

Number of Occupants: _____

Signed: _____ Dated: _____

Printed Name: _____



444 21st Street South · La Crosse, Wisconsin · 54601

December 1, 2020

██████████
 2548 2nd Avenue East
 La Crosse, WI 54603

Subject: Private Well Sampling Results
 2548 2nd Avenue East, La Crosse, WI 54603
 Tax parcel # 4-181-0
 Sample ID # 181-0

Dear ██████████:

We have received and reviewed the test results for the sample collected on November 2, 2020 at the above address. Some PFAS compounds were found, but the levels found were **below** the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in *your* well are called the “Sample Result” in the table below.

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)	
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}	The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}	
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}	
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}	
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	Not Detected	20 ppt ^{a,b}	
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	4.5 ppt	20 ppt ^{a,b}	

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	4.3 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	6.6 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	95 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	1.8 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS # 2706-91-4	3.3 ppt	None Established ^c
Perfluoro-n-heptanoic acid (PFHpA) CAS # 375-85-9	1.2 ppt	None Established ^c
Perfluoro-n-pentanoic acid (PFPeA) CAS # 2706-90-3	3.2 ppt	None Established ^c

^a Public health enforcement standard (ES) recommended by DHS.

^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA.

^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation.

^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code.

^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L)

^{BL} Detected in the method blank. Possible lab contaminant.

Private Well Sampling Results for
2548 2nd Avenue East, La Crosse, WI 54603
Tax parcel # 4-181-0
Sample ID # 181-0
December 1, 2020

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-001
Description: 181-0	Matrix: Aqueous
Date Sampled: 11/02/2020 1130	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/17/2020 1605	MMM	11/16/2020 1125	73619

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.6	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	4.3		3.6	0.90	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	3.3	J	3.6	0.90	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	6.6		3.6	0.90	ng/L	1
Perfluoro-n-butyric acid (PFBA)	375-22-4	PFAS by ID SOP	95		3.6	0.90	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	1.2	J	3.6	0.90	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	1.8	J	3.6	0.90	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	3.2	J	3.6	0.90	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	4.5		3.6	0.90	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		88	25-150
13C2_6:2FTS		87	25-150
13C2_8:2FTS		76	25-150
13C2_PFDaA		79	25-150
13C2_PFHxDA		66	25-150
13C2_PFTeDA		75	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-001
Description: 181-0	Matrix: Aqueous
Date Sampled: 11/02/2020 1130	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		80	25-150
13C3_PFHxS		76	25-150
13C3-HFPO-DA		97	25-150
13C4_PFBa		83	25-150
13C4_PFHpA		84	25-150
13C5_PFHxA		91	25-150
13C5_PFPeA		81	25-150
13C6_PFDa		80	25-150
13C7_PFUdA		86	25-150
13C8_PFOA		87	25-150
13C8_PFOS		76	25-150
13C8_PFOSA		85	10-150
13C9_PFNA		84	25-150
d-EtFOSA		72	10-150
d5-EtFOSAA		80	25-150
d9-EtFOSE		81	10-150
d-MeFOSA		77	10-150
d3-MeFOSAA		86	25-150
d7-MeFOSE		82	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
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444 21st Street South · La Crosse, Wisconsin · 54601

December 1, 2020

██████████
E7104 Traastad Rd.
Viroqua, WI 54665

Subject: Private Well Sampling Results
2532 Second Avenue East,
La Crosse, WI 54603
Tax parcel # 4-184-0
Sample ID # 184-0

Dear ██████████:

We have received and reviewed the test results for the sample collected on November 2, 2020 at the above address. Some PFAS compounds were found at levels above the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the "Recommended Public Health Standard" in the table below. The levels found in your well are called the "Sample Result" in the table below.

Because some of the levels are above the recommended Public Health Standard, the City is offering to provide bottled water delivered to your home for drinking, cooking, and brushing your teeth. There will be no cost to you for the bottled water. Please complete the attached form and mail it to The OS Group to make arrangements for having a water dispenser and bottles delivered to your home. Call 608-668-2718 or email PFAS@theOSgrp.com . You may also complete this form on line at www.cityoflacrosse.org/bottledwater

The following table summarizes the test results from the sample. **Bolded results** are above a current recommended level intended to protect your health according to the Department of Health Services (DHS).

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	0.91 ppt	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	Not Detected	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	4.5 ppt	20 ppt ^{a,b}
The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6		
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	9.1 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	70 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	30 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	3.8 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a

Perfluoro-1-heptanesulfonic acid (PFHpS) CAS # 375-92-8	1.7 ppt	None Established ^c
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS # 2706-91-4	8.0 ppt	None Established ^c
Perfluoro-n-pentanoic acid (PFPeA) CAS #2706-90-3	2.7 ppt	None Established ^c
^a Public health enforcement standard (ES) recommended by DHS. ^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA. ^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation. ^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code. ^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L) ^{BL} Detected in the method blank. Possible lab contaminant.		

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>	<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well
 Bottled Water Acknowledgement

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-003
Description: 184-0	Matrix: Aqueous
Date Sampled: 11/02/2020 1200	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/17/2020 1637	MMM	11/16/2020 1125	73619

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.5	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	9.1		3.5	0.88	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	1.7	J	3.5	0.88	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	0.91	J	3.5	0.88	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	8.0		3.5	0.88	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	70		3.5	0.88	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	30		3.5	0.88	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	3.8		3.5	0.88	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	2.7	J	3.5	0.88	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	4.5		3.5	0.88	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		91	25-150
13C2_6:2FTS		86	25-150
13C2_8:2FTS		74	25-150
13C2_PFDaA		88	25-150
13C2_PFHxDA		93	25-150
13C2_PFTeDA		84	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-003
Description: 184-0	Matrix: Aqueous
Date Sampled: 11/02/2020 1200	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		82	25-150
13C3_PFHxS		86	25-150
13C3-HFPO-DA		112	25-150
13C4_PFBa		92	25-150
13C4_PFHpA		100	25-150
13C5_PFHxA		95	25-150
13C5_PFPeA		91	25-150
13C6_PFDa		85	25-150
13C7_PFUdA		85	25-150
13C8_PFOA		91	25-150
13C8_PFOS		82	25-150
13C8_PFOsA		91	10-150
13C9_PFNa		89	25-150
d-EtFOSA		72	10-150
d5-EtFOSAA		84	25-150
d9-EtFOSE		87	10-150
d-MeFOSA		78	10-150
d3-MeFOSAA		92	25-150
d7-MeFOSE		88	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
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BOTTLED WATER ACKNOWLEDGEMENT

2532 Second Avenue East,

If you desire to accept the bottled water delivery, please complete and sign this form and return it to The OS Group at PFAS@TheOSgrp.com or mail to 444 21st St. S, La Crosse, WI 54601. You may also complete this form electronically on line at www.cityoflacrosse.org/bottledwater . Call 608-668-2718 with any question you may have.

As pre-caution for the protection of human health, the City of La Crosse (The City) will provide, on a temporary basis, bottled water for drinking, cooking and toothbrushing purposes at the above referenced address. The water will be delivered to your home or business by a commercial water delivery service. At the City's cost, a dispenser / cooler and regular deliveries of 5-gallon containers of water will be provided. The City reserves the right to dictate the conditions of delivery, such as minimum and maximum number of containers per delivery, frequency and timing of deliveries. The City reserves the right to periodically review whether The City should continue to provide bottled water, considering factors such as State and Federal standards and guidance, evolving knowledge and understanding of the sources, cause and responsibility for the contamination, new or reinterpreted test results, and the availability of more permanent or cost-effective sources of water for the above purposes. The City of La Crosse makes no warranty or representation regarding the suitability of the bottled water beyond those made by the commercial water delivery service.

All reusable or returnable equipment and supplies, such as the containers and cooler/dispenser, are the property of the commercial water delivery service or the City of La Crosse. By signing below, the Occupant of the above referenced property acknowledges that all reusable or returnable equipment and supplies shall be returned to the commercial water delivery service or the City of La Crosse upon request. The Occupant agrees to provide reasonable access for delivery of bottled water and pick up of reusable or returnable equipment and supplies. Occupant(s) acknowledges that they may be required to sign an agreement with the commercial water delivery service as a condition of receiving bottled water.

Check ownership:

_____ Owner-Occupant

_____ Occupant Only

Number of Occupants: _____

Signed: _____ Dated: _____

Printed Name: _____



444 21st Street South · La Crosse, Wisconsin · 54601

December 1, 2020

[REDACTED]
2532 Second Avenue East
La Crosse, WI 54603

Subject: Private Well Sampling Results
2532 Second Avenue East, La Crosse, WI 54603
Tax parcel # 4-184-0
Sample ID # 184-0

Dear [REDACTED]:

We have received and reviewed the test results for the sample collected on November 2, 2020 at the above address. Some PFAS compounds were found at levels above the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the "Recommended Public Health Standard" in the table below. The levels found in your well are called the "Sample Result" in the table below.

Because some of the levels are above the recommended Public Health Standard, the City is offering to provide bottled water delivered to your home for drinking, cooking, and brushing your teeth. There will be no cost to you for the bottled water. Please complete the attached form and mail it to The OS Group to make arrangements for having a water dispenser and bottles delivered to your home. Call 608-668-2718 or email PFAS@theOSgrp.com . You may also complete this form on line at www.cityoflacrosse.org/bottledwater

The following table summarizes the test results from the sample. **Bolded results** are above a current recommended level intended to protect your health according to the Department of Health Services (DHS).

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	0.91 ppt	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	Not Detected	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	4.5 ppt	20 ppt ^{a,b}
The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6		
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	9.1 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	70 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	30 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	3.8 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a

Perfluoro-1-heptanesulfonic acid (PFHpS) CAS # 375-92-8	1.7 ppt	None Established ^c
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS # 2706-91-4	8.0 ppt	None Established ^c
Perfluoro-n-pentanoic acid (PFPeA) CAS #2706-90-3	2.7 ppt	None Established ^c
^a Public health enforcement standard (ES) recommended by DHS. ^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA. ^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation. ^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code. ^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L) ^{BL} Detected in the method blank. Possible lab contaminant.		

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well
 Bottled Water Acknowledgement

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-003
Description: 184-0	Matrix: Aqueous
Date Sampled: 11/02/2020 1200	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/17/2020 1637	MMM	11/16/2020 1125	73619

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.5	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	9.1		3.5	0.88	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	1.7	J	3.5	0.88	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	0.91	J	3.5	0.88	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	8.0		3.5	0.88	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	70		3.5	0.88	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	30		3.5	0.88	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	3.8		3.5	0.88	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	2.7	J	3.5	0.88	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	4.5		3.5	0.88	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		91	25-150
13C2_6:2FTS		86	25-150
13C2_8:2FTS		74	25-150
13C2_PFDaA		88	25-150
13C2_PFHxDA		93	25-150
13C2_PFTeDA		84	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-003
Description: 184-0	Matrix: Aqueous
Date Sampled: 11/02/2020 1200	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		82	25-150
13C3_PFHxS		86	25-150
13C3-HFPO-DA		112	25-150
13C4_PFBa		92	25-150
13C4_PFHpA		100	25-150
13C5_PFHxA		95	25-150
13C5_PFPeA		91	25-150
13C6_PFDa		85	25-150
13C7_PFUdA		85	25-150
13C8_PFOA		91	25-150
13C8_PFOS		82	25-150
13C8_PFOsA		91	10-150
13C9_PFNa		89	25-150
d-EtFOsA		72	10-150
d5-EtFOsAA		84	25-150
d9-EtFOsE		87	10-150
d-MeFOsA		78	10-150
d3-MeFOsAA		92	25-150
d7-MeFOsE		88	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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BOTTLED WATER ACKNOWLEDGEMENT

2532 Second Avenue East, La Crosse, WI 54603

If you desire to accept the bottled water delivery, please complete and sign this form and return it to The OS Group at PFAS@TheOSgrp.com or mail to 444 21st St. S, La Crosse, WI 54601. You may also complete this form electronically on line at www.cityoflacrosse.org/bottledwater . Call 608-668-2718 with any question you may have.

As pre-caution for the protection of human health, the City of La Crosse (The City) will provide, on a temporary basis, bottled water for drinking, cooking and toothbrushing purposes at the above referenced address. The water will be delivered to your home or business by a commercial water delivery service. At the City's cost, a dispenser / cooler and regular deliveries of 5-gallon containers of water will be provided. The City reserves the right to dictate the conditions of delivery, such as minimum and maximum number of containers per delivery, frequency and timing of deliveries. The City reserves the right to periodically review whether The City should continue to provide bottled water, considering factors such as State and Federal standards and guidance, evolving knowledge and understanding of the sources, cause and responsibility for the contamination, new or reinterpreted test results, and the availability of more permanent or cost-effective sources of water for the above purposes. The City of La Crosse makes no warranty or representation regarding the suitability of the bottled water beyond those made by the commercial water delivery service.

All reusable or returnable equipment and supplies, such as the containers and cooler/dispenser, are the property of the commercial water delivery service or the City of La Crosse. By signing below, the Occupant of the above referenced property acknowledges that all reusable or returnable equipment and supplies shall be returned to the commercial water delivery service or the City of La Crosse upon request. The Occupant agrees to provide reasonable access for delivery of bottled water and pick up of reusable or returnable equipment and supplies. Occupant(s) acknowledges that they may be required to sign an agreement with the commercial water delivery service as a condition of receiving bottled water.

Check ownership:

_____ Owner-Occupant

_____ Occupant Only

Number of Occupants: _____

Signed: _____ Dated: _____

Printed Name: _____



444 21st Street South · La Crosse, Wisconsin · 54601

December 1, 2020

████████████████████
 2556 1st Avenue East
 La Crosse, WI 54603

Subject: Private Well Sampling Results
 2556 1st Avenue East, La Crosse, WI 54603
 Tax parcel # 4-194-0
 Sample ID # 194-0

Dear ██████████:

We have received and reviewed the test results for the sample collected on November 2, 2020 at the above address. Some PFAS compounds were found, but the levels found were **below** the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in *your* well are called the “Sample Result” in the table below.

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)	
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}	The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}	
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}	
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}	
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	Not Detected	20 ppt ^{a,b}	
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	8.3 ppt	20 ppt ^{a,b}	

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	8.4 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	12 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	73 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	Not Detected	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS #2706-91-4	6.4 ppt	None Established ^c

^a Public health enforcement standard (ES) recommended by DHS.
^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA.
^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation.
^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code.
^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L)
^{BL} Detected in the method blank. Possible lab contaminant.

Private Well Sampling Results for
2556 1st Avenue East, La Crosse, WI 54603
Tax parcel # 4-194-0
Sample ID # 194-0
December 1, 2020

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-008
Description: 194-0	Matrix: Aqueous
Date Sampled: 11/02/2020 1325	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/18/2020 1302	MMM	11/16/2020 1125	73619

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.6	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	8.4		3.6	0.90	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	6.4		3.6	0.90	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	12		3.6	0.90	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	73		3.6	0.90	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	8.3		3.6	0.90	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		86	25-150
13C2_6:2FTS		92	25-150
13C2_8:2FTS		78	25-150
13C2_PFDaA		83	25-150
13C2_PFHxDA		78	25-150
13C2_PFTeDA		77	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-008
Description: 194-0	Matrix: Aqueous
Date Sampled: 11/02/2020 1325	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		78	25-150
13C3_PFHxS		81	25-150
13C3-HFPO-DA		88	25-150
13C4_PFBa		88	25-150
13C4_PFHpA		80	25-150
13C5_PFHxA		84	25-150
13C5_PFPeA		93	25-150
13C6_PFDa		79	25-150
13C7_PFUdA		83	25-150
13C8_PFOA		89	25-150
13C8_PFOS		75	25-150
13C8_PFOSA		89	10-150
13C9_PFNA		81	25-150
d-EtFOSA		68	10-150
d5-EtFOSAA		82	25-150
d9-EtFOSE		81	10-150
d-MeFOSA		73	10-150
d3-MeFOSAA		81	25-150
d7-MeFOSE		73	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com



444 21st Street South · La Crosse, Wisconsin · 54601

December 1, 2020

[REDACTED]
2524 1st Avenue East
La Crosse, WI 54603

Subject: Private Well Sampling Results
2524 1st Avenue East, La Crosse, WI 54603
Tax parcel # 4-202-0
Sample ID # 202-0

Dear [REDACTED]:

We have received and reviewed the test results for the sample collected on November 2, 2020 at the above address. Some PFAS compounds were found at levels above the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the "Recommended Public Health Standard" in the table below. The levels found in your well are called the "Sample Result" in the table below.

Because some of the levels are above the recommended Public Health Standard, the City is offering to provide bottled water delivered to your home for drinking, cooking, and brushing your teeth. There will be no cost to you for the bottled water. Please complete the attached form and mail it to The OS Group to make arrangements for having a water dispenser and bottles delivered to your home. Call 608-668-2718 or email PFAS@theOSgrp.com . You may also complete this form on line at www.cityoflacrosse.org/bottledwater

The following table summarizes the test results from the sample. **Bolded results** are above a current recommended level intended to protect your health according to the Department of Health Services (DHS).

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	68 ppt	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	680 ppt	20 ppt ^{a,b}
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	130 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	1700 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	18 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	51 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a

The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6

Perfluoro-1-heptanesulfonic acid (PFHpS) CAS # 375-92-8	64 ppt	None Established ^c
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS # 2706-91-4	220 ppt	None Established ^c
Perfluoro-n-heptanoic acid (PFHpA) CAS # 375-85-9	9.7 ppt	None Established ^c
Perfluoro-n-pentanoic acid (PFPeA) CAS #2706-90-3	13 ppt	None Established ^c
^a Public health enforcement standard (ES) recommended by DHS. ^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA. ^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation. ^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code. ^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L) ^{BL} Detected in the method blank. Possible lab contaminant.		

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well
 Bottled Water Acknowledgement

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-007
Description: 202-0	Matrix: Aqueous
Date Sampled: 11/02/2020 1310	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/17/2020 1730	MMM	11/16/2020 1125	73619
2	SOP SPE	PFAS by ID SOP	5	11/18/2020 1251	MMM	11/16/2020 1125	73619

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.5	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	130		3.5	0.89	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	64		3.5	0.89	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	220		3.5	0.89	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	1700		18	4.4	ng/L	2
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	18		3.5	0.89	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	9.7		3.5	0.89	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	51		3.5	0.89	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	68		3.5	0.89	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	13		3.5	0.89	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	680		3.5	0.89	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
13C2_4:2FTS		97	25-150		103	25-150
13C2_6:2FTS		93	25-150		111	25-150
13C2_8:2FTS		78	25-150		91	25-150
13C2_PFDa		85	25-150		97	25-150
13C2_PFHxDA		96	25-150		98	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-007
Description: 202-0	Matrix: Aqueous
Date Sampled: 11/02/2020 1310	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
13C2_PFTeDA		84	25-150		91	25-150
13C3_PFBS		86	25-150		90	25-150
13C3_PFHxS		75	25-150		92	25-150
13C3-HFPO-DA		99	25-150		105	25-150
13C4_PFBA		88	25-150		96	25-150
13C4_PFHpA		86	25-150		92	25-150
13C5_PFHxA		91	25-150		95	25-150
13C5_PFPeA		88	25-150		100	25-150
13C6_PFDA		83	25-150		89	25-150
13C7_PFUdA		86	25-150		96	25-150
13C8_PFOA		86	25-150		92	25-150
13C8_PFOS		79	25-150		88	25-150
13C8_PFOSA		90	10-150		105	10-150
13C9_PFNA		89	25-150		91	25-150
d-EtFOSA		80	10-150		100	10-150
d5-EtFOSAA		84	25-150		98	25-150
d9-EtFOSE		89	10-150		97	10-150
d-MeFOSA		80	10-150		99	10-150
d3-MeFOSAA		88	25-150		97	25-150
d7-MeFOSE		89	10-150		99	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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BOTTLED WATER ACKNOWLEDGEMENT

2524 1st Avenue East, La Crosse, WI 54603

If you desire to accept the bottled water delivery, please complete and sign this form and return it to The OS Group at PFAS@TheOSgrp.com or mail to 444 21st St. S, La Crosse, WI 54601. You may also complete this form electronically on line at www.cityoflacrosse.org/bottledwater . Call 608-668-2718 with any question you may have.

As pre-caution for the protection of human health, the City of La Crosse (The City) will provide, on a temporary basis, bottled water for drinking, cooking and toothbrushing purposes at the above referenced address. The water will be delivered to your home or business by a commercial water delivery service. At the City's cost, a dispenser / cooler and regular deliveries of 5-gallon containers of water will be provided. The City reserves the right to dictate the conditions of delivery, such as minimum and maximum number of containers per delivery, frequency and timing of deliveries. The City reserves the right to periodically review whether The City should continue to provide bottled water, considering factors such as State and Federal standards and guidance, evolving knowledge and understanding of the sources, cause and responsibility for the contamination, new or reinterpreted test results, and the availability of more permanent or cost-effective sources of water for the above purposes. The City of La Crosse makes no warranty or representation regarding the suitability of the bottled water beyond those made by the commercial water delivery service.

All reusable or returnable equipment and supplies, such as the containers and cooler/dispenser, are the property of the commercial water delivery service or the City of La Crosse. By signing below, the Occupant of the above referenced property acknowledges that all reusable or returnable equipment and supplies shall be returned to the commercial water delivery service or the City of La Crosse upon request. The Occupant agrees to provide reasonable access for delivery of bottled water and pick up of reusable or returnable equipment and supplies. Occupant(s) acknowledges that they may be required to sign an agreement with the commercial water delivery service as a condition of receiving bottled water.

Check ownership:

_____ Owner-Occupant

_____ Occupant Only

Number of Occupants: _____

Signed: _____ Dated: _____

Printed Name: _____



444 21st Street South · La Crosse, Wisconsin · 54601

December 1, 2020

██████████
 2500 1st Avenue East
 La Crosse, WI 54603

Subject: Private Well Sampling Results
 2500 1st Avenue East, La Crosse, WI 54603
 Tax parcel # 4-209-0
 Sample ID # 209-0

Dear ██████████:

We have received and reviewed the test results for the sample collected on November 2, 2020 at the above address. Some PFAS compounds were found, but the levels found were **below** the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in *your* well are called the “Sample Result” in the table below.

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)	
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}	The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}	
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}	
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}	
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	Not Detected	20 ppt ^{a,b}	
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	3.0 ppt	20 ppt ^{a,b}	

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	4.3 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	4.5 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	1.9 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	Not Detected	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS #2706-91-4	3.2 ppt	None Established ^c
^a Public health enforcement standard (ES) recommended by DHS. ^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA. ^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation. ^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code. ^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L) ^{BL} Detected in the method blank. Possible lab contaminant.		

Private Well Sampling Results for
2500 1st Avenue East, La Crosse, WI 54603
Tax parcel # 4-209-0
Sample ID # 209-0
December 1, 2020

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-006
Description: 209-0	Matrix: Aqueous
Date Sampled: 11/02/2020 1255	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/17/2020 1709	MMM	11/16/2020 1125	73619

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		6.8	1.7	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		6.8	1.7	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		6.8	1.7	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		6.8	1.7	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		6.8	1.7	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		6.8	1.7	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		6.8	1.7	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		6.8	1.7	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		6.8	1.7	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		6.8	1.7	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		6.8	1.7	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.4	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		6.8	1.7	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		6.8	1.7	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	4.3		3.4	0.85	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.4	0.85	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.4	0.85	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.4	0.85	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.4	0.85	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	3.2	J	3.4	0.85	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		6.8	1.7	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	4.5		3.4	0.85	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	1.9	J	3.4	0.85	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.4	0.85	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.4	0.85	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.4	0.85	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		6.8	1.7	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		3.4	0.85	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.4	0.85	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		6.8	1.7	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		3.4	0.85	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		3.4	0.85	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.4	0.85	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.4	0.85	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.4	0.85	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	3.0	J	3.4	0.85	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		92	25-150
13C2_6:2FTS		87	25-150
13C2_8:2FTS		79	25-150
13C2_PFDaA		86	25-150
13C2_PFHxDA		92	25-150
13C2_PFTeDA		85	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-006
Description: 209-0	Matrix: Aqueous
Date Sampled: 11/02/2020 1255	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		88	25-150
13C3_PFHxS		82	25-150
13C3-HFPO-DA		107	25-150
13C4_PFBa		90	25-150
13C4_PFHpA		88	25-150
13C5_PFHxA		95	25-150
13C5_PFPeA		89	25-150
13C6_PFDa		83	25-150
13C7_PFUdA		88	25-150
13C8_PFOA		89	25-150
13C8_PFOS		81	25-150
13C8_PFOSA		91	10-150
13C9_PFNA		87	25-150
d-EtFOSA		80	10-150
d5-EtFOSAA		85	25-150
d9-EtFOSE		84	10-150
d-MeFOSA		81	10-150
d3-MeFOSAA		89	25-150
d7-MeFOSE		83	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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444 21st Street South · La Crosse, Wisconsin · 54601

December 1, 2020

██████████
 2501 2nd Avenue East
 La Crosse, WI 54603

Subject: Private Well Sampling Results
 2501 2nd Avenue East, La Crosse, WI 54603
 Tax parcel # 4-210-0
 Sample ID # 210-0

Dear ██████████:

We have received and reviewed the test results for the sample collected on November 3, 2020 at the above address. Some PFAS compounds were found, but the levels found were **below** the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in *your* well are called the “Sample Result” in the table below.

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)	
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}	The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}	
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}	
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}	
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	1.4 ppt	20 ppt ^{a,b}	
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	1.9 ppt	20 ppt ^{a,b}	

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	2.2 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	3.0 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	3.3 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	1.1 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-n-pentanoic acid (PFPeA) CAS # 2706-90-3	1.0 ppt	None Established ^c

^a Public health enforcement standard (ES) recommended by DHS.
^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA.
^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation.
^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code.
^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L)
^{BL} Detected in the method blank. Possible lab contaminant.

Private Well Sampling Results for
2501 2nd Avenue East, La Crosse, WI 54603
Tax parcel # 4-210-0
Sample ID # 210-0
December 1, 2020

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-011
Description: 210-0	Matrix: Aqueous
Date Sampled: 11/03/2020 0915	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/17/2020 1824	MMM	11/16/2020 1125	73619

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.6	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	2.2	J	3.6	0.89	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.6	0.89	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.6	0.89	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.6	0.89	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.6	0.89	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	ND		3.6	0.89	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	3.0	J	3.6	0.89	ng/L	1
Perfluoro-n-butyric acid (PFBA)	375-22-4	PFAS by ID SOP	3.3	J	3.6	0.89	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.6	0.89	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.6	0.89	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.6	0.89	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	1.1	J	3.6	0.89	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.6	0.89	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	1.4	J	3.6	0.89	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	1.0	J	3.6	0.89	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.6	0.89	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.6	0.89	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.6	0.89	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	1.9	J	3.6	0.89	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		102	25-150
13C2_6:2FTS		95	25-150
13C2_8:2FTS		88	25-150
13C2_PFDaA		90	25-150
13C2_PFHxDA		96	25-150
13C2_PFTeDA		85	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-011
Description: 210-0	Matrix: Aqueous
Date Sampled: 11/03/2020 09:15	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		87	25-150
13C3_PFHxS		86	25-150
13C3-HFPO-DA		102	25-150
13C4_PFBa		93	25-150
13C4_PFHpA		102	25-150
13C5_PFHxA		100	25-150
13C5_PFPeA		93	25-150
13C6_PFDA		89	25-150
13C7_PFUdA		92	25-150
13C8_PFOA		94	25-150
13C8_PFOS		84	25-150
13C8_PFOSA		95	10-150
13C9_PFNA		95	25-150
d-EtFOSA		79	10-150
d5-EtFOSAA		90	25-150
d9-EtFOSE		93	10-150
d-MeFOSA		86	10-150
d3-MeFOSAA		93	25-150
d7-MeFOSE		88	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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444 21st Street South · La Crosse, Wisconsin · 54601

December 1, 2020

████████████████████
 424 Russel Drive S
 Holmen, WI 54636

Subject: Private Well Sampling Results
 2501 2nd Avenue East, La Crosse, WI 54603
 Tax parcel # 4-210-0
 Sample ID # 210-0

Dear ██████████:

We have received and reviewed the test results for the sample collected on November 3, 2020 at the above address. Some PFAS compounds were found, but the levels found were **below** the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in *your* well are called the “Sample Result” in the table below.

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)	
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}	The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}	
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}	
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}	
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	1.4 ppt	20 ppt ^{a,b}	
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	1.9 ppt	20 ppt ^{a,b}	

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	2.2 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	3.0 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	3.3 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	1.1 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-n-pentanoic acid (PFPeA) CAS # 2706-90-3	1.0 ppt	None Established ^c

^a Public health enforcement standard (ES) recommended by DHS.

^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA.

^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation.

^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code.

^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L)

^{BL} Detected in the method blank. Possible lab contaminant.

Private Well Sampling Results for
2501 2nd Avenue East, La Crosse, WI 54603
Tax parcel # 4-210-0
Sample ID # 210-0
December 1, 2020

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-011
Description: 210-0	Matrix: Aqueous
Date Sampled: 11/03/2020 0915	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/17/2020 1824	MMM	11/16/2020 1125	73619

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.6	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	2.2	J	3.6	0.89	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.6	0.89	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.6	0.89	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.6	0.89	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.6	0.89	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	ND		3.6	0.89	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	3.0	J	3.6	0.89	ng/L	1
Perfluoro-n-butyric acid (PFBA)	375-22-4	PFAS by ID SOP	3.3	J	3.6	0.89	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.6	0.89	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.6	0.89	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.6	0.89	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	1.1	J	3.6	0.89	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.6	0.89	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	1.4	J	3.6	0.89	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	1.0	J	3.6	0.89	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.6	0.89	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.6	0.89	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.6	0.89	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	1.9	J	3.6	0.89	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		102	25-150
13C2_6:2FTS		95	25-150
13C2_8:2FTS		88	25-150
13C2_PFDa		90	25-150
13C2_PFHxDA		96	25-150
13C2_PFTeDA		85	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-011
Description: 210-0	Matrix: Aqueous
Date Sampled: 11/03/2020 0915	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		87	25-150
13C3_PFHxS		86	25-150
13C3-HFPO-DA		102	25-150
13C4_PFBa		93	25-150
13C4_PFHpA		102	25-150
13C5_PFHxA		100	25-150
13C5_PFPeA		93	25-150
13C6_PFDa		89	25-150
13C7_PFUdA		92	25-150
13C8_PFOa		94	25-150
13C8_PFOs		84	25-150
13C8_PFOsA		95	10-150
13C9_PFNa		95	25-150
d-EtFOsA		79	10-150
d5-EtFOsAA		90	25-150
d9-EtFOsE		93	10-150
d-MeFOsA		86	10-150
d3-MeFOsAA		93	25-150
d7-MeFOsE		88	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com



444 21st Street South · La Crosse, Wisconsin · 54601

December 1, 2020

██████████
2521 2nd Avenue East
La Crosse, WI 54603

Subject: Private Well Sampling Results
2521 2nd Avenue East, La Crosse, WI 54603
Tax parcel # 4-215-0
Sample ID # 215-0

Dear ██████████:

We have received and reviewed the test results for the sample collected on November 3, 2020 at the above address. Some PFAS compounds were found at levels above the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in your well are called the “Sample Result” in the table below.

Because some of the levels are above the recommended Public Health Standard, the City is offering to provide bottled water delivered to your home for drinking, cooking, and brushing your teeth. There will be no cost to you for the bottled water. Please complete the attached form and mail it to The OS Group to make arrangements for having a water dispenser and bottles delivered to your home. Call 608-668-2718 or email PFAS@theOSgrp.com . You may also complete this form on line at www.cityoflacrosse.org/bottledwater

The following table summarizes the test results from the sample. **Bolded results** are above a current recommended level intended to protect your health according to the Department of Health Services (DHS).

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	110 ppt	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	210 ppt	20 ppt ^{a,b}
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	120 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	2800 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	21 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	86 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a

The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6

Perfluoro-1-heptanesulfonic acid (PFHpS) CAS # 375-92-8	69 ppt	None Established ^c
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS # 2706-91-4	270 ppt	None Established ^c
Perfluoro-n-heptanoic acid (PFHpA) CAS # 375-85-9	17 ppt	None Established ^c
Perfluoro-n-pentanoic acid (PFPeA) CAS #2706-90-3	18 ppt	None Established ^c
^a Public health enforcement standard (ES) recommended by DHS. ^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA. ^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation. ^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code. ^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L) ^{BL} Detected in the method blank. Possible lab contaminant.		

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well
 Bottled Water Acknowledgement

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-012
Description: 215-0	Matrix: Aqueous
Date Sampled: 11/03/2020 0935	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/18/2020 1355	MMM	11/17/2020 1034	73728
2	SOP SPE	PFAS by ID SOP	5	11/19/2020 1348	MMM	11/17/2020 1034	73728

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.6	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	120		3.6	0.90	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	69		3.6	0.90	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	270		3.6	0.90	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	2800		18	4.5	ng/L	2
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	21		3.6	0.90	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	17		3.6	0.90	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	86		3.6	0.90	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	110		3.6	0.90	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	18		3.6	0.90	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	210		3.6	0.90	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
13C2_4:2FTS		103	25-150		95	25-150
13C2_6:2FTS		104	25-150		100	25-150
13C2_8:2FTS		90	25-150		102	25-150
13C2_PFDa		90	25-150		88	25-150
13C2_PFHxDA		87	25-150		98	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-012
Description: 215-0	Matrix: Aqueous
Date Sampled: 11/03/2020 0935	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Surrogate	Run 1		Acceptance Limits	Run 2	
	Q	% Recovery		Q	% Recovery
13C2_PFTeDA		86	25-150	91	25-150
13C3_PFBs		91	25-150	90	25-150
13C3_PFHxS		77	25-150	86	25-150
13C3-HFPO-DA		99	25-150	94	25-150
13C4_PFBa		93	25-150	96	25-150
13C4_PFHpA		85	25-150	91	25-150
13C5_PFHxA		91	25-150	88	25-150
13C5_PFPeA		101	25-150	91	25-150
13C6_PFDA		84	25-150	85	25-150
13C7_PFUdA		85	25-150	94	25-150
13C8_PFOA		97	25-150	93	25-150
13C8_PFOS		84	25-150	87	25-150
13C8_PFOsA		98	10-150	101	10-150
13C9_PFNA		95	25-150	99	25-150
d-EtFOSA		84	10-150	94	10-150
d5-EtFOSAA		92	25-150	89	25-150
d9-EtFOSE		91	10-150	98	10-150
d-MeFOSA		81	10-150	90	10-150
d3-MeFOSAA		89	25-150	95	25-150
d7-MeFOSE		85	10-150	93	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
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BOTTLED WATER ACKNOWLEDGEMENT

2521 2nd Avenue East, La Crosse, WI 54603

If you desire to accept the bottled water delivery, please complete and sign this form and return it to The OS Group at PFAS@TheOSgrp.com or mail to 444 21st St. S, La Crosse, WI 54601. You may also complete this form electronically on line at www.cityoflacrosse.org/bottledwater . Call 608-668-2718 with any question you may have.

As pre-caution for the protection of human health, the City of La Crosse (The City) will provide, on a temporary basis, bottled water for drinking, cooking and toothbrushing purposes at the above referenced address. The water will be delivered to your home or business by a commercial water delivery service. At the City's cost, a dispenser / cooler and regular deliveries of 5-gallon containers of water will be provided. The City reserves the right to dictate the conditions of delivery, such as minimum and maximum number of containers per delivery, frequency and timing of deliveries. The City reserves the right to periodically review whether The City should continue to provide bottled water, considering factors such as State and Federal standards and guidance, evolving knowledge and understanding of the sources, cause and responsibility for the contamination, new or reinterpreted test results, and the availability of more permanent or cost-effective sources of water for the above purposes. The City of La Crosse makes no warranty or representation regarding the suitability of the bottled water beyond those made by the commercial water delivery service.

All reusable or returnable equipment and supplies, such as the containers and cooler/dispenser, are the property of the commercial water delivery service or the City of La Crosse. By signing below, the Occupant of the above referenced property acknowledges that all reusable or returnable equipment and supplies shall be returned to the commercial water delivery service or the City of La Crosse upon request. The Occupant agrees to provide reasonable access for delivery of bottled water and pick up of reusable or returnable equipment and supplies. Occupant(s) acknowledges that they may be required to sign an agreement with the commercial water delivery service as a condition of receiving bottled water.

Check ownership:

_____ Owner-Occupant

_____ Occupant Only

Number of Occupants: _____

Signed: _____ Dated: _____

Printed Name: _____



444 21st Street South · La Crosse, Wisconsin · 54601

December 1, 2020

[REDACTED]
2525 2nd Avenue East
La Crosse, WI 54603

Subject: Private Well Sampling Results
2525 2nd Avenue East, La Crosse, WI 54603
Tax parcel # 4-218-0
Sample ID # 218-0

Dear [REDACTED]:

We have received and reviewed the test results for the sample collected on November 2, 2020 at the above address. Some PFAS compounds were found at levels above the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the "Recommended Public Health Standard" in the table below. The levels found in your well are called the "Sample Result" in the table below.

Because some of the levels are above the recommended Public Health Standard, the City is offering to provide bottled water delivered to your home for drinking, cooking, and brushing your teeth. There will be no cost to you for the bottled water. Please complete the attached form and mail it to The OS Group to make arrangements for having a water dispenser and bottles delivered to your home. Call 608-668-2718 or email PFAS@theOSgrp.com . You may also complete this form on line at www.cityoflacrosse.org/bottledwater

The following table summarizes the test results from the sample. **Bolded results** are above a current recommended level intended to protect your health according to the Department of Health Services (DHS).

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}
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N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	67 ppt	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	580 ppt	20 ppt ^{a,b}
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	82 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	1800 ppt	40 ppt ^a
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Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a

The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6

Perfluoro-1-heptanesulfonic acid (PFHpS) CAS # 375-92-8	80 ppt	None Established ^c
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS # 2706-91-4	150 ppt	None Established ^c
Perfluoro-n-heptanoic acid (PFHpA) CAS # 375-85-9	8.9 ppt	None Established ^c
Perfluoro-n-pentanoic acid (PFPeA) CAS #2706-90-3	13 ppt	None Established ^c
^a Public health enforcement standard (ES) recommended by DHS. ^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA. ^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation. ^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code. ^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L) ^{BL} Detected in the method blank. Possible lab contaminant.		

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>	<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
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Drinking Water or Private wells	DNR Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well
 Bottled Water Acknowledgement

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-004
Description: 218-0	Matrix: Aqueous
Date Sampled: 11/02/2020 1220	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/17/2020 1647	MMM	11/16/2020 1125	73619
2	SOP SPE	PFAS by ID SOP	5	11/18/2020 1230	MMM	11/16/2020 1125	73619

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
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1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		15	3.8	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	82		3.8	0.95	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.8	0.95	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	80		3.8	0.95	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.8	0.95	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.8	0.95	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	150		3.8	0.95	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	1800		19	4.7	ng/L	2
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	17		3.8	0.95	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.8	0.95	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.8	0.95	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	8.9		3.8	0.95	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	45		3.8	0.95	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.8	0.95	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.6	1.9	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	67		3.8	0.95	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	13		3.8	0.95	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.8	0.95	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.8	0.95	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.8	0.95	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	580		3.8	0.95	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
13C2_4:2FTS		91	25-150		111	25-150
13C2_6:2FTS		89	25-150		113	25-150
13C2_8:2FTS		77	25-150		95	25-150
13C2_PFDaA		83	25-150		95	25-150
13C2_PFHxDA		99	25-150		94	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-004
Description: 218-0	Matrix: Aqueous
Date Sampled: 11/02/2020 1220	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Surrogate	Run 1			Run 2		
	Q	% Recovery	Acceptance Limits	Q	% Recovery	Acceptance Limits
13C2_PFTeDA		85	25-150		90	25-150
13C3_PFBS		93	25-150		88	25-150
13C3_PFHxS		78	25-150		89	25-150
13C3-HFPO-DA		109	25-150		101	25-150
13C4_PFBA		97	25-150		98	25-150
13C4_PFHpA		97	25-150		93	25-150
13C5_PFHxA		97	25-150		100	25-150
13C5_PFPeA		96	25-150		98	25-150
13C6_PFDA		82	25-150		96	25-150
13C7_PFUdA		88	25-150		93	25-150
13C8_PFOA		96	25-150		96	25-150
13C8_PFOS		82	25-150		84	25-150
13C8_PFOSA		91	10-150		106	10-150
13C9_PFNA		98	25-150		94	25-150
d-EtFOSA		81	10-150		103	10-150
d5-EtFOSAA		82	25-150		101	25-150
d9-EtFOSE		82	10-150		101	10-150
d-MeFOSA		82	10-150		94	10-150
d3-MeFOSAA		91	25-150		95	25-150
d7-MeFOSE		90	10-150		98	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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BOTTLED WATER ACKNOWLEDGEMENT

2525 2nd Avenue East, La Crosse, WI 54603

If you desire to accept the bottled water delivery, please complete and sign this form and return it to The OS Group at PFAS@TheOSgrp.com or mail to 444 21st St. S, La Crosse, WI 54601. You may also complete this form electronically on line at www.cityoflacrosse.org/bottledwater . Call 608-668-2718 with any question you may have.

As pre-caution for the protection of human health, the City of La Crosse (The City) will provide, on a temporary basis, bottled water for drinking, cooking and toothbrushing purposes at the above referenced address. The water will be delivered to your home or business by a commercial water delivery service. At the City's cost, a dispenser / cooler and regular deliveries of 5-gallon containers of water will be provided. The City reserves the right to dictate the conditions of delivery, such as minimum and maximum number of containers per delivery, frequency and timing of deliveries. The City reserves the right to periodically review whether The City should continue to provide bottled water, considering factors such as State and Federal standards and guidance, evolving knowledge and understanding of the sources, cause and responsibility for the contamination, new or reinterpreted test results, and the availability of more permanent or cost-effective sources of water for the above purposes. The City of La Crosse makes no warranty or representation regarding the suitability of the bottled water beyond those made by the commercial water delivery service.

All reusable or returnable equipment and supplies, such as the containers and cooler/dispenser, are the property of the commercial water delivery service or the City of La Crosse. By signing below, the Occupant of the above referenced property acknowledges that all reusable or returnable equipment and supplies shall be returned to the commercial water delivery service or the City of La Crosse upon request. The Occupant agrees to provide reasonable access for delivery of bottled water and pick up of reusable or returnable equipment and supplies. Occupant(s) acknowledges that they may be required to sign an agreement with the commercial water delivery service as a condition of receiving bottled water.

Check ownership:

_____ Owner-Occupant

_____ Occupant Only

Number of Occupants: _____

Signed: _____ Dated: _____

Printed Name: _____



444 21st Street South · La Crosse, Wisconsin · 54601

December 1, 2020

[REDACTED]
2529 2nd Avenue East
La Crosse, WI 54603

Subject: Private Well Sampling Results
2529 2nd Avenue East, La Crosse, WI 54603
Tax parcel # 4-219-0
Sample ID # 219-0

Dear [REDACTED]:

We have received and reviewed the test results for the sample collected on November 3, 2020 at the above address. Some PFAS compounds were found at levels above the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the "Recommended Public Health Standard" in the table below. The levels found in your well are called the "Sample Result" in the table below.

Because some of the levels are above the recommended Public Health Standard, the City is offering to provide bottled water delivered to your home for drinking, cooking, and brushing your teeth. There will be no cost to you for the bottled water. Please complete the attached form and mail it to The OS Group to make arrangements for having a water dispenser and bottles delivered to your home. Call 608-668-2718 or email PFAS@theOSgrp.com . You may also complete this form on line at www.cityoflacrosse.org/bottledwater

The following table summarizes the test results from the sample. **Bolded results** are above a current recommended level intended to protect your health according to the Department of Health Services (DHS).

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	12 ppt	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	58 ppt	20 ppt ^{a,b}
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	21 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	360 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	18 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	8.9 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a

The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6

Perfluoro-1-heptanesulfonic acid (PFHpS) CAS # 375-92-8	6.8 ppt	None Established ^c
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS # 2706-91-4	37 ppt	None Established ^c
Perfluoro-n-heptanoic acid (PFHpA) CAS # 375-85-9	3.6 ppt	None Established ^c
Perfluoro-n-pentanoic acid (PFPeA) CAS #2706-90-3	5.0 ppt	None Established ^c
^a Public health enforcement standard (ES) recommended by DHS. ^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA. ^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation. ^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code. ^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L) ^{BL} Detected in the method blank. Possible lab contaminant.		

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well
 Bottled Water Acknowledgement

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-013
Description: 219-0	Matrix: Aqueous
Date Sampled: 11/03/2020 0950	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/19/2020 1359	MMM	11/17/2020 1034	73728

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.5	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	21		3.5	0.87	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	6.8		3.5	0.87	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	37		3.5	0.87	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	360		3.5	0.87	ng/L	1
Perfluoro-n-butyric acid (PFBA)	375-22-4	PFAS by ID SOP	18		3.5	0.87	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	3.6		3.5	0.87	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	8.9		3.5	0.87	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	12		3.5	0.87	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	5.0		3.5	0.87	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	58		3.5	0.87	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		93	25-150
13C2_6:2FTS		94	25-150
13C2_8:2FTS		92	25-150
13C2_PFDa		82	25-150
13C2_PFHxDA		88	25-150
13C2_PFTeDA		87	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-013
Description: 219-0	Matrix: Aqueous
Date Sampled: 11/03/2020 0950	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		87	25-150
13C3_PFHxS		89	25-150
13C3-HFPO-DA		93	25-150
13C4_PFBa		95	25-150
13C4_PFHpA		91	25-150
13C5_PFHxA		97	25-150
13C5_PFPeA		91	25-150
13C6_PFDa		85	25-150
13C7_PFUdA		92	25-150
13C8_PFOA		96	25-150
13C8_PFOS		83	25-150
13C8_PFOSA		96	10-150
13C9_PFNA		97	25-150
d-EtFOSA		83	10-150
d5-EtFOSAA		85	25-150
d9-EtFOSE		92	10-150
d-MeFOSA		81	10-150
d3-MeFOSAA		89	25-150
d7-MeFOSE		83	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
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BOTTLED WATER ACKNOWLEDGEMENT

2529 2nd Avenue East, La Crosse, WI 54603

If you desire to accept the bottled water delivery, please complete and sign this form and return it to The OS Group at PFAS@TheOSgrp.com or mail to 444 21st St. S, La Crosse, WI 54601. You may also complete this form electronically on line at www.cityoflacrosse.org/bottledwater . Call 608-668-2718 with any question you may have.

As pre-caution for the protection of human health, the City of La Crosse (The City) will provide, on a temporary basis, bottled water for drinking, cooking and toothbrushing purposes at the above referenced address. The water will be delivered to your home or business by a commercial water delivery service. At the City's cost, a dispenser / cooler and regular deliveries of 5-gallon containers of water will be provided. The City reserves the right to dictate the conditions of delivery, such as minimum and maximum number of containers per delivery, frequency and timing of deliveries. The City reserves the right to periodically review whether The City should continue to provide bottled water, considering factors such as State and Federal standards and guidance, evolving knowledge and understanding of the sources, cause and responsibility for the contamination, new or reinterpreted test results, and the availability of more permanent or cost-effective sources of water for the above purposes. The City of La Crosse makes no warranty or representation regarding the suitability of the bottled water beyond those made by the commercial water delivery service.

All reusable or returnable equipment and supplies, such as the containers and cooler/dispenser, are the property of the commercial water delivery service or the City of La Crosse. By signing below, the Occupant of the above referenced property acknowledges that all reusable or returnable equipment and supplies shall be returned to the commercial water delivery service or the City of La Crosse upon request. The Occupant agrees to provide reasonable access for delivery of bottled water and pick up of reusable or returnable equipment and supplies. Occupant(s) acknowledges that they may be required to sign an agreement with the commercial water delivery service as a condition of receiving bottled water.

Check ownership:

_____ Owner-Occupant

_____ Occupant Only

Number of Occupants: _____

Signed: _____ Dated: _____

Printed Name: _____



444 21st Street South · La Crosse, Wisconsin · 54601

December 1, 2020

██████████
2531 Second Avenue East
La Crosse, WI 54603

Subject: Private Well Sampling Results
2531 Second Avenue East, La Crosse, WI 54603
Tax parcel # 4-220-0
Sample ID # 220-0

Dear ██████████:

We have received and reviewed the test results for the sample collected on November 2, 2020 at the above address. Some PFAS compounds were found at levels above the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the "Recommended Public Health Standard" in the table below. The levels found in your well are called the "Sample Result" in the table below.

Because some of the levels are above the recommended Public Health Standard, the City is offering to provide bottled water delivered to your home for drinking, cooking, and brushing your teeth. There will be no cost to you for the bottled water. Please complete the attached form and mail it to The OS Group to make arrangements for having a water dispenser and bottles delivered to your home. Call 608-668-2718 or email PFAS@theOSgrp.com . You may also complete this form on line at www.cityoflacrosse.org/bottledwater

The following table summarizes the test results from the sample. **Bolded results** are above a current recommended level intended to protect your health according to the Department of Health Services (DHS).

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	15 ppt	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	100 ppt	20 ppt ^{a,b}
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	16 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	420 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	17 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	11 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a

The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6

Perfluoro-1-heptanesulfonic acid (PFHpS) CAS # 375-92-8	11 ppt	None Established ^c
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS # 2706-91-4	30 ppt	None Established ^c
Perfluoro-n-heptanoic acid (PFHpA) CAS # 375-85-9	5.8 ppt	None Established ^c
Perfluoro-n-pentanoic acid (PFPeA) CAS #2706-90-3	8.7 ppt	None Established ^c
^a Public health enforcement standard (ES) recommended by DHS. ^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA. ^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation. ^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code. ^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L) ^{BL} Detected in the method blank. Possible lab contaminant.		

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well
 Bottled Water Acknowledgement

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-002
Description: 220-0	Matrix: Aqueous
Date Sampled: 11/02/2020 1145	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/17/2020 1615	MMM	11/16/2020 1125	73619

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		15	3.7	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	16		3.7	0.93	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	11		3.7	0.93	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	30		3.7	0.93	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	420		3.7	0.93	ng/L	1
Perfluoro-n-butyric acid (PFBA)	375-22-4	PFAS by ID SOP	17		3.7	0.93	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	5.8		3.7	0.93	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	11		3.7	0.93	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	15		3.7	0.93	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	8.7		3.7	0.93	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	100		3.7	0.93	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		93	25-150
13C2_6:2FTS		89	25-150
13C2_8:2FTS		70	25-150
13C2_PFDaA		79	25-150
13C2_PFHxDA		82	25-150
13C2_PFTeDA		75	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-002
Description: 220-0	Matrix: Aqueous
Date Sampled: 11/02/2020 1145	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		82	25-150
13C3_PFHxS		77	25-150
13C3-HFPO-DA		104	25-150
13C4_PFBa		85	25-150
13C4_PFHpA		86	25-150
13C5_PFHxA		91	25-150
13C5_PFPeA		86	25-150
13C6_PFDa		77	25-150
13C7_PFUdA		83	25-150
13C8_PFOa		87	25-150
13C8_PFOs		78	25-150
13C8_PFOsA		82	10-150
13C9_PFNa		90	25-150
d-EtFOsA		73	10-150
d5-EtFOsAA		78	25-150
d9-EtFOsE		76	10-150
d-MeFOsA		75	10-150
d3-MeFOsAA		82	25-150
d7-MeFOsE		78	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
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BOTTLED WATER ACKNOWLEDGEMENT

2531 Second Avenue East, La Crosse, WI 54603

If you desire to accept the bottled water delivery, please complete and sign this form and return it to The OS Group at PFAS@TheOSgrp.com or mail to 444 21st St. S, La Crosse, WI 54601. You may also complete this form electronically on line at www.cityoflacrosse.org/bottledwater . Call 608-668-2718 with any question you may have.

As pre-caution for the protection of human health, the City of La Crosse (The City) will provide, on a temporary basis, bottled water for drinking, cooking and toothbrushing purposes at the above referenced address. The water will be delivered to your home or business by a commercial water delivery service. At the City's cost, a dispenser / cooler and regular deliveries of 5-gallon containers of water will be provided. The City reserves the right to dictate the conditions of delivery, such as minimum and maximum number of containers per delivery, frequency and timing of deliveries. The City reserves the right to periodically review whether The City should continue to provide bottled water, considering factors such as State and Federal standards and guidance, evolving knowledge and understanding of the sources, cause and responsibility for the contamination, new or reinterpreted test results, and the availability of more permanent or cost-effective sources of water for the above purposes. The City of La Crosse makes no warranty or representation regarding the suitability of the bottled water beyond those made by the commercial water delivery service.

All reusable or returnable equipment and supplies, such as the containers and cooler/dispenser, are the property of the commercial water delivery service or the City of La Crosse. By signing below, the Occupant of the above referenced property acknowledges that all reusable or returnable equipment and supplies shall be returned to the commercial water delivery service or the City of La Crosse upon request. The Occupant agrees to provide reasonable access for delivery of bottled water and pick up of reusable or returnable equipment and supplies. Occupant(s) acknowledges that they may be required to sign an agreement with the commercial water delivery service as a condition of receiving bottled water.

Check ownership:

_____ Owner-Occupant

_____ Occupant Only

Number of Occupants: _____

Signed: _____ Dated: _____

Printed Name: _____



444 21st Street South · La Crosse, Wisconsin · 54601

December 1, 2020

██████████
2544 Bainbridge Street
La Crosse, WI 54603

Subject: Private Well Sampling Results
2544 Bainbridge Street, La Crosse, WI 54603
Tax parcel # 4-229-0
Sample ID # 229-0

Dear ██████████:

We have received and reviewed the test results for the sample collected on November 3, 2020 at the above address. Some PFAS compounds were found at levels above the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in your well are called the “Sample Result” in the table below.

Because some of the levels are above the recommended Public Health Standard, the City is offering to provide bottled water delivered to your home for drinking, cooking, and brushing your teeth. There will be no cost to you for the bottled water. Please complete the attached form and mail it to The OS Group to make arrangements for having a water dispenser and bottles delivered to your home. Call 608-668-2718 or email PFAS@theOSgrp.com . You may also complete this form on line at www.cityoflacrosse.org/bottledwater

The following table summarizes the test results from the sample. **Bolded results** are above a current recommended level intended to protect your health according to the Department of Health Services (DHS).

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)	The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6				
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}					
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}					
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}					
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}					
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	26 ppt	20 ppt ^{a,b}					
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	2100 ppt	20 ppt ^{a,b}					
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a					
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	34 ppt	450,000 ppt ^a					
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	900 ppt	40 ppt ^a					
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	46 ppt	10,000 ppt ^a					
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a					
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a					
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	39 ppt	150,000 ppt ^a					
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a					
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a					
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a					
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a					
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a					

Perfluoro-1-heptanesulfonic acid (PFHpS) CAS # 375-92-8	51 ppt	None Established ^c
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS # 2706-91-4	86 ppt	None Established ^c
Perfluoro-n-heptanoic acid (PFHpA) CAS # 375-85-9	3.7 ppt	None Established ^c
Perfluoro-n-pentanoic acid (PFPeA) CAS #2706-90-3	9.0 ppt	None Established ^c
^a Public health enforcement standard (ES) recommended by DHS. ^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA. ^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation. ^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code. ^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L) ^{BL} Detected in the method blank. Possible lab contaminant.		

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well
 Bottled Water Acknowledgement

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-014
Description: 229-0	Matrix: Aqueous
Date Sampled: 11/03/2020 1005	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/18/2020 1416	MMM	11/17/2020 1034	73728
2	SOP SPE	PFAS by ID SOP	5	11/19/2020 1409	MMM	11/17/2020 1034	73728

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.6	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	34		3.6	0.90	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	51		3.6	0.90	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	86		3.6	0.90	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	900		18	4.5	ng/L	2
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	46		3.6	0.90	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	3.7		3.6	0.90	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	39		3.6	0.90	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	26		3.6	0.90	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	9.0		3.6	0.90	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	2100		18	4.5	ng/L	2

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
13C2_4:2FTS		95	25-150		98	25-150
13C2_6:2FTS		96	25-150		94	25-150
13C2_8:2FTS		91	25-150		98	25-150
13C2_PFDa		91	25-150		86	25-150
13C2_PFHxDA		88	25-150		97	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-014
Description: 229-0	Matrix: Aqueous
Date Sampled: 11/03/2020 1005	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
13C2_PFTeDA		85	25-150		88	25-150
13C3_PFBs		89	25-150		91	25-150
13C3_PFHxS		85	25-150		89	25-150
13C3-HFPO-DA		97	25-150		90	25-150
13C4_PFBa		98	25-150		95	25-150
13C4_PFHpA		83	25-150		96	25-150
13C5_PFHxA		94	25-150		93	25-150
13C5_PFPeA		98	25-150		97	25-150
13C6_PFDA		89	25-150		92	25-150
13C7_PFUdA		92	25-150		92	25-150
13C8_PFOA		97	25-150		95	25-150
13C8_PFOS		80	25-150		83	25-150
13C8_PFOSA		95	10-150		98	10-150
13C9_PFNA		86	25-150		99	25-150
d-EtFOSA		83	10-150		91	10-150
d5-EtFOSAA		87	25-150		93	25-150
d9-EtFOSE		85	10-150		97	10-150
d-MeFOSA		78	10-150		89	10-150
d3-MeFOSAA		91	25-150		93	25-150
d7-MeFOSE		86	10-150		96	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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BOTTLED WATER ACKNOWLEDGEMENT

2544 Bainbridge Street, La Crosse, WI 54603

If you desire to accept the bottled water delivery, please complete and sign this form and return it to The OS Group at PFAS@TheOSgrp.com or mail to 444 21st St. S, La Crosse, WI 54601. You may also complete this form electronically on line at www.cityoflacrosse.org/bottledwater . Call 608-668-2718 with any question you may have.

As pre-caution for the protection of human health, the City of La Crosse (The City) will provide, on a temporary basis, bottled water for drinking, cooking and toothbrushing purposes at the above referenced address. The water will be delivered to your home or business by a commercial water delivery service. At the City's cost, a dispenser / cooler and regular deliveries of 5-gallon containers of water will be provided. The City reserves the right to dictate the conditions of delivery, such as minimum and maximum number of containers per delivery, frequency and timing of deliveries. The City reserves the right to periodically review whether The City should continue to provide bottled water, considering factors such as State and Federal standards and guidance, evolving knowledge and understanding of the sources, cause and responsibility for the contamination, new or reinterpreted test results, and the availability of more permanent or cost-effective sources of water for the above purposes. The City of La Crosse makes no warranty or representation regarding the suitability of the bottled water beyond those made by the commercial water delivery service.

All reusable or returnable equipment and supplies, such as the containers and cooler/dispenser, are the property of the commercial water delivery service or the City of La Crosse. By signing below, the Occupant of the above referenced property acknowledges that all reusable or returnable equipment and supplies shall be returned to the commercial water delivery service or the City of La Crosse upon request. The Occupant agrees to provide reasonable access for delivery of bottled water and pick up of reusable or returnable equipment and supplies. Occupant(s) acknowledges that they may be required to sign an agreement with the commercial water delivery service as a condition of receiving bottled water.

Check ownership:

_____ Owner-Occupant

_____ Occupant Only

Number of Occupants: _____

Signed: _____ Dated: _____

Printed Name: _____



444 21st Street South · La Crosse, Wisconsin · 54601

December 1, 2020

██████████
 2534 Bainbridge Street
 La Crosse, WI 54603

Subject: Private Well Sampling Results
 2534 Bainbridge Street, La Crosse, WI 54603
 Tax parcel # 4-233-0
 Sample ID # 233-0

Dear ██████████:

We have received and reviewed the test results for the sample collected on November 3, 2020 at the above address. Some PFAS compounds were found, but the levels found were **below** the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in *your* well are called the “Sample Result” in the table below.

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)	
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}	The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}	
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}	
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}	
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	Not Detected	20 ppt ^{a,b}	
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	6.5 ppt	20 ppt ^{a,b}	

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	6.6 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	20 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	11 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	2.2 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-heptanesulfonic acid (PFHpS) CAS # 375-92-8	0.97 ppt	None Established ^c
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS #2706-91-4	6.1 ppt	None Established ^c
Perfluoro-n-pentanoic acid (PFPeA) CAS # 2706-90-3	1.2	None Established ^c

^a Public health enforcement standard (ES) recommended by DHS.
^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA.
^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation.
^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code.
^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L)
^{BL} Detected in the method blank. Possible lab contaminant.

Private Well Sampling Results for
2534 Bainbridge Street, La Crosse, WI 54603
Tax parcel # 4-233-0
Sample ID # 233-0
December 1, 2020

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-015
Description: 233-0	Matrix: Aqueous
Date Sampled: 11/03/2020 1020	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/19/2020 1420	MMM	11/17/2020 1034	73728

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.6	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	6.6		3.6	0.90	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	0.97	J	3.6	0.90	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	6.1		3.6	0.90	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	20		3.6	0.90	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	11		3.6	0.90	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	2.2	J	3.6	0.90	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	1.2	J	3.6	0.90	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	6.5		3.6	0.90	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		93	25-150
13C2_6:2FTS		89	25-150
13C2_8:2FTS		102	25-150
13C2_PFDaA		86	25-150
13C2_PFHxDA		95	25-150
13C2_PFTeDA		90	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-015
Description: 233-0	Matrix: Aqueous
Date Sampled: 11/03/2020 1020	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		84	25-150
13C3_PFHxS		85	25-150
13C3-HFPO-DA		101	25-150
13C4_PFBa		96	25-150
13C4_PFHpA		92	25-150
13C5_PFHxA		98	25-150
13C5_PFPeA		100	25-150
13C6_PFDA		88	25-150
13C7_PFUdA		89	25-150
13C8_PFOA		98	25-150
13C8_PFOS		84	25-150
13C8_PFOSA		98	10-150
13C9_PFNA		102	25-150
d-EtFOSA		87	10-150
d5-EtFOSAA		91	25-150
d9-EtFOSE		97	10-150
d-MeFOSA		79	10-150
d3-MeFOSAA		92	25-150
d7-MeFOSE		91	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
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444 21st Street South · La Crosse, Wisconsin · 54601

December 1, 2020

██████████
 2512 Bainbridge Street
 La Crosse, WI 54603

Subject: Private Well Sampling Results
 2512 Bainbridge Street, La Crosse, WI 54603
 Tax parcel # 4-239-0
 Sample ID # 239-0

Dear Gregory ██████████:

We have received and reviewed the test results for the sample collected on November 3, 2020 at the above address. Some PFAS compounds were found, but the levels found were **below** the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in *your* well are called the “Sample Result” in the table below.

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)	
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}	The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}	
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}	
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	1.1 ppt	20 ppt ^{a,b}	
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	Not Detected	20 ppt ^{a,b}	
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	8.3 ppt	20 ppt ^{a,b}	

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	5.6 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	14 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	28 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	1.9 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS # 2706-91-4	3.8 ppt	None Established ^c
Perfluoro-n-heptanoic acid (PFHpA) CAS # 375-85-9	1.2 ppt	None Established ^c
Perfluoro-n-pentanoic acid (PFPeA) CAS # 2706-90-3	1.8 ppt	None Established ^c

^a Public health enforcement standard (ES) recommended by DHS.

^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA.

^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation.

^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code.

^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L)

^{BL} Detected in the method blank. Possible lab contaminant.

Private Well Sampling Results for
2512 Bainbridge Street, La Crosse, WI 54603
Tax parcel # 4-239-0
Sample ID # 239-0
December 1, 2020

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-016
Description: 239-0	Matrix: Aqueous
Date Sampled: 11/03/2020 1030	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/18/2020 1438	MMM	11/17/2020 1034	73728

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.6	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	5.6		3.6	0.91	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	1.1	J	3.6	0.91	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	3.8		3.6	0.91	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	14		3.6	0.91	ng/L	1
Perfluoro-n-butyric acid (PFBA)	375-22-4	PFAS by ID SOP	28		3.6	0.91	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	1.2	J	3.6	0.91	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	1.9	J	3.6	0.91	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	1.8	J	3.6	0.91	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.6	0.91	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	8.3		3.6	0.91	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		113	25-150
13C2_6:2FTS		101	25-150
13C2_8:2FTS		86	25-150
13C2_PFDaA		88	25-150
13C2_PFHxDA		87	25-150
13C2_PFTeDA		84	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-016
Description: 239-0	Matrix: Aqueous
Date Sampled: 11/03/2020 1030	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		87	25-150
13C3_PFHxS		89	25-150
13C3-HFPO-DA		93	25-150
13C4_PFBa		99	25-150
13C4_PFHpA		88	25-150
13C5_PFHxA		96	25-150
13C5_PFPeA		97	25-150
13C6_PFDA		92	25-150
13C7_PFUdA		84	25-150
13C8_PFOA		98	25-150
13C8_PFOS		82	25-150
13C8_PFOSA		98	10-150
13C9_PFNA		92	25-150
d-EtFOSA		79	10-150
d5-EtFOSAA		90	25-150
d9-EtFOSE		96	10-150
d-MeFOSA		92	10-150
d3-MeFOSAA		91	25-150
d7-MeFOSE		86	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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444 21st Street South · La Crosse, Wisconsin · 54601

December 1, 2020

██████████
 2517 1st Avenue East
 La Crosse, WI 54603

Subject: Private Well Sampling Results
 2517 1st Avenue East, La Crosse, WI 54603
 Tax parcel # 4-247-0
 Sample ID # 247-0

Dear ██████████:

We have received and reviewed the test results for the sample collected on November 3, 2020 at the above address. Some PFAS compounds were found, but the levels found were **below** the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in *your* well are called the “Sample Result” in the table below.

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)	
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}	The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}	
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}	
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}	
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	Not Detected	20 ppt ^{a,b}	
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	4.7 ppt	20 ppt ^{a,b}	

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	3.9 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	17 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	18 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	Not Detected	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS #2706-91-4	2.3 ppt	None Established ^c

^a Public health enforcement standard (ES) recommended by DHS.
^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA.
^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation.
^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code.
^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L)
^{BL} Detected in the method blank. Possible lab contaminant.

Private Well Sampling Results for
2517 1st Avenue East, La Crosse, WI 54603
Tax parcel # 4-247-0
Sample ID # 247-0
December 1, 2020

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-017
Description: 247-0	Matrix: Aqueous
Date Sampled: 11/03/2020 1055	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/18/2020 1448	MMM	11/17/2020 1034	73728

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.5	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	3.9		3.5	0.88	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	2.3	J	3.5	0.88	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	17		3.5	0.88	ng/L	1
Perfluoro-n-butyric acid (PFBA)	375-22-4	PFAS by ID SOP	18		3.5	0.88	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	4.7		3.5	0.88	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		103	25-150
13C2_6:2FTS		92	25-150
13C2_8:2FTS		81	25-150
13C2_PFDaA		91	25-150
13C2_PFHxDA		89	25-150
13C2_PFTeDA		84	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-017
Description: 247-0	Matrix: Aqueous
Date Sampled: 11/03/2020 1055	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		87	25-150
13C3_PFHxS		89	25-150
13C3-HFPO-DA		98	25-150
13C4_PFBa		95	25-150
13C4_PFHpA		86	25-150
13C5_PFHxA		92	25-150
13C5_PFPeA		94	25-150
13C6_PFDa		85	25-150
13C7_PFUdA		84	25-150
13C8_PFOA		93	25-150
13C8_PFOS		82	25-150
13C8_PFOSA		96	10-150
13C9_PFNA		87	25-150
d-EtFOSA		82	10-150
d5-EtFOSAA		91	25-150
d9-EtFOSE		91	10-150
d-MeFOSA		88	10-150
d3-MeFOSAA		86	25-150
d7-MeFOSE		88	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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444 21st Street South · La Crosse, Wisconsin · 54601

December 1, 2020

[REDACTED]
2537 1st Avenue East
La Crosse, WI 54603

Subject: Private Well Sampling Results
2537 1st Avenue East, La Crosse, WI 54603
Tax parcel # 4-252-0
Sample ID # 252-0

Dear [REDACTED]:

We have received and reviewed the test results for the sample collected on November 3, 2020 at the above address. Some PFAS compounds were found at levels above the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the "Recommended Public Health Standard" in the table below. The levels found in your well are called the "Sample Result" in the table below.

Because some of the levels are above the recommended Public Health Standard, the City is offering to provide bottled water delivered to your home for drinking, cooking, and brushing your teeth. There will be no cost to you for the bottled water. Please complete the attached form and mail it to The OS Group to make arrangements for having a water dispenser and bottles delivered to your home. Call 608-668-2718 or email PFAS@theOSgrp.com . You may also complete this form on line at www.cityoflacrosse.org/bottledwater

The following table summarizes the test results from the sample. **Bolded results** are above a current recommended level intended to protect your health according to the Department of Health Services (DHS).

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	38 ppt	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	310 ppt	20 ppt ^{a,b}
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	35 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	950 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	15 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	24 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a

The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6

Perfluoro-1-heptanesulfonic acid (PFHpS) CAS # 375-92-8	38 ppt	None Established ^c
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS # 2706-91-4	77 ppt	None Established ^c
Perfluoro-n-heptanoic acid (PFHpA) CAS # 375-85-9	5.7 ppt	None Established ^c
Perfluoro-n-pentanoic acid (PFPeA) CAS #2706-90-3	6.1 ppt	None Established ^c
^a Public health enforcement standard (ES) recommended by DHS. ^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA. ^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation. ^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code. ^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L) ^{BL} Detected in the method blank. Possible lab contaminant.		

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well
 Bottled Water Acknowledgement

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-018
Description: 252-0	Matrix: Aqueous
Date Sampled: 11/03/2020 1110	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/18/2020 1459	MMM	11/17/2020 1034	73728
2	SOP SPE	PFAS by ID SOP	5	11/19/2020 1431	MMM	11/17/2020 1034	73728

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.6	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	35		3.6	0.89	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.6	0.89	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	38		3.6	0.89	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.6	0.89	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.6	0.89	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	77		3.6	0.89	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	950		18	4.5	ng/L	2
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	15		3.6	0.89	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.6	0.89	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.6	0.89	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	5.7		3.6	0.89	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	24		3.6	0.89	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.6	0.89	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	38		3.6	0.89	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	6.1		3.6	0.89	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.6	0.89	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.6	0.89	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.6	0.89	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	310		3.6	0.89	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
13C2_4:2FTS		94	25-150		95	25-150
13C2_6:2FTS		99	25-150		94	25-150
13C2_8:2FTS		86	25-150		93	25-150
13C2_PFDa		87	25-150		86	25-150
13C2_PFHxDA		92	25-150		95	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-018
Description: 252-0	Matrix: Aqueous
Date Sampled: 11/03/2020 1110	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
13C2_PFTeDA		88	25-150		88	25-150
13C3_PFBS		85	25-150		87	25-150
13C3_PFHxS		86	25-150		84	25-150
13C3-HFPO-DA		95	25-150		90	25-150
13C4_PFBA		101	25-150		92	25-150
13C4_PFHpA		82	25-150		90	25-150
13C5_PFHxA		91	25-150		92	25-150
13C5_PFPeA		96	25-150		89	25-150
13C6_PFDA		86	25-150		83	25-150
13C7_PFUdA		89	25-150		90	25-150
13C8_PFOA		94	25-150		96	25-150
13C8_PFOS		80	25-150		86	25-150
13C8_PFOSA		97	10-150		92	10-150
13C9_PFNA		93	25-150		93	25-150
d-EtFOSA		94	10-150		89	10-150
d5-EtFOSAA		94	25-150		90	25-150
d9-EtFOSE		92	10-150		99	10-150
d-MeFOSA		90	10-150		84	10-150
d3-MeFOSAA		93	25-150		88	25-150
d7-MeFOSE		85	10-150		89	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
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BOTTLED WATER ACKNOWLEDGEMENT

2537 1st Avenue East, La Crosse, WI 54603

If you desire to accept the bottled water delivery, please complete and sign this form and return it to The OS Group at PFAS@TheOSgrp.com or mail to 444 21st St. S, La Crosse, WI 54601. You may also complete this form electronically on line at www.cityoflacrosse.org/bottledwater . Call 608-668-2718 with any question you may have.

As pre-caution for the protection of human health, the City of La Crosse (The City) will provide, on a temporary basis, bottled water for drinking, cooking and toothbrushing purposes at the above referenced address. The water will be delivered to your home or business by a commercial water delivery service. At the City's cost, a dispenser / cooler and regular deliveries of 5-gallon containers of water will be provided. The City reserves the right to dictate the conditions of delivery, such as minimum and maximum number of containers per delivery, frequency and timing of deliveries. The City reserves the right to periodically review whether The City should continue to provide bottled water, considering factors such as State and Federal standards and guidance, evolving knowledge and understanding of the sources, cause and responsibility for the contamination, new or reinterpreted test results, and the availability of more permanent or cost-effective sources of water for the above purposes. The City of La Crosse makes no warranty or representation regarding the suitability of the bottled water beyond those made by the commercial water delivery service.

All reusable or returnable equipment and supplies, such as the containers and cooler/dispenser, are the property of the commercial water delivery service or the City of La Crosse. By signing below, the Occupant of the above referenced property acknowledges that all reusable or returnable equipment and supplies shall be returned to the commercial water delivery service or the City of La Crosse upon request. The Occupant agrees to provide reasonable access for delivery of bottled water and pick up of reusable or returnable equipment and supplies. Occupant(s) acknowledges that they may be required to sign an agreement with the commercial water delivery service as a condition of receiving bottled water.

Check ownership:

_____ Owner-Occupant

_____ Occupant Only

Number of Occupants: _____

Signed: _____ Dated: _____

Printed Name: _____



444 21st Street South · La Crosse, Wisconsin · 54601

December 1, 2020

██████████
N5881 Lakeview Court E
Onalaska, WI 54650

Subject: Private Well Sampling Results
2537 1st Avenue East, La Crosse, WI 54603
Tax parcel # 4-252-0
Sample ID # 252-0

Dear ██████████:

We have received and reviewed the test results for the sample collected on November 3, 2020 at the above address. Some PFAS compounds were found at levels above the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the "Recommended Public Health Standard" in the table below. The levels found in your well are called the "Sample Result" in the table below.

Because some of the levels are above the recommended Public Health Standard, the City is offering to provide bottled water delivered to your home for drinking, cooking, and brushing your teeth. There will be no cost to you for the bottled water. Please complete the attached form and mail it to The OS Group to make arrangements for having a water dispenser and bottles delivered to your home. Call 608-668-2718 or email PFAS@theOSgrp.com. You may also complete this form on line at www.cityoflacrosse.org/bottledwater

The following table summarizes the test results from the sample. **Bolded results** are above a current recommended level intended to protect your health according to the Department of Health Services (DHS).

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	38 ppt	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	310 ppt	20 ppt ^{a,b}
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	35 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	950 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	15 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	24 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a

The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6

Perfluoro-1-heptanesulfonic acid (PFHpS) CAS # 375-92-8	38 ppt	None Established ^c
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS # 2706-91-4	77 ppt	None Established ^c
Perfluoro-n-heptanoic acid (PFHpA) CAS # 375-85-9	5.7 ppt	None Established ^c
Perfluoro-n-pentanoic acid (PFPeA) CAS #2706-90-3	6.1 ppt	None Established ^c
^a Public health enforcement standard (ES) recommended by DHS. ^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA. ^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation. ^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code. ^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L) ^{BL} Detected in the method blank. Possible lab contaminant.		

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

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1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
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Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.6	0.89	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	5.7		3.6	0.89	ng/L	1
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Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.6	0.89	ng/L	1
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13C2_6:2FTS		99	25-150		94	25-150
13C2_8:2FTS		86	25-150		93	25-150
13C2_PFDa		87	25-150		86	25-150
13C2_PFHxDA		92	25-150		95	25-150

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13C3_PFBS		85	25-150		87	25-150
13C3_PFHxS		86	25-150		84	25-150
13C3-HFPO-DA		95	25-150		90	25-150
13C4_PFBA		101	25-150		92	25-150
13C4_PFHpA		82	25-150		90	25-150
13C5_PFHxA		91	25-150		92	25-150
13C5_PFPeA		96	25-150		89	25-150
13C6_PFDA		86	25-150		83	25-150
13C7_PFUdA		89	25-150		90	25-150
13C8_PFOA		94	25-150		96	25-150
13C8_PFOS		80	25-150		86	25-150
13C8_PFOSA		97	10-150		92	10-150
13C9_PFNA		93	25-150		93	25-150
d-EtFOSA		94	10-150		89	10-150
d5-EtFOSAA		94	25-150		90	25-150
d9-EtFOSE		92	10-150		99	10-150
d-MeFOSA		90	10-150		84	10-150
d3-MeFOSAA		93	25-150		88	25-150
d7-MeFOSE		85	10-150		89	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

BOTTLED WATER ACKNOWLEDGEMENT

2537 1st Avenue East, La Crosse, WI 54603

If you desire to accept the bottled water delivery, please complete and sign this form and return it to The OS Group at PFAS@TheOSgrp.com or mail to 444 21st St. S, La Crosse, WI 54601. You may also complete this form electronically on line at www.cityoflacrosse.org/bottledwater . Call 608-668-2718 with any question you may have.

As pre-caution for the protection of human health, the City of La Crosse (The City) will provide, on a temporary basis, bottled water for drinking, cooking and toothbrushing purposes at the above referenced address. The water will be delivered to your home or business by a commercial water delivery service. At the City's cost, a dispenser / cooler and regular deliveries of 5-gallon containers of water will be provided. The City reserves the right to dictate the conditions of delivery, such as minimum and maximum number of containers per delivery, frequency and timing of deliveries. The City reserves the right to periodically review whether The City should continue to provide bottled water, considering factors such as State and Federal standards and guidance, evolving knowledge and understanding of the sources, cause and responsibility for the contamination, new or reinterpreted test results, and the availability of more permanent or cost-effective sources of water for the above purposes. The City of La Crosse makes no warranty or representation regarding the suitability of the bottled water beyond those made by the commercial water delivery service.

All reusable or returnable equipment and supplies, such as the containers and cooler/dispenser, are the property of the commercial water delivery service or the City of La Crosse. By signing below, the Occupant of the above referenced property acknowledges that all reusable or returnable equipment and supplies shall be returned to the commercial water delivery service or the City of La Crosse upon request. The Occupant agrees to provide reasonable access for delivery of bottled water and pick up of reusable or returnable equipment and supplies. Occupant(s) acknowledges that they may be required to sign an agreement with the commercial water delivery service as a condition of receiving bottled water.

Check ownership:

_____ Owner-Occupant

_____ Occupant Only

Number of Occupants: _____

Signed: _____ Dated: _____

Printed Name: _____



444 21st Street South · La Crosse, Wisconsin · 54601

December 1, 2020

[REDACTED]
2530 1st Avenue West
La Crosse, WI 54603

Subject: Private Well Sampling Results
2530 1st Avenue West, La Crosse, WI 54603
Tax parcel # 4-328-0
Sample ID # 328-0

Dear [REDACTED]:

We have received and reviewed the test results for the sample collected on November 3, 2020 at the above address. Some PFAS compounds were found at levels above the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in your well are called the “Sample Result” in the table below.

Because some of the levels are above the recommended Public Health Standard, the City is offering to provide bottled water delivered to your home for drinking, cooking, and brushing your teeth. There will be no cost to you for the bottled water. Please complete the attached form and mail it to The OS Group to make arrangements for having a water dispenser and bottles delivered to your home. Call 608-668-2718 or email PFAS@theOSgrp.com . You may also complete this form on line at www.cityoflacrosse.org/bottledwater

The following table summarizes the test results from the sample. **Bolded results** are above a current recommended level intended to protect your health according to the Department of Health Services (DHS).

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	13 ppt	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	12 ppt	20 ppt ^{a,b}
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	8.5 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	12 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	64 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	1.3 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a

The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6

Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS # 2706-91-4	5.7 ppt	None Established ^c
^a Public health enforcement standard (ES) recommended by DHS. ^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA. ^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation. ^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code. ^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L) ^{BL} Detected in the method blank. Possible lab contaminant.		

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well
 Bottled Water Acknowledgement

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-019
Description: 328-0	Matrix: Aqueous
Date Sampled: 11/03/2020 1120	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/19/2020 1441	MMM	11/17/2020 1034	73728

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.7	1.9	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.7	1.9	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.7	1.9	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.7	1.9	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.7	1.9	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.7	1.9	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.7	1.9	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.7	1.9	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.7	1.9	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.7	1.9	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.7	1.9	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		15	3.9	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.7	1.9	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.7	1.9	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	8.5		3.9	0.97	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.9	0.97	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.9	0.97	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.9	0.97	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.9	0.97	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	5.7		3.9	0.97	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.7	1.9	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	12		3.9	0.97	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	64		3.9	0.97	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.9	0.97	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.9	0.97	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.9	0.97	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.7	1.9	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	1.3	J	3.9	0.97	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.9	0.97	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.7	1.9	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	13		3.9	0.97	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		3.9	0.97	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.9	0.97	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.9	0.97	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.9	0.97	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	12		3.9	0.97	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		96	25-150
13C2_6:2FTS		99	25-150
13C2_8:2FTS		100	25-150
13C2_PFDaA		89	25-150
13C2_PFHxDA		103	25-150
13C2_PFTeDA		93	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-019
Description: 328-0	Matrix: Aqueous
Date Sampled: 11/03/2020 1120	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		93	25-150
13C3_PFHxS		90	25-150
13C3-HFPO-DA		104	25-150
13C4_PFBa		101	25-150
13C4_PFHpA		101	25-150
13C5_PFHxA		97	25-150
13C5_PFPeA		93	25-150
13C6_PFDa		96	25-150
13C7_PFUdA		91	25-150
13C8_PFOA		105	25-150
13C8_PFOS		85	25-150
13C8_PFOsA		103	10-150
13C9_PFNa		105	25-150
d-EtFOsA		93	10-150
d5-EtFOsAA		94	25-150
d9-EtFOsE		103	10-150
d-MeFOsA		89	10-150
d3-MeFOsAA		97	25-150
d7-MeFOsE		97	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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BOTTLED WATER ACKNOWLEDGEMENT

2530 1st Avenue West, La Crosse, WI 54603

If you desire to accept the bottled water delivery, please complete and sign this form and return it to The OS Group at PFAS@TheOSgrp.com or mail to 444 21st St. S, La Crosse, WI 54601. You may also complete this form electronically on line at www.cityoflacrosse.org/bottledwater . Call 608-668-2718 with any question you may have.

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All reusable or returnable equipment and supplies, such as the containers and cooler/dispenser, are the property of the commercial water delivery service or the City of La Crosse. By signing below, the Occupant of the above referenced property acknowledges that all reusable or returnable equipment and supplies shall be returned to the commercial water delivery service or the City of La Crosse upon request. The Occupant agrees to provide reasonable access for delivery of bottled water and pick up of reusable or returnable equipment and supplies. Occupant(s) acknowledges that they may be required to sign an agreement with the commercial water delivery service as a condition of receiving bottled water.

Check ownership:

_____ Owner-Occupant

_____ Occupant Only

Number of Occupants: _____

Signed: _____ Dated: _____

Printed Name: _____



444 21st Street South · La Crosse, Wisconsin · 54601

December 1, 2020

██████████
 2537 Bainbridge Street
 La Crosse, WI 54603

Subject: Private Well Sampling Results
 2537 Bainbridge Street, La Crosse, WI 54603
 Tax parcel # 4-333-0
 Sample ID # 333-0

Dear ██████████:

We have received and reviewed the test results for the sample collected on November 3, 2020 at the above address. Some PFAS compounds were found, but the levels found were **below** the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in *your* well are called the “Sample Result” in the table below. **PLEASE NOTE: At your residence we took a second “duplicate” sample for quality control / quality assurance purposes. The two samples’ tests confirmed each other, and there were only minor differences. The results in the table below are based on the highest levels observed in either of the two samples.**

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)	
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}	The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}	
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}	
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}	
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	Not Detected	20 ppt ^{a,b}	
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	4.8 ppt	20 ppt ^{a,b}	

Private Well Sampling Results for
 2537 Bainbridge Street, La Crosse, WI 54603
 Tax parcel # 4-333-0
 Sample ID # 333-0
 December 1, 2020

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	6.0 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	21 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	18 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	1.3 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS #2706-91-4	6.0 ppt	None Established ^c
Perfluoro-n-pentanoic acid (PFPeA) CAS # 2706-90-3	1.4 ppt	None Established ^c

^a Public health enforcement standard (ES) recommended by DHS.

^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA.

^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation.

^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code.

^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L)

^{bl} Detected in the method blank. Possible lab contaminant.

Private Well Sampling Results for
2537 Bainbridge Street, La Crosse, WI 54603
Tax parcel # 4-333-0
Sample ID # 333-0
December 1, 2020

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-020
Description: 333-0	Matrix: Aqueous
Date Sampled: 11/03/2020 1135	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/18/2020 1531	MMM	11/17/2020 1034	73728

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		15	3.7	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	5.6		3.7	0.92	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	6.0		3.7	0.92	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	21		3.7	0.92	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	18		3.7	0.92	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	1.3	J	3.7	0.92	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	1.4	J	3.7	0.92	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	4.1		3.7	0.92	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		100	25-150
13C2_6:2FTS		107	25-150
13C2_8:2FTS		87	25-150
13C2_PFDaA		89	25-150
13C2_PFHxDA		92	25-150
13C2_PFTeDA		87	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-020
Description: 333-0	Matrix: Aqueous
Date Sampled: 11/03/2020 1135	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		91	25-150
13C3_PFHxS		90	25-150
13C3-HFPO-DA		100	25-150
13C4_PFBa		97	25-150
13C4_PFHpA		91	25-150
13C5_PFHxA		93	25-150
13C5_PFPeA		96	25-150
13C6_PFDa		83	25-150
13C7_PFUdA		89	25-150
13C8_PFOA		95	25-150
13C8_PFOS		81	25-150
13C8_PFOsA		100	10-150
13C9_PFNa		94	25-150
d-EtFOsA		88	10-150
d5-EtFOsAA		88	25-150
d9-EtFOSE		90	10-150
d-MeFOsA		81	10-150
d3-MeFOsAA		87	25-150
d7-MeFOSE		79	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
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PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-021
Description: DUP-3	Matrix: Aqueous
Date Sampled: 11/03/2020 1140	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/18/2020 1552	MMM	11/17/2020 1034	73728

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		15	3.7	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	6.0		3.7	0.92	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	6.0		3.7	0.92	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	21		3.7	0.92	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	17		3.7	0.92	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	1.3	J	3.7	0.92	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	1.4	J	3.7	0.92	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	4.8		3.7	0.92	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		106	25-150
13C2_6:2FTS		102	25-150
13C2_8:2FTS		88	25-150
13C2_PFDaA		96	25-150
13C2_PFHxDA		95	25-150
13C2_PFTeDA		90	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
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PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-021
Description: DUP-3	Matrix: Aqueous
Date Sampled: 11/03/2020 1140	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		92	25-150
13C3_PFHxS		96	25-150
13C3-HFPO-DA		95	25-150
13C4_PFBa		102	25-150
13C4_PFHpA		94	25-150
13C5_PFHxA		99	25-150
13C5_PFPeA		100	25-150
13C6_PFDa		89	25-150
13C7_PFUdA		93	25-150
13C8_PFOA		103	25-150
13C8_PFOS		89	25-150
13C8_PFOsA		103	10-150
13C9_PFNa		104	25-150
d-EtFOSA		88	10-150
d5-EtFOSAA		95	25-150
d9-EtFOSE		90	10-150
d-MeFOSA		83	10-150
d3-MeFOSAA		95	25-150
d7-MeFOSE		85	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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444 21st Street South · La Crosse, Wisconsin · 54601

December 1, 2020

[Redacted]

424 Russell Drive S
Holmen, WI 54636

Subject: Private Well Sampling Results
2537 Bainbridge Street, La Crosse, WI 54603
Tax parcel # 4-333-0
Sample ID # 333-0

Dear [Redacted]:

We have received and reviewed the test results for the sample collected on November 3, 2020 at the above address. Some PFAS compounds were found, but the levels found were **below** the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in *your* well are called the “Sample Result” in the table below. **PLEASE NOTE: At your residence we took a second “duplicate” sample for quality control / quality assurance purposes. The two samples’ tests confirmed each other, and there were only minor differences. The results in the table below are based on the highest levels observed in either of the two samples.**

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)	
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}	The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}	
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}	
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}	
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	Not Detected	20 ppt ^{a,b}	
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	4.8 ppt	20 ppt ^{a,b}	

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	6.0 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	21 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	18 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	1.3 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS # 2706-91-4	6.0 ppt	None Established ^c
Perfluoro-n-pentanoic acid (PFPeA) CAS # 2706-90-3	1.4 ppt	None Established ^c

^a Public health enforcement standard (ES) recommended by DHS.

^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA.

^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation.

^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code.

^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L)

^{Bl} Detected in the method blank. Possible lab contaminant.

Private Well Sampling Results for
2537 Bainbridge Street, La Crosse, WI 54603
Tax parcel # 4-333-0
Sample ID # 333-0
December 1, 2020

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-020
Description: 333-0	Matrix: Aqueous
Date Sampled: 11/03/2020 1135	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/18/2020 1531	MMM	11/17/2020 1034	73728

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		15	3.7	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	5.6		3.7	0.92	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	6.0		3.7	0.92	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	21		3.7	0.92	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	18		3.7	0.92	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	1.3	J	3.7	0.92	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	1.4	J	3.7	0.92	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	4.1		3.7	0.92	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		100	25-150
13C2_6:2FTS		107	25-150
13C2_8:2FTS		87	25-150
13C2_PFDaA		89	25-150
13C2_PFHxDA		92	25-150
13C2_PFTeDA		87	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-020
Description: 333-0	Matrix: Aqueous
Date Sampled: 11/03/2020 1135	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		91	25-150
13C3_PFHxS		90	25-150
13C3-HFPO-DA		100	25-150
13C4_PFBa		97	25-150
13C4_PFHpA		91	25-150
13C5_PFHxA		93	25-150
13C5_PFPeA		96	25-150
13C6_PFDa		83	25-150
13C7_PFUdA		89	25-150
13C8_PFOa		95	25-150
13C8_PFOs		81	25-150
13C8_PFOsA		100	10-150
13C9_PFNa		94	25-150
d-EtFOsA		88	10-150
d5-EtFOsAA		88	25-150
d9-EtFOsE		90	10-150
d-MeFOsA		81	10-150
d3-MeFOsAA		87	25-150
d7-MeFOsE		79	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-021
Description: DUP-3	Matrix: Aqueous
Date Sampled: 11/03/2020 1140	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/18/2020 1552	MMM	11/17/2020 1034	73728

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		15	3.7	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	6.0		3.7	0.92	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	6.0		3.7	0.92	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	21		3.7	0.92	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	17		3.7	0.92	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	1.3	J	3.7	0.92	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	1.4	J	3.7	0.92	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	4.8		3.7	0.92	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		106	25-150
13C2_6:2FTS		102	25-150
13C2_8:2FTS		88	25-150
13C2_PFDaA		96	25-150
13C2_PFHxDA		95	25-150
13C2_PFTeDA		90	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-021
Description: DUP-3	Matrix: Aqueous
Date Sampled: 11/03/2020 1140	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		92	25-150
13C3_PFHxS		96	25-150
13C3-HFPO-DA		95	25-150
13C4_PFBa		102	25-150
13C4_PFHpA		94	25-150
13C5_PFHxA		99	25-150
13C5_PFPeA		100	25-150
13C6_PFDA		89	25-150
13C7_PFUdA		93	25-150
13C8_PFOA		103	25-150
13C8_PFOS		89	25-150
13C8_PFOSA		103	10-150
13C9_PFNA		104	25-150
d-EtFOSA		88	10-150
d5-EtFOSAA		95	25-150
d9-EtFOSE		90	10-150
d-MeFOSA		83	10-150
d3-MeFOSAA		95	25-150
d7-MeFOSE		85	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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444 21st Street South · La Crosse, Wisconsin · 54601

December 1, 2020

[REDACTED]
2541 Bainbridge Street
La Crosse, WI 54603

Subject: Private Well Sampling Results
2541 Bainbridge Street, La Crosse, WI 54603
Tax parcel # 4-334-0
Sample ID # 334-0

Dear [REDACTED]:

We have received and reviewed the test results for the sample collected on November 3, 2020 at the above address. Some PFAS compounds were found, but the levels found were *below* the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the "Recommended Public Health Standard" in the table below. The levels found in *your* well are called the "Sample Result" in the table below.

Also, please note, we collected two samples from your house for quality assurance / quality control purposes. The second sample is considered a "split" sample and was sent to a different laboratory for analysis. The "split" sample was analyzed by a different EPA method. That method analyzes for 18 compounds as compared to the 36 compounds under the other method. Thus, in the second table for the "Split" sample provided below, you will see some results listed as "Not Analyzed".

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)	
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}	The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}	
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}	
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}	
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	Not Detected	20 ppt ^{a,b}	
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	5.8 ppt	20 ppt ^{a,b}	
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a	
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	9.4 ppt	450,000 ppt ^a	
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	27 ppt	40 ppt ^a	
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	36 ppt	10,000 ppt ^a	
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a	
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a	
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	3.4 ppt	150,000 ppt ^a	
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a	
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a	
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a	
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a	

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS #2706-91-4	8.8 ppt	None Established ^c
Perfluoro-n-pentanoic acid (PFPeA) CAS # 2706-90-3	2.0 ppt	None Established ^c
^a Public health enforcement standard (ES) recommended by DHS. ^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA. ^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation. ^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code. ^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L) ^{bl} Detected in the method blank. Possible lab contaminant.		

“SPLIT” Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Analyzed	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Analyzed	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Analyzed	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	1.7 ppt	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	Not Detected	20 ppt ^{a,b}
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	6.9 ppt	450,000 ppt ^a

The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6

Private Well Sampling Results for
 2541 Bainbridge Street, La Crosse, WI 54603
 Tax parcel # 4-334-0
 Sample ID # 334-0
 December 1, 2020

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	26 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	Not Analyzed	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	2.3 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Analyzed	400,000 ppt ^a
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS #2706-91-4	Not Analyzed	None Established ^c
Perfluoro-n-pentanoic acid (PFPeA) CAS # 2706-90-3	Not Analyzed	None Established ^c

^a Public health enforcement standard (ES) recommended by DHS.

^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA.

^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation.

^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code.

^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L)

^{bl} Detected in the method blank. Possible lab contaminant.

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-022
Description: 334-0	Matrix: Aqueous
Date Sampled: 11/03/2020 1305	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/18/2020 1603	MMM	11/17/2020 1034	73728

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		6.8	1.7	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		6.8	1.7	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		6.8	1.7	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		6.8	1.7	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		6.8	1.7	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		6.8	1.7	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		6.8	1.7	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		6.8	1.7	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		6.8	1.7	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		6.8	1.7	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		6.8	1.7	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.4	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		6.8	1.7	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		6.8	1.7	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	9.4		3.4	0.86	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	8.8		3.4	0.86	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		6.8	1.7	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	27		3.4	0.86	ng/L	1
Perfluoro-n-butyric acid (PFBA)	375-22-4	PFAS by ID SOP	36		3.4	0.86	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		6.8	1.7	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	3.4		3.4	0.86	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		6.8	1.7	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	2.0	J	3.4	0.86	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	5.8		3.4	0.86	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		90	25-150
13C2_6:2FTS		96	25-150
13C2_8:2FTS		81	25-150
13C2_PFDa		86	25-150
13C2_PFHxDA		81	25-150
13C2_PFTeDA		82	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-022
Description: 334-0	Matrix: Aqueous
Date Sampled: 11/03/2020 1305	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		87	25-150
13C3_PFHxS		90	25-150
13C3-HFPO-DA		103	25-150
13C4_PFBa		96	25-150
13C4_PFHpA		87	25-150
13C5_PFHxA		93	25-150
13C5_PFPeA		95	25-150
13C6_PFDa		83	25-150
13C7_PFUdA		85	25-150
13C8_PFOA		95	25-150
13C8_PFOS		82	25-150
13C8_PFOSA		95	10-150
13C9_PFNA		89	25-150
d-EtFOSA		85	10-150
d5-EtFOSAA		88	25-150
d9-EtFOSE		87	10-150
d-MeFOSA		79	10-150
d3-MeFOSAA		87	25-150
d7-MeFOSE		83	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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ANALYTICAL RESULTS

Project: LACROSSE WELL #23 & 24
Pace Project No.: 40217713

Sample: 334-0 Lab ID: 40217713022 Collected: 11/03/20 13:05 Received: 11/04/20 11:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
537.1 PFAS Compounds, Water									
Analytical Method: EPA 537.1 Preparation Method: EPA 537.1									
Pace Analytical Services - Ormond Beach									
11CI-PF3OUdS	<0.0015	ug/L	0.0019	0.0015	1	11/09/20 10:05	11/12/20 08:52	763051-92-9	1q
9CI-PF3ONS	<0.0011	ug/L	0.0019	0.0011	1	11/09/20 10:05	11/12/20 08:52	756426-58-1	1q
ADONA	<0.00069	ug/L	0.0019	0.00069	1	11/09/20 10:05	11/12/20 08:52	919005-14-4	1q
HFPO-DA	<0.0015	ug/L	0.0019	0.0015	1	11/09/20 10:05	11/12/20 08:52	13252-13-6	1q
NEtFOSAA	<0.00088	ug/L	0.0019	0.00088	1	11/09/20 10:05	11/12/20 08:52	2991-50-6	1q
NMeFOSAA	<0.0015	ug/L	0.0019	0.0015	1	11/09/20 10:05	11/12/20 08:52	2355-31-9	1q
Perfluorobutanesulfonic acid	0.0069	ug/L	0.0019	0.00063	1	11/09/20 10:05	11/12/20 08:52	375-73-5	1q
Perfluorodecanoic acid	<0.0019	ug/L	0.0019	0.0019	1	11/09/20 10:05	11/12/20 08:52	335-76-2	1q
Perfluorohexanoic acid	0.0023	ug/L	0.0019	0.0012	1	11/09/20 10:05	11/12/20 08:52	307-24-4	1q
Perfluorododecanoic acid	<0.0014	ug/L	0.0019	0.0014	1	11/09/20 10:05	11/12/20 08:52	307-55-1	1q
Perfluoroheptanoic acid	<0.00095	ug/L	0.0019	0.00095	1	11/09/20 10:05	11/12/20 08:52	375-85-9	1q
Perfluorohexanesulfonic acid	0.026	ug/L	0.0019	0.00070	1	11/09/20 10:05	11/12/20 08:52	355-46-4	1q
Perfluorononanoic acid	<0.0019	ug/L	0.0019	0.0019	1	11/09/20 10:05	11/12/20 08:52	375-95-1	1q
Perfluorooctanesulfonic acid	<0.0011	ug/L	0.0019	0.0011	1	11/09/20 10:05	11/12/20 08:52	1763-23-1	1q
Perfluorooctanoic acid	0.0017J	ug/L	0.0019	0.00083	1	11/09/20 10:05	11/12/20 08:52	335-67-1	1q
Perfluorotetradecanoic acid	<0.0018	ug/L	0.0019	0.0018	1	11/09/20 10:05	11/12/20 08:52	376-06-7	1q
Perfluorotridecanoic acid	<0.0016	ug/L	0.0019	0.0016	1	11/09/20 10:05	11/12/20 08:52	72629-94-8	1q
Perfluoroundecanoic acid	<0.0019	ug/L	0.0019	0.0019	1	11/09/20 10:05	11/12/20 08:52	2058-94-8	1q
Surrogates									
13C2-PFDA (S)	102	%	70-130		1	11/09/20 10:05	11/12/20 08:52		
13C2-PFHxA (S)	95	%	70-130		1	11/09/20 10:05	11/12/20 08:52		
NEtFOSAA-d5 (S)	115	%	70-130		1	11/09/20 10:05	11/12/20 08:52		
HFPO-DAS (S)	88	%	70-130		1	11/09/20 10:05	11/12/20 08:52		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Private Well Sampling Results for
2541 Bainbridge Street, La Crosse, WI 54603
Tax parcel # 4-334-0
Sample ID # 334-0
December 1, 2020

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well



444 21st Street South · La Crosse, Wisconsin · 54601

December 1, 2020

[REDACTED]
2558 1st Avenue West
La Crosse, WI 54603

Subject: Private Well Sampling Results
2558 1st Avenue West, La Crosse, WI 54603
Tax parcel # 4-343-0
Sample ID # 343-0

Dear [REDACTED]:

We have received and reviewed the test results for the sample collected on November 3, 2020 at the above address. Some PFAS compounds were found at levels above the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in your well are called the “Sample Result” in the table below.

Because some of the levels are above the recommended Public Health Standard, the City is offering to provide bottled water delivered to your home for drinking, cooking, and brushing your teeth. There will be no cost to you for the bottled water. Please complete the attached form and mail it to The OS Group to make arrangements for having a water dispenser and bottles delivered to your home. Call 608-668-2718 or email PFAS@theOSgrp.com . You may also complete this form on line at www.cityoflacrosse.org/bottledwater

The following table summarizes the test results from the sample. **Bolded results** are above a current recommended level intended to protect your health according to the Department of Health Services (DHS).

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	10 ppt	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	38 ppt	20 ppt ^{a,b}
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	6.9 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	87 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	44 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	2.7 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a

The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6

Perfluoro-1-heptanesulfonic acid (PFHpS) CAS # 375-92-8	2.4 ppt	None Established ^c
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS # 2706-91-4	10 ppt	None Established ^c
Perfluoro-n-heptanoic acid (PFHpA) CAS # 375-85-9	1.1 ppt	None Established ^c
Perfluoro-n-pentanoic acid (PFPeA) CAS #2706-90-3	1.6 ppt	None Established ^c
^a Public health enforcement standard (ES) recommended by DHS. ^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA. ^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation. ^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code. ^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L) ^{Bl} Detected in the method blank. Possible lab contaminant.		

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well
 Bottled Water Acknowledgement

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-024
Description: 343-0	Matrix: Aqueous
Date Sampled: 11/03/2020 1335	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/18/2020 1624	MMM	11/17/2020 1034	73728

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.5	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	6.9		3.5	0.87	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	2.4	J	3.5	0.87	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	10		3.5	0.87	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	87		3.5	0.87	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	44		3.5	0.87	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	1.1	J	3.5	0.87	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	2.7	J	3.5	0.87	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	10		3.5	0.87	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	1.6	J	3.5	0.87	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	38		3.5	0.87	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		105	25-150
13C2_6:2FTS		95	25-150
13C2_8:2FTS		77	25-150
13C2_PFDaA		89	25-150
13C2_PFHxDA		88	25-150
13C2_PFTeDA		84	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-024
Description: 343-0	Matrix: Aqueous
Date Sampled: 11/03/2020 1335	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBS		93	25-150
13C3_PFHxS		94	25-150
13C3-HFPO-DA		97	25-150
13C4_PFBA		96	25-150
13C4_PFHpA		91	25-150
13C5_PFHxA		96	25-150
13C5_PFPeA		98	25-150
13C6_PFDA		89	25-150
13C7_PFUdA		89	25-150
13C8_PFOA		93	25-150
13C8_PFOS		84	25-150
13C8_PFOSA		97	10-150
13C9_PFNA		93	25-150
d-EtFOSA		83	10-150
d5-EtFOSAA		93	25-150
d9-EtFOSE		89	10-150
d-MeFOSA		87	10-150
d3-MeFOSAA		90	25-150
d7-MeFOSE		83	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

BOTTLED WATER ACKNOWLEDGEMENT

2558 1st Avenue West, La Crosse, WI 54603

If you desire to accept the bottled water delivery, please complete and sign this form and return it to The OS Group at PFAS@TheOSgrp.com or mail to 444 21st St. S, La Crosse, WI 54601. You may also complete this form electronically on line at www.cityoflacrosse.org/bottledwater . Call 608-668-2718 with any question you may have.

As pre-caution for the protection of human health, the City of La Crosse (The City) will provide, on a temporary basis, bottled water for drinking, cooking and toothbrushing purposes at the above referenced address. The water will be delivered to your home or business by a commercial water delivery service. At the City's cost, a dispenser / cooler and regular deliveries of 5-gallon containers of water will be provided. The City reserves the right to dictate the conditions of delivery, such as minimum and maximum number of containers per delivery, frequency and timing of deliveries. The City reserves the right to periodically review whether The City should continue to provide bottled water, considering factors such as State and Federal standards and guidance, evolving knowledge and understanding of the sources, cause and responsibility for the contamination, new or reinterpreted test results, and the availability of more permanent or cost-effective sources of water for the above purposes. The City of La Crosse makes no warranty or representation regarding the suitability of the bottled water beyond those made by the commercial water delivery service.

All reusable or returnable equipment and supplies, such as the containers and cooler/dispenser, are the property of the commercial water delivery service or the City of La Crosse. By signing below, the Occupant of the above referenced property acknowledges that all reusable or returnable equipment and supplies shall be returned to the commercial water delivery service or the City of La Crosse upon request. The Occupant agrees to provide reasonable access for delivery of bottled water and pick up of reusable or returnable equipment and supplies. Occupant(s) acknowledges that they may be required to sign an agreement with the commercial water delivery service as a condition of receiving bottled water.

Check ownership:

_____ Owner-Occupant

_____ Occupant Only

Number of Occupants: _____

Signed: _____ Dated: _____

Printed Name: _____



444 21st Street South · La Crosse, Wisconsin · 54601

December 1, 2020

██████████
 2514 1st Avenue West
 La Crosse, WI 54603

Subject: Private Well Sampling Results
 2514 1st Avenue West, La Crosse, WI 54603
 Tax parcel # 4-350-0
 Sample ID # 350-0

Dear ██████████:

We have received and reviewed the test results for the sample collected on November 2, 2020 at the above address. Some PFAS compounds were found, but the levels found were **below** the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in *your* well are called the “Sample Result” in the table below.

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	Not Detected	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	3.4 ppt	20 ppt ^{a,b}

The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	2.4 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	2.0 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	4.3 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	Not Detected	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS #2706-91-4	1.3 ppt	None Established ^c

^a Public health enforcement standard (ES) recommended by DHS.
^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA.
^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation.
^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code.
^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L)
^{Bl} Detected in the method blank. Possible lab contaminant.

Private Well Sampling Results for
2514 1st Avenue West, La Crosse, WI 54603
Tax parcel # 4-350-0
Sample ID # 350-0
December 1, 2020

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-005
Description: 350-0	Matrix: Aqueous
Date Sampled: 11/02/2020 1235	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/18/2020 1240	MMM	11/16/2020 1125	73619

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		15	3.7	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	2.4	J	3.7	0.93	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	1.3	J	3.7	0.93	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	2.0	J	3.7	0.93	ng/L	1
Perfluoro-n-butyric acid (PFBA)	375-22-4	PFAS by ID SOP	4.3		3.7	0.93	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	3.4	J	3.7	0.93	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		107	25-150
13C2_6:2FTS		98	25-150
13C2_8:2FTS		88	25-150
13C2_PFDaA		84	25-150
13C2_PFHxDA		85	25-150
13C2_PFTeDA		84	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-005
Description: 350-0	Matrix: Aqueous
Date Sampled: 11/02/2020 1235	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBS		85	25-150
13C3_PFHxS		86	25-150
13C3-HFPO-DA		98	25-150
13C4_PFBA		96	25-150
13C4_PFHpA		89	25-150
13C5_PFHxA		96	25-150
13C5_PFPeA		96	25-150
13C6_PFDA		88	25-150
13C7_PFUdA		87	25-150
13C8_PFOA		91	25-150
13C8_PFOS		80	25-150
13C8_PFOSA		95	10-150
13C9_PFNA		91	25-150
d-EtFOSA		73	10-150
d5-EtFOSAA		88	25-150
d9-EtFOSE		85	10-150
d-MeFOSA		76	10-150
d3-MeFOSAA		87	25-150
d7-MeFOSE		85	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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444 21st Street South · La Crosse, Wisconsin · 54601

December 1, 2020

██████████
 2501 Bainbridge Street
 La Crosse, WI 54603

Subject: Private Well Sampling Results
 2501 Bainbridge Street, La Crosse, WI 54603
 Tax parcel # 4-363-0
 Sample ID # 363-0

Dear ██████████:

We have received and reviewed the test results for the sample collected on November 3, 2020 at the above address. Some PFAS compounds were found, but the levels found were **below** the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in *your* well are called the “Sample Result” in the table below. **PLEASE NOTE: At your residence we took a second “duplicate” sample for quality control / quality assurance purposes. The two samples’ tests confirmed each other, and there were only minor differences. The results in the table below are based on the highest level observed in either of the two samples.**

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	Not Detected	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	3.7 ppt	20 ppt ^{a,b}

The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	1.6 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	2.5 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	4.6 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	Not Detected	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a

^a Public health enforcement standard (ES) recommended by DHS.

^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA.

^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation.

^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code.

^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L)

^{bl} Detected in the method blank. Possible lab contaminant.

Private Well Sampling Results for
2501 Bainbridge Street, La Crosse, WI 54603
Tax parcel # 4-363-0
Sample ID # 363-0
December 1, 2020

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-025
Description: 363-0	Matrix: Aqueous
Date Sampled: 11/03/2020 1345	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/18/2020 1635	MMM	11/17/2020 1034	73728

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.5	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	1.6	J	3.5	0.88	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	2.5	J	3.5	0.88	ng/L	1
Perfluoro-n-butyric acid (PFBA)	375-22-4	PFAS by ID SOP	4.6		3.5	0.88	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.5	0.88	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	3.7		3.5	0.88	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		116	25-150
13C2_6:2FTS		107	25-150
13C2_8:2FTS		85	25-150
13C2_PFDaA		93	25-150
13C2_PFHxDA		86	25-150
13C2_PFTeDA		89	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-025
Description: 363-0	Matrix: Aqueous
Date Sampled: 11/03/2020 1345	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		94	25-150
13C3_PFHxS		97	25-150
13C3-HFPO-DA		99	25-150
13C4_PFBa		100	25-150
13C4_PFHpA		96	25-150
13C5_PFHxA		102	25-150
13C5_PFPeA		103	25-150
13C6_PFDa		90	25-150
13C7_PFUdA		98	25-150
13C8_PFOA		99	25-150
13C8_PFOS		90	25-150
13C8_PFOsA		100	10-150
13C9_PFNa		94	25-150
d-EtFOsA		88	10-150
d5-EtFOsAA		93	25-150
d9-EtFOsE		89	10-150
d-MeFOsA		92	10-150
d3-MeFOsAA		88	25-150
d7-MeFOsE		81	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-026
Description: DUP 4	Matrix: Aqueous
Date Sampled: 11/03/2020 1345	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/18/2020 1645	MMM	11/17/2020 1034	73728

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		15	3.8	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	1.6	J	3.8	0.94	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.8	0.94	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.8	0.94	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.8	0.94	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.8	0.94	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	ND		3.8	0.94	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	2.3	J	3.8	0.94	ng/L	1
Perfluoro-n-butyric acid (PFBA)	375-22-4	PFAS by ID SOP	4.6		3.8	0.94	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.8	0.94	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.8	0.94	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.8	0.94	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		3.8	0.94	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.8	0.94	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		3.8	0.94	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		3.8	0.94	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.8	0.94	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.8	0.94	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.8	0.94	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	3.2	J	3.8	0.94	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		101	25-150
13C2_6:2FTS		100	25-150
13C2_8:2FTS		82	25-150
13C2_PFDaA		86	25-150
13C2_PFHxDA		85	25-150
13C2_PFTeDA		84	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-026
Description: DUP 4	Matrix: Aqueous
Date Sampled: 11/03/2020 1345	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		89	25-150
13C3_PFHxS		93	25-150
13C3-HFPO-DA		100	25-150
13C4_PFBa		97	25-150
13C4_PFHpA		91	25-150
13C5_PFHxA		93	25-150
13C5_PFPeA		99	25-150
13C6_PFDa		82	25-150
13C7_PFUdA		91	25-150
13C8_PFOA		95	25-150
13C8_PFOS		87	25-150
13C8_PFOSA		98	10-150
13C9_PFNA		92	25-150
d-EtFOSA		82	10-150
d5-EtFOSAA		89	25-150
d9-EtFOSE		90	10-150
d-MeFOSA		81	10-150
d3-MeFOSAA		91	25-150
d7-MeFOSE		84	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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December 1, 2020

444 21st Street South · La Crosse, Wisconsin · 54601

██████████
2539 1st Avenue West
La Crosse, WI 54603

Subject: Private Well Sampling Results
2539 1st Avenue West, La Crosse, WI 54603
Tax parcel # 4-385-0
Sample ID # 385-0

Dear ██████████:

We have received and reviewed the test results for the sample collected on November 3, 2020 at the above address. Some PFAS compounds were found at levels above the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in your well are called the “Sample Result” in the table below.

Because some of the levels are above the recommended Public Health Standard, the City is offering to provide bottled water delivered to your home for drinking, cooking, and brushing your teeth. There will be no cost to you for the bottled water. Please complete the attached form and mail it to The OS Group to make arrangements for having a water dispenser and bottles delivered to your home. Call 608-668-2718 or email PFAS@theOSgrp.com. You may also complete this form on line at www.cityoflacrosse.org/bottledwater

The following table summarizes the test results from the sample. **Bolded results** are above a current recommended level intended to protect your health according to the Department of Health Services (DHS). **Also, please note, we collected two samples from your house for quality assurance / quality control purposes. The second sample is considered a “split” sample and was sent to a different laboratory for analysis. The “split” sample was analyzed by a different EPA method. That method analyzes for 18 compounds as compared to the 36 compounds under the other method. Thus, in the second table for the “Split” sample provided below, you will see some results listed as “Not Analyzed”.**

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	13 ppt	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	13 ppt	20 ppt ^{a,b}
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	4.2 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	7.4 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	66 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	0.95 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a

The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6

Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS # 2706-91-4	3.4 ppt	None Established ^c
^a Public health enforcement standard (ES) recommended by DHS. ^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA. ^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation. ^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code. ^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L) ^{bl} Detected in the method blank. Possible lab contaminant.		

“Split” Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Analyzed	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Analyzed	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Analyzed	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	9.9 ppt	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	9.8 ppt	20 ppt ^{a,b}
The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6		
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	3.7 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	6.8 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	Not Analyzed	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a

Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	Not Detected	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Analyzed	400,000 ppt ^a
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS # 2706-91-4	Not Analyzed	None Established ^c

^a Public health enforcement standard (ES) recommended by DHS.

^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA.

^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation.

^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code.

^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L)

^{Bl} Detected in the method blank. Possible lab contaminant.

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well
Bottled Water Acknowledgement

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-027
Description: 385-0	Matrix: Aqueous
Date Sampled: 11/03/2020 1400	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/18/2020 1656	MMM	11/17/2020 1034	73728

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		15	3.7	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	4.2		3.7	0.94	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.7	0.94	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.7	0.94	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.7	0.94	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.7	0.94	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	3.4	J	3.7	0.94	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	7.4		3.7	0.94	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	66		3.7	0.94	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.7	0.94	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.7	0.94	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.7	0.94	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	0.95	J	3.7	0.94	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.7	0.94	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	13		3.7	0.94	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		3.7	0.94	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.7	0.94	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.7	0.94	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.7	0.94	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	13		3.7	0.94	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		111	25-150
13C2_6:2FTS		115	25-150
13C2_8:2FTS		95	25-150
13C2_PFDaA		94	25-150
13C2_PFHxDA		92	25-150
13C2_PFTeDA		89	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-027
Description: 385-0	Matrix: Aqueous
Date Sampled: 11/03/2020 1400	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		94	25-150
13C3_PFHxS		98	25-150
13C3-HFPO-DA		98	25-150
13C4_PFBa		99	25-150
13C4_PFHpA		98	25-150
13C5_PFHxA		103	25-150
13C5_PFPeA		103	25-150
13C6_PFDa		92	25-150
13C7_PFUdA		91	25-150
13C8_PFOA		101	25-150
13C8_PFOs		87	25-150
13C8_PFOsA		101	10-150
13C9_PFNa		98	25-150
d-EtFOsA		96	10-150
d5-EtFOsAA		92	25-150
d9-EtFOsE		88	10-150
d-MeFOsA		95	10-150
d3-MeFOsAA		93	25-150
d7-MeFOsE		89	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

ANALYTICAL RESULTS

Project: LACROSSE WELL #23 & 24
Pace Project No.: 40217713

Sample: 385-0 **Lab ID: 40217713028** Collected: 11/03/20 14:05 Received: 11/04/20 11:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
537.1 PFAS Compounds, Water									
Analytical Method: EPA 537.1 Preparation Method: EPA 537.1 Pace Analytical Services - Ormond Beach									
11CI-PF3OUdS	<0.0015	ug/L	0.0018	0.0015	1	11/09/20 10:05	11/12/20 19:04	763051-92-9	1q
9CI-PF3ONS	<0.0011	ug/L	0.0018	0.0011	1	11/09/20 10:05	11/12/20 19:04	756426-58-1	1q
ADONA	<0.00068	ug/L	0.0018	0.00068	1	11/09/20 10:05	11/12/20 19:04	919005-14-4	1q
HFPO-DA	<0.0015	ug/L	0.0018	0.0015	1	11/09/20 10:05	11/12/20 19:04	13252-13-6	1q
NEtFOSAA	<0.00088	ug/L	0.0018	0.00088	1	11/09/20 10:05	11/12/20 19:04	2991-50-6	1q
NMeFOSAA	<0.0015	ug/L	0.0018	0.0015	1	11/09/20 10:05	11/12/20 19:04	2355-31-9	1q
Perfluorobutanesulfonic acid	0.0037	ug/L	0.0018	0.00063	1	11/09/20 10:05	11/12/20 19:04	375-73-5	1q
Perfluorodecanoic acid	<0.0018	ug/L	0.0018	0.0018	1	11/09/20 10:05	11/12/20 19:04	335-76-2	1q
Perfluorohexanoic acid	<0.0012	ug/L	0.0018	0.0012	1	11/09/20 10:05	11/12/20 19:04	307-24-4	1q
Perfluorododecanoic acid	<0.0014	ug/L	0.0018	0.0014	1	11/09/20 10:05	11/12/20 19:04	307-55-1	1q
Perfluoroheptanoic acid	<0.00095	ug/L	0.0018	0.00095	1	11/09/20 10:05	11/12/20 19:04	375-85-9	1q
Perfluorohexanesulfonic acid	0.0068	ug/L	0.0018	0.00069	1	11/09/20 10:05	11/12/20 19:04	355-46-4	1q
Perfluorononanoic acid	<0.0018	ug/L	0.0018	0.0018	1	11/09/20 10:05	11/12/20 19:04	375-95-1	1q
Perfluorooctanesulfonic acid	0.0098	ug/L	0.0018	0.0011	1	11/09/20 10:05	11/12/20 19:04	1763-23-1	1q
Perfluorooctanoic acid	0.0099	ug/L	0.0018	0.00083	1	11/09/20 10:05	11/12/20 19:04	335-67-1	1q
Perfluorotetradecanoic acid	<0.0018	ug/L	0.0018	0.0018	1	11/09/20 10:05	11/12/20 19:04	376-06-7	1q
Perfluorotridecanoic acid	<0.0016	ug/L	0.0018	0.0016	1	11/09/20 10:05	11/12/20 19:04	72629-94-8	1q
Perfluoroundecanoic acid	<0.0018	ug/L	0.0018	0.0018	1	11/09/20 10:05	11/12/20 19:04	2058-94-8	1q
Surrogates									
13C2-PFDA (S)	118	%	70-130		1	11/09/20 10:05	11/12/20 19:04		
13C2-PFHxA (S)	113	%	70-130		1	11/09/20 10:05	11/12/20 19:04		
NEtFOSAA-d5 (S)	103	%	70-130		1	11/09/20 10:05	11/12/20 19:04		
HFPO-DAS (S)	114	%	70-130		1	11/09/20 10:05	11/12/20 19:04		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

BOTTLED WATER ACKNOWLEDGEMENT

2539 1st Avenue West, La Crosse, WI 54603

If you desire to accept the bottled water delivery, please complete and sign this form and return it to The OS Group at PFAS@TheOSgrp.com or mail to 444 21st St. S, La Crosse, WI 54601. You may also complete this form electronically on line at www.cityoflacrosse.org/bottledwater . Call 608-668-2718 with any question you may have.

As pre-caution for the protection of human health, the City of La Crosse (The City) will provide, on a temporary basis, bottled water for drinking, cooking and toothbrushing purposes at the above referenced address. The water will be delivered to your home or business by a commercial water delivery service. At the City's cost, a dispenser / cooler and regular deliveries of 5-gallon containers of water will be provided. The City reserves the right to dictate the conditions of delivery, such as minimum and maximum number of containers per delivery, frequency and timing of deliveries. The City reserves the right to periodically review whether The City should continue to provide bottled water, considering factors such as State and Federal standards and guidance, evolving knowledge and understanding of the sources, cause and responsibility for the contamination, new or reinterpreted test results, and the availability of more permanent or cost-effective sources of water for the above purposes. The City of La Crosse makes no warranty or representation regarding the suitability of the bottled water beyond those made by the commercial water delivery service.

All reusable or returnable equipment and supplies, such as the containers and cooler/dispenser, are the property of the commercial water delivery service or the City of La Crosse. By signing below, the Occupant of the above referenced property acknowledges that all reusable or returnable equipment and supplies shall be returned to the commercial water delivery service or the City of La Crosse upon request. The Occupant agrees to provide reasonable access for delivery of bottled water and pick up of reusable or returnable equipment and supplies. Occupant(s) acknowledges that they may be required to sign an agreement with the commercial water delivery service as a condition of receiving bottled water.

Check ownership:

_____ Owner-Occupant

_____ Occupant Only

Number of Occupants: _____

Signed: _____ Dated: _____

Printed Name: _____



444 21st Street South · La Crosse, Wisconsin · 54601

December 1, 2020

[REDACTED]
PO BOX 2896
La Crosse, WI 54602-2896

Subject: Private Well Sampling Results
2555 1st Avenue West, La Crosse, WI 54603
Tax parcel # 4-389-0
Sample ID # 389-0-A

Dear [REDACTED]:

We have received and reviewed the test results for the sample collected on November 2, 2020 at the above address. Some PFAS compounds were found at levels above the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in your well are called the “Sample Result” in the table below.

Because some of the levels are above the recommended Public Health Standard, the City is offering to provide bottled water delivered to your home for drinking, cooking, and brushing your teeth. There will be no cost to you for the bottled water. Please complete the attached form and mail it to The OS Group to make arrangements for having a water dispenser and bottles delivered to your home. Call 608-668-2718 or email PFAS@theOSgrp.com . You may also complete this form on line at www.cityoflacrosse.org/bottledwater

The following table summarizes the test results from the sample. **Bolded results** are above a current recommended level intended to protect your health according to the Department of Health Services (DHS).

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	3.5 ppt	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	18 ppt	20 ppt ^{a,b}
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	12 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	14 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	110 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	1.2 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a

The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6

Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-heptanesulfonic acid (PFHpS) CAS # 375-92-8	0.96 ppt	None Established ^c
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS # 2706-91-4	7.9 ppt	None Established ^c
^a Public health enforcement standard (ES) recommended by DHS. ^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA. ^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation. ^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code. ^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L) ^{B1} Detected in the method blank. Possible lab contaminant.		

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call us at (608) 668-2718 or email us at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well
 Bottled Water Acknowledgement

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-010
Description: 389-0-A	Matrix: Aqueous
Date Sampled: 11/02/2020 1400	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/17/2020 1813	MMM	11/16/2020 1125	73619

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.5	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	12		3.5	0.89	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	0.96	J	3.5	0.89	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	7.9		3.5	0.89	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	14		3.5	0.89	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	110		3.5	0.89	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	1.2	J	3.5	0.89	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	3.5		3.5	0.89	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	18		3.5	0.89	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		103	25-150
13C2_6:2FTS		100	25-150
13C2_8:2FTS		83	25-150
13C2_PFDaA		94	25-150
13C2_PFHxDA		103	25-150
13C2_PFTeDA		90	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-010
Description: 389-0-A	Matrix: Aqueous
Date Sampled: 11/02/2020 1400	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		93	25-150
13C3_PFHxS		87	25-150
13C3-HFPO-DA		115	25-150
13C4_PFBa		95	25-150
13C4_PFHpA		103	25-150
13C5_PFHxA		106	25-150
13C5_PFPeA		99	25-150
13C6_PFDA		87	25-150
13C7_PFUdA		97	25-150
13C8_PFOA		99	25-150
13C8_PFOS		89	25-150
13C8_PFOSA		102	10-150
13C9_PFNA		95	25-150
d-EtFOSA		82	10-150
d5-EtFOSAA		94	25-150
d9-EtFOSE		88	10-150
d-MeFOSA		91	10-150
d3-MeFOSAA		97	25-150
d7-MeFOSE		88	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
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 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

BOTTLED WATER ACKNOWLEDGEMENT

2555 1st Avenue West, La Crosse, WI 54603

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All reusable or returnable equipment and supplies, such as the containers and cooler/dispenser, are the property of the commercial water delivery service or the City of La Crosse. By signing below, the Occupant of the above referenced property acknowledges that all reusable or returnable equipment and supplies shall be returned to the commercial water delivery service or the City of La Crosse upon request. The Occupant agrees to provide reasonable access for delivery of bottled water and pick up of reusable or returnable equipment and supplies. Occupant(s) acknowledges that they may be required to sign an agreement with the commercial water delivery service as a condition of receiving bottled water.

Check ownership:

_____ Owner-Occupant

_____ Occupant Only

Number of Occupants: _____

Signed: _____ Dated: _____

Printed Name: _____



444 21st Street South · La Crosse, Wisconsin · 54601

December 1, 2020

██████████
2555 1st Avenue West
La Crosse, WI 54603

Subject: Private Well Sampling Results
2555 1st Avenue West, La Crosse, WI 54603
Tax parcel # 4-389-0
Sample ID # 389-0-A

Dear ██████████:

We have received and reviewed the test results for the sample collected on November 2, 2020 at the above address. Some PFAS compounds were found at levels above the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in your well are called the “Sample Result” in the table below.

Because some of the levels are above the recommended Public Health Standard, the City is offering to provide bottled water delivered to your home for drinking, cooking, and brushing your teeth. There will be no cost to you for the bottled water. Please complete the attached form and mail it to The OS Group to make arrangements for having a water dispenser and bottles delivered to your home. Call 608-668-2718 or email PFAS@theOSgrp.com . You may also complete this form on line at www.cityoflacrosse.org/bottledwater

The following table summarizes the test results from the sample. **Bolded results** are above a current recommended level intended to protect your health according to the Department of Health Services (DHS).

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	3.5 ppt	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	18 ppt	20 ppt ^{a,b}
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	12 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	14 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	110 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	1.2 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a

The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6

Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-heptanesulfonic acid (PFHpS) CAS # 375-92-8	0.96 ppt	None Established ^c
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS # 2706-91-4	7.9 ppt	None Established ^c
^a Public health enforcement standard (ES) recommended by DHS. ^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA. ^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation. ^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code. ^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L) ^{B1} Detected in the method blank. Possible lab contaminant.		

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call us at (608) 668-2718 or email us at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well
 Bottled Water Acknowledgement

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-010
Description: 389-0-A	Matrix: Aqueous
Date Sampled: 11/02/2020 1400	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/17/2020 1813	MMM	11/16/2020 1125	73619

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.5	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	12		3.5	0.89	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	0.96	J	3.5	0.89	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	7.9		3.5	0.89	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	14		3.5	0.89	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	110		3.5	0.89	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	1.2	J	3.5	0.89	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	3.5		3.5	0.89	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	18		3.5	0.89	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		103	25-150
13C2_6:2FTS		100	25-150
13C2_8:2FTS		83	25-150
13C2_PFDaA		94	25-150
13C2_PFHxDA		103	25-150
13C2_PFTeDA		90	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-010
Description: 389-0-A	Matrix: Aqueous
Date Sampled: 11/02/2020 1400	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		93	25-150
13C3_PFHxS		87	25-150
13C3-HFPO-DA		115	25-150
13C4_PFBa		95	25-150
13C4_PFHpA		103	25-150
13C5_PFHxA		106	25-150
13C5_PFPeA		99	25-150
13C6_PFDa		87	25-150
13C7_PFUdA		97	25-150
13C8_PFOa		99	25-150
13C8_PFOs		89	25-150
13C8_PFOsA		102	10-150
13C9_PFNa		95	25-150
d-EtFOsA		82	10-150
d5-EtFOsAA		94	25-150
d9-EtFOsE		88	10-150
d-MeFOsA		91	10-150
d3-MeFOsAA		97	25-150
d7-MeFOsE		88	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
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BOTTLED WATER ACKNOWLEDGEMENT

2555 1st Avenue West, La Crosse, WI 54603

If you desire to accept the bottled water delivery, please complete and sign this form and return it to The OS Group at PFAS@TheOSgrp.com or mail to 444 21st St. S, La Crosse, WI 54601. You may also complete this form electronically on line at www.cityoflacrosse.org/bottledwater . Call 608-668-2718 with any question you may have.

As pre-caution for the protection of human health, the City of La Crosse (The City) will provide, on a temporary basis, bottled water for drinking, cooking and toothbrushing purposes at the above referenced address. The water will be delivered to your home or business by a commercial water delivery service. At the City's cost, a dispenser / cooler and regular deliveries of 5-gallon containers of water will be provided. The City reserves the right to dictate the conditions of delivery, such as minimum and maximum number of containers per delivery, frequency and timing of deliveries. The City reserves the right to periodically review whether The City should continue to provide bottled water, considering factors such as State and Federal standards and guidance, evolving knowledge and understanding of the sources, cause and responsibility for the contamination, new or reinterpreted test results, and the availability of more permanent or cost-effective sources of water for the above purposes. The City of La Crosse makes no warranty or representation regarding the suitability of the bottled water beyond those made by the commercial water delivery service.

All reusable or returnable equipment and supplies, such as the containers and cooler/dispenser, are the property of the commercial water delivery service or the City of La Crosse. By signing below, the Occupant of the above referenced property acknowledges that all reusable or returnable equipment and supplies shall be returned to the commercial water delivery service or the City of La Crosse upon request. The Occupant agrees to provide reasonable access for delivery of bottled water and pick up of reusable or returnable equipment and supplies. Occupant(s) acknowledges that they may be required to sign an agreement with the commercial water delivery service as a condition of receiving bottled water.

Check ownership:

_____ Owner-Occupant

_____ Occupant Only

Number of Occupants: _____

Signed: _____ Dated: _____

Printed Name: _____



444 21st Street South · La Crosse, Wisconsin · 54601

December 1, 2020

██████████
 2557 1st Avenue West
 La Crosse, WI 54603

Subject: Private Well Sampling Results
 2557 1st Avenue West, La Crosse, WI 54603
 Tax parcel # 4-389-0
 Sample ID # 389-0-B

Dear ██████████:

We have received and reviewed the test results for the sample collected on November 2, 2020 at the above address. Some PFAS compounds were found, but the levels found were **below** the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in *your* well are called the “Sample Result” in the table below.

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)	
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}	The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}	
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}	
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}	
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	Not Detected	20 ppt ^{a,b}	
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	15 ppt	20 ppt ^{a,b}	

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	10 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	16 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	130 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	Not Detected	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-heptanesulfonic acid (PFHpS) CAS # 375-92-8	1.1 ppt	None Established ^c
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS #2706-91-4	7.9 ppt	None Established ^c

^a Public health enforcement standard (ES) recommended by DHS.

^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA.

^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation.

^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code.

^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L)

^{BL} Detected in the method blank. Possible lab contaminant.

Private Well Sampling Results for
2557 1st Avenue West, La Crosse, WI 54603
Tax parcel # 4-389-0
Sample ID # 389-0-B
December 1, 2020

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-009
Description: 389-0-B	Matrix: Aqueous
Date Sampled: 11/02/2020 1345	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/17/2020 1752	MMM	11/16/2020 1125	73619

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.5	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	10		3.5	0.87	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	1.1	J	3.5	0.87	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	7.9		3.5	0.87	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	16		3.5	0.87	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	130		3.5	0.87	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	15		3.5	0.87	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		96	25-150
13C2_6:2FTS		96	25-150
13C2_8:2FTS		86	25-150
13C2_PFDaA		91	25-150
13C2_PFHxDA		84	25-150
13C2_PFTeDA		83	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-009
Description: 389-0-B	Matrix: Aqueous
Date Sampled: 11/02/2020 1345	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		91	25-150
13C3_PFHxS		85	25-150
13C3-HFPO-DA		101	25-150
13C4_PFBa		92	25-150
13C4_PFHpA		99	25-150
13C5_PFHxA		96	25-150
13C5_PFPeA		92	25-150
13C6_PFDa		85	25-150
13C7_PFUdA		92	25-150
13C8_PFOA		96	25-150
13C8_PFOS		87	25-150
13C8_PFOSA		95	10-150
13C9_PFNA		94	25-150
d-EtFOSA		80	10-150
d5-EtFOSAA		90	25-150
d9-EtFOSE		91	10-150
d-MeFOSA		84	10-150
d3-MeFOSAA		89	25-150
d7-MeFOSE		86	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com



444 21st Street South · La Crosse, Wisconsin · 54601

December 1, 2020

[Redacted]

PO BOX 2896
La Crosse, WI 54602-2896

Subject: Private Well Sampling Results
2557 1st Avenue West, La Crosse, WI 54603
Tax parcel # 4-389-0
Sample ID # 389-0-B

Dear [Redacted]:

We have received and reviewed the test results for the sample collected on November 2, 2020 at the above address. Some PFAS compounds were found, but the levels found were **below** the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in *your* well are called the “Sample Result” in the table below.

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)	
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}	The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}	
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}	
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}	
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	Not Detected	20 ppt ^{a,b}	
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	15 ppt	20 ppt ^{a,b}	

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	10 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	16 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	130 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	Not Detected	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-heptanesulfonic acid (PFHpS) CAS # 375-92-8	1.1 ppt	None Established ^c
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS #2706-91-4	7.9 ppt	None Established ^c

^a Public health enforcement standard (ES) recommended by DHS.

^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA.

^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation.

^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code.

^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L)

^{BL} Detected in the method blank. Possible lab contaminant.

Private Well Sampling Results for
2557 1st Avenue West, La Crosse, WI 54603
Tax parcel # 4-389-0
Sample ID # 389-0-B
December 1, 2020

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-009
Description: 389-0-B	Matrix: Aqueous
Date Sampled: 11/02/2020 1345	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/17/2020 1752	MMM	11/16/2020 1125	73619

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.5	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	10		3.5	0.87	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	1.1	J	3.5	0.87	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	7.9		3.5	0.87	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	16		3.5	0.87	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	130		3.5	0.87	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	15		3.5	0.87	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		96	25-150
13C2_6:2FTS		96	25-150
13C2_8:2FTS		86	25-150
13C2_PFDaA		91	25-150
13C2_PFHxDA		84	25-150
13C2_PFTeDA		83	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK08043-009
Description: 389-0-B	Matrix: Aqueous
Date Sampled: 11/02/2020 1345	Project Name: LACROSSE WELL #23 & 24
Date Received: 11/06/2020	Project Number: 40217713

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		91	25-150
13C3_PFHxS		85	25-150
13C3-HFPO-DA		101	25-150
13C4_PFBa		92	25-150
13C4_PFHpA		99	25-150
13C5_PFHxA		96	25-150
13C5_PFPeA		92	25-150
13C6_PFDa		85	25-150
13C7_PFUdA		92	25-150
13C8_PFOA		96	25-150
13C8_PFOS		87	25-150
13C8_PFOSA		95	10-150
13C9_PFNA		94	25-150
d-EtFOSA		80	10-150
d5-EtFOSAA		90	25-150
d9-EtFOSE		91	10-150
d-MeFOSA		84	10-150
d3-MeFOSAA		89	25-150
d7-MeFOSE		86	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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444 21st Street South · La Crosse, Wisconsin · 54601

December 2, 2020

[REDACTED]
2512 2nd Avenue East
La Crosse, WI 54603

Subject: Private Well Sampling Results
2512 2nd Avenue East, La Crosse, WI 54603
Tax parcel # 4-188-0
Sample ID # 188-0

Dear [REDACTED]:

We have received and reviewed the test results for the sample collected on November 5, 2020 at the above address. Some PFAS compounds were found at levels above the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in your well are called the “Sample Result” in the table below.

Because some of the levels are above the recommended Public Health Standard, the City is offering to provide bottled water delivered to your home for drinking, cooking, and brushing your teeth. There will be no cost to you for the bottled water. Please complete the attached form and mail it to The OS Group to make arrangements for having a water dispenser and bottles delivered to your home. Call 608-668-2718 or email PFAS@theOSgrp.com . You may also complete this form on line at www.cityoflacrosse.org/bottledwater

The following table summarizes the test results from the sample. **Bolded results** are above a current recommended level intended to protect your health according to the Department of Health Services (DHS). **PLEASE NOTE: At your residence we took a second “duplicate” sample for quality control / quality assurance purposes. The two samples’ tests confirmed each other, and there were only minor differences. The results in the table below are based on the highest concentration of contaminants observed in either of the two samples.**

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	8.0 ppt	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	15 ppt	20 ppt ^{a,b}
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	100 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	29 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	12 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	6.5 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a

The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6

Perfluoro-1-pentanesulfonic acid (PFPeS) CAS # 2706-91-4	22 ppt	None Established ^c
Perfluoro-n-heptanoic acid (PFHpA) CAS # 375-85-9	2.4 ppt	None Established ^c
Perfluoro-n-pentanoic acid (PFPeA) CAS #2706-90-3	6.5 ppt	None Established ^c
^a Public health enforcement standard (ES) recommended by DHS. ^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA. ^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation. ^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code. ^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L) ^{Bl} Detected in the method blank. Possible lab contaminant.		

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>	<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well
 Bottled Water Acknowledgement

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK12004-002
Description: 188-0	Matrix: Aqueous
Date Sampled: 11/05/2020 1140	Project Name: LACROSSE WELL 23 & 24
Date Received: 11/12/2020	Project Number: 40217917

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	SOP SPE	PFAS by ID SOP	1	11/25/2020 0316	SES	11/22/2020 1454	74383

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		6.8	1.7	ng/L	2
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		6.8	1.7	ng/L	2
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		6.8	1.7	ng/L	2
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		6.8	1.7	ng/L	2
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		6.8	1.7	ng/L	2
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		6.8	1.7	ng/L	2
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		6.8	1.7	ng/L	2
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		6.8	1.7	ng/L	2
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		6.8	1.7	ng/L	2
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		6.8	1.7	ng/L	2
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		6.8	1.7	ng/L	2
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.4	ng/L	2
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		6.8	1.7	ng/L	2
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		6.8	1.7	ng/L	2
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	100		3.4	0.85	ng/L	2
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.4	0.85	ng/L	2
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.4	0.85	ng/L	2
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.4	0.85	ng/L	2
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.4	0.85	ng/L	2
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	22		3.4	0.85	ng/L	2
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		6.8	1.7	ng/L	2
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	28		3.4	0.85	ng/L	2
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	11		3.4	0.85	ng/L	2
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.4	0.85	ng/L	2
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.4	0.85	ng/L	2
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	2.4	J	3.4	0.85	ng/L	2
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		6.8	1.7	ng/L	2
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	6.4		3.4	0.85	ng/L	2
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.4	0.85	ng/L	2
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		6.8	1.7	ng/L	2
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	7.9		3.4	0.85	ng/L	2
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	6.5		3.4	0.85	ng/L	2
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.4	0.85	ng/L	2
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.4	0.85	ng/L	2
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.4	0.85	ng/L	2
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	12		3.4	0.85	ng/L	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
13C2_4:2FTS		112	25-150
13C2_6:2FTS		95	25-150
13C2_8:2FTS		98	25-150
13C2_PFDa		86	25-150
13C2_PFHxDA		89	25-150
13C2_PFTeDA		87	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK12004-002
Description: 188-0	Matrix: Aqueous
Date Sampled: 11/05/2020 1140	Project Name: LACROSSE WELL 23 & 24
Date Received: 11/12/2020	Project Number: 40217917

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
13C3_PFBs		92	25-150
13C3_PFHxS		85	25-150
13C3-HFPO-DA		100	25-150
13C4_PFBa		101	25-150
13C4_PFHpA		90	25-150
13C5_PFHxA		96	25-150
13C5_PFPeA		97	25-150
13C6_PFDa		91	25-150
13C7_PFUdA		96	25-150
13C8_PFOA		94	25-150
13C8_PFOS		92	25-150
13C8_PFOsA		100	10-150
13C9_PFNA		92	25-150
d-EtFOSA		91	10-150
d5-EtFOSAA		94	25-150
d9-EtFOSE		84	10-150
d-MeFOSA		86	10-150
d3-MeFOSAA		103	25-150
d7-MeFOSE		81	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK12004-003
Description: DUP-5	Matrix: Aqueous
Date Sampled: 11/05/2020 1145	Project Name: LACROSSE WELL 23 & 24
Date Received: 11/12/2020	Project Number: 40217917

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	SOP SPE	PFAS by ID SOP	1	11/25/2020 0327	SES	11/22/2020 1454	74383

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.5	1.9	ng/L	2
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.5	1.9	ng/L	2
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.5	1.9	ng/L	2
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.5	1.9	ng/L	2
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.5	1.9	ng/L	2
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.5	1.9	ng/L	2
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.5	1.9	ng/L	2
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.5	1.9	ng/L	2
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.5	1.9	ng/L	2
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.5	1.9	ng/L	2
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.5	1.9	ng/L	2
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		15	3.7	ng/L	2
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.5	1.9	ng/L	2
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.5	1.9	ng/L	2
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	100		3.7	0.94	ng/L	2
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.7	0.94	ng/L	2
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.7	0.94	ng/L	2
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.7	0.94	ng/L	2
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.7	0.94	ng/L	2
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	22		3.7	0.94	ng/L	2
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.5	1.9	ng/L	2
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	29		3.7	0.94	ng/L	2
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	12		3.7	0.94	ng/L	2
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.7	0.94	ng/L	2
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.7	0.94	ng/L	2
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	2.2	J	3.7	0.94	ng/L	2
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.5	1.9	ng/L	2
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	6.5		3.7	0.94	ng/L	2
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.7	0.94	ng/L	2
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.5	1.9	ng/L	2
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	8.0		3.7	0.94	ng/L	2
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	6.5		3.7	0.94	ng/L	2
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.7	0.94	ng/L	2
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.7	0.94	ng/L	2
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.7	0.94	ng/L	2
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	15		3.7	0.94	ng/L	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
13C2_4:2FTS		102	25-150
13C2_6:2FTS		97	25-150
13C2_8:2FTS		99	25-150
13C2_PFDaA		86	25-150
13C2_PFHxDA		84	25-150
13C2_PFTeDA		86	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK12004-003
Description: DUP-5	Matrix: Aqueous
Date Sampled: 11/05/2020 1145	Project Name: LACROSSE WELL 23 & 24
Date Received: 11/12/2020	Project Number: 40217917

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
13C3_PFBs		93	25-150
13C3_PFHxS		85	25-150
13C3-HFPO-DA		97	25-150
13C4_PFBa		100	25-150
13C4_PFHpA		88	25-150
13C5_PFHxA		93	25-150
13C5_PFPeA		96	25-150
13C6_PFDa		93	25-150
13C7_PFUdA		95	25-150
13C8_PFOA		93	25-150
13C8_PFOS		94	25-150
13C8_PFOsA		104	10-150
13C9_PFNa		96	25-150
d-EtFOsA		103	10-150
d5-EtFOsAA		99	25-150
d9-EtFOSE		88	10-150
d-MeFOsA		80	10-150
d3-MeFOsAA		99	25-150
d7-MeFOSE		90	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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BOTTLED WATER ACKNOWLEDGEMENT

2512 2nd Avenue East, La Crosse, WI 54603

If you desire to accept the bottled water delivery, please complete and sign this form and return it to The OS Group at PFAS@TheOSgrp.com or mail to 444 21st St. S, La Crosse, WI 54601. You may also complete this form electronically on line at www.cityoflacrosse.org/bottledwater . Call 608-668-2718 with any question you may have.

As pre-caution for the protection of human health, the City of La Crosse (The City) will provide, on a temporary basis, bottled water for drinking, cooking and toothbrushing purposes at the above referenced address. The water will be delivered to your home or business by a commercial water delivery service. At the City's cost, a dispenser / cooler and regular deliveries of 5-gallon containers of water will be provided. The City reserves the right to dictate the conditions of delivery, such as minimum and maximum number of containers per delivery, frequency and timing of deliveries. The City reserves the right to periodically review whether The City should continue to provide bottled water, considering factors such as State and Federal standards and guidance, evolving knowledge and understanding of the sources, cause and responsibility for the contamination, new or reinterpreted test results, and the availability of more permanent or cost-effective sources of water for the above purposes. The City of La Crosse makes no warranty or representation regarding the suitability of the bottled water beyond those made by the commercial water delivery service.

All reusable or returnable equipment and supplies, such as the containers and cooler/dispenser, are the property of the commercial water delivery service or the City of La Crosse. By signing below, the Occupant of the above referenced property acknowledges that all reusable or returnable equipment and supplies shall be returned to the commercial water delivery service or the City of La Crosse upon request. The Occupant agrees to provide reasonable access for delivery of bottled water and pick up of reusable or returnable equipment and supplies. Occupant(s) acknowledges that they may be required to sign an agreement with the commercial water delivery service as a condition of receiving bottled water.

Check ownership:

_____ Owner-Occupant

_____ Occupant Only

Number of Occupants: _____

Signed: _____ Dated: _____

Printed Name: _____



444 21st Street South · La Crosse, Wisconsin · 54601

December 2, 2020

██████████
 2548 1st Avenue East
 La Crosse, WI 54603

Subject: Private Well Sampling Results
 2548 1st Avenue East, La Crosse, WI 54603
 Tax parcel # 4-195-0
 Sample ID # 195-0

Dear ██████████:

We have received and reviewed the test results for the sample collected on November 5, 2020 at the above address. Some PFAS compounds were found, but the levels found were **below** the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in *your* well are called the “Sample Result” in the table below.

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt _{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt _{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt _{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt _{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	1.8 ppt	20 ppt _{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	8.4 ppt	20 ppt _{a,b}

The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	11 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	15 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	30 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	Not Detected	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS #2706-91-4	7.8 ppt	None Established ^c

^a Public health enforcement standard (ES) recommended by DHS.
^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA.
^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation.
^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code.
^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L)
^{bl} Detected in the method blank. Possible lab contaminant.

Private Well Sampling Results for
2548 1st Avenue East, La Crosse, WI 54603
Tax parcel # 4-195-0
Sample ID # 195-0
December 2, 2020

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK12004-004
Description: 195-0	Matrix: Aqueous
Date Sampled: 11/05/2020 1200	Project Name: LACROSSE WELL 23 & 24
Date Received: 11/12/2020	Project Number: 40217917

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	SOP SPE	PFAS by ID SOP	1	11/25/2020 0337	SES	11/22/2020 1454	74383

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.0	1.7	ng/L	2
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.0	1.7	ng/L	2
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.0	1.7	ng/L	2
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.0	1.7	ng/L	2
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.0	1.7	ng/L	2
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.0	1.7	ng/L	2
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.0	1.7	ng/L	2
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.0	1.7	ng/L	2
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.0	1.7	ng/L	2
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.0	1.7	ng/L	2
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.0	1.7	ng/L	2
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.5	ng/L	2
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.0	1.7	ng/L	2
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.0	1.7	ng/L	2
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	11		3.5	0.87	ng/L	2
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.5	0.87	ng/L	2
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.5	0.87	ng/L	2
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.5	0.87	ng/L	2
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.5	0.87	ng/L	2
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	7.8		3.5	0.87	ng/L	2
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.0	1.7	ng/L	2
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	15		3.5	0.87	ng/L	2
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	30		3.5	0.87	ng/L	2
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.5	0.87	ng/L	2
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.5	0.87	ng/L	2
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.5	0.87	ng/L	2
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.0	1.7	ng/L	2
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		3.5	0.87	ng/L	2
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.5	0.87	ng/L	2
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.0	1.7	ng/L	2
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	1.8	J	3.5	0.87	ng/L	2
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		3.5	0.87	ng/L	2
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.5	0.87	ng/L	2
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.5	0.87	ng/L	2
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.5	0.87	ng/L	2
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	8.4		3.5	0.87	ng/L	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
13C2_4:2FTS		111	25-150
13C2_6:2FTS		108	25-150
13C2_8:2FTS		94	25-150
13C2_PFDa		95	25-150
13C2_PFHxDA		91	25-150
13C2_PFTeDA		92	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK12004-004
Description: 195-0	Matrix: Aqueous
Date Sampled: 11/05/2020 1200	Project Name: LACROSSE WELL 23 & 24
Date Received: 11/12/2020	Project Number: 40217917

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
13C3_PFBs		98	25-150
13C3_PFHxS		93	25-150
13C3-HFPO-DA		99	25-150
13C4_PFBa		102	25-150
13C4_PFHpA		95	25-150
13C5_PFHxA		97	25-150
13C5_PFPeA		97	25-150
13C6_PFDa		95	25-150
13C7_PFUdA		103	25-150
13C8_PFOa		95	25-150
13C8_PFOs		98	25-150
13C8_PFOsA		111	10-150
13C9_PFNa		94	25-150
d-EtFOsA		100	10-150
d5-EtFOsAA		110	25-150
d9-EtFOSE		90	10-150
d-MeFOsA		84	10-150
d3-MeFOsAA		105	25-150
d7-MeFOSE		90	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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444 21st Street South · La Crosse, Wisconsin · 54601

December 2, 2020

██████████
2505 2nd Avenue East
La Crosse, WI 54603

Subject: Private Well Sampling Results
2505 2nd Avenue East, La Crosse, WI 54603
Tax parcel # 4-211-0
Sample ID # 211-0

Dear ██████████:

We have received and reviewed the test results for the sample collected on November 5, 2020 at the above address. Some PFAS compounds were found, but the levels found were **below** the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the "Recommended Public Health Standard" in the table below. The levels found in *your* well are called the "Sample Result" in the table below.

Also, please note, we collected two samples from your house for quality assurance / quality control purposes. The second sample is considered a "split" sample and was sent to a different laboratory for analysis. The "split" sample was analyzed by a different EPA method. That method analyzes for 18 compounds as compared to the 36 compounds under the other method. Thus, in the second table for the "Split" sample provided below, you will see some results listed as "Not Analyzed".

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	4.9 ppt	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	5.5 ppt	20 ppt ^{a,b}
The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6		
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	3.9 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	2.9 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	4.8 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	2.0 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS #2706-91-4	1.1 ppt	None Established ^c
Perfluoro-n-heptanoic acid (PFHpA) CAS # 375-85-9	1.2 ppt	None Established ^c
Perfluoro-n-pentanoic acid (PFPeA) CAS # 2706-90-3	1.9 ppt	None Established ^c

^a Public health enforcement standard (ES) recommended by DHS.
^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA.
^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation.
^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code.
^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L)
^{bl} Detected in the method blank. Possible lab contaminant.

“SPLIT” Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Analyzed	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Analyzed	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Analyzed	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	3.5 ppt	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	4.6 ppt	20 ppt ^{a,b}
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	3.1 ppt	450,000 ppt ^a

The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	3.1 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	Not Analyzed	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	1.8 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Analyzed	400,000 ppt ^a
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS #2706-91-4	Not Analyzed	None Established ^c
Perfluoro-n-heptanoic acid (PFHpA) CAS # 375-85-9	1.7 ppt	None Established ^c
Perfluoro-n-pentanoic acid (PFPeA) CAS # 2706-90-3	Not Analyzed	None Established ^c
^a Public health enforcement standard (ES) recommended by DHS. ^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA. ^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation. ^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code. ^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L) ^{Bl} Detected in the method blank. Possible lab contaminant.		

Private Well Sampling Results for
2505 2nd Avenue East, La Crosse, WI 54603
Tax parcel # 4-211-0
Sample ID # 211-0
December 2, 2020

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK12004-001
Description: 211-0	Matrix: Aqueous
Date Sampled: 11/05/2020 1120	Project Name: LACROSSE WELL 23 & 24
Date Received: 11/12/2020	Project Number: 40217917

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	SOP SPE	PFAS by ID SOP	1	11/25/2020 0305	SES	11/22/2020 1454	74383

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.4	1.9	ng/L	2
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.4	1.9	ng/L	2
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.4	1.9	ng/L	2
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.4	1.9	ng/L	2
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.4	1.9	ng/L	2
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.4	1.9	ng/L	2
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.4	1.9	ng/L	2
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.4	1.9	ng/L	2
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.4	1.9	ng/L	2
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.4	1.9	ng/L	2
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.4	1.9	ng/L	2
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		15	3.7	ng/L	2
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.4	1.9	ng/L	2
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.4	1.9	ng/L	2
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	3.9		3.7	0.93	ng/L	2
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.7	0.93	ng/L	2
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.7	0.93	ng/L	2
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.7	0.93	ng/L	2
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.7	0.93	ng/L	2
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	1.1	J	3.7	0.93	ng/L	2
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.4	1.9	ng/L	2
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	2.9	J	3.7	0.93	ng/L	2
Perfluoro-n-butyric acid (PFBA)	375-22-4	PFAS by ID SOP	4.8		3.7	0.93	ng/L	2
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.7	0.93	ng/L	2
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.7	0.93	ng/L	2
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	1.2	J	3.7	0.93	ng/L	2
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.4	1.9	ng/L	2
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	2.0	J	3.7	0.93	ng/L	2
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.7	0.93	ng/L	2
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.4	1.9	ng/L	2
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	4.9		3.7	0.93	ng/L	2
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	1.9	J	3.7	0.93	ng/L	2
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.7	0.93	ng/L	2
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.7	0.93	ng/L	2
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.7	0.93	ng/L	2
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	5.5		3.7	0.93	ng/L	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
13C2_4:2FTS		106	25-150
13C2_6:2FTS		101	25-150
13C2_8:2FTS		96	25-150
13C2_PFDa		92	25-150
13C2_PFHxDA		89	25-150
13C2_PFTeDA		89	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK12004-001
Description: 211-0	Matrix: Aqueous
Date Sampled: 11/05/2020 1120	Project Name: LACROSSE WELL 23 & 24
Date Received: 11/12/2020	Project Number: 40217917

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
13C3_PFBs		92	25-150
13C3_PFHxS		86	25-150
13C3-HFPO-DA		101	25-150
13C4_PFBa		103	25-150
13C4_PFHpA		97	25-150
13C5_PFHxA		96	25-150
13C5_PFPeA		98	25-150
13C6_PFDa		92	25-150
13C7_PFUdA		96	25-150
13C8_PFOA		93	25-150
13C8_PFOS		93	25-150
13C8_PFOsA		106	10-150
13C9_PFNa		95	25-150
d-EtFOSA		98	10-150
d5-EtFOSAA		102	25-150
d9-EtFOSE		85	10-150
d-MeFOSA		86	10-150
d3-MeFOSAA		102	25-150
d7-MeFOSE		89	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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ANALYTICAL RESULTS

Project: LACROSSE WELL #23 & 24

Pace Project No.: 40217917

Sample: 211-0 **Lab ID: 40217917001** Collected: 11/05/20 11:20 Received: 11/06/20 09:20 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
537.1 PFAS Compounds, Water									
Analytical Method: EPA 537.1 Preparation Method: EPA 537.1									
Pace Analytical Services - Ormond Beach									
11CI-PF3OUdS	<0.0015	ug/L	0.0019	0.0015	1	11/11/20 09:07	11/17/20 21:49	763051-92-9	
9CI-PF3ONS	<0.0011	ug/L	0.0019	0.0011	1	11/11/20 09:07	11/17/20 21:49	756426-58-1	
ADONA	<0.00069	ug/L	0.0019	0.00069	1	11/11/20 09:07	11/17/20 21:49	919005-14-4	
HFPO-DA	<0.0016	ug/L	0.0019	0.0016	1	11/11/20 09:07	11/17/20 21:49	13252-13-6	
NEtFOSAA	<0.00089	ug/L	0.0019	0.00089	1	11/11/20 09:07	11/17/20 21:49	2991-50-6	
NMeFOSAA	<0.0015	ug/L	0.0019	0.0015	1	11/11/20 09:07	11/17/20 21:49	2355-31-9	
Perfluorobutanesulfonic acid	0.0031	ug/L	0.0019	0.00063	1	11/11/20 09:07	11/17/20 21:49	375-73-5	
Perfluorodecanoic acid	<0.0019	ug/L	0.0019	0.0019	1	11/11/20 09:07	11/17/20 21:49	335-76-2	
Perfluorohexanoic acid	0.0018J	ug/L	0.0019	0.0012	1	11/11/20 09:07	11/17/20 21:49	307-24-4	
Perfluorododecanoic acid	<0.0014	ug/L	0.0019	0.0014	1	11/11/20 09:07	11/17/20 21:49	307-55-1	
Perfluoroheptanoic acid	0.0017J	ug/L	0.0019	0.00096	1	11/11/20 09:07	11/17/20 21:49	375-85-9	
Perfluorohexanesulfonic acid	0.0031	ug/L	0.0019	0.00070	1	11/11/20 09:07	11/17/20 21:49	355-46-4	
Perfluorononanoic acid	<0.0019	ug/L	0.0019	0.0019	1	11/11/20 09:07	11/17/20 21:49	375-95-1	
Perfluorooctanesulfonic acid	0.0046	ug/L	0.0019	0.0011	1	11/11/20 09:07	11/17/20 21:49	1763-23-1	
Perfluorooctanoic acid	0.0035	ug/L	0.0019	0.00083	1	11/11/20 09:07	11/17/20 21:49	335-67-1	
Perfluorotetradecanoic acid	<0.0018	ug/L	0.0019	0.0018	1	11/11/20 09:07	11/17/20 21:49	376-06-7	
Perfluorotridecanoic acid	<0.0017	ug/L	0.0019	0.0017	1	11/11/20 09:07	11/17/20 21:49	72629-94-8	
Perfluoroundecanoic acid	<0.0019	ug/L	0.0019	0.0019	1	11/11/20 09:07	11/17/20 21:49	2058-94-8	
Surrogates									
13C2-PFDA (S)	122	%	70-130		1	11/11/20 09:07	11/17/20 21:49		
13C2-PFHxA (S)	116	%	70-130		1	11/11/20 09:07	11/17/20 21:49		
NEtFOSAA-d5 (S)	100	%	70-130		1	11/11/20 09:07	11/17/20 21:49		
HFPO-DAS (S)	111	%	70-130		1	11/11/20 09:07	11/17/20 21:49		

REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, LLC.



444 21st Street South · La Crosse, Wisconsin · 54601

December 2, 2020

████████████████████
 2507 1st Avenue East
 La Crosse, WI 54603

Subject: Private Well Sampling Results
 2507 1st Avenue East, La Crosse, WI 54603
 Tax parcel # 4-245-0
 Sample ID # 245-0

Dear ████████████████████:

We have received and reviewed the test results for the sample collected on November 5, 2020 at the above address. Some PFAS compounds were found, but the levels found were **below** the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in *your* well are called the “Sample Result” in the table below.

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	Not Detected	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	9.0 ppt	20 ppt ^{a,b}

The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	4.9 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	6.7 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	12 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	Not Detected	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS # 2706-91-4	3.4 ppt	None Established ^c

^a Public health enforcement standard (ES) recommended by DHS.
^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NET-FOSE, NET-FOSA, NetFOSAA, PFOS, and PFOA.
^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation.
^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code.
^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L)
^{Bl} Detected in the method blank. Possible lab contaminant.

Private Well Sampling Results for
2507 1st Avenue East, La Crosse, WI 54603
Tax parcel # 4-245-0
Sample ID # 245-0
December 2, 2020

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK12004-006
Description: 245-0	Matrix: Aqueous
Date Sampled: 11/05/2020 1235	Project Name: LACROSSE WELL 23 & 24
Date Received: 11/12/2020	Project Number: 40217917

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/20/2020 1901	KMM2	11/19/2020 1221	74049

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.4	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
Perfluoro-1-butanefluoride (PFBS)	375-73-5	PFAS by ID SOP	4.9	B	3.4	0.86	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	3.4		3.4	0.86	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	6.7		3.4	0.86	ng/L	1
Perfluoro-n-butyric acid (PFBA)	375-22-4	PFAS by ID SOP	12	B	3.4	0.86	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	9.0		3.4	0.86	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		111	25-150
13C2_6:2FTS		111	25-150
13C2_8:2FTS		110	25-150
13C2_PFDa		88	25-150
13C2_PFHxDA		100	25-150
13C2_PFTeDA		86	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK12004-006
Description: 245-0	Matrix: Aqueous
Date Sampled: 11/05/2020 1235	Project Name: LACROSSE WELL 23 & 24
Date Received: 11/12/2020	Project Number: 40217917

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		89	25-150
13C3_PFHxS		94	25-150
13C3-HFPO-DA		108	25-150
13C4_PFBa		100	25-150
13C4_PFHpA		101	25-150
13C5_PFHxA		95	25-150
13C5_PFPeA		100	25-150
13C6_PFDa		98	25-150
13C7_PFUdA		95	25-150
13C8_PFOA		99	25-150
13C8_PFOs		91	25-150
13C8_PFOsA		108	10-150
13C9_PFNa		94	25-150
d-EtFOsA		84	10-150
d5-EtFOsAA		102	25-150
d9-EtFOsE		97	10-150
d-MeFOsA		92	10-150
d3-MeFOsAA		106	25-150
d7-MeFOsE		104	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com



444 21st Street South · La Crosse, Wisconsin · 54601

December 2, 2020

[REDACTED]
2545 1st Avenue East
La Crosse, WI 54603

Subject: Private Well Sampling Results
2545 1st Avenue East, La Crosse, WI 54603
Tax parcel # 4-255-0
Sample ID # 255-0

Dear [REDACTED]:

We have received and reviewed the test results for the sample collected on November 5, 2020 at the above address. Some PFAS compounds were found at levels above the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in your well are called the “Sample Result” in the table below.

Because some of the levels are above the recommended Public Health Standard, the City is offering to provide bottled water delivered to your home for drinking, cooking, and brushing your teeth. There will be no cost to you for the bottled water. Please complete the attached form and mail it to The OS Group to make arrangements for having a water dispenser and bottles delivered to your home. Call 608-668-2718 or email PFAS@theOSgrp.com . You may also complete this form on line at www.cityoflacrosse.org/bottledwater

The following table summarizes the test results from the sample. **Bolded results** are above a current recommended level intended to protect your health according to the Department of Health Services (DHS).

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	1.2 ppt	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	27 ppt	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	190 ppt	20 ppt ^{a,b}
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	28 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	580 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	33 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	15 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a

The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6

Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-heptanesulfonic acid (PFHpS) CAS # 375-92-8	25 ppt	None Established ^c
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS # 2706-91-4	51 ppt	None Established ^c
Perfluoro-n-heptanoic acid (PFHpA) CAS # 375-85-9	3.2 ppt	None Established ^c
Perfluoro-n-pentanoic acid (PFPeA) CAS #2706-90-3	3.8 ppt	None Established ^c
^a Public health enforcement standard (ES) recommended by DHS. ^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA. ^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation. ^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code. ^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L) ^{bl} Detected in the method blank. Possible lab contaminant.		

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

Private Well Sampling Results for
2545 1st Avenue East, La Crosse, WI 54603
Tax Parcel # 4-255-0
December 2, 2020

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well
Bottled Water Acknowledgement

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK12004-005
Description: 255-0	Matrix: Aqueous
Date Sampled: 11/05/2020 1215	Project Name: LACROSSE WELL 23 & 24
Date Received: 11/12/2020	Project Number: 40217917

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/20/2020 1840	KMM2	11/19/2020 1221	74049

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.6	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	28	B	3.6	0.89	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.6	0.89	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	25		3.6	0.89	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.6	0.89	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	1.2	J	3.6	0.89	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	51		3.6	0.89	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	580		3.6	0.89	ng/L	1
Perfluoro-n-butyric acid (PFBA)	375-22-4	PFAS by ID SOP	33	B	3.6	0.89	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.6	0.89	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.6	0.89	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	3.2	J	3.6	0.89	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	15		3.6	0.89	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.6	0.89	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	27	B	3.6	0.89	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	3.8		3.6	0.89	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.6	0.89	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.6	0.89	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.6	0.89	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	190		3.6	0.89	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		122	25-150
13C2_6:2FTS		110	25-150
13C2_8:2FTS		109	25-150
13C2_PFDaA		88	25-150
13C2_PFHxDA		105	25-150
13C2_PFTeDA		91	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK12004-005
Description: 255-0	Matrix: Aqueous
Date Sampled: 11/05/2020 1215	Project Name: LACROSSE WELL 23 & 24
Date Received: 11/12/2020	Project Number: 40217917

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		89	25-150
13C3_PFHxS		85	25-150
13C3-HFPO-DA		108	25-150
13C4_PFBa		105	25-150
13C4_PFHpA		98	25-150
13C5_PFHxA		100	25-150
13C5_PFPeA		102	25-150
13C6_PFDa		97	25-150
13C7_PFUdA		92	25-150
13C8_PFOA		92	25-150
13C8_PFOS		95	25-150
13C8_PFOsA		114	10-150
13C9_PFNa		96	25-150
d-EtFOsA		76	10-150
d5-EtFOsAA		103	25-150
d9-EtFOSE		92	10-150
d-MeFOsA		94	10-150
d3-MeFOsAA		106	25-150
d7-MeFOSE		98	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

BOTTLED WATER ACKNOWLEDGEMENT

2545 1st Avenue East, La Crosse, WI 54603

If you desire to accept the bottled water delivery, please complete and sign this form and return it to The OS Group at PFAS@TheOSgrp.com or mail to 444 21st St. S, La Crosse, WI 54601. You may also complete this form electronically on line at www.cityoflacrosse.org/bottledwater. Call 608-668-2718 with any question you may have.

As pre-caution for the protection of human health, the City of La Crosse (The City) will provide, on a temporary basis, bottled water for drinking, cooking and toothbrushing purposes at the above referenced address. The water will be delivered to your home or business by a commercial water delivery service. At the City's cost, a dispenser / cooler and regular deliveries of 5-gallon containers of water will be provided. The City reserves the right to dictate the conditions of delivery, such as minimum and maximum number of containers per delivery, frequency and timing of deliveries. The City reserves the right to periodically review whether The City should continue to provide bottled water, considering factors such as State and Federal standards and guidance, evolving knowledge and understanding of the sources, cause and responsibility for the contamination, new or reinterpreted test results, and the availability of more permanent or cost-effective sources of water for the above purposes. The City of La Crosse makes no warranty or representation regarding the suitability of the bottled water beyond those made by the commercial water delivery service.

All reusable or returnable equipment and supplies, such as the containers and cooler/dispenser, are the property of the commercial water delivery service or the City of La Crosse. By signing below, the Occupant of the above referenced property acknowledges that all reusable or returnable equipment and supplies shall be returned to the commercial water delivery service or the City of La Crosse upon request. The Occupant agrees to provide reasonable access for delivery of bottled water and pick up of reusable or returnable equipment and supplies. Occupant(s) acknowledges that they may be required to sign an agreement with the commercial water delivery service as a condition of receiving bottled water.

Check ownership:

_____ Owner-Occupant

_____ Occupant Only

Number of Occupants: _____

Signed: _____ Dated: _____

Printed Name: _____



444 21st Street South · La Crosse, Wisconsin · 54601

December 2, 2020

██████████
 2510 1st Avenue West
 La Crosse, WI 54603

Subject: Private Well Sampling Results
 2510 1st Avenue West, La Crosse, WI 54603
 Tax parcel # 4-347-0
 Sample ID # 347-0

Dear ██████████:

We have received and reviewed the test results for the sample collected on November 5, 2020 at the above address. Some PFAS compounds were found, but the levels found were **below** the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in *your* well are called the “Sample Result” in the table below.

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	1.8 ppt	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	4.7 ppt	20 ppt ^{a,b}

The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	6.1 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	6.5 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	13 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	Not Detected	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS #2706-91-4	5.0 ppt	None Established ^c

^a Public health enforcement standard (ES) recommended by DHS.
^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA.
^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation.
^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code.
^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L)
^{bl} Detected in the method blank. Possible lab contaminant.

Private Well Sampling Results for
2510 1st Avenue West, La Crosse, WI 54603
Tax parcel # 4-347-0
Sample ID # 347-0
December 2, 2020

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK12004-008
Description: 347-0	Matrix: Aqueous
Date Sampled: 11/05/2020 1300	Project Name: LACROSSE WELL 23 & 24
Date Received: 11/12/2020	Project Number: 40217917

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	SOP SPE	PFAS by ID SOP	1	11/25/2020 0348	SES	11/22/2020 1454	74383

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		6.9	1.7	ng/L	2
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		6.9	1.7	ng/L	2
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		6.9	1.7	ng/L	2
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		6.9	1.7	ng/L	2
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		6.9	1.7	ng/L	2
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		6.9	1.7	ng/L	2
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		6.9	1.7	ng/L	2
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		6.9	1.7	ng/L	2
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		6.9	1.7	ng/L	2
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		6.9	1.7	ng/L	2
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		6.9	1.7	ng/L	2
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.5	ng/L	2
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		6.9	1.7	ng/L	2
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		6.9	1.7	ng/L	2
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	6.1		3.5	0.87	ng/L	2
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.5	0.87	ng/L	2
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.5	0.87	ng/L	2
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.5	0.87	ng/L	2
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.5	0.87	ng/L	2
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	5.0		3.5	0.87	ng/L	2
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		6.9	1.7	ng/L	2
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	6.5		3.5	0.87	ng/L	2
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	13		3.5	0.87	ng/L	2
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.5	0.87	ng/L	2
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.5	0.87	ng/L	2
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.5	0.87	ng/L	2
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		6.9	1.7	ng/L	2
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		3.5	0.87	ng/L	2
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.5	0.87	ng/L	2
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		6.9	1.7	ng/L	2
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	1.8	J	3.5	0.87	ng/L	2
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		3.5	0.87	ng/L	2
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.5	0.87	ng/L	2
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.5	0.87	ng/L	2
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.5	0.87	ng/L	2
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	4.7		3.5	0.87	ng/L	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
13C2_4:2FTS		99	25-150
13C2_6:2FTS		93	25-150
13C2_8:2FTS		93	25-150
13C2_PFDaA		81	25-150
13C2_PFHxDA		78	25-150
13C2_PFTeDA		82	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK12004-008
Description: 347-0	Matrix: Aqueous
Date Sampled: 11/05/2020 1300	Project Name: LACROSSE WELL 23 & 24
Date Received: 11/12/2020	Project Number: 40217917

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
13C3_PFBs		88	25-150
13C3_PFHxS		82	25-150
13C3-HFPO-DA		93	25-150
13C4_PFBa		94	25-150
13C4_PFHpA		88	25-150
13C5_PFHxA		92	25-150
13C5_PFPeA		92	25-150
13C6_PFDa		90	25-150
13C7_PFUdA		90	25-150
13C8_PFOa		91	25-150
13C8_PFOs		79	25-150
13C8_PFOsA		102	10-150
13C9_PFNa		90	25-150
d-EtFOsA		91	10-150
d5-EtFOsAA		93	25-150
d9-EtFOsE		88	10-150
d-MeFOsA		86	10-150
d3-MeFOsAA		102	25-150
d7-MeFOsE		80	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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444 21st Street South · La Crosse, Wisconsin · 54601

December 9, 2020

██████████
2640 Fanta Reed Road
La Crosse, WI 54603

Subject: Private Well Sampling Results
2640 Fanta Reed Road, La Crosse, WI 54603
Tax parcel # 4-106-0
Sample ID # 106-0

Dear ██████████:

We have received and reviewed the test results for the sample collected on November 9, 2020 at the above address. Some PFAS compounds were found at levels above the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in your well are called the “Sample Result” in the table below.

Because some of the levels are above the recommended Public Health Standard, the City is offering to provide bottled water delivered to your home for drinking, cooking, and brushing your teeth. There will be no cost to you for the bottled water. Please complete the attached form and mail it to The OS Group to make arrangements for having a water dispenser and bottles delivered to your home. Call 608-668-2718 or email PFAS@theOSgrp.com . You may also complete this form on line at www.cityoflacrosse.org/bottledwater

The following table summarizes the test results from the sample. **Bolded results** are above a current recommended level intended to protect your health according to the Department of Health Services (DHS).

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	34 ppt	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	390 ppt	20 ppt ^{a,b}
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	16 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	130 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	17 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	38 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	1.9 ppt	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a

The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6

1H, 1H, 2H, 2H-perflurooctane sulfonic acid (6:2 FTS) CAS # 27619-97-2	48 ppt	None Established ^c
Perfluoro-1-heptanesulfonic acid (PFHps) CAS # 375-92-8	9.1 ppt	None Established ^c
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS # 2706-91-4	18 ppt	None Established ^c
Perfluoro-n-heptanoic acid (PFHpA) CAS # 375-85-9	17 ppt	None Established ^c
Perfluoro-n-pentanoic acid (PFPeA) CAS #2706-90-3	42 ppt	None Established ^c
^a Public health enforcement standard (ES) recommended by DHS. ^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA. ^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation. ^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code. ^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L) ^{Bl} Detected in the method blank. Possible lab contaminant.		

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well
 Bottled Water Acknowledgement

BOTTLED WATER ACKNOWLEDGEMENT

2640 Fanta Reed Road, La Crosse, WI 54603

If you desire to accept the bottled water delivery, please complete and sign this form and return it to The OS Group at PFAS@TheOSgrp.com or mail to 444 21st St. S, La Crosse, WI 54601. You may also complete this form electronically on line at www.cityoflacrosse.org/bottledwater . Call 608-668-2718 with any question you may have.

As pre-caution for the protection of human health, the City of La Crosse (The City) will provide, on a temporary basis, bottled water for drinking, cooking and toothbrushing purposes at the above referenced address. The water will be delivered to your home or business by a commercial water delivery service. At the City's cost, a dispenser / cooler and regular deliveries of 5-gallon containers of water will be provided. The City reserves the right to dictate the conditions of delivery, such as minimum and maximum number of containers per delivery, frequency and timing of deliveries. The City reserves the right to periodically review whether The City should continue to provide bottled water, considering factors such as State and Federal standards and guidance, evolving knowledge and understanding of the sources, cause and responsibility for the contamination, new or reinterpreted test results, and the availability of more permanent or cost-effective sources of water for the above purposes. The City of La Crosse makes no warranty or representation regarding the suitability of the bottled water beyond those made by the commercial water delivery service.

All reusable or returnable equipment and supplies, such as the containers and cooler/dispenser, are the property of the commercial water delivery service or the City of La Crosse. By signing below, the Occupant of the above referenced property acknowledges that all reusable or returnable equipment and supplies shall be returned to the commercial water delivery service or the City of La Crosse upon request. The Occupant agrees to provide reasonable access for delivery of bottled water and pick up of reusable or returnable equipment and supplies. Occupant(s) acknowledges that they may be required to sign an agreement with the commercial water delivery service as a condition of receiving bottled water.

Check ownership:

_____ Owner-Occupant

_____ Occupant Only

Number of Occupants: _____

Signed: _____ Dated: _____

Printed Name: _____

Phone Number: (_____) _____

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK15010-004
Description: 106-0	Matrix: Aqueous
Date Sampled: 11/09/2020 1325	Project Name: LACROSSE WELLS 23 & 24
Date Received: 11/13/2020	Project Number: 40218153

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/29/2020 1504	MMM	11/25/2020 1438	74773
2	SOP SPE	PFAS by ID SOP	1	12/03/2020 2235	MMM	12/02/2020 1200	75232

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	48		7.3	1.8	ng/L	2
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.5	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	16		3.5	0.89	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	9.1		3.5	0.89	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	18		3.5	0.89	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	130		3.5	0.89	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	17		3.5	0.89	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	17		3.5	0.89	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	38		3.5	0.89	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	1.9	J	3.5	0.89	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	34		3.5	0.89	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	42		3.5	0.89	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	390		3.5	0.89	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
13C2_4:2FTS		98	25-150		128	25-150
13C2_6:2FTS		86	25-150		102	25-150
13C2_8:2FTS		76	25-150		115	25-150
13C2_PFDaA		64	25-150		81	25-150
13C2_PFHxDA		53	25-150		96	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK15010-004
Description: 106-0	Matrix: Aqueous
Date Sampled: 11/09/2020 1325	Project Name: LACROSSE WELLS 23 & 24
Date Received: 11/13/2020	Project Number: 40218153

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
13C2_PFTeDA		61	25-150		86	25-150
13C3_PFBs		82	25-150		93	25-150
13C3_PFHxS		73	25-150		94	25-150
13C3-HFPO-DA		88	25-150		112	25-150
13C4_PFBA		94	25-150		97	25-150
13C4_PFHpA		89	25-150		94	25-150
13C5_PFHxA		91	25-150		97	25-150
13C5_PFPeA		91	25-150		95	25-150
13C6_PFDA		84	25-150		88	25-150
13C7_PFUdA		72	25-150		86	25-150
13C8_PFOA		82	25-150		94	25-150
13C8_PFOS		61	25-150		82	25-150
13C8_PFOSA		87	10-150		100	10-150
13C9_PFNA		82	25-150		88	25-150
d-EtFOSA		66	10-150		92	10-150
d5-EtFOSAA		74	25-150		99	25-150
d9-EtFOSE		75	10-150		92	10-150
d-MeFOSA		61	10-150		104	10-150
d3-MeFOSAA		77	25-150		103	25-150
d7-MeFOSE		76	10-150		95	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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444 21st Street South · La Crosse, Wisconsin · 54601

December 9, 2020

██████████
N6940 County Road M
Holmen, WI 54636

Subject: Private Well Sampling Results
2640 Fanta Reed Road, La Crosse, WI 54603
Tax parcel # 4-106-0
Sample ID # 106-0

Dear ██████████:

We have received and reviewed the test results for the sample collected on November 9, 2020 at the above address. Some PFAS compounds were found at levels above the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in your well are called the “Sample Result” in the table below.

Because some of the levels are above the recommended Public Health Standard, the City is offering to provide bottled water delivered to your home for drinking, cooking, and brushing your teeth. There will be no cost to you for the bottled water. Please complete the attached form and mail it to The OS Group to make arrangements for having a water dispenser and bottles delivered to your home. Call 608-668-2718 or email PFAS@theOSgrp.com . You may also complete this form on line at www.cityoflacrosse.org/bottledwater

The following table summarizes the test results from the sample. **Bolded results** are above a current recommended level intended to protect your health according to the Department of Health Services (DHS).

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	34 ppt	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	390 ppt	20 ppt ^{a,b}
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	16 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	130 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	17 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	38 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	1.9 ppt	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a

The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6

1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS) CAS # 27619-97-2	48 ppt	None Established ^c
Perfluoro-1-heptanesulfonic acid (PFHpS) CAS # 375-92-8	9.1 ppt	None Established ^c
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS # 2706-91-4	18 ppt	None Established ^c
Perfluoro-n-heptanoic acid (PFHpA) CAS # 375-85-9	17 ppt	None Established ^c
Perfluoro-n-pentanoic acid (PFPeA) CAS #2706-90-3	42 ppt	None Established ^c
^a Public health enforcement standard (ES) recommended by DHS. ^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA. ^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation. ^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code. ^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L) ^{Bl} Detected in the method blank. Possible lab contaminant.		

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well
 Bottled Water Acknowledgement

BOTTLED WATER ACKNOWLEDGEMENT

2640 Fanta Reed Road, La Crosse, WI 54603

If you desire to accept the bottled water delivery, please complete and sign this form and return it to The OS Group at PFAS@TheOSgrp.com or mail to 444 21st St. S, La Crosse, WI 54601. You may also complete this form electronically on line at www.cityoflacrosse.org/bottledwater . Call 608-668-2718 with any question you may have.

As pre-caution for the protection of human health, the City of La Crosse (The City) will provide, on a temporary basis, bottled water for drinking, cooking and toothbrushing purposes at the above referenced address. The water will be delivered to your home or business by a commercial water delivery service. At the City's cost, a dispenser / cooler and regular deliveries of 5-gallon containers of water will be provided. The City reserves the right to dictate the conditions of delivery, such as minimum and maximum number of containers per delivery, frequency and timing of deliveries. The City reserves the right to periodically review whether The City should continue to provide bottled water, considering factors such as State and Federal standards and guidance, evolving knowledge and understanding of the sources, cause and responsibility for the contamination, new or reinterpreted test results, and the availability of more permanent or cost-effective sources of water for the above purposes. The City of La Crosse makes no warranty or representation regarding the suitability of the bottled water beyond those made by the commercial water delivery service.

All reusable or returnable equipment and supplies, such as the containers and cooler/dispenser, are the property of the commercial water delivery service or the City of La Crosse. By signing below, the Occupant of the above referenced property acknowledges that all reusable or returnable equipment and supplies shall be returned to the commercial water delivery service or the City of La Crosse upon request. The Occupant agrees to provide reasonable access for delivery of bottled water and pick up of reusable or returnable equipment and supplies. Occupant(s) acknowledges that they may be required to sign an agreement with the commercial water delivery service as a condition of receiving bottled water.

Check ownership:

_____ Owner-Occupant

_____ Occupant Only

Number of Occupants: _____

Signed: _____ Dated: _____

Printed Name: _____

Phone Number: (_____) _____

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK15010-004
Description: 106-0	Matrix: Aqueous
Date Sampled: 11/09/2020 1325	Project Name: LACROSSE WELLS 23 & 24
Date Received: 11/13/2020	Project Number: 40218153

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/29/2020 1504	MMM	11/25/2020 1438	74773
2	SOP SPE	PFAS by ID SOP	1	12/03/2020 2235	MMM	12/02/2020 1200	75232

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	48		7.3	1.8	ng/L	2
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.5	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	16		3.5	0.89	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	9.1		3.5	0.89	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	18		3.5	0.89	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	130		3.5	0.89	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	17		3.5	0.89	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	17		3.5	0.89	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	38		3.5	0.89	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	1.9	J	3.5	0.89	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	34		3.5	0.89	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	42		3.5	0.89	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	390		3.5	0.89	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
13C2_4:2FTS		98	25-150		128	25-150
13C2_6:2FTS		86	25-150		102	25-150
13C2_8:2FTS		76	25-150		115	25-150
13C2_PFDaA		64	25-150		81	25-150
13C2_PFHxDA		53	25-150		96	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK15010-004
Description: 106-0	Matrix: Aqueous
Date Sampled: 11/09/2020 1325	Project Name: LACROSSE WELLS 23 & 24
Date Received: 11/13/2020	Project Number: 40218153

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
13C2_PFTeDA		61	25-150		86	25-150
13C3_PFBs		82	25-150		93	25-150
13C3_PFHxS		73	25-150		94	25-150
13C3-HFPO-DA		88	25-150		112	25-150
13C4_PFBa		94	25-150		97	25-150
13C4_PFHpA		89	25-150		94	25-150
13C5_PFHxA		91	25-150		97	25-150
13C5_PFPeA		91	25-150		95	25-150
13C6_PFDA		84	25-150		88	25-150
13C7_PFUdA		72	25-150		86	25-150
13C8_PFOA		82	25-150		94	25-150
13C8_PFOS		61	25-150		82	25-150
13C8_PFOSA		87	10-150		100	10-150
13C9_PFNA		82	25-150		88	25-150
d-EtFOSA		66	10-150		92	10-150
d5-EtFOSAA		74	25-150		99	25-150
d9-EtFOSE		75	10-150		92	10-150
d-MeFOSA		61	10-150		104	10-150
d3-MeFOSAA		77	25-150		103	25-150
d7-MeFOSE		76	10-150		95	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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444 21st Street South · La Crosse, Wisconsin · 54601

December 9, 2020

██████████
 2516 1st Avenue East
 La Crosse, WI 54603

Subject: Private Well Sampling Results
 2516 1st Avenue East, La Crosse, WI 54603
 Tax parcel # 4-204-0
 Sample ID # 204-0

Dear ██████████:

We have received and reviewed the test results for the sample collected on November 9, 2020 at the above address. Some PFAS compounds were found, but the levels found were **below** the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in *your* well are called the “Sample Result” in the table below.

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)	
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}	The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}	
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}	
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}	
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	Not Detected	20 ppt ^{a,b}	
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	10 ppt	20 ppt ^{a,b}	

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	11 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	21 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	130 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	2.6 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS # 2706-91-4	11 ppt	None Established ^c
Perfluoro-n-pentanoic acid (PFPeA) CAS # 2706-90-3	0.93 ppt	None Established ^c

^a Public health enforcement standard (ES) recommended by DHS.
^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOXA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA.
^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation.
^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code.
^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L)
^{bl} Detected in the method blank. Possible lab contaminant.

Private Well Sampling Results for
2516 1st Avenue East, La Crosse, WI 54603
Tax parcel # 4-204-0
Sample ID # 204-0
December 9, 2020

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK15010-001
Description: 204-0	Matrix: Aqueous
Date Sampled: 11/09/2020 1225	Project Name: LACROSSE WELLS 23 & 24
Date Received: 11/13/2020	Project Number: 40218153

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/29/2020 1432	MMM	11/25/2020 1438	74773
2	SOP SPE	PFAS by ID SOP	1	12/03/2020 2203	MMM	12/02/2020 1200	75232

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.4	1.9	ng/L	2
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		15	3.7	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	11		3.7	0.93	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	11		3.7	0.93	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	21		3.7	0.93	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	130		3.7	0.93	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	2.6	J	3.7	0.93	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	0.93	J	3.7	0.93	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	10		3.7	0.93	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
13C2_4:2FTS		103	25-150		123	25-150
13C2_6:2FTS		101	25-150		113	25-150
13C2_8:2FTS		86	25-150		107	25-150
13C2_PFDa		78	25-150		85	25-150
13C2_PFHxDA		77	25-150		102	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK15010-001
Description: 204-0	Matrix: Aqueous
Date Sampled: 11/09/2020 1225	Project Name: LACROSSE WELLS 23 & 24
Date Received: 11/13/2020	Project Number: 40218153

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
13C2_PFTeDA		79	25-150		88	25-150
13C3_PFBs		87	25-150		93	25-150
13C3_PFHxS		85	25-150		89	25-150
13C3-HFPO-DA		92	25-150		117	25-150
13C4_PFBa		95	25-150		98	25-150
13C4_PFHpA		90	25-150		95	25-150
13C5_PFHxA		92	25-150		97	25-150
13C5_PFPeA		95	25-150		98	25-150
13C6_PFDA		88	25-150		91	25-150
13C7_PFUdA		85	25-150		91	25-150
13C8_PFOA		89	25-150		96	25-150
13C8_PFOs		78	25-150		86	25-150
13C8_PFOsA		90	10-150		100	10-150
13C9_PFNA		92	25-150		92	25-150
d-EtFOSA		68	10-150		109	10-150
d5-EtFOSAA		83	25-150		101	25-150
d9-EtFOSE		73	10-150		94	10-150
d-MeFOSA		79	10-150		115	10-150
d3-MeFOSAA		84	25-150		105	25-150
d7-MeFOSE		71	10-150		101	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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444 21st Street South · La Crosse, Wisconsin · 54601

December 9, 2020

██████████
 2504 1st Avenue West
 La Crosse, WI 54603

Subject: Private Well Sampling Results
 2504 1st Avenue West, La Crosse, WI 54603
 Tax parcel # 4-346-0
 Sample ID # 346-0

Dear ██████████:

We have received and reviewed the test results for the sample collected on November 9, 2020 at the above address. Some PFAS compounds were found, but the levels found were **below** the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in *your* well are called the “Sample Result” in the table below.

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)	
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}	The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}	
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}	
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}	
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	16 ppt	20 ppt ^{a,b}	
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	2.8 ppt	20 ppt ^{a,b}	

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	1.5 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	17 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	15 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	2.4 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-n-heptanoic acid (PFHpA) CAS # 375-85-9	5.2 ppt	None Established ^c
Perfluoro-n-pentanoic acid (PFPeA) CAS # 2706-90-3	1.6 ppt	None Established ^c

^a Public health enforcement standard (ES) recommended by DHS.

^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOXA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA.

^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation.

^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code.

^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L)

^{bl} Detected in the method blank. Possible lab contaminant.

Private Well Sampling Results for
2504 1st Avenue West, La Crosse, WI 54603
Tax parcel # 4-346-0
Sample ID # 346-0
December 9, 2020

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK15010-003
Description: 346-0	Matrix: Aqueous
Date Sampled: 11/09/2020 1315	Project Name: LACROSSE WELLS 23 & 24
Date Received: 11/13/2020	Project Number: 40218153

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/29/2020 1453	MMM	11/25/2020 1438	74773
2	SOP SPE	PFAS by ID SOP	1	12/03/2020 2224	MMM	12/02/2020 1200	75232

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.5	1.9	ng/L	2
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.5	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	1.5	J	3.5	0.87	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	17		3.5	0.87	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	15		3.5	0.87	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	5.2		3.5	0.87	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	2.4	J	3.5	0.87	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	16		3.5	0.87	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	1.6	J	3.5	0.87	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	2.8	J	3.5	0.87	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
13C2_4:2FTS		103	25-150		121	25-150
13C2_6:2FTS		91	25-150		110	25-150
13C2_8:2FTS		85	25-150		114	25-150
13C2_PFDa		79	25-150		91	25-150
13C2_PFHxDA		76	25-150		100	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK15010-003
Description: 346-0	Matrix: Aqueous
Date Sampled: 11/09/2020 1315	Project Name: LACROSSE WELLS 23 & 24
Date Received: 11/13/2020	Project Number: 40218153

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
13C2_PFTeDA		76	25-150		88	25-150
13C3_PFBs		89	25-150		97	25-150
13C3_PFHxS		89	25-150		95	25-150
13C3-HFPO-DA		95	25-150		118	25-150
13C4_PFBa		98	25-150		101	25-150
13C4_PFHpA		92	25-150		98	25-150
13C5_PFHxA		95	25-150		94	25-150
13C5_PFPeA		100	25-150		100	25-150
13C6_PFDA		92	25-150		96	25-150
13C7_PFUdA		91	25-150		92	25-150
13C8_PFOA		91	25-150		96	25-150
13C8_PFOS		83	25-150		83	25-150
13C8_PFOSA		87	10-150		110	10-150
13C9_PFNA		90	25-150		94	25-150
d-EtFOSA		62	10-150		98	10-150
d5-EtFOSAA		83	25-150		106	25-150
d9-EtFOSE		70	10-150		88	10-150
d-MeFOSA		70	10-150		116	10-150
d3-MeFOSAA		86	25-150		103	25-150
d7-MeFOSE		68	10-150		98	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com



444 21st Street South · La Crosse, Wisconsin · 54601

December 9, 2020

████████████████████
 2505 1st Avenue West
 La Crosse, WI 54603

Subject: Private Well Sampling Results
 2505 1st Avenue West, La Crosse, WI 54603
 Tax parcel # 4-366-0
 Sample ID # 366-0

Dear ████████████████████:

We have received and reviewed the test results for the sample collected on November 9, 2020 at the above address. Some PFAS compounds were found, but the levels found were **below** the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in *your* well are called the “Sample Result” in the table below.

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)	
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}	The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}	
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}	
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}	
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	Not Detected	20 ppt ^{a,b}	
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	Not Detected	20 ppt ^{a,b}	

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	2.9 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	5.3 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	13 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	Not Detected	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS #2706-91-4	2.1 ppt	None Established ^c

^a Public health enforcement standard (ES) recommended by DHS.
^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA.
^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation.
^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code.
^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L)
^{bl} Detected in the method blank. Possible lab contaminant.

Private Well Sampling Results for
2505 1st Avenue West, La Crosse, WI 54603
Tax parcel # 4-366-0
Sample ID # 366-0
December 9, 2020

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK15010-002
Description: 366-0	Matrix: Aqueous
Date Sampled: 11/09/2020 1255	Project Name: LACROSSE WELLS 23 & 24
Date Received: 11/13/2020	Project Number: 40218153

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/29/2020 1443	MMM	11/25/2020 1438	74773
2	SOP SPE	PFAS by ID SOP	1	12/03/2020 2214	MMM	12/02/2020 1200	75232

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.6	1.9	ng/L	2
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		15	3.7	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	2.9	J	3.7	0.93	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	2.1	J	3.7	0.93	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	5.3		3.7	0.93	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	13		3.7	0.93	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	ND		3.7	0.93	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
13C2_4:2FTS		106	25-150		114	25-150
13C2_6:2FTS		106	25-150		103	25-150
13C2_8:2FTS		88	25-150		98	25-150
13C2_PFDa		87	25-150		84	25-150
13C2_PFHxDA		94	25-150		100	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK15010-002
Description: 366-0	Matrix: Aqueous
Date Sampled: 11/09/2020 1255	Project Name: LACROSSE WELLS 23 & 24
Date Received: 11/13/2020	Project Number: 40218153

Surrogate	Run 1		Acceptance Limits	Run 2	
	Q	% Recovery		Q	% Recovery
13C2_PFTeDA		91	25-150	84	25-150
13C3_PFBs		98	25-150	88	25-150
13C3_PFHxS		99	25-150	86	25-150
13C3-HFPO-DA		101	25-150	111	25-150
13C4_PFBa		102	25-150	96	25-150
13C4_PFHpA		106	25-150	95	25-150
13C5_PFHxA		96	25-150	94	25-150
13C5_PFPeA		102	25-150	96	25-150
13C6_PFDA		100	25-150	92	25-150
13C7_PFUdA		100	25-150	88	25-150
13C8_PFOA		102	25-150	94	25-150
13C8_PFOS		97	25-150	72	25-150
13C8_PFOsA		96	10-150	103	10-150
13C9_PFNA		101	25-150	86	25-150
d-EtFOSA		72	10-150	104	10-150
d5-EtFOSAA		102	25-150	97	25-150
d9-EtFOSE		88	10-150	93	10-150
d-MeFOSA		87	10-150	109	10-150
d3-MeFOSAA		95	25-150	103	25-150
d7-MeFOSE		88	10-150	92	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
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444 21st Street South · La Crosse, Wisconsin · 54601

December 9, 2020

██████████
 N3280 Hidden Springs Road
 La Crosse, WI 54601

Subject: Private Well Sampling Results
 2505 1st Avenue West, La Crosse, WI 54603
 Tax parcel # 4-366-0
 Sample ID # 366-0

Dear ██████████:

We have received and reviewed the test results for the sample collected on November 9, 2020 at the above address. Some PFAS compounds were found, but the levels found were **below** the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in *your* well are called the “Sample Result” in the table below.

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)	
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}	The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}	
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}	
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}	
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	Not Detected	20 ppt ^{a,b}	
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	Not Detected	20 ppt ^{a,b}	

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	2.9 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	5.3 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	13 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	Not Detected	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS #2706-91-4	2.1 ppt	None Established ^c

^a Public health enforcement standard (ES) recommended by DHS.
^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA.
^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation.
^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code.
^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L)
^{bl} Detected in the method blank. Possible lab contaminant.

Private Well Sampling Results for
2505 1st Avenue West, La Crosse, WI 54601
Tax parcel # 4-366-0
Sample ID # 366-0
December 9, 2020

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK15010-002
Description: 366-0	Matrix: Aqueous
Date Sampled: 11/09/2020 1255	Project Name: LACROSSE WELLS 23 & 24
Date Received: 11/13/2020	Project Number: 40218153

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	11/29/2020 1443	MMM	11/25/2020 1438	74773
2	SOP SPE	PFAS by ID SOP	1	12/03/2020 2214	MMM	12/02/2020 1200	75232

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.6	1.9	ng/L	2
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		15	3.7	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	2.9	J	3.7	0.93	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	2.1	J	3.7	0.93	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	5.3		3.7	0.93	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	13		3.7	0.93	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.7	0.93	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	ND		3.7	0.93	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
13C2_4:2FTS		106	25-150		114	25-150
13C2_6:2FTS		106	25-150		103	25-150
13C2_8:2FTS		88	25-150		98	25-150
13C2_PFDa		87	25-150		84	25-150
13C2_PFHxDA		94	25-150		100	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK15010-002
Description: 366-0	Matrix: Aqueous
Date Sampled: 11/09/2020 1255	Project Name: LACROSSE WELLS 23 & 24
Date Received: 11/13/2020	Project Number: 40218153

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
13C2_PFTeDA		91	25-150		84	25-150
13C3_PFBs		98	25-150		88	25-150
13C3_PFHxS		99	25-150		86	25-150
13C3-HFPO-DA		101	25-150		111	25-150
13C4_PFBa		102	25-150		96	25-150
13C4_PFHpA		106	25-150		95	25-150
13C5_PFHxA		96	25-150		94	25-150
13C5_PFPeA		102	25-150		96	25-150
13C6_PFDA		100	25-150		92	25-150
13C7_PFUdA		100	25-150		88	25-150
13C8_PFOA		102	25-150		94	25-150
13C8_PFOs		97	25-150		72	25-150
13C8_PFOsA		96	10-150		103	10-150
13C9_PFNAA		101	25-150		86	25-150
d-EtFOSA		72	10-150		104	10-150
d5-EtFOSAA		102	25-150		97	25-150
d9-EtFOSE		88	10-150		93	10-150
d-MeFOSA		87	10-150		109	10-150
d3-MeFOSAA		95	25-150		103	25-150
d7-MeFOSE		88	10-150		92	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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444 21st Street South · La Crosse, Wisconsin · 54601

December 23, 2020

████████████████████
 2509 2nd Avenue East
 La Crosse, WI 54603

Subject: Private Well Sampling Results
 2509 2nd Avenue East, La Crosse, WI 54603
 Tax parcel # 4-212-0
 Sample ID # 212-0

Dear ██████████:

We have received and reviewed the test results for the sample collected on November 18, 2020 at the above address. Some PFAS compounds were found, but the levels found were **below** the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in *your* well are called the “Sample Result” in the table below.

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)	
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}	The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}	
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}	
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}	
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	3.2 ppt	20 ppt ^{a,b}	
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	3.9 ppt	20 ppt ^{a,b}	

Private Well Sampling Results for
 2509 2nd Avenue East, La Crosse, WI 54603
 Tax parcel # 4-212-0
 Sample ID # 212-0
 December 23, 2020

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	7.7 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	13 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	6.3 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	1.7 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS #2706-91-4	5.6 ppt	None Established ^c
Perfluoro-n-heptanoic acid (PFHpA) CAS # 375-85-9	1.2 ppt	None Established ^c
Perfluoro-n-pentanoic acid (PFPeA) CAS # 2706-90-3	1.6 ppt	None Established ^c

^a Public health enforcement standard (ES) recommended by DHS.

^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA.

^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation.

^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code.

^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L)

Private Well Sampling Results for
2509 2nd Avenue East, La Crosse, WI 54603
Tax parcel # 4-212-0
Sample ID # 212-0
December 23, 2020

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK21043-007
Description: 212-0	Matrix: Aqueous
Date Sampled: 11/18/2020 1600	Project Name: 1901155 LACROSSE WELL 23 &
Date Received: 11/20/2020	Project Number: 40218686

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	SOP SPE	PFAS by ID SOP	1	12/17/2020 0337	SES	12/15/2020 1330	76544

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.9	2.0	ng/L	2
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.9	2.0	ng/L	2
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.9	2.0	ng/L	2
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.9	2.0	ng/L	2
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.9	2.0	ng/L	2
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.9	2.0	ng/L	2
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.9	2.0	ng/L	2
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.9	2.0	ng/L	2
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.9	2.0	ng/L	2
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.9	2.0	ng/L	2
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.9	2.0	ng/L	2
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		16	4.0	ng/L	2
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.9	2.0	ng/L	2
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.9	2.0	ng/L	2
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	7.7		4.0	0.99	ng/L	2
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		4.0	0.99	ng/L	2
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		4.0	0.99	ng/L	2
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		4.0	0.99	ng/L	2
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		4.0	0.99	ng/L	2
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	5.6		4.0	0.99	ng/L	2
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.9	2.0	ng/L	2
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	13		4.0	0.99	ng/L	2
Perfluoro-n-butyric acid (PFBA)	375-22-4	PFAS by ID SOP	6.3		4.0	0.99	ng/L	2
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		4.0	0.99	ng/L	2
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		4.0	0.99	ng/L	2
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	1.2	J	4.0	0.99	ng/L	2
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.9	2.0	ng/L	2
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	1.7	J	4.0	0.99	ng/L	2
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		4.0	0.99	ng/L	2
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.9	2.0	ng/L	2
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	3.2	J	4.0	0.99	ng/L	2
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	1.6	J	4.0	0.99	ng/L	2
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		4.0	0.99	ng/L	2
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		4.0	0.99	ng/L	2
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		4.0	0.99	ng/L	2
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	3.9	J	4.0	0.99	ng/L	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
13C2_4:2FTS		116	25-150
13C2_6:2FTS		103	25-150
13C2_8:2FTS		112	25-150
13C2_PFDa		101	25-150
13C2_PFHxDA		98	25-150
13C2_PFTeDA		100	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK21043-007
Description: 212-0	Matrix: Aqueous
Date Sampled: 11/18/2020 1600	Project Name: 1901155 LACROSSE WELL 23 &
Date Received: 11/20/2020	Project Number: 40218686

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
13C3_PFBs		111	25-150
13C3_PFHxS		100	25-150
13C3-HFPO-DA		106	25-150
13C4_PFBa		115	25-150
13C4_PFHpA		107	25-150
13C5_PFHxA		108	25-150
13C5_PFPeA		105	25-150
13C6_PFDa		105	25-150
13C7_PFUdA		106	25-150
13C8_PFOA		110	25-150
13C8_PFOS		101	25-150
13C8_PFOSA		108	10-150
13C9_PFNA		107	25-150
d-EtFOSA		73	10-150
d5-EtFOSAA		100	25-150
d9-EtFOSE		87	10-150
d-MeFOSA		81	10-150
d3-MeFOSAA		102	25-150
d7-MeFOSE		93	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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444 21st Street South · La Crosse, Wisconsin · 54601

December 23, 2020

████████████████████
 2561 2nd Avenue East
 La Crosse, WI 54603

Subject: Private Well Sampling Results
 2561 2nd Avenue East, La Crosse, WI 54603
 Tax parcel # 4-227-0
 Sample ID # 227-0

Dear ██████████:

We have received and reviewed the test results for the sample collected on November 17, 2020 at the above address. Some PFAS compounds were found, but the levels found were **below** the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in *your* well are called the “Sample Result” in the table below.

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)	
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}	The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}	
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}	
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}	
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	Not Detected	20 ppt ^{a,b}	
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	0.92 ppt	20 ppt ^{a,b}	

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	0.98 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	1.8 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	2.7 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	Not Detected	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS #2706-91-4	0.92 ppt	None Established ^c

^a Public health enforcement standard (ES) recommended by DHS.
^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA.
^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation.
^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code.
^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L)
^{bl} Detected in the method blank. Possible lab contaminant.

Private Well Sampling Results for
2561 2nd Avenue East, La Crosse, WI 54603
Tax parcel # 4-227-0
Sample ID # 227-0
December 23, 2020

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK21043-003
Description: 227-0	Matrix: Aqueous
Date Sampled: 11/17/2020 1340	Project Name: 1901155 LACROSSE WELL 23 &
Date Received: 11/20/2020	Project Number: 40218686

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	SOP SPE	PFAS by ID SOP	1	12/17/2020 0255	SES	12/15/2020 1330	76544

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.3	1.8	ng/L	2
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.3	1.8	ng/L	2
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.3	1.8	ng/L	2
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.3	1.8	ng/L	2
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.3	1.8	ng/L	2
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.3	1.8	ng/L	2
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.3	1.8	ng/L	2
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.3	1.8	ng/L	2
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.3	1.8	ng/L	2
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.3	1.8	ng/L	2
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.3	1.8	ng/L	2
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		15	3.6	ng/L	2
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.3	1.8	ng/L	2
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.3	1.8	ng/L	2
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	0.98	J	3.6	0.91	ng/L	2
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.6	0.91	ng/L	2
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.6	0.91	ng/L	2
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.6	0.91	ng/L	2
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.6	0.91	ng/L	2
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	0.92	J	3.6	0.91	ng/L	2
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.3	1.8	ng/L	2
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	1.8	J	3.6	0.91	ng/L	2
Perfluoro-n-butyric acid (PFBA)	375-22-4	PFAS by ID SOP	2.7	J	3.6	0.91	ng/L	2
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.6	0.91	ng/L	2
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.6	0.91	ng/L	2
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.6	0.91	ng/L	2
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.3	1.8	ng/L	2
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		3.6	0.91	ng/L	2
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.6	0.91	ng/L	2
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.3	1.8	ng/L	2
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		3.6	0.91	ng/L	2
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		3.6	0.91	ng/L	2
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.6	0.91	ng/L	2
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.6	0.91	ng/L	2
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.6	0.91	ng/L	2
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	0.92	J	3.6	0.91	ng/L	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
13C2_4:2FTS		102	25-150
13C2_6:2FTS		83	25-150
13C2_8:2FTS		83	25-150
13C2_PFDaA		87	25-150
13C2_PFHxDA		86	25-150
13C2_PFTeDA		83	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK21043-003
Description: 227-0	Matrix: Aqueous
Date Sampled: 11/17/2020 1340	Project Name: 1901155 LACROSSE WELL 23 &
Date Received: 11/20/2020	Project Number: 40218686

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
13C3_PFBs		96	25-150
13C3_PFHxS		91	25-150
13C3-HFPO-DA		94	25-150
13C4_PFBa		96	25-150
13C4_PFHpA		95	25-150
13C5_PFHxA		93	25-150
13C5_PFPeA		94	25-150
13C6_PFDa		100	25-150
13C7_PFUdA		97	25-150
13C8_PFOA		95	25-150
13C8_PFOS		91	25-150
13C8_PFOSA		93	10-150
13C9_PFNA		92	25-150
d-EtFOSA		77	10-150
d5-EtFOSAA		90	25-150
d9-EtFOSE		74	10-150
d-MeFOSA		73	10-150
d3-MeFOSAA		91	25-150
d7-MeFOSE		74	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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444 21st Street South · La Crosse, Wisconsin · 54601

December 23, 2020

[REDACTED]
2549 Bainbridge Street
La Crosse, WI 54603

Subject: Private Well Sampling Results
2549 Bainbridge Street, La Crosse, WI 54603
Tax parcel # 4-338-0
Sample ID # 338-0

Dear [REDACTED]:

We have received and reviewed the test results for the sample collected on November 18, 2020 at the above address. Some PFAS compounds were found at levels above the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the "Recommended Public Health Standard" in the table below. The levels found in your well are called the "Sample Result" in the table below.

Because some of the levels are above the recommended Public Health Standard, the City is offering to provide bottled water delivered to your home for drinking, cooking, and brushing your teeth. The bottled water is being provided by Culligan is bottled in Rothschild, WI from a municipal water system. Culligan's source water is filtered and treated by carbon filter, reverse osmosis, distillation and other methods before it is bottled. It has been sampled for PFAS, and no PFAS was detected in the sample. There will be no cost to you for the bottled water. Please complete the attached form and mail it to The OS Group to make arrangements for having a water dispenser and bottles delivered to your home. Call 608-668-2718 or email PFAS@theOSgrp.com . You may also complete this form online at www.cityoflacrosse.org/bottledwater

The following table summarizes the test results from the sample. **Bolded results** are above a current recommended level intended to protect your health according to the Department of Health Services (DHS). **PLEASE NOTE: At your residence we took a second "duplicate" sample for quality control / quality assurance purposes. The two samples' tests confirmed each other, and there were only minor differences. The results in the table below are based on the highest concentration of contaminants observed in either of the two samples.**

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	6.5 ppt	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	160 ppt	20 ppt ^{a,b}
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	6.5 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	140 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	8.0 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	3.4 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeDA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUdA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a

The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6

Perfluoro-1-heptanesulfonic acid (PFHpS) CAS # 375-92-8	6.1 ppt	None Established ^c
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS # 2706-91-4	13 ppt	None Established ^c
Perfluoro-n-pentanoic acid (PFPeA) CAS #2706-90-3	1.5 ppt	None Established ^c
^a Public health enforcement standard (ES) recommended by DHS. ^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA. ^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation. ^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code. ^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L) ^{Bl} Detected in the method blank. Possible lab contaminant.		

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well
 Bottled Water Acknowledgement

BOTTLED WATER ACKNOWLEDGEMENT

2549 Bainbridge Street, La Crosse, WI 54603

If you desire to accept the bottled water delivery, please complete and sign this form and return it to The OS Group at PFAS@TheOSgrp.com or mail to 444 21st St. S, La Crosse, WI 54601. You may also complete this form electronically on line at www.cityoflacrosse.org/bottledwater . Call 608-668-2718 with any question you may have.

As pre-caution for the protection of human health, the City of La Crosse (The City) will provide, on a temporary basis, bottled water for drinking, cooking and toothbrushing purposes at the above referenced address. The water will be delivered to your home or business by a commercial water delivery service. At the City's cost, a dispenser / cooler and regular deliveries of 5-gallon containers of water will be provided. The City reserves the right to dictate the conditions of delivery, such as minimum and maximum number of containers per delivery, frequency and timing of deliveries. The City reserves the right to periodically review whether The City should continue to provide bottled water, considering factors such as State and Federal standards and guidance, evolving knowledge and understanding of the sources, cause and responsibility for the contamination, new or reinterpreted test results, and the availability of more permanent or cost-effective sources of water for the above purposes. The City of La Crosse makes no warranty or representation regarding the suitability of the bottled water beyond those made by the commercial water delivery service.

All reusable or returnable equipment and supplies, such as the containers and cooler/dispenser, are the property of the commercial water delivery service or the City of La Crosse. By signing below, the Occupant of the above referenced property acknowledges that all reusable or returnable equipment and supplies shall be returned to the commercial water delivery service or the City of La Crosse upon request. The Occupant agrees to provide reasonable access for delivery of bottled water and pick up of reusable or returnable equipment and supplies. Occupant(s) acknowledges that they may be required to sign an agreement with the commercial water delivery service as a condition of receiving bottled water.

Check ownership:

_____ Owner-Occupant

_____ Occupant Only

Number of Occupants: _____

Signed: _____ Dated: _____

Printed Name: _____

Phone Number: (_____) _____

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK21043-005
Description: 338-0	Matrix: Aqueous
Date Sampled: 11/18/2020 1545	Project Name: 1901155 LACROSSE WELL 23 &
Date Received: 11/20/2020	Project Number: 40218686

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	SOP SPE	PFAS by ID SOP	1	12/17/2020 0316	SES	12/15/2020 1330	76544

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		9.3	2.3	ng/L	2
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		9.3	2.3	ng/L	2
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		9.3	2.3	ng/L	2
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		9.3	2.3	ng/L	2
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		9.3	2.3	ng/L	2
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		9.3	2.3	ng/L	2
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		9.3	2.3	ng/L	2
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		9.3	2.3	ng/L	2
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		9.3	2.3	ng/L	2
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		9.3	2.3	ng/L	2
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		9.3	2.3	ng/L	2
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		19	4.6	ng/L	2
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		9.3	2.3	ng/L	2
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		9.3	2.3	ng/L	2
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	6.5		4.6	1.2	ng/L	2
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		4.6	1.2	ng/L	2
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	5.8		4.6	1.2	ng/L	2
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		4.6	1.2	ng/L	2
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		4.6	1.2	ng/L	2
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	13		4.6	1.2	ng/L	2
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		9.3	2.3	ng/L	2
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	130		4.6	1.2	ng/L	2
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	7.8		4.6	1.2	ng/L	2
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		4.6	1.2	ng/L	2
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		4.6	1.2	ng/L	2
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		4.6	1.2	ng/L	2
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		9.3	2.3	ng/L	2
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	3.4	J	4.6	1.2	ng/L	2
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		4.6	1.2	ng/L	2
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		9.3	2.3	ng/L	2
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	6.3		4.6	1.2	ng/L	2
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	1.5	J	4.6	1.2	ng/L	2
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		4.6	1.2	ng/L	2
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		4.6	1.2	ng/L	2
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		4.6	1.2	ng/L	2
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	160		4.6	1.2	ng/L	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
13C2_4:2FTS		95	25-150
13C2_6:2FTS		78	25-150
13C2_8:2FTS		81	25-150
13C2_PFDa		82	25-150
13C2_PFHxDA		79	25-150
13C2_PFTeDA		75	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK21043-005
Description: 338-0	Matrix: Aqueous
Date Sampled: 11/18/2020 1545	Project Name: 1901155 LACROSSE WELL 23 &
Date Received: 11/20/2020	Project Number: 40218686

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
13C3_PFBs		85	25-150
13C3_PFHxS		84	25-150
13C3-HFPO-DA		88	25-150
13C4_PFBa		92	25-150
13C4_PFHpA		91	25-150
13C5_PFHxA		86	25-150
13C5_PFPeA		89	25-150
13C6_PFDa		85	25-150
13C7_PFUdA		88	25-150
13C8_PFOa		88	25-150
13C8_PFOs		86	25-150
13C8_PFOsA		89	10-150
13C9_PFNa		85	25-150
d-EtFOsA		60	10-150
d5-EtFOsAA		78	25-150
d9-EtFOsE		71	10-150
d-MeFOsA		68	10-150
d3-MeFOsAA		81	25-150
d7-MeFOsE		77	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK21043-006
Description: DUP#6	Matrix: Aqueous
Date Sampled: 11/18/2020 1550	Project Name: 1901155 LACROSSE WELL 23 &
Date Received: 11/20/2020	Project Number: 40218686

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	SOP SPE	PFAS by ID SOP	1	12/17/2020 0326	SES	12/15/2020 1330	76544

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		9.2	2.3	ng/L	2
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		9.2	2.3	ng/L	2
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		9.2	2.3	ng/L	2
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		9.2	2.3	ng/L	2
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		9.2	2.3	ng/L	2
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		9.2	2.3	ng/L	2
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		9.2	2.3	ng/L	2
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		9.2	2.3	ng/L	2
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		9.2	2.3	ng/L	2
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		9.2	2.3	ng/L	2
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		9.2	2.3	ng/L	2
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		18	4.6	ng/L	2
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		9.2	2.3	ng/L	2
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		9.2	2.3	ng/L	2
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	6.4		4.6	1.1	ng/L	2
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		4.6	1.1	ng/L	2
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	6.1		4.6	1.1	ng/L	2
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		4.6	1.1	ng/L	2
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		4.6	1.1	ng/L	2
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	12		4.6	1.1	ng/L	2
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		9.2	2.3	ng/L	2
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	140		4.6	1.1	ng/L	2
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	8.0		4.6	1.1	ng/L	2
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		4.6	1.1	ng/L	2
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		4.6	1.1	ng/L	2
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		4.6	1.1	ng/L	2
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		9.2	2.3	ng/L	2
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	3.2	J	4.6	1.1	ng/L	2
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		4.6	1.1	ng/L	2
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		9.2	2.3	ng/L	2
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	5.8		4.6	1.1	ng/L	2
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	1.4	J	4.6	1.1	ng/L	2
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		4.6	1.1	ng/L	2
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		4.6	1.1	ng/L	2
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		4.6	1.1	ng/L	2
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	160		4.6	1.1	ng/L	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
13C2_4:2FTS		102	25-150
13C2_6:2FTS		80	25-150
13C2_8:2FTS		83	25-150
13C2_PFDaA		86	25-150
13C2_PFHxDA		80	25-150
13C2_PFTeDA		77	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK21043-006
Description: DUP#6	Matrix: Aqueous
Date Sampled: 11/18/2020 1550	Project Name: 1901155 LACROSSE WELL 23 &
Date Received: 11/20/2020	Project Number: 40218686

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
13C3_PFBs		93	25-150
13C3_PFHxS		88	25-150
13C3-HFPO-DA		92	25-150
13C4_PFBa		97	25-150
13C4_PFHpA		92	25-150
13C5_PFHxA		90	25-150
13C5_PFPeA		91	25-150
13C6_PFDa		96	25-150
13C7_PFUdA		92	25-150
13C8_PFOA		89	25-150
13C8_PFOS		89	25-150
13C8_PFOSA		91	10-150
13C9_PFNA		89	25-150
d-EtFOSA		71	10-150
d5-EtFOSAA		83	25-150
d9-EtFOSE		79	10-150
d-MeFOSA		60	10-150
d3-MeFOSAA		81	25-150
d7-MeFOSE		79	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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BOTTLED WATER ACKNOWLEDGEMENT

2549 Bainbridge Street, La Crosse, WI 54603

If you desire to accept the bottled water delivery, please complete and sign this form and return it to The OS Group at PFAS@TheOSgrp.com or mail to 444 21st St. S, La Crosse, WI 54601. You may also complete this form electronically on line at www.cityoflacrosse.org/bottledwater . Call 608-668-2718 with any question you may have.

As pre-caution for the protection of human health, the City of La Crosse (The City) will provide, on a temporary basis, bottled water for drinking, cooking and toothbrushing purposes at the above referenced address. The water will be delivered to your home or business by a commercial water delivery service. At the City's cost, a dispenser / cooler and regular deliveries of 5-gallon containers of water will be provided. The City reserves the right to dictate the conditions of delivery, such as minimum and maximum number of containers per delivery, frequency and timing of deliveries. The City reserves the right to periodically review whether The City should continue to provide bottled water, considering factors such as State and Federal standards and guidance, evolving knowledge and understanding of the sources, cause and responsibility for the contamination, new or reinterpreted test results, and the availability of more permanent or cost-effective sources of water for the above purposes. The City of La Crosse makes no warranty or representation regarding the suitability of the bottled water beyond those made by the commercial water delivery service.

All reusable or returnable equipment and supplies, such as the containers and cooler/dispenser, are the property of the commercial water delivery service or the City of La Crosse. By signing below, the Occupant of the above referenced property acknowledges that all reusable or returnable equipment and supplies shall be returned to the commercial water delivery service or the City of La Crosse upon request. The Occupant agrees to provide reasonable access for delivery of bottled water and pick up of reusable or returnable equipment and supplies. Occupant(s) acknowledges that they may be required to sign an agreement with the commercial water delivery service as a condition of receiving bottled water.

Check ownership:

_____ Owner-Occupant

_____ Occupant Only

Number of Occupants: _____

Signed: _____ Dated: _____

Printed Name: _____

Phone Number: (_____) _____



444 21st Street South · La Crosse, Wisconsin · 54601

December 23, 2020

██████████
2501 1st Avenue West
La Crosse, WI 54603

Subject: Private Well Sampling Results
2501 1st Avenue West, La Crosse, WI 54603
Tax parcel # 4-365-0
Sample ID # 365-0

Dear ██████████:

We have received and reviewed the test results for the sample collected on November 16, 2020 at the above address. Some PFAS compounds were found, but the levels found were **below** the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the "Recommended Public Health Standard" in the table below. The levels found in *your* well are called the "Sample Result" in the table below.

PLEASE NOTE: Due to a laboratory quality control/ quality assurance issue, the laboratory ran a second "confirmation" analysis on your sample. The two laboratory analyses confirmed each other, and there were only minor differences. The results in the table below are based on the highest concentration of contaminants observed in either of the two analyses.

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	0.98 ppt	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	3.2 ppt	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	8.3 ppt	20 ppt ^{a,b}
The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6		
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	Not Detected	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	4.4 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	2.2 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	1.5 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-n-pentanoic acid (PFPeA) CAS # 2706-90-3	1.2 ppt	Not established ^c
^a Public health enforcement standard (ES) recommended by DHS. ^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA. ^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation. ^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code. ^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L) ^{Bl} Detected in the method blank. Possible lab contaminant.		

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>	<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK21043-001
Description: 365-0	Matrix: Aqueous
Date Sampled: 11/16/2020 1440	Project Name: 1901155 LACROSSE WELL 23 &
Date Received: 11/20/2020	Project Number: 40218686

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	12/09/2020 1933	SES	12/07/2020 1226	75710
2	SOP SPE	PFAS by ID SOP	1	12/17/2020 0234	SES	12/15/2020 1330	76544

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.3	1.8	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.3	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.3	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.3	1.8	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.3	1.8	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.3	1.8	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.3	1.8	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.3	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.3	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.3	1.8	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.3	1.8	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		15	3.7	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.3	1.8	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.3	1.8	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	0.98	J	3.7	0.92	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.3	1.8	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	4.4		3.7	0.92	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	2.2	BJ	3.7	0.92	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.3	1.8	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	1.4	J	3.7	0.92	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.3	1.8	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	2.8	J	3.7	0.92	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	0.98	J	3.7	0.92	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-n-undecanoic acid (PFUDA)	2058-94-8	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	8.3		3.7	0.92	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
13C2_4:2FTS		100	25-150	H	113	25-150
13C2_6:2FTS		104	25-150	H	94	25-150
13C2_8:2FTS		95	25-150	H	98	25-150
13C2_PFDaA		79	25-150	H	91	25-150
13C2_PFHxDA		90	25-150	H	88	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK21043-001
Description: 365-0	Matrix: Aqueous
Date Sampled: 11/16/2020 1440	Project Name: 1901155 LACROSSE WELL 23 &
Date Received: 11/20/2020	Project Number: 40218686

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
13C2_PFTeDA		88	25-150	H	84	25-150
13C3_PFBs		98	25-150	H	103	25-150
13C3_PFHxS		90	25-150	H	95	25-150
13C3-HFPO-DA		98	25-150	H	96	25-150
13C4_PFBa		106	25-150	H	105	25-150
13C4_PFHpA		101	25-150	H	102	25-150
13C5_PFHxA		97	25-150	H	100	25-150
13C5_PFPeA		103	25-150	H	100	25-150
13C6_PFDa		97	25-150	H	101	25-150
13C7_PFUdA		86	25-150	H	92	25-150
13C8_PFOA		98	25-150	H	101	25-150
13C8_PFOS		90	25-150	H	93	25-150
13C8_PFOsA		103	10-150	H	104	10-150
13C9_PFNa		96	25-150	H	95	25-150
d-EtFOsA		75	10-150	H	75	10-150
d5-EtFOsAA		92	25-150	H	87	25-150
d9-EtFOsE		74	10-150	H	75	10-150
d-MeFOsA		75	10-150	H	74	10-150
d3-MeFOsAA		96	25-150	H	87	25-150
d7-MeFOsE		78	10-150	H	76	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK21043-001
Description: 365-0	Matrix: Aqueous
Date Sampled: 11/16/2020 1440	Project Name: 1901155 LACROSSE WELL 23 &
Date Received: 11/20/2020	Project Number: 40218686

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	12/09/2020 1933	SES	12/07/2020 1226	75710
2	SOP SPE	PFAS by ID SOP	1	12/17/2020 0234	SES	12/15/2020 1330	76544

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND	H	7.0	1.7	ng/L	2
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND	H	7.0	1.7	ng/L	2
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND	H	7.0	1.7	ng/L	2
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND	H	7.0	1.7	ng/L	2
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND	H	7.0	1.7	ng/L	2
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND	H	7.0	1.7	ng/L	2
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND	H	7.0	1.7	ng/L	2
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND	H	7.0	1.7	ng/L	2
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND	H	7.0	1.7	ng/L	2
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND	H	7.0	1.7	ng/L	2
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND	H	7.0	1.7	ng/L	2
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND	H	14	3.5	ng/L	2
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND	H	7.0	1.7	ng/L	2
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND	H	7.0	1.7	ng/L	2
Perfluoro-1-butanefluoro-1-octanesulfonic acid (PFBS)	375-73-5	PFAS by ID SOP	ND	H	3.5	0.87	ng/L	2
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND	H	3.5	0.87	ng/L	2
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND	H	3.5	0.87	ng/L	2
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND	H	3.5	0.87	ng/L	2
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND	H	3.5	0.87	ng/L	2
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	ND	H	3.5	0.87	ng/L	2
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND	H	7.0	1.7	ng/L	2
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	4.2	H	3.5	0.87	ng/L	2
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	1.9	HJ	3.5	0.87	ng/L	2
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND	H	3.5	0.87	ng/L	2
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND	H	3.5	0.87	ng/L	2
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND	H	3.5	0.87	ng/L	2
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND	H	7.0	1.7	ng/L	2
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	1.5	HJ	3.5	0.87	ng/L	2
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND	H	3.5	0.87	ng/L	2
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND	H	7.0	1.7	ng/L	2
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	3.2	HJ	3.5	0.87	ng/L	2
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	1.2	HJ	3.5	0.87	ng/L	2
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND	H	3.5	0.87	ng/L	2
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND	H	3.5	0.87	ng/L	2
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND	H	3.5	0.87	ng/L	2
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	7.9	H	3.5	0.87	ng/L	2

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
13C2_4:2FTS		100	25-150	H	113	25-150
13C2_6:2FTS		104	25-150	H	94	25-150
13C2_8:2FTS		95	25-150	H	98	25-150
13C2_PFDa		79	25-150	H	91	25-150
13C2_PFHxDA		90	25-150	H	88	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK21043-001
Description: 365-0	Matrix: Aqueous
Date Sampled: 11/16/2020 1440	Project Name: 1901155 LACROSSE WELL 23 &
Date Received: 11/20/2020	Project Number: 40218686

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
13C2_PFTeDA		88	25-150	H	84	25-150
13C3_PFBs		98	25-150	H	103	25-150
13C3_PFHxS		90	25-150	H	95	25-150
13C3-HFPO-DA		98	25-150	H	96	25-150
13C4_PFBa		106	25-150	H	105	25-150
13C4_PFHpA		101	25-150	H	102	25-150
13C5_PFHxA		97	25-150	H	100	25-150
13C5_PFPeA		103	25-150	H	100	25-150
13C6_PFDA		97	25-150	H	101	25-150
13C7_PFUdA		86	25-150	H	92	25-150
13C8_PFOA		98	25-150	H	101	25-150
13C8_PFOS		90	25-150	H	93	25-150
13C8_PFOsA		103	10-150	H	104	10-150
13C9_PFNA		96	25-150	H	95	25-150
d-EtFOSA		75	10-150	H	75	10-150
d5-EtFOSAA		92	25-150	H	87	25-150
d9-EtFOSE		74	10-150	H	75	10-150
d-MeFOSA		75	10-150	H	74	10-150
d3-MeFOSAA		96	25-150	H	87	25-150
d7-MeFOSE		78	10-150	H	76	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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444 21st Street South · La Crosse, Wisconsin · 54601

December 23, 2020

████████████████████
 2531 1st Avenue West
 La Crosse, WI 54603

Subject: Private Well Sampling Results
 2531 1st Avenue West, La Crosse, WI 54603
 Tax parcel # 4-383-0
 Sample ID # 383-0

Dear ████████████████████:

We have received and reviewed the test results for the sample collected on November 17, 2020 at the above address. Some PFAS compounds were found, but the levels found were **below** the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in *your* well are called the “Sample Result” in the table below.

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)	
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}	The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}	
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}	
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}	
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	Not Detected	20 ppt ^{a,b}	
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	Not Detected	20 ppt ^{a,b}	

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	2.5 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	3.0 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	16 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	Not Detected	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS #2706-91-4	1.7 ppt	None Established ^c

^a Public health enforcement standard (ES) recommended by DHS.
^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA.
^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation.
^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code.
^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L)
^{bl} Detected in the method blank. Possible lab contaminant.

Private Well Sampling Results for
2531 1st Avenue West, La Crosse, WI 54603
Tax parcel # 4-383-0
Sample ID # 383-0
December 23, 2020

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK21043-004
Description: 383-0	Matrix: Aqueous
Date Sampled: 11/17/2020 1505	Project Name: 1901155 LACROSSE WELL 23 &
Date Received: 11/20/2020	Project Number: 40218686

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	SOP SPE	PFAS by ID SOP	1	12/17/2020 0305	SES	12/15/2020 1330	76544

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.9	2.0	ng/L	2
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.9	2.0	ng/L	2
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.9	2.0	ng/L	2
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.9	2.0	ng/L	2
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.9	2.0	ng/L	2
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.9	2.0	ng/L	2
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.9	2.0	ng/L	2
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.9	2.0	ng/L	2
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.9	2.0	ng/L	2
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.9	2.0	ng/L	2
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.9	2.0	ng/L	2
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		16	4.0	ng/L	2
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.9	2.0	ng/L	2
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.9	2.0	ng/L	2
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	2.5	J	4.0	0.99	ng/L	2
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		4.0	0.99	ng/L	2
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		4.0	0.99	ng/L	2
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		4.0	0.99	ng/L	2
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		4.0	0.99	ng/L	2
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	1.7	J	4.0	0.99	ng/L	2
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.9	2.0	ng/L	2
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	3.0	J	4.0	0.99	ng/L	2
Perfluoro-n-butyric acid (PFBA)	375-22-4	PFAS by ID SOP	16		4.0	0.99	ng/L	2
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		4.0	0.99	ng/L	2
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		4.0	0.99	ng/L	2
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		4.0	0.99	ng/L	2
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.9	2.0	ng/L	2
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		4.0	0.99	ng/L	2
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		4.0	0.99	ng/L	2
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.9	2.0	ng/L	2
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		4.0	0.99	ng/L	2
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		4.0	0.99	ng/L	2
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		4.0	0.99	ng/L	2
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		4.0	0.99	ng/L	2
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		4.0	0.99	ng/L	2
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	ND		4.0	0.99	ng/L	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
13C2_4:2FTS		106	25-150
13C2_6:2FTS		95	25-150
13C2_8:2FTS		97	25-150
13C2_PFDaA		92	25-150
13C2_PFHxDA		87	25-150
13C2_PFTeDA		87	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK21043-004
Description: 383-0	Matrix: Aqueous
Date Sampled: 11/17/2020 1505	Project Name: 1901155 LACROSSE WELL 23 &
Date Received: 11/20/2020	Project Number: 40218686

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
13C3_PFBs		106	25-150
13C3_PFHxS		101	25-150
13C3-HFPO-DA		103	25-150
13C4_PFBa		108	25-150
13C4_PFHpA		106	25-150
13C5_PFHxA		100	25-150
13C5_PFPeA		102	25-150
13C6_PFDa		108	25-150
13C7_PFUdA		104	25-150
13C8_PFOA		105	25-150
13C8_PFOS		97	25-150
13C8_PFOsA		107	10-150
13C9_PFNa		99	25-150
d-EtFOSA		81	10-150
d5-EtFOSAA		98	25-150
d9-EtFOSE		78	10-150
d-MeFOSA		85	10-150
d3-MeFOSAA		96	25-150
d7-MeFOSE		86	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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444 21st Street South · La Crosse, Wisconsin · 54601

December 23, 2020

██████████
Colgan Air Services
2709 Fanta Reed Road
La Crosse, WI 54603

Subject: Private Well Sampling Results
2717 Fanta Reed Road, La Crosse, WI 54603
Tax Parcel # 17-10253-20
Sample ID # 2717-FR

Dear ██████████:

We have received and reviewed the test results for the sample collected on November 16, 2020 at the above address. Some PFAS compounds were found at levels above the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in the well are called the “Sample Result” in the table below.

Because some of the levels are above the recommended Public Health Standard and because we understand the water is not used for drinking water, we recommend you take measures to ensure the water is NOT used for drinking, cooking, and brushing teeth.

The following table summarizes the test results from the sample. **Bolded results** are above a current recommended level intended to protect your health according to the Department of Health Services (DHS). **PLEASE NOTE: Due to a laboratory quality control/ quality assurance issue, the laboratory ran a second “confirmation” analysis on your sample. The two laboratory analyses confirmed each other, and there were only minor differences. The results in the table below are based on the highest concentration of contaminants observed in either of the two analyses.**

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	1.6 ppt	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	95 ppt	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	20 ppt	20 ppt ^{a,b}
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	2.3 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	26 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	21 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	43 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	2.2 ppt	30 ppt ^a
Perfluorotetradecanoic acid (PFTeDA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUdA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a

The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6

Perfluoro-1-heptanesulfonic acid (PFHpS) CAS # 375-92-8	1.7 ppt	None Established ^c
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS # 2706-91-4	1.7 ppt	None Established ^c
Perfluoro-n-heptanoic acid (PFHpA) CAS # 375-85-9	22 ppt	None Established ^c
Perfluoro-n-pentanoic acid (PFPeA) CAS #2706-90-3	36 ppt	None Established ^c
^a Public health enforcement standard (ES) recommended by DHS. ^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA. ^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation. ^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code. ^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L) ^{Bl} Detected in the method blank. Possible lab contaminant.		

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well

cc Ian Turner, La Crosse Regional Airport

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK21043-002
Description: 2717-FR	Matrix: Aqueous
Date Sampled: 11/16/2020 1505	Project Name: 1901155 LACROSSE WELL 23 &
Date Received: 11/20/2020	Project Number: 40218686

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	12/09/2020 1944	SES	12/07/2020 1226	75710
2	SOP SPE	PFAS by ID SOP	1	12/17/2020 0244	SES	12/15/2020 1330	76544

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		9.0	2.2	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		9.0	2.2	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		9.0	2.2	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		9.0	2.2	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		9.0	2.2	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		9.0	2.2	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		9.0	2.2	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		9.0	2.2	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		9.0	2.2	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		9.0	2.2	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		9.0	2.2	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		18	4.5	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		9.0	2.2	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		9.0	2.2	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	2.3	J	4.5	1.1	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		4.5	1.1	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	1.7	J	4.5	1.1	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		4.5	1.1	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	1.4	J	4.5	1.1	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	1.7	J	4.5	1.1	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		9.0	2.2	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	25		4.5	1.1	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	21	B	4.5	1.1	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		4.5	1.1	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		4.5	1.1	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	22		4.5	1.1	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		9.0	2.2	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	43		4.5	1.1	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	2.1	J	4.5	1.1	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		9.0	2.2	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	95		4.5	1.1	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	36		4.5	1.1	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		4.5	1.1	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		4.5	1.1	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		4.5	1.1	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	20		4.5	1.1	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
13C2_4:2FTS		103	25-150	H	105	25-150
13C2_6:2FTS		109	25-150	H	94	25-150
13C2_8:2FTS		88	25-150	H	88	25-150
13C2_PFDa		82	25-150	H	76	25-150
13C2_PFHxDA		85	25-150	H	79	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK21043-002
Description: 2717-FR	Matrix: Aqueous
Date Sampled: 11/16/2020 1505	Project Name: 1901155 LACROSSE WELL 23 &
Date Received: 11/20/2020	Project Number: 40218686

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
13C2_PFTeDA		83	25-150	H	73	25-150
13C3_PFBs		94	25-150	H	100	25-150
13C3_PFHxS		89	25-150	H	90	25-150
13C3-HFPO-DA		96	25-150	H	98	25-150
13C4_PFBa		101	25-150	H	103	25-150
13C4_PFHpA		100	25-150	H	98	25-150
13C5_PFHxA		97	25-150	H	96	25-150
13C5_PFPeA		100	25-150	H	99	25-150
13C6_PFDA		96	25-150	H	95	25-150
13C7_PFUdA		85	25-150	H	87	25-150
13C8_PFOA		94	25-150	H	100	25-150
13C8_PFOS		85	25-150	H	90	25-150
13C8_PFOsA		98	10-150	H	92	10-150
13C9_PFNA		92	25-150	H	96	25-150
d-EtFOSA		77	10-150	H	78	10-150
d5-EtFOSAA		86	25-150	H	78	25-150
d9-EtFOSE		78	10-150	H	66	10-150
d-MeFOSA		78	10-150	H	77	10-150
d3-MeFOSAA		91	25-150	H	81	25-150
d7-MeFOSE		83	10-150	H	67	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
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PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK21043-002
Description: 2717-FR	Matrix: Aqueous
Date Sampled: 11/16/2020 1505	Project Name: 1901155 LACROSSE WELL 23 &
Date Received: 11/20/2020	Project Number: 40218686

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	12/09/2020 1944	SES	12/07/2020 1226	75710
2	SOP SPE	PFAS by ID SOP	1	12/17/2020 0244	SES	12/15/2020 1330	76544

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND	H	7.7	1.9	ng/L	2
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND	H	7.7	1.9	ng/L	2
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND	H	7.7	1.9	ng/L	2
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND	H	7.7	1.9	ng/L	2
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND	H	7.7	1.9	ng/L	2
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND	H	7.7	1.9	ng/L	2
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND	H	7.7	1.9	ng/L	2
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND	H	7.7	1.9	ng/L	2
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND	H	7.7	1.9	ng/L	2
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND	H	7.7	1.9	ng/L	2
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND	H	7.7	1.9	ng/L	2
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND	H	15	3.9	ng/L	2
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND	H	7.7	1.9	ng/L	2
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND	H	7.7	1.9	ng/L	2
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	2.1	HJ	3.9	0.97	ng/L	2
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND	H	3.9	0.97	ng/L	2
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	1.7	HJ	3.9	0.97	ng/L	2
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND	H	3.9	0.97	ng/L	2
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	1.6	HJ	3.9	0.97	ng/L	2
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	1.6	HJ	3.9	0.97	ng/L	2
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND	H	7.7	1.9	ng/L	2
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	26	H	3.9	0.97	ng/L	2
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	19	H	3.9	0.97	ng/L	2
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND	H	3.9	0.97	ng/L	2
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND	H	3.9	0.97	ng/L	2
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	22	H	3.9	0.97	ng/L	2
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND	H	7.7	1.9	ng/L	2
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	41	H	3.9	0.97	ng/L	2
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	2.2	HJ	3.9	0.97	ng/L	2
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND	H	7.7	1.9	ng/L	2
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	90	H	3.9	0.97	ng/L	2
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	33	H	3.9	0.97	ng/L	2
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND	H	3.9	0.97	ng/L	2
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND	H	3.9	0.97	ng/L	2
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND	H	3.9	0.97	ng/L	2
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	20	H	3.9	0.97	ng/L	2

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
13C2_4:2FTS		103	25-150	H	105	25-150
13C2_6:2FTS		109	25-150	H	94	25-150
13C2_8:2FTS		88	25-150	H	88	25-150
13C2_PFDa		82	25-150	H	76	25-150
13C2_PFHxDA		85	25-150	H	79	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK21043-002
Description: 2717-FR	Matrix: Aqueous
Date Sampled: 11/16/2020 1505	Project Name: 1901155 LACROSSE WELL 23 &
Date Received: 11/20/2020	Project Number: 40218686

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
13C2_PFTeDA		83	25-150	H	73	25-150
13C3_PFBs		94	25-150	H	100	25-150
13C3_PFHxS		89	25-150	H	90	25-150
13C3-HFPO-DA		96	25-150	H	98	25-150
13C4_PFBa		101	25-150	H	103	25-150
13C4_PFHpA		100	25-150	H	98	25-150
13C5_PFHxA		97	25-150	H	96	25-150
13C5_PFPeA		100	25-150	H	99	25-150
13C6_PFDA		96	25-150	H	95	25-150
13C7_PFUdA		85	25-150	H	87	25-150
13C8_PFOA		94	25-150	H	100	25-150
13C8_PFOS		85	25-150	H	90	25-150
13C8_PFOSA		98	10-150	H	92	10-150
13C9_PFNA		92	25-150	H	96	25-150
d-EtFOSA		77	10-150	H	78	10-150
d5-EtFOSAA		86	25-150	H	78	25-150
d9-EtFOSE		78	10-150	H	66	10-150
d-MeFOSA		78	10-150	H	77	10-150
d3-MeFOSAA		91	25-150	H	81	25-150
d7-MeFOSE		83	10-150	H	67	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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444 21st Street South · La Crosse, Wisconsin · 54601

December 17, 2020

██████████
2560 2nd Avenue East
La Crosse, WI 54603

Subject: Private Well Sampling Results
2560 2nd Avenue East, La Crosse, WI 54603
Tax parcel # 4-178-0
Sample ID # 178-0

Dear ██████████:

We have received and reviewed the test results for the sample collected on November 19, 2020 at the above address. Some PFAS compounds were found at levels above the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in your well are called the “Sample Result” in the table below.

Because some of the levels are above the recommended Public Health Standard, the City is offering to provide bottled water delivered to your home for drinking, cooking, and brushing your teeth. The bottled water is being provided by Culligan is bottled in Rothschild, WI from a municipal water system. Culligan’s source water is filtered and treated by carbon filter, reverse osmosis, distillation and other methods before it is bottled. It has been sampled for PFAS, and no PFAS was detected in the sample. There will be no cost to you for the bottled water. Please complete the attached form and mail it to The OS Group to make arrangements for having a water dispenser and bottles delivered to your home. Call 608-668-2718 or email PFAS@theOSgrp.com . You may also complete this form on line at www.cityoflacrosse.org/bottledwater

The following table summarizes the test results from the sample. **Bolded results** are above a current recommended level intended to protect your health according to the Department of Health Services (DHS).

We collected two samples from your well and sent them to two separate labs as a quality control check. These are referred to as “spilt” samples. The results of the two tests were similar. The results of the higher of the two are shown in the table below.

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	19 ppt	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	6.5 ppt	20 ppt ^{a,b}
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	4.8 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	7.9 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	150 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	1.9 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeDA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUdA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a

The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6

1H, 1H, 2H, 2H-perflurooctane sulfonic acid (6:2 FTS) CAS # 27619-97-2	17 ppt	None Established ^c
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS # 2706-91-4	3.8 ppt	None Established ^c
Perfluoro-n-pentanoic acid (PFPeA) CAS #2706-90-3	7.8 ppt	None Established ^c
^a Public health enforcement standard (ES) recommended by DHS. ^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA. ^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation. ^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code. ^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L) ^{Bl} Detected in the method blank. Possible lab contaminant.		

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well
 Bottled Water Acknowledgement

BOTTLED WATER ACKNOWLEDGEMENT

2560 2nd Avenue East, La Crosse, WI 54603

If you desire to accept the bottled water delivery, please complete and sign this form and return it to The OS Group at PFAS@TheOSgrp.com or mail to 444 21st St. S, La Crosse, WI 54601. You may also complete this form electronically on line at www.cityoflacrosse.org/bottledwater . Call 608-668-2718 with any question you may have.

As pre-caution for the protection of human health, the City of La Crosse (The City) will provide, on a temporary basis, bottled water for drinking, cooking and toothbrushing purposes at the above referenced address. The water will be delivered to your home or business by a commercial water delivery service. At the City's cost, a dispenser / cooler and regular deliveries of 5-gallon containers of water will be provided. The City reserves the right to dictate the conditions of delivery, such as minimum and maximum number of containers per delivery, frequency and timing of deliveries. The City reserves the right to periodically review whether The City should continue to provide bottled water, considering factors such as State and Federal standards and guidance, evolving knowledge and understanding of the sources, cause and responsibility for the contamination, new or reinterpreted test results, and the availability of more permanent or cost-effective sources of water for the above purposes. The City of La Crosse makes no warranty or representation regarding the suitability of the bottled water beyond those made by the commercial water delivery service.

All reusable or returnable equipment and supplies, such as the containers and cooler/dispenser, are the property of the commercial water delivery service or the City of La Crosse. By signing below, the Occupant of the above referenced property acknowledges that all reusable or returnable equipment and supplies shall be returned to the commercial water delivery service or the City of La Crosse upon request. The Occupant agrees to provide reasonable access for delivery of bottled water and pick up of reusable or returnable equipment and supplies. Occupant(s) acknowledges that they may be required to sign an agreement with the commercial water delivery service as a condition of receiving bottled water.

Check ownership:

_____ Owner-Occupant

_____ Occupant Only

Number of Occupants: _____

Signed: _____ Dated: _____

Printed Name: _____

Phone Number: (_____) _____

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK21023-001
Description: 178-0	Matrix: Aqueous
Date Sampled: 11/19/2020 1340	Project Name: LACROSSE WELL 23 & 24
Date Received: 11/21/2020	Project Number: 40218781

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	12/10/2020 2116	MMM	12/09/2020 1112	75955

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	17		7.2	1.8	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.6	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	4.8		3.6	0.90	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	3.8		3.6	0.90	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	7.9		3.6	0.90	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	150		3.6	0.90	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	1.9	J	3.6	0.90	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	19		3.6	0.90	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	7.8		3.6	0.90	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.6	0.90	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	6.5		3.6	0.90	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		102	25-150
13C2_6:2FTS		101	25-150
13C2_8:2FTS		104	25-150
13C2_PFDaA		91	25-150
13C2_PFHxDA		92	25-150
13C2_PFTeDA		90	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK21023-001
Description: 178-0	Matrix: Aqueous
Date Sampled: 11/19/2020 1340	Project Name: LACROSSE WELL 23 & 24
Date Received: 11/21/2020	Project Number: 40218781

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		99	25-150
13C3_PFHxS		102	25-150
13C3-HFPO-DA		107	25-150
13C4_PFBa		105	25-150
13C4_PFHpA		105	25-150
13C5_PFHxA		101	25-150
13C5_PFPeA		102	25-150
13C6_PFDa		101	25-150
13C7_PFUdA		96	25-150
13C8_PFOA		103	25-150
13C8_PFOS		94	25-150
13C8_PFOSA		109	10-150
13C9_PFNA		101	25-150
d-EtFOSA		72	10-150
d5-EtFOSAA		99	25-150
d9-EtFOSE		83	10-150
d-MeFOSA		93	10-150
d3-MeFOSAA		101	25-150
d7-MeFOSE		92	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
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ANALYTICAL RESULTS

Project: LACROSSE WELL 23 & 24

Pace Project No.: 40218781

Sample: 178-0 **Lab ID: 40218781001** Collected: 11/19/20 13:40 Received: 11/20/20 09:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
537.1 PFAS Compounds, Water									
Analytical Method: EPA 537.1 Preparation Method: EPA 537.1									
Pace Analytical Services - Ormond Beach									
11CI-PF3OUdS	<0.0015	ug/L	0.0018	0.0015	1	11/28/20 16:15	12/05/20 04:34	763051-92-9	
9CI-PF3ONS	<0.0010	ug/L	0.0018	0.0010	1	11/28/20 16:15	12/05/20 04:34	756426-58-1	
ADONA	<0.00067	ug/L	0.0018	0.00067	1	11/28/20 16:15	12/05/20 04:34	919005-14-4	
HFPO-DA	<0.0015	ug/L	0.0018	0.0015	1	11/28/20 16:15	12/05/20 04:34	13252-13-6	
NEtFOSAA	<0.00086	ug/L	0.0018	0.00086	1	11/28/20 16:15	12/05/20 04:34	2991-50-6	
NMeFOSAA	<0.0014	ug/L	0.0018	0.0014	1	11/28/20 16:15	12/05/20 04:34	2355-31-9	
Perfluorobutanesulfonic acid	0.0033	ug/L	0.0018	0.00061	1	11/28/20 16:15	12/05/20 04:34	375-73-5	
Perfluorodecanoic acid	<0.0018	ug/L	0.0018	0.0018	1	11/28/20 16:15	12/05/20 04:34	335-76-2	
Perfluorohexanoic acid	0.0018	ug/L	0.0018	0.0012	1	11/28/20 16:15	12/05/20 04:34	307-24-4	
Perfluorododecanoic acid	<0.0013	ug/L	0.0018	0.0013	1	11/28/20 16:15	12/05/20 04:34	307-55-1	
Perfluoroheptanoic acid	<0.00093	ug/L	0.0018	0.00093	1	11/28/20 16:15	12/05/20 04:34	375-85-9	
Perfluorohexanesulfonic acid	0.0054	ug/L	0.0018	0.00068	1	11/28/20 16:15	12/05/20 04:34	355-46-4	
Perfluorononanoic acid	<0.0018	ug/L	0.0018	0.0018	1	11/28/20 16:15	12/05/20 04:34	375-95-1	
Perfluorooctanesulfonic acid	0.0046	ug/L	0.0018	0.0011	1	11/28/20 16:15	12/05/20 04:34	1763-23-1	
Perfluorooctanoic acid	0.013	ug/L	0.0018	0.00081	1	11/28/20 16:15	12/05/20 04:34	335-67-1	
Perfluorotetradecanoic acid	<0.0017	ug/L	0.0018	0.0017	1	11/28/20 16:15	12/05/20 04:34	376-06-7	
Perfluorotridecanoic acid	<0.0016	ug/L	0.0018	0.0016	1	11/28/20 16:15	12/05/20 04:34	72629-94-8	
Perfluoroundecanoic acid	<0.0018	ug/L	0.0018	0.0018	1	11/28/20 16:15	12/05/20 04:34	2058-94-8	
Surrogates									
13C2-PFDA (S)	130	%	70-130		1	11/28/20 16:15	12/05/20 04:34		
13C2-PFHxA (S)	130	%	70-130		1	11/28/20 16:15	12/05/20 04:34		
NEtFOSAA-d5 (S)	114	%	70-130		1	11/28/20 16:15	12/05/20 04:34		
HFPO-DAS (S)	92	%	70-130		1	11/28/20 16:15	12/05/20 04:34		

REPORT OF LABORATORY ANALYSIS

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BOTTLED WATER ACKNOWLEDGEMENT

2560 2nd Avenue East, La Crosse, WI 54603

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Check ownership:

_____ Owner-Occupant

_____ Occupant Only

Number of Occupants: _____

Signed: _____ Dated: _____

Printed Name: _____

Phone Number: (_____) _____



444 21st Street South · La Crosse, Wisconsin · 54601

December 4, 2020

████████████████████
 3053 Lakota Place
 LA Crosse, WI 54601

Subject: Private Well Sampling Results
 1820 Bainbridge St., La Crosse, WI 54603
 Tax parcel # 4-623-0
 Sample ID # 623-0

Dear ██████████:

We have received and reviewed the test results for the sample collected on November 19, 2020 at the above address. Some PFAS compounds were found, but the levels found were **below** the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in *your* well are called the “Sample Result” in the table below. The detections in your well were very low.

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)	
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}	The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}	
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}	
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}	
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	Not Detected	20 ppt ^{a,b}	
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	Not Detected	20 ppt ^{a,b}	

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	Not Detected	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	1.5 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	1.8 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	Not Detected	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a

^a Public health enforcement standard (ES) recommended by DHS.
^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA.
^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation.
^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code.
^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L)
^{bl} Detected in the method blank. Possible lab contaminant.

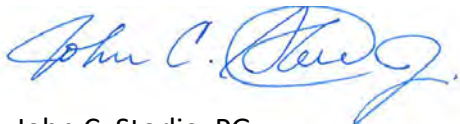
As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call me or email.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

The OS Group, LLC



John C. Storlie, PG
Principal Hydrogeologist

John.storlie@theosgrp.com

Direct: 608-433-9389

Attachment: Lab report for your well

December 04, 2020

Steve Osesek
The OS Group, LLC
N6746 McCurdy Road
Holmen, WI 54636

RE: Project: LACROSSE WELL 23 & 24
Pace Project No.: 40218779

Dear Steve Osesek:

Enclosed are the analytical results for sample(s) received by the laboratory on November 20, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Christopher Hyska
christopher.hyska@pacelabs.com
(920)469-2436
Project Manager

Enclosures

cc: John Storlie, The OS Group, LLC



REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: LACROSSE WELL 23 & 24

Pace Project No.: 40218779

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40218779001	623-0	Water	11/19/20 13:20	11/20/20 09:15

REPORT OF LABORATORY ANALYSIS

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Sample Preservation Receipt Form

Client Name: The OSGroup LLC

Project # 4028779

All containers needing preservation have been checked and noted below: Yes No N/A

Initial when completed:

Date/Time:

Lab Lot# of pH paper:

Lab Std #ID of preservation (if pH adjusted):

Pace Lab #	Glass							Plastic					Vials					Jars				General			VOA Vials (>6mm) *	H2SO4 pH s2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH s2	pH after adjusted	Volume (mL)										
	AG1U	BG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	BP1U	BP3U	BP3B	BP3N	BP3S	VG9A	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	JG9U	WGFU	WPFU	SP5T								ZPLC	GN								
001																																									2.5 / 5 / 10
002																																									2.5 / 5 / 10
003																																									2.5 / 5 / 10
004																																									2.5 / 5 / 10
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015																																									2.5 / 5 / 10
016																																									2.5 / 5 / 10
017																																									2.5 / 5 / 10
018																																									2.5 / 5 / 10
019																																									2.5 / 5 / 10
020																																									2.5 / 5 / 10

Handwritten notes:
 MR
 11-20-20

Exceptions to preservation check: VOA, Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other: _____ Headspace in VOA Vials (>6mm) : Yes No N/A *If yes look in headspace column

AG1U	1 liter amber glass	BP1U	1 liter plastic unpres	VG9A	40 mL clear ascorbic	JGFU	4 oz amber jar unpres
BG1U	1 liter clear glass	BP3U	250 mL plastic unpres	DG9T	40 mL amber Na Thio	JG9U	9 oz amber jar unpres
AG1H	1 liter amber glass HCL	BP3B	250 mL plastic NaOH	VG9U	40 mL clear vial unpres	WGFU	4 oz clear jar unpres
AG4S	125 mL amber glass H2SO4	BP3N	250 mL plastic HNO3	VG9H	40 mL clear vial HCL	WPFU	4 oz plastic jar unpres
AG4U	120 mL amber glass unpres	BP3S	250 mL plastic H2SO4	VG9M	40 mL clear vial MeOH	SP5T	120 mL plastic Na Thiosulfate
AG5U	100 mL amber glass unpres			VG9D	40 mL clear vial DI	ZPLC	ziploc bag
AG2S	500 mL amber glass H2SO4					GN	
BG3U	250 mL clear glass unpres						

Sample Condition Upon Receipt Form (SCUR)

Project #:

WO# : 40218779



Client Name: The CS Group LLC

Courier: CS Logistics Fed Ex Speedee UPS Walto
 Client Pace Other: _____

Tracking #: 3991 4734 7034

Custody Seal on Cooler/Box Present: yes no Seals intact: yes no

Custody Seal on Samples Present: yes no Seals intact: yes no

Packing Material: Bubble Wrap Bubble Bags None Other

Thermometer Used SR - n/a Type of Ice: Wet Blue Dry None Samples on ice, cooling process has begun

Cooler Temperature Uncorr: 602 / Corr: _____

Temp Blank Present: yes no Biological Tissue is Frozen: yes no

Temp should be above freezing to 6°C.

Biota Samples may be received at ≤ 0°C if shipped on Dry Ice.

Person examining contents:
 Date: 11-20-20 / Initials: MLR
 Labeled By Initials: ML

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	2. <u>pg#, proj. #</u>
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time:
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
Rush Turn Around Time Requested:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	7. <u>Rush per PM</u>
Sufficient Volume:		8.
For Analysis: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No MS/MSD: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
-Pace Containers Used:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
-Pace IR Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>WT</u>		
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: _____ If checked, see attached form for additional comments
 Person Contacted: _____ Date/Time: _____
 Comments/ Resolution: _____



Report of Analysis

Pace Analytical Services, LLC
1241 Bellevue Street
Suite 9
Green Bay, WI 54302
Attention: Christopher Hyska

Project Name: LACROSSE WELL 23 & 24

Project Number: 40218779

Lot Number: **VK21022**

Date Completed: 12/04/2020

Karen Coonan

12/04/2020 1:41 PM

Approved and released by:
Project Manager II: **Karen L. Coonan**



The electronic signature above is the equivalent of a handwritten signature.
This report shall not be reproduced, except in its entirety, without the written approval of Pace Analytical Services, LLC.

PACE ANALYTICAL SERVICES, LLC

SC DHEC No: 32010001

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

Case Narrative Pace Analytical Services, LLC Lot Number: VK21022

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved The NELAC Institute (TNI) standards, the Pace Analytical Services, LLC ("Pace") Laboratory Quality Manual, standard operating procedures (SOPs), and Pace policies. Any exceptions to the TNI standards, the Laboratory Quality Manual, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Pace Project Manager listed on the cover page.

PACE ANALYTICAL SERVICES, LLC

Sample Summary

Pace Analytical Services, LLC

Lot Number: VK21022

Project Name: LACROSSE WELL 23 & 24

Project Number: 40218779

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	623-0	Aqueous	11/19/2020 1320	11/21/2020

(1 sample)

PACE ANALYTICAL SERVICES, LLC

Detection Summary
Pace Analytical Services, LLC
Lot Number: VK21022
Project Name: LACROSSE WELL 23 & 24
Project Number: 40218779

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	623-0	Aqueous	PFHxS	PFAS by ID	1.5	J	ng/L	5
001	623-0	Aqueous	PFBA	PFAS by ID	1.8	J	ng/L	5

(2 detections)

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK21022-001
Description: 623-0	Matrix: Aqueous
Date Sampled: 11/19/2020 1320	Project Name: LACROSSE WELL 23 & 24
Date Received: 11/21/2020	Project Number: 40218779

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	12/03/2020 0143	MMM	12/01/2020 1245	75114

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.5	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
Perfluoro-1-butanefluoro-1-sulfonic acid (PFBS)	375-73-5	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	1.5	J	3.5	0.87	ng/L	1
Perfluoro-n-butyric acid (PFBA)	375-22-4	PFAS by ID SOP	1.8	J	3.5	0.87	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	ND		3.5	0.87	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		148	25-150
13C2_6:2FTS		136	25-150
13C2_8:2FTS		121	25-150
13C2_PFDaA		127	25-150
13C2_PFHxDA		119	25-150
13C2_PFTeDA		134	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VK21022-001
Description: 623-0	Matrix: Aqueous
Date Sampled: 11/19/2020 1320	Project Name: LACROSSE WELL 23 & 24
Date Received: 11/21/2020	Project Number: 40218779

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		127	25-150
13C3_PFHxS		129	25-150
13C3-HFPO-DA		133	25-150
13C4_PFBa		139	25-150
13C4_PFHpA		135	25-150
13C5_PFHxA		132	25-150
13C5_PFPeA		137	25-150
13C6_PFDa		139	25-150
13C7_PFUdA		136	25-150
13C8_PFOA		142	25-150
13C8_PFOS		134	25-150
13C8_PFOSA		138	10-150
13C9_PFNA		139	25-150
d-EtFOSA		120	10-150
d5-EtFOSAA		129	25-150
d9-EtFOSE		113	10-150
d-MeFOSA		111	10-150
d3-MeFOSAA		125	25-150
d7-MeFOSE		117	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

QC Summary

PFAS by LC/MS/MS - MB

Sample ID: VQ75114-001

Matrix: Aqueous

Batch: 75114

Prep Method: SOP SPE

Analytical Method: PFAS by ID SOP

Prep Date: 12/01/2020 1245

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
9CI-PF3ONS	ND		1	8.0	2.0	ng/L	12/02/2020 2045
11CI-PF3OUdS	ND		1	8.0	2.0	ng/L	12/02/2020 2045
8:2 FTS	ND		1	8.0	2.0	ng/L	12/02/2020 2045
6:2 FTS	ND		1	8.0	2.0	ng/L	12/02/2020 2045
10:2 FTS	ND		1	8.0	2.0	ng/L	12/02/2020 2045
4:2 FTS	ND		1	8.0	2.0	ng/L	12/02/2020 2045
GenX	ND		1	8.0	2.0	ng/L	12/02/2020 2045
ADONA	ND		1	8.0	2.0	ng/L	12/02/2020 2045
EtFOSA	ND		1	8.0	2.0	ng/L	12/02/2020 2045
EtFOSAA	ND		1	8.0	2.0	ng/L	12/02/2020 2045
EtFOSE	ND		1	8.0	2.0	ng/L	12/02/2020 2045
MeFOSA	ND		1	16	4.0	ng/L	12/02/2020 2045
MeFOSAA	ND		1	8.0	2.0	ng/L	12/02/2020 2045
MeFOSE	ND		1	8.0	2.0	ng/L	12/02/2020 2045
PFBS	ND		1	4.0	1.0	ng/L	12/02/2020 2045
PFDS	ND		1	4.0	1.0	ng/L	12/02/2020 2045
PFHpS	ND		1	4.0	1.0	ng/L	12/02/2020 2045
PFNS	ND		1	4.0	1.0	ng/L	12/02/2020 2045
PFOSA	ND		1	4.0	1.0	ng/L	12/02/2020 2045
PFPeS	ND		1	4.0	1.0	ng/L	12/02/2020 2045
PFDOS	ND		1	8.0	2.0	ng/L	12/02/2020 2045
PFHxS	ND		1	4.0	1.0	ng/L	12/02/2020 2045
PFBA	ND		1	4.0	1.0	ng/L	12/02/2020 2045
PFDA	ND		1	4.0	1.0	ng/L	12/02/2020 2045
PFDoA	ND		1	4.0	1.0	ng/L	12/02/2020 2045
PFHpA	ND		1	4.0	1.0	ng/L	12/02/2020 2045
PFHxDA	ND		1	8.0	2.0	ng/L	12/02/2020 2045
PFHxA	ND		1	4.0	1.0	ng/L	12/02/2020 2045
PFNA	ND		1	4.0	1.0	ng/L	12/02/2020 2045
PFODA	ND		1	8.0	2.0	ng/L	12/02/2020 2045
PFOA	ND		1	4.0	1.0	ng/L	12/02/2020 2045
PFPeA	ND		1	4.0	1.0	ng/L	12/02/2020 2045
PFTeDA	ND		1	4.0	1.0	ng/L	12/02/2020 2045
PFTTrDA	ND		1	4.0	1.0	ng/L	12/02/2020 2045
PFUdA	ND		1	4.0	1.0	ng/L	12/02/2020 2045
PFOS	ND		1	4.0	1.0	ng/L	12/02/2020 2045

Surrogate	Q	% Rec	Acceptance Limit
13C2_4:2FTS		103	25-150
13C2_6:2FTS		113	25-150
13C2_8:2FTS		98	25-150
13C2_PFDoA		119	25-150
13C2_PFHxDA		106	25-150

LOQ = Limit of Quantitation

ND = Not detected at or above the DL

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

P = The RPD between two GC columns exceeds 40%

* = RSD is out of criteria

+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

PFAS by LC/MS/MS - MB

Sample ID: VQ75114-001

Matrix: Aqueous

Batch: 75114

Prep Method: SOP SPE

Analytical Method: PFAS by ID SOP

Prep Date: 12/01/2020 1245

Surrogate	Q	% Rec	Acceptance Limit
13C2_PFTeDA		113	25-150
13C3_PFBs		102	25-150
13C3_PFHxS		107	25-150
13C3-HFPO-DA		99	25-150
13C4_PFBa		104	25-150
13C4_PFHpA		109	25-150
13C5_PFHxA		107	25-150
13C5_PFPeA		109	25-150
13C6_PFDa		103	25-150
13C7_PFUdA		108	25-150
13C8_PFOA		116	25-150
13C8_PFOs		101	25-150
13C8_PFOsA		89	10-150
13C9_PFNA		103	25-150
d-EtFOsA		81	10-150
d5-EtFOsAA		107	25-150
d9-EtFOsE		96	10-150
d-MeFOsA		82	10-150
d3-MeFOsAA		101	25-150
d7-MeFOsE		94	10-150

LOQ = Limit of Quantitation

ND = Not detected at or above the DL

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

P = The RPD between two GC columns exceeds 40%

* = RSD is out of criteria

+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

PFAS by LC/MS/MS - LCS

Sample ID: VQ75114-002

Matrix: Aqueous

Batch: 75114

Prep Method: SOP SPE

Analytical Method: PFAS by ID SOP

Prep Date: 12/01/2020 1245

Parameter	Spike Amount (ng/L)	Result (ng/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
9CI-PF3ONS	15	17		1	114	50-150	12/02/2020 2056
11CI-PF3OUdS	15	17		1	113	50-150	12/02/2020 2056
8:2 FTS	15	18		1	115	50-150	12/02/2020 2056
6:2 FTS	15	18		1	116	50-150	12/02/2020 2056
10:2 FTS	15	15		1	94	50-150	12/02/2020 2056
4:2 FTS	15	16		1	105	50-150	12/02/2020 2056
GenX	32	35		1	110	50-150	12/02/2020 2056
ADONA	15	18		1	118	50-150	12/02/2020 2056
EtFOSA	16	14		1	89	50-150	12/02/2020 2056
EtFOSAA	16	17		1	107	50-150	12/02/2020 2056
EtFOSE	16	21		1	129	50-150	12/02/2020 2056
MeFOSA	16	19		1	121	50-150	12/02/2020 2056
MeFOSAA	16	20		1	124	50-150	12/02/2020 2056
MeFOSE	16	17		1	105	50-150	12/02/2020 2056
PFBS	14	17		1	117	50-150	12/02/2020 2056
PFDS	15	19		1	125	50-150	12/02/2020 2056
PFHpS	15	17		1	112	50-150	12/02/2020 2056
PFNS	15	17		1	110	50-150	12/02/2020 2056
PFOSA	16	18		1	114	50-150	12/02/2020 2056
PFPeS	15	17		1	112	50-150	12/02/2020 2056
PFDOS	15	17		1	110	50-150	12/02/2020 2056
PFHxS	15	15		1	103	50-150	12/02/2020 2056
PFBA	16	18		1	114	50-150	12/02/2020 2056
PFDA	16	18		1	113	50-150	12/02/2020 2056
PFDoA	16	18		1	112	50-150	12/02/2020 2056
PFHpA	16	18		1	110	50-150	12/02/2020 2056
PFHxDA	16	17		1	107	50-150	12/02/2020 2056
PFHxA	16	18		1	112	50-150	12/02/2020 2056
PFNA	16	18		1	110	50-150	12/02/2020 2056
PFODA	16	20		1	128	50-150	12/02/2020 2056
PFOA	16	17		1	107	50-150	12/02/2020 2056
PFPeA	16	18		1	111	50-150	12/02/2020 2056
PFTeDA	16	19		1	117	50-150	12/02/2020 2056
PFTTrDA	16	16		1	102	50-150	12/02/2020 2056
PFUdA	16	16		1	100	50-150	12/02/2020 2056
PFOS	15	17		1	113	50-150	12/02/2020 2056
Surrogate	Q	% Rec	Acceptance Limit				
13C2_4:2FTS		98	25-150				
13C2_6:2FTS		105	25-150				
13C2_8:2FTS		87	25-150				
13C2_PFDoA		109	25-150				
13C2_PFHxDA		98	25-150				

LOQ = Limit of Quantitation

ND = Not detected at or above the DL

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

P = The RPD between two GC columns exceeds 40%

* = RSD is out of criteria

+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

PFAS by LC/MS/MS - LCS

Sample ID: VQ75114-002

Matrix: Aqueous

Batch: 75114

Prep Method: SOP SPE

Analytical Method: PFAS by ID SOP

Prep Date: 12/01/2020 1245

Surrogate	Q	% Rec	Acceptance Limit
13C2_PFTeDA		102	25-150
13C3_PFBs		91	25-150
13C3_PFHxS		97	25-150
13C3-HFPO-DA		95	25-150
13C4_PFBa		98	25-150
13C4_PFHpA		104	25-150
13C5_PFHxA		96	25-150
13C5_PFPeA		99	25-150
13C6_PFDa		91	25-150
13C7_PFUdA		107	25-150
13C8_PFOA		108	25-150
13C8_PFOs		89	25-150
13C8_PFOsA		87	10-150
13C9_PFNa		98	25-150
d-EtFOsA		82	10-150
d5-EtFOsAA		102	25-150
d9-EtFOsE		84	10-150
d-MeFOsA		67	10-150
d3-MeFOsAA		93	25-150
d7-MeFOsE		88	10-150

LOQ = Limit of Quantitation

ND = Not detected at or above the DL

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

P = The RPD between two GC columns exceeds 40%

* = RSD is out of criteria

+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Chain of Custody
and
Miscellaneous Documents

(Please Print Clearly)

Company Name: The OS Group LLC
 Branch/Location: LaCrosse WI
 Project Contact: Steven Osesek
 Phone: 608-433-9388
 Project Number:
 Project Name: LaCrosse Well 23+24
 Project State: WI
 Sampled By (Print): Kristie L Tweed
 Sampled By (Sign): Kristie L Tweed
 PO #:



UPPER MIDWEST REGION
 MN: 612-607-1700 WI: 920-469-2438

Page of

COC No. 40248779

CHAIN OF CUSTODY

*Preservation Codes
 A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Michael G=NaOH
 H=Sodium Sulfate Solution I=Sodium Thiosulfate J=Other

UNLINED?
 (YES/NO)
 PRESERVATION
 (CODE)

YTN	Pick Letter	Analyses Requested
N	A	PFAS W136
		X

Quote #:
 Mail To Contact: Steven Osesek
 Mail To Company: The OS Group LLC
 Mail To Address: 444 21st St S
 LaCrosse, WI 54601
 Invoice To Contact: Steven Osesek
 Invoice To Company: The OS Group LLC
 Invoice To Address: 444 21st St S
 LaCrosse, WI 54601
 Invoice To Phone: 608-433-9388
 CLIENT COMMENTS
 LAB COMMENTS (Lab Use Only)
 Profile #

Data Package Options (billable)
 EPA Level III
 EPA Level IV
 MS/MSD
 On your sample (billable)
 NOT needed on your sample
 Matrix Codes
 A = Air W = Water
 B = Biore DW = Drinking Water
 C = Charcoal GW = Ground Water
 D = Oil SW = Surface Water
 S = Soil WW = Waste Water
 Sl = Sludge W* = Wipe

PACE LAB #	CLIENT FIELD ID	COLLECTION		MATRIX	Analyses Requested
		DATE	TIME		
001	603-0	11-19-20	1:20	DW	X


Rush Turnaround Time Requested - Prelims (Rush TAT subject to approval/surcharge)
 Date Needed: 12/1/20
 Transmitted By: Kristie L Tweed Date/Time: 11-19-20 2:00
 Received By: [Signature] Date/Time: 11-20-20 09:15
 Date Needed: 12/1/20
 Transmitted By: FedEx Express Date/Time: 11-20-20 09:15
 Received By: [Signature] Date/Time: 11-20-20 09:15
 PACE Project No. 40248779
 Receipt Temp = ROT °C
 Sample Receipt pH CK / Adjusted
 Cooler Custody Seal Present / Not Present Intact / Not Intact

PACE ANALYTICAL SERVICES, LLC

PACE ANALYTICAL SERVICES, LLC

 1241 Bellevue Street, Green Bay, WI 54302	Document Name: Sample Condition Upon Receipt (SCUR)	Document Revised: 26Mar2020
	Document No.: ENV-FRM-GBAY-0014-Rev.00	Author: Pace Green Bay Quality Office

Sample Condition Upon Receipt Form (SCUR)

Client Name: The CS Group LLC Project #:
WO#: 40218779

 40218779

Courier: CS Logistics Fed Ex Speedee UPS Walico
 Client Pace Other: _____

Tracking #: 3991 4734 7034

Custody Seal on Cooler/Box Present: yes no Seals intact: yes no
 Custody Seal on Samples Present: yes no Seals intact: yes no
 Packing Material: Bubble Wrap Bubble Bags None Other
 Thermometer Used SR - N/A Type of ice: Blue Dry None Samples on ice, cooling process has begun
 Cooler Temperature Uncorr: 6.02 / Corr: _____

Temp Blank Present: yes no Biological Tissue is Frozen: yes no
 Temp should be above freezing to 5°C. Biota Samples may be received at ≤ 0°C if shipped on Dry Ice.

Person examining contents:	Date: <u>11-20-20</u> / Initials: <u>MLR</u>
Labeled By Initials: _____	

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	2. <u>pg #, pty #</u> <u>MLR 11-20-20</u>
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time: _____
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
Rush Turn Around Time Requested:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	7. <u>Rush per PM</u> <u>MLR 11-20-20</u>
Sufficient Volume:	8.	
For Analysis: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No MS/MSD: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
- Pace Containers Used:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
- Pace IR Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
- Includes date/time/ID/Analysis Matrix: <u>WT</u>		
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: _____ If checked, see attached form for additional comments
 Person Contacted: _____ Date/Time: _____
 Comments/ Resolution: _____

PM Review is documented electronically in LIMS. By releasing the project, the PM acknowledges they have reviewed the sample logi



Samples Receipt Checklist (SRC) (ME0018C-15)
Issuing Authority: Pace ENV - WCOL

Revised: 9/29/2020
Page 1 of 1

Sample Receipt Checklist (SRC)

Client: Pace

Cooler Inspected by/date: AHD / 11/21/2020

Lot #: VK21023

Means of receipt: <input type="checkbox"/> Pace <input type="checkbox"/> Client <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> Other: _____	
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	1. Were custody seals present on the cooler?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	2. If custody seals were present, were they intact and unbroken?
pH Strip ID: NA Chlorine Strip ID: NA Tested by: NA	
Original temperature upon receipt / Derived (Corrected) temperature upon receipt %Solid Snap-Cup ID: NA	
2.5 / 2.5 °C NA / NA °C NA / NA °C NA / NA °C	
Method: <input checked="" type="checkbox"/> Temperature Blank <input type="checkbox"/> Against Bottles IR Gun ID: 6 IR Gun Correction Factor: 0 °C	
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Ice Packs <input type="checkbox"/> Dry Ice <input type="checkbox"/> None	
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	3. If temperature of any cooler exceeded 6.0°C, was Project Manager Notified? PM was Notified by: phone / email / face-to-face (circle one).
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	4. Is the commercial courier's packing slip attached to this form?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5. Were proper custody procedures (relinquished/received) followed?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	6. Were sample IDs listed on the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	7. Were sample IDs listed on all sample containers?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	8. Was collection date & time listed on the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9. Was collection date & time listed on all sample containers?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10. Did all container label information (ID, date, time) agree with the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	11. Were tests to be performed listed on the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	13. Was adequate sample volume available?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	14. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	15. Were any samples containers missing/excess (circle one) samples Not listed on COC?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	16. For VOA and RSK-175 samples, were bubbles present >"pea-size" (¼" or 6mm in diameter) in any of the VOA vials?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	17. Were all DRO/metals/nutrient samples received at a pH of < 7?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	18. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	19. Were all applicable NH ₃ /TKN/cyanide/phenol/625.1/608.3 (< 0.5mg/L) samples free of residual chlorine?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	20. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	21. Was the quote number listed on the container label? If yes, Quote # _____
Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)	
Sample(s) NA were received incorrectly preserved and were adjusted accordingly in sample receiving with NA mL of circle one: H ₂ SO ₄ , HNO ₃ , HCl, NaOH using SR # NA	
Time of preservation NA. If more than one preservative is needed, please note in the comments below.	
Sample(s) NA were received with bubbles >6 mm in diameter.	
Sample(s) NA were received with TRC > 0.5 mg/L (If #19 is no) and were adjusted accordingly in sample receiving with sodium thiosulfate (Na ₂ S ₂ O ₃) with Shealy ID: NA	
SR barcode labels applied by: AHD Date: 11/21/2020	

Comments:



444 21st Street South · La Crosse, Wisconsin · 54601

December 23, 2020

[REDACTED]
2559 Bainbridge Street
La Crosse, WI 54603

Subject: Private Well Sampling Results
2559 Bainbridge Street, La Crosse, WI 54603
Tax parcel # 4-342-0
Sample ID # 342-0

Dear [REDACTED]:

We have received and reviewed the test results for the sample collected on November 24, 2020 at the above address. Some PFAS compounds were found at levels above the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in your well are called the “Sample Result” in the table below.

Because some of the levels are above the recommended Public Health Standard, the City is offering to provide bottled water delivered to your home for drinking, cooking, and brushing your teeth. The bottled water is being provided by Culligan is bottled in Rothschild, WI from a municipal water system. Culligan’s source water is filtered and treated by carbon filter, reverse osmosis, distillation and other methods before it is bottled. It has been sampled for PFAS, and no PFAS was detected in the sample. There will be no cost to you for the bottled water. Please complete the attached form and mail it to The OS Group to make arrangements for having a water dispenser and bottles delivered to your home. You may also complete this form on line at www.cityoflacrosse.org/bottledwater . Call 608-668-2718 or email PFAS@theOSgrp.com with any questions.

The following table summarizes the test results from the sample. **Bolded results** are above a current recommended level intended to protect your health according to the Department of Health Services (DHS).

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	22 ppt	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	930 ppt	20 ppt ^{a,b}
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	19 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	460 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	63 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	17 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeDA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUdA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a

The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6

Perfluoro-1-heptanesulfonic acid (PFHpS) CAS # 375-92-8	32 ppt	None Established ^c
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS # 2706-91-4	37 ppt	None Established ^c
Perfluoro-n-heptanoic acid (PFHpA) CAS # 375-85-9	1.7 ppt	None Established ^c
Perfluoro-n-pentanoic acid (PFPeA) CAS #2706-90-3	5.7 ppt	None Established ^c
^a Public health enforcement standard (ES) recommended by DHS. ^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA. ^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation. ^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code. ^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L) ^{Bl} Detected in the method blank. Possible lab contaminant.		

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>	<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well
 Bottled Water Acknowledgement

BOTTLED WATER ACKNOWLEDGEMENT

2559 Bainbridge Street, La Crosse, WI 54603

If you desire to accept the bottled water delivery, please complete and sign this form and return it to The OS Group at PFAS@TheOSgrp.com or mail to 444 21st St. S, La Crosse, WI 54601. You may also complete this form electronically on line at www.cityoflacrosse.org/bottledwater . Call 608-668-2718 with any question you may have.

As pre-caution for the protection of human health, the City of La Crosse (The City) will provide, on a temporary basis, bottled water for drinking, cooking and toothbrushing purposes at the above referenced address. The water will be delivered to your home or business by a commercial water delivery service. At the City's cost, a dispenser / cooler and regular deliveries of 5-gallon containers of water will be provided. The City reserves the right to dictate the conditions of delivery, such as minimum and maximum number of containers per delivery, frequency and timing of deliveries. The City reserves the right to periodically review whether The City should continue to provide bottled water, considering factors such as State and Federal standards and guidance, evolving knowledge and understanding of the sources, cause and responsibility for the contamination, new or reinterpreted test results, and the availability of more permanent or cost-effective sources of water for the above purposes. The City of La Crosse makes no warranty or representation regarding the suitability of the bottled water beyond those made by the commercial water delivery service.

All reusable or returnable equipment and supplies, such as the containers and cooler/dispenser, are the property of the commercial water delivery service or the City of La Crosse. By signing below, the Occupant of the above referenced property acknowledges that all reusable or returnable equipment and supplies shall be returned to the commercial water delivery service or the City of La Crosse upon request. The Occupant agrees to provide reasonable access for delivery of bottled water and pick up of reusable or returnable equipment and supplies. Occupant(s) acknowledges that they may be required to sign an agreement with the commercial water delivery service as a condition of receiving bottled water.

Check ownership:

_____ Owner-Occupant

_____ Occupant Only

Number of Occupants: _____

Signed: _____ Dated: _____

Printed Name: _____

Phone Number: (_____) _____

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VL01023-001
Description: 342-0	Matrix: Aqueous
Date Sampled: 11/24/2020 1500	Project Name: 1901155 LACROSSE WELL 23 &
Date Received: 12/01/2020	Project Number: 40219007

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	12/10/2020 2252	MMM	12/09/2020 1129	75956
2	SOP SPE	PFAS by ID SOP	5	12/13/2020 1233	MMM	12/09/2020 1129	75956

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		15	3.8	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	19		3.8	0.94	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.8	0.94	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	32		3.8	0.94	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.8	0.94	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.8	0.94	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	37		3.8	0.94	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	460		3.8	0.94	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	63		3.8	0.94	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.8	0.94	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.8	0.94	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	1.7	J	3.8	0.94	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	17		3.8	0.94	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.8	0.94	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	22		3.8	0.94	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	5.7		3.8	0.94	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.8	0.94	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.8	0.94	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.8	0.94	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	930		19	4.7	ng/L	2

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
13C2_4:2FTS		118	25-150		95	25-150
13C2_6:2FTS		101	25-150		106	25-150
13C2_8:2FTS		99	25-150		105	25-150
13C2_PFDa		95	25-150		105	25-150
13C2_PFHxDA		87	25-150		101	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VL01023-001
Description: 342-0	Matrix: Aqueous
Date Sampled: 11/24/2020 1500	Project Name: 1901155 LACROSSE WELL 23 &
Date Received: 12/01/2020	Project Number: 40219007

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
13C2_PFTeDA		87	25-150		104	25-150
13C3_PFBS		95	25-150		107	25-150
13C3_PFHxS		98	25-150		100	25-150
13C3-HFPO-DA		102	25-150		103	25-150
13C4_PFBA		102	25-150		107	25-150
13C4_PFHpA		96	25-150		103	25-150
13C5_PFHxA		96	25-150		106	25-150
13C5_PFPeA		97	25-150		107	25-150
13C6_PFDA		93	25-150		99	25-150
13C7_PFUdA		93	25-150		110	25-150
13C8_PFOA		90	25-150		104	25-150
13C8_PFOS		91	25-150		110	25-150
13C8_PFOSA		96	10-150		103	10-150
13C9_PFNA		93	25-150		108	25-150
d-EtFOSA		76	10-150		93	10-150
d5-EtFOSAA		91	25-150		107	25-150
d9-EtFOSE		73	10-150		98	10-150
d-MeFOSA		84	10-150		112	10-150
d3-MeFOSAA		98	25-150		104	25-150
d7-MeFOSE		78	10-150		99	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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BOTTLED WATER ACKNOWLEDGEMENT

2559 Bainbridge Street, La Crosse, WI 54603

If you desire to accept the bottled water delivery, please complete and sign this form and return it to The OS Group at PFAS@TheOSgrp.com or mail to 444 21st St. S, La Crosse, WI 54601. You may also complete this form electronically on line at www.cityoflacrosse.org/bottledwater . Call 608-668-2718 with any question you may have.

As pre-caution for the protection of human health, the City of La Crosse (The City) will provide, on a temporary basis, bottled water for drinking, cooking and toothbrushing purposes at the above referenced address. The water will be delivered to your home or business by a commercial water delivery service. At the City's cost, a dispenser / cooler and regular deliveries of 5-gallon containers of water will be provided. The City reserves the right to dictate the conditions of delivery, such as minimum and maximum number of containers per delivery, frequency and timing of deliveries. The City reserves the right to periodically review whether The City should continue to provide bottled water, considering factors such as State and Federal standards and guidance, evolving knowledge and understanding of the sources, cause and responsibility for the contamination, new or reinterpreted test results, and the availability of more permanent or cost-effective sources of water for the above purposes. The City of La Crosse makes no warranty or representation regarding the suitability of the bottled water beyond those made by the commercial water delivery service.

All reusable or returnable equipment and supplies, such as the containers and cooler/dispenser, are the property of the commercial water delivery service or the City of La Crosse. By signing below, the Occupant of the above referenced property acknowledges that all reusable or returnable equipment and supplies shall be returned to the commercial water delivery service or the City of La Crosse upon request. The Occupant agrees to provide reasonable access for delivery of bottled water and pick up of reusable or returnable equipment and supplies. Occupant(s) acknowledges that they may be required to sign an agreement with the commercial water delivery service as a condition of receiving bottled water.

Check ownership:

_____ Owner-Occupant

_____ Occupant Only

Number of Occupants: _____

Signed: _____ Dated: _____

Printed Name: _____

Phone Number: (_____) _____



444 21st Street South · La Crosse, Wisconsin · 54601

December 30, 2020

██████████
2508 2nd Avenue East
La Crosse, WI 54603

Subject: Private Well Sampling Results
2508 2nd Avenue East, La Crosse, WI 54603
Tax parcel # 4-189-0
Sample ID # 189-0

Dear ██████████:

We have received and reviewed the test results for the sample collected on December 2, 2020 at the above address. Some PFAS compounds were found at levels above the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the "Recommended Public Health Standard" in the table below. The levels found in your well are called the "Sample Result" in the table below.

Because some of the levels are above the recommended Public Health Standard, the City is offering to provide bottled water delivered to your home for drinking, cooking, and brushing your teeth. The bottled water is being provided by Culligan is bottled in Rothschild, WI from a municipal water system. Culligan's source water is filtered and treated by carbon filter, reverse osmosis, distillation and other methods before it is bottled. It has been sampled for PFAS, and no PFAS was detected in the sample. There will be no cost to you for the bottled water. Please complete the attached form and mail it to The OS Group to make arrangements for having a water dispenser and bottles delivered to your home. Call 608-668-2718 or email PFAS@theOSgrp.com. You may also complete this form on line at www.cityoflacrosse.org/bottledwater

The following table summarizes the test results from the sample. **Bolded results** are above a current recommended level intended to protect your health according to the Department of Health Services (DHS).

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	38 ppt	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	23 ppt	20 ppt ^{a,b}
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	120 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	900 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	15 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	51 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeDA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUDA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a

The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6.

Perfluoro-1-heptanesulfonic acid (PFHpS) CAS # 375-92-8	9.5 ppt	None Established ^c
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS # 2706-91-4	190 ppt	None Established ^c
Perfluoro-n-heptanoic acid (PFHpA) CAS # 375-85-9	15 ppt	None Established ^c
Perfluoro-n-pentanoic acid (PFPeA) CAS #2706-90-3	12 ppt	None Established ^c
^a Public health enforcement standard (ES) recommended by DHS. ^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NET-FOSE, NET-FOSA, NetFOSAA, PFOS, and PFOA. ^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation. ^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code. ^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L) ^{Bl} Detected in the method blank. Possible lab contaminant.		

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>	<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well
 Bottled Water Acknowledgement

BOTTLED WATER ACKNOWLEDGEMENT

2508 2nd Avenue East, La Crosse, WI 54603

If you desire to accept the bottled water delivery, please complete and sign this form and return it to The OS Group at PFAS@TheOSgrp.com or mail to 444 21st St. S, La Crosse, WI 54601. You may also complete this form electronically online at www.cityoflacrosse.org/bottledwater . Call 608-668-2718 with any question you may have.

As pre-caution for the protection of human health, the City of La Crosse (The City) will provide, on a temporary basis, bottled water for drinking, cooking and toothbrushing purposes at the above referenced address. The water will be delivered to your home or business by a commercial water delivery service. At the City's cost, a dispenser / cooler and regular deliveries of 5-gallon containers of water will be provided. The City reserves the right to dictate the conditions of delivery, such as minimum and maximum number of containers per delivery, frequency and timing of deliveries. The City reserves the right to periodically review whether The City should continue to provide bottled water, considering factors such as State and Federal standards and guidance, evolving knowledge and understanding of the sources, cause and responsibility for the contamination, new or reinterpreted test results, and the availability of more permanent or cost-effective sources of water for the above purposes. The City of La Crosse makes no warranty or representation regarding the suitability of the bottled water beyond those made by the commercial water delivery service.

All reusable or returnable equipment and supplies, such as the containers and cooler/dispenser, are the property of the commercial water delivery service or the City of La Crosse. By signing below, the Occupant of the above referenced property acknowledges that all reusable or returnable equipment and supplies shall be returned to the commercial water delivery service or the City of La Crosse upon request. The Occupant agrees to provide reasonable access for delivery of bottled water and pick up of reusable or returnable equipment and supplies. Occupant(s) acknowledges that they may be required to sign an agreement with the commercial water delivery service as a condition of receiving bottled water.

Check ownership:

_____ Owner-Occupant

_____ Occupant Only

Number of Occupants: _____

Signed: _____ Dated: _____

Printed Name: _____

Phone Number: (_____) _____

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VL08011-005
Description: 189-0	Matrix: Aqueous
Date Sampled: 12/02/2020 1345	Project Name: LACROSSE WELL 23 & 24
Date Received: 12/08/2020	Project Number: 40219347

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	12/22/2020 2235	MMM	12/21/2020 1110	77227
2	SOP SPE	PFAS by ID SOP	5	12/27/2020 1827	MMM	12/21/2020 1110	77227

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		8.2	2.0	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		8.2	2.0	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		8.2	2.0	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		8.2	2.0	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		8.2	2.0	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		8.2	2.0	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		8.2	2.0	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		8.2	2.0	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		8.2	2.0	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		8.2	2.0	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		8.2	2.0	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		16	4.1	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		8.2	2.0	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		8.2	2.0	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	120		4.1	1.0	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		4.1	1.0	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	9.5		4.1	1.0	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		4.1	1.0	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		4.1	1.0	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	190		4.1	1.0	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		8.2	2.0	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	900		20	5.1	ng/L	2
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	15		4.1	1.0	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		4.1	1.0	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		4.1	1.0	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	15		4.1	1.0	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		8.2	2.0	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	51		4.1	1.0	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		4.1	1.0	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		8.2	2.0	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	38		4.1	1.0	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	12		4.1	1.0	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		4.1	1.0	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		4.1	1.0	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		4.1	1.0	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	23		4.1	1.0	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
13C2_4:2FTS		90	25-150		103	25-150
13C2_6:2FTS		82	25-150		97	25-150
13C2_8:2FTS		80	25-150		103	25-150
13C2_PFDa		84	25-150		103	25-150
13C2_PFHxDA		87	25-150		105	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VL08011-005
Description: 189-0	Matrix: Aqueous
Date Sampled: 12/02/2020 1345	Project Name: LACROSSE WELL 23 & 24
Date Received: 12/08/2020	Project Number: 40219347

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
13C2_PFTeDA		87	25-150		96	25-150
13C3_PFBs		83	25-150		100	25-150
13C3_PFHxS		79	25-150		104	25-150
13C3-HFPO-DA		100	25-150		102	25-150
13C4_PFBa		90	25-150		105	25-150
13C4_PFHpA		86	25-150		102	25-150
13C5_PFHxA		85	25-150		103	25-150
13C5_PFPeA		90	25-150		102	25-150
13C6_PFDA		89	25-150		100	25-150
13C7_PFUdA		98	25-150		99	25-150
13C8_PFOA		96	25-150		101	25-150
13C8_PFOS		87	25-150		98	25-150
13C8_PFOsA		92	10-150		106	10-150
13C9_PFNA		94	25-150		100	25-150
d-EtFOSA		80	10-150		104	10-150
d5-EtFOSAA		93	25-150		103	25-150
d9-EtFOSE		77	10-150		96	10-150
d-MeFOSA		73	10-150		112	10-150
d3-MeFOSAA		98	25-150		104	25-150
d7-MeFOSE		93	10-150		90	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
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Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

BOTTLED WATER ACKNOWLEDGEMENT

2508 2nd Avenue East, La Crosse, WI 54603

If you desire to accept the bottled water delivery, please complete and sign this form and return it to The OS Group at PFAS@TheOSgrp.com or mail to 444 21st St. S, La Crosse, WI 54601. You may also complete this form electronically online at www.cityoflacrosse.org/bottledwater. Call 608-668-2718 with any question you may have.

As pre-caution for the protection of human health, the City of La Crosse (The City) will provide, on a temporary basis, bottled water for drinking, cooking and toothbrushing purposes at the above referenced address. The water will be delivered to your home or business by a commercial water delivery service. At the City's cost, a dispenser / cooler and regular deliveries of 5-gallon containers of water will be provided. The City reserves the right to dictate the conditions of delivery, such as minimum and maximum number of containers per delivery, frequency and timing of deliveries. The City reserves the right to periodically review whether The City should continue to provide bottled water, considering factors such as State and Federal standards and guidance, evolving knowledge and understanding of the sources, cause and responsibility for the contamination, new or reinterpreted test results, and the availability of more permanent or cost-effective sources of water for the above purposes. The City of La Crosse makes no warranty or representation regarding the suitability of the bottled water beyond those made by the commercial water delivery service.

All reusable or returnable equipment and supplies, such as the containers and cooler/dispenser, are the property of the commercial water delivery service or the City of La Crosse. By signing below, the Occupant of the above referenced property acknowledges that all reusable or returnable equipment and supplies shall be returned to the commercial water delivery service or the City of La Crosse upon request. The Occupant agrees to provide reasonable access for delivery of bottled water and pick up of reusable or returnable equipment and supplies. Occupant(s) acknowledges that they may be required to sign an agreement with the commercial water delivery service as a condition of receiving bottled water.

Check ownership:

_____ Owner-Occupant

_____ Occupant Only

Number of Occupants: _____

Signed: _____ Dated: _____

Printed Name: _____

Phone Number: (_____) _____



444 21st Street South · La Crosse, Wisconsin · 54601

December 30, 2020

[REDACTED]
2529 2nd Avenue East
La Crosse, WI 54603

Subject: Private Well Sampling Results
2529 2nd Avenue East, La Crosse, WI 54603
Tax parcel # 4-219-0
Sample ID # 219-0 - Post Filter

Dear [REDACTED]:

We have received and reviewed the test results for the sample collected on **December 2, 2020** at the above address. Some PFAS compounds were found at levels above the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in your well are called the “Sample Result” in the table below. **Please note that this sample represents the sample taken from your kitchen faucet after the granular activated carbon filter.**

Because some of the levels are above the recommended Public Health Standard *even after treatment by your filter*, the City recommends that you use the bottled water being delivered to your home for drinking, cooking, and brushing your teeth. The bottled water is being provided by Culligan is bottled in Rothschild, WI from a municipal water system. Culligan’s source water is filtered and treated by carbon filter, reverse osmosis, distillation and other methods before it is bottled. It has been sampled for PFAS, and no PFAS was detected in the sample. There will be no cost to you for the bottled water. You have already completed a bottled water agreement.

The following table summarizes the test results from the sample. **Bolded results** are above a current recommended level intended to protect your health according to the Department of Health Services (DHS).

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	8.6 ppt	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	38 ppt	20 ppt ^{a,b}
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	12 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	260 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	15 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	7.3 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeDA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUdA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a

The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6

Perfluoro-1-heptanesulfonic acid (PFHpS) CAS # 375-92-8	4.4 ppt	None Established ^c
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS # 2706-91-4	23 ppt	None Established ^c
Perfluoro-n-heptanoic acid (PFHpA) CAS # 375-85-9	3.0 ppt	None Established ^c
Perfluoro-n-pentanoic acid (PFPeA) CAS #2706-90-3	4.5 ppt	None Established ^c
^a Public health enforcement standard (ES) recommended by DHS. ^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA. ^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation. ^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code. ^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L) ^{Bl} Detected in the method blank. Possible lab contaminant.		

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>	<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well
 Bottled Water Acknowledgement

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VL08011-002
Description: 219-0 POST-FILTER	Matrix: Aqueous
Date Sampled: 12/02/2020 1300	Project Name: LACROSSE WELL 23 & 24
Date Received: 12/08/2020	Project Number: 40219347

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	12/22/2020 2142	MMM	12/21/2020 1110	77227

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.8	2.0	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.8	2.0	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.8	2.0	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.8	2.0	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.8	2.0	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.8	2.0	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.8	2.0	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.8	2.0	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.8	2.0	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.8	2.0	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.8	2.0	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		16	3.9	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.8	2.0	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.8	2.0	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	12		3.9	0.98	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	4.4		3.9	0.98	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	23		3.9	0.98	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.8	2.0	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	260		3.9	0.98	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	15		3.9	0.98	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	3.0	J	3.9	0.98	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.8	2.0	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	7.3		3.9	0.98	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.8	2.0	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	8.6		3.9	0.98	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	4.5		3.9	0.98	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	38		3.9	0.98	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		95	25-150
13C2_6:2FTS		82	25-150
13C2_8:2FTS		96	25-150
13C2_PFDa		81	25-150
13C2_PFHxDA		90	25-150
13C2_PFTeDA		89	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VL08011-002
Description: 219-0 POST-FILTER	Matrix: Aqueous
Date Sampled: 12/02/2020 1300	Project Name: LACROSSE WELL 23 & 24
Date Received: 12/08/2020	Project Number: 40219347

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		92	25-150
13C3_PFHxS		88	25-150
13C3-HFPO-DA		94	25-150
13C4_PFBa		93	25-150
13C4_PFHpA		91	25-150
13C5_PFHxA		88	25-150
13C5_PFPeA		92	25-150
13C6_PFDa		96	25-150
13C7_PFUdA		83	25-150
13C8_PFOA		91	25-150
13C8_PFOS		81	25-150
13C8_PFOSA		95	10-150
13C9_PFNA		102	25-150
d-EtFOSA		82	10-150
d5-EtFOSAA		86	25-150
d9-EtFOSE		80	10-150
d-MeFOSA		76	10-150
d3-MeFOSAA		103	25-150
d7-MeFOSE		93	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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444 21st Street South · La Crosse, Wisconsin · 54601

December 30, 2020

██████████
 206 Fanta Reed Road
 La Crosse, WI 54603

Subject: Private Well Sampling Results
 206 Fanta Reed Road, La Crosse, WI 54603
 Tax parcel # 4-228-0
 Sample ID # 228-0

Dear ██████████:

We have received and reviewed the test results for the sample collected on December 2, 2020 at the above address. Some PFAS compounds were found, but the levels found were **below** the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in *your* well are called the “Sample Result” in the table below.

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)	
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}	The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}	
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}	
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}	
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	11 ppt	20 ppt ^{a,b}	
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	Not Detected	20 ppt ^{a,b}	

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	6.5 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	12 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	110 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	1.4 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS # 2706-91-4	4.4 ppt	None Established ^c
Perfluoro-n-pentanoic acid (PFPeA) CAS # 2706-90-3	2.2 ppt	None Established ^c

^a Public health enforcement standard (ES) recommended by DHS.
^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA.
^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation.
^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code.
^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L)
^{bl} Detected in the method blank. Possible lab contaminant.

Private Well Sampling Results for
206 Fanta Reed Road, La Crosse, WI 54603
Tax parcel # 4-228-0
Sample ID # 228-0
December 30, 2020

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VL08011-001
Description: 228-0	Matrix: Aqueous
Date Sampled: 12/02/2020 1245	Project Name: LACROSSE WELL 23 & 24
Date Received: 12/08/2020	Project Number: 40219347

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	12/22/2020 2131	MMM	12/21/2020 1110	77227

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.7	1.9	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.7	1.9	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.7	1.9	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.7	1.9	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.7	1.9	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.7	1.9	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.7	1.9	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.7	1.9	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.7	1.9	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.7	1.9	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.7	1.9	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		15	3.9	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.7	1.9	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.7	1.9	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	6.5		3.9	0.97	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.9	0.97	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.9	0.97	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.9	0.97	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.9	0.97	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	4.4		3.9	0.97	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.7	1.9	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	12		3.9	0.97	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	110		3.9	0.97	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.9	0.97	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.9	0.97	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.9	0.97	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.7	1.9	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	1.4	J	3.9	0.97	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.9	0.97	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.7	1.9	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	11		3.9	0.97	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	2.2	J	3.9	0.97	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.9	0.97	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.9	0.97	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.9	0.97	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	ND		3.9	0.97	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		86	25-150
13C2_6:2FTS		85	25-150
13C2_8:2FTS		80	25-150
13C2_PFDaA		80	25-150
13C2_PFHxDA		89	25-150
13C2_PFTeDA		88	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VL08011-001
Description: 228-0	Matrix: Aqueous
Date Sampled: 12/02/2020 1245	Project Name: LACROSSE WELL 23 & 24
Date Received: 12/08/2020	Project Number: 40219347

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		83	25-150
13C3_PFHxS		86	25-150
13C3-HFPO-DA		96	25-150
13C4_PFBa		88	25-150
13C4_PFHpA		85	25-150
13C5_PFHxA		86	25-150
13C5_PFPeA		91	25-150
13C6_PFDa		88	25-150
13C7_PFUdA		88	25-150
13C8_PFOA		89	25-150
13C8_PFOS		82	25-150
13C8_PFOSA		91	10-150
13C9_PFNA		90	25-150
d-EtFOSA		90	10-150
d5-EtFOSAA		87	25-150
d9-EtFOSE		73	10-150
d-MeFOSA		68	10-150
d3-MeFOSAA		97	25-150
d7-MeFOSE		84	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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444 21st Street South · La Crosse, Wisconsin · 54601

December 30, 2020

██████████
2528 Bainbridge Street
La Crosse, WI 54603

Subject: Private Well Sampling Results
2528 Bainbridge Street, La Crosse, WI 54603
Tax parcel # 4-234-0
Sample ID # 234-0

Dear ██████████:

We have received and reviewed the test results for the sample collected on December 2, 2020 at the above address. Some PFAS compounds were found, but the levels found were ***below*** the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the "Recommended Public Health Standard" in the table below. The levels found in *your* well are called the "Sample Result" in the table below. **PLEASE NOTE: At your residence we took a second "duplicate" sample for quality control / quality assurance purposes. The two samples' tests confirmed each other, and there were only minor differences. The results in the table below are based on the highest concentration of contaminants observed in either of the two samples.**

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	2.9 ppt	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	2.5 ppt	20 ppt ^{a,b}
<i>The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6</i>		
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	2.4 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	9.2 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	8.4 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	Not Detected	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-n-pentanoic acid (PFPeA) CAS # 2706-90-3	1.1 ppt	None Established ^c
^a Public health enforcement standard (ES) recommended by DHS. ^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOSA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA. ^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation. ^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code. ^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L) ^{bl} Detected in the method blank. Possible lab contaminant.		

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

Questions about...	Contact	Phone	E-mail Address
Soil & Groundwater Testing, Clean Up	DNR David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
 The OS Group, LLC

Attachment: Lab report for your well

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VL08011-004
Description: 234-0	Matrix: Aqueous
Date Sampled: 12/02/2020 1320	Project Name: LACROSSE WELL 23 & 24
Date Received: 12/08/2020	Project Number: 40219347

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	12/22/2020 2213	MMM	12/21/2020 1110	77227

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		15	3.8	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	2.3	J	3.8	0.94	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.8	0.94	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.8	0.94	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.8	0.94	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.8	0.94	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	ND		3.8	0.94	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	9.2		3.8	0.94	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	8.4		3.8	0.94	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.8	0.94	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.8	0.94	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.8	0.94	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		3.8	0.94	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.8	0.94	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	2.9	J	3.8	0.94	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	1.1	J	3.8	0.94	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.8	0.94	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.8	0.94	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.8	0.94	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	ND		3.8	0.94	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		101	25-150
13C2_6:2FTS		96	25-150
13C2_8:2FTS		90	25-150
13C2_PFDaA		79	25-150
13C2_PFHxDA		91	25-150
13C2_PFTeDA		92	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VL08011-004
Description: 234-0	Matrix: Aqueous
Date Sampled: 12/02/2020 1320	Project Name: LACROSSE WELL 23 & 24
Date Received: 12/08/2020	Project Number: 40219347

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		94	25-150
13C3_PFHxS		88	25-150
13C3-HFPO-DA		96	25-150
13C4_PFBa		95	25-150
13C4_PFHpA		91	25-150
13C5_PFHxA		89	25-150
13C5_PFPeA		91	25-150
13C6_PFDa		99	25-150
13C7_PFUdA		99	25-150
13C8_PFOA		93	25-150
13C8_PFOS		87	25-150
13C8_PFOSA		99	10-150
13C9_PFNA		90	25-150
d-EtFOSA		87	10-150
d5-EtFOSAA		95	25-150
d9-EtFOSE		82	10-150
d-MeFOSA		79	10-150
d3-MeFOSAA		103	25-150
d7-MeFOSE		93	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
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PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VL08011-006
Description: DUP#7	Matrix: Aqueous
Date Sampled: 12/02/2020	Project Name: LACROSSE WELL 23 & 24
Date Received: 12/08/2020	Project Number: 40219347

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	12/27/2020 1838	MMM	12/21/2020 1110	77227

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.5	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	2.4	J	3.5	0.89	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	8.7		3.5	0.89	ng/L	1
Perfluoro-n-butyric acid (PFBA)	375-22-4	PFAS by ID SOP	8.2		3.5	0.89	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	2.0	J	3.5	0.89	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	0.95	J	3.5	0.89	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.5	0.89	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	2.5	J	3.5	0.89	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		90	25-150
13C2_6:2FTS		84	25-150
13C2_8:2FTS		106	25-150
13C2_PFDaA		85	25-150
13C2_PFHxDA		92	25-150
13C2_PFTeDA		86	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VL08011-006
Description: DUP#7	Matrix: Aqueous
Date Sampled: 12/02/2020	Project Name: LACROSSE WELL 23 & 24
Date Received: 12/08/2020	Project Number: 40219347

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		88	25-150
13C3_PFHxS		92	25-150
13C3-HFPO-DA		96	25-150
13C4_PFBa		99	25-150
13C4_PFHpA		94	25-150
13C5_PFHxA		92	25-150
13C5_PFPeA		92	25-150
13C6_PFDa		91	25-150
13C7_PFUdA		83	25-150
13C8_PFOA		93	25-150
13C8_PFOS		81	25-150
13C8_PFOSA		95	10-150
13C9_PFNA		90	25-150
d-EtFOSA		87	10-150
d5-EtFOSAA		95	25-150
d9-EtFOSE		89	10-150
d-MeFOSA		97	10-150
d3-MeFOSAA		102	25-150
d7-MeFOSE		83	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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444 21st Street South · La Crosse, Wisconsin · 54601

December 30, 2020

██████████
 2545 Bainbridge Street
 La Crosse, WI 54603

Subject: Private Well Sampling Results
 2545 Bainbridge Street, La Crosse, WI 54603
 Tax parcel # 4-337-0
 Sample ID # 337-0

Dear ██████████:

We have received and reviewed the test results for the sample collected on December 2, 2020 at the above address. Some PFAS compounds were found, but the levels found were **below** the Department of Health Services (DHS) levels recommended for protecting health. These levels are called the “Recommended Public Health Standard” in the table below. The levels found in *your* well are called the “Sample Result” in the table below.

Sample Results

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
N-Ethyl Perfluorooctane sulfonamide (NEtFOSA) CAS # 4151-50-2	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA) CAS # 2991-50-6	Not Detected	20 ppt ^{a,b}
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) CAS # 1691-99-2	Not Detected	20 ppt ^{a,b}
Perfluorooctane sulfonamide (FOSA) CAS # 754-91-6	Not Detected	20 ppt ^{a,b}
Perfluorooctanoic acid (PFOA) CAS # 335-67-1	3.7 ppt	20 ppt ^{a,b}
Perfluorooctanesulfonic acid (PFOS) CAS # 1763-23-1	11 ppt	20 ppt ^{a,b}
Hexafluoropropylene oxide dimer acid (HPFO-DA; GenX) CAS # 13252-13-6	Not Detected	300 ppt ^a

The recommended limit is 20 ppt for any one of these 6 compounds or the combined total of all 6

Compound	Sample Result (unit)	Recommended Public Health Standard (unit ^e)
Perfluorobutanesulfonic acid (PFBS) CAS # 375-73-5	11 ppt	450,000 ppt ^a
Perfluorohexanesulfonic acid (PFHxS) CAS # 355-46-4	25 ppt	40 ppt ^a
Perfluorobutanoic acid (PFBA) CAS # 375-22-4	82 ppt	10,000 ppt ^a
Perfluorodecanoic acid (PFDA) CAS # 335-76-2	Not Detected	300 ppt ^a
Perfluorododecanoic acid (PFDoA) CAS # 307-55-1	Not Detected	500 ppt ^a
Perfluorohexanoic acid (PFHxA) CAS # 307-24-4	2.2 ppt	150,000 ppt ^a
Perfluorononanoic acid (PFNA) CAS # 375-95-1	Not Detected	30 ppt ^a
Perfluorotetradecanoic acid (PFTeA) CAS # 376-06-7	Not Detected	10,000 ppt ^a
Perfluoroundecanoic acid (PFUnA) CAS # 2058-94-8	Not Detected	3,000 ppt ^a
4,8-Dioxa-3H-perfluorononanoic acid (DONA) CAS # 919005-14-4	Not Detected	3,000 ppt ^a
Perfluorooctadecanoic acid (PFODA) CAS # 16517-11-6	Not Detected	400,000 ppt ^a
Perfluoro-1-heptanesulfonic acid (PFHps) CAS # 375-92-8	1.3 ppt	None Established ^c
Perfluoro-1-pentanesulfonic acid (PFPeS) CAS # 2706-91-4	9.8 ppt	None Established ^c
Perfluoro-n-pentanoic acid (PFPeA) CAS # 2706-90-3	1.7 ppt	None Established ^c

^a Public health enforcement standard (ES) recommended by DHS.
^b DHS recommends a combined enforcement standard of 20 ng/L and combined preventive action limit of 2 ng/L for FOA, NEt-FOSE, NEt-FOSA, NetFOSAA, PFOS, and PFOA.
^c A current standard is not available; the compound is currently under review by DHS for potential public health standard recommendation.
^d Public health enforcement standard (ES) in NR 140, Wisconsin Administrative Code.
^e Units: Parts per trillion (ppt) = nanograms of substance per liter of water (ng/L)
^{Bl} Detected in the method blank. Possible lab contaminant.

Private Well Sampling Results for
2545 Bainbridge Street, La Crosse, WI 54603
Tax parcel # 4-337-0
Sample ID # 337-0
December 30, 2020

As required by law, we will be submitting these results to the Department of Natural Resources (DNR). The DNR may consult with the Department of Health Services (DHS) about these test results. *DHS may review all PFAS tests and follow-up with you directly if any actions are recommended to protect your health.*

Thank you for your patience and assistance with our investigation. We will provide updates on the project at <https://www.cityoflacrosse.org/wells> as our work continues. If you have any questions, please call The OS Group at (608) 668-2718 or email them at PFAS@theOSgrp.com.

You can also contact the DNR and DHS with questions about PFAS or the water sample results at the numbers provided below.

<u>Questions about...</u>		<u>Contact</u>	<u>Phone</u>	<u>E-mail Address</u>
Soil & Groundwater Testing, Clean Up	DNR	David Rozeboom	715-215-2078	David.Rozeboom@wisconsin.gov
Drinking Water or Private wells	DNR	Kyle Burton	920-360-2112	kyle.burton@wisconsin.gov
Health Concerns	DHS	Curtis Hedman	608-266-6677	Curtis.Hedman@dhs.wisconsin.gov

On behalf of The City of La Crosse
The OS Group, LLC

Attachment: Lab report for your well

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VL08011-003
Description: 337-0	Matrix: Aqueous
Date Sampled: 12/02/2020 1315	Project Name: LACROSSE WELL 23 & 24
Date Received: 12/08/2020	Project Number: 40219347

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	12/22/2020 2203	MMM	12/21/2020 1110	77227

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		15	3.8	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
Perfluoro-1-butanefluoronic acid (PFBS)	375-73-5	PFAS by ID SOP	11		3.8	0.94	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.8	0.94	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	1.3	J	3.8	0.94	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.8	0.94	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.8	0.94	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	9.8		3.8	0.94	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	25		3.8	0.94	ng/L	1
Perfluoro-n-butyric acid (PFBA)	375-22-4	PFAS by ID SOP	82		3.8	0.94	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.8	0.94	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.8	0.94	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.8	0.94	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	2.2	J	3.8	0.94	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.8	0.94	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.5	1.9	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	3.7	J	3.8	0.94	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	1.7	J	3.8	0.94	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.8	0.94	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.8	0.94	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.8	0.94	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	11		3.8	0.94	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		97	25-150
13C2_6:2FTS		83	25-150
13C2_8:2FTS		85	25-150
13C2_PFDa		85	25-150
13C2_PFHxDA		87	25-150
13C2_PFTeDA		86	25-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC	Laboratory ID: VL08011-003
Description: 337-0	Matrix: Aqueous
Date Sampled: 12/02/2020 1315	Project Name: LACROSSE WELL 23 & 24
Date Received: 12/08/2020	Project Number: 40219347

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBs		89	25-150
13C3_PFHxS		82	25-150
13C3-HFPO-DA		93	25-150
13C4_PFBa		90	25-150
13C4_PFHpA		84	25-150
13C5_PFHxA		88	25-150
13C5_PFPeA		94	25-150
13C6_PFDa		91	25-150
13C7_PFUdA		95	25-150
13C8_PFOA		91	25-150
13C8_PFOS		84	25-150
13C8_PFOSA		94	10-150
13C9_PFNA		96	25-150
d-EtFOSA		77	10-150
d5-EtFOSAA		87	25-150
d9-EtFOSE		77	10-150
d-MeFOSA		72	10-150
d3-MeFOSAA		104	25-150
d7-MeFOSE		86	10-150

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
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