

STATE OF MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY LANSING



WSSN: 2244363

August 20, 2018

VIA E-MAIL

ROSE PIONEER ELEMENTARY 920 EAST BAIRD HOLLY, MICHIGAN 48442

Dear School Administrator and Drinking Water Operator:

SUBJECT:

ROSE PIONEER ELEMENTARY

Per- and Polyfluoroalkyl Substances (PFAS)

As you may be aware, the Michigan PFAS Action Response Team (MPART) has undertaken a proactive effort to investigate sources and locations of PFAS contamination in Michigan, to protect our drinking water, and to inform the public about PFAS. This involves the work of ten state departments, in coordination with local and federal officials.

One vital piece of this effort is the ongoing collaboration between the Michigan Department of Environmental Quality (MDEQ) and our water supply partners. It is through your generous participation that we are able to set and achieve our goal: to proactively test all community water supplies and schools that are classified as non-transient non-community water supplies for PFAS contamination. Once complete, this study will be an invaluable tool in determining the extent of PFAS in Michigan's drinking water, and empowering the MPART in the pursuit of their mission. We thank you for your continuing partnership, collaboration, and dedication to the residents of our great state.

This letter is intended to provide the results of PFAS analyses in samples collected from the ROSE PIONEER ELEMENTARY, WSSN # 2244363 (water supply) on the date(s) indicated below.

The table below summarizes the sampling results. A copy of the laboratory report is enclosed for your review. The analyses of these samples reported less than 10 parts per trillion (ppt) for perfluorooctanesulfonic acid (PFOS) and perfluorooctanoic acid (PFOA). Your water supply may have returned results greater than non-detect (ND) for the total amount of PFAS analytes tested for. An ND result means the analyte was not detected. Neither the MDEQ nor the United States Environmental Protection Agency (USEPA) have any guidance values for these other analytes at this time. If additional guidance and/or comparison values are developed for these or other PFAS chemicals in the future, we may reevaluate this water supply.

Date Collected	Sampling Location	PFOS + PFOA (ppt)	LHA (ppt) PFOS + PFOA	Total Tested PFAS (ppt)
7/12/2018	Well 1	ND	70	ND

ND – The parameter was not detected based on the laboratory's analytical report. See Official lab results for test method used.

Currently, there is no regulatory drinking water standard for any of the PFAS chemicals. However, in May 2016 the USEPA established a non-regulatory Lifetime Health Advisory (LHA) for two of these chemicals, PFOS and PFOA. The LHA for PFOS and PFOA is 70 ppt combined, or individually if only one of them is present. The USEPA recommends that this LHA applies to both short-term (i.e., weeks to months) scenarios during pregnancy and lactation, as well as to lifetime-exposure scenarios. The LHA is the level, or amount, below which no harm is expected from these chemicals. The Michigan Department of Health and Human Services (MDHHS), as well as the MDEQ, have used this LHA of 70 ppt to inform decisions on actions that should be taken or are recommended to reduce exposure and prevent increased risk to public health from these PFAS contaminants. The USEPA has not set health advisory levels for the other PFAS compounds because not enough is known about them.

Additional information on the health effects of PFAS can be found on the Agency for Toxic Substances and Disease Registry (ATSDR) website listed at the end of this correspondence.

The concentrations of PFOS and PFOA in these samples are well below the USEPA LHA of 70 ppt and are not expected to result in adverse health effects as long as the concentrations are shown to remain below the LHA over time.

Because of the detection of low levels found in the water supply, we have the following recommendations for your consideration. These recommendations are essentially the same actions we have advised public water systems to follow for the past 30-plus years when a new contaminant has been confirmed as present in their drinking water.

- 1. Inform the public of these sample results through posting on your website or other means. The MDEQ, in collaboration with the MDHHS, has developed a toolkit containing communication templates to help notify school staff, students, and parents on the presence of PFAS in the drinking water and the response measures that are being initiated. This is a resource available to you if you choose and can be modified to fit your needs. The toolkit is available at www.michigan.gov/pfasresponse and click on "visit news and education."
- 2. Please continue with your regularly scheduled monitoring. The MDEQ recommends you also continue monitoring for PFAS on an annual basis to demonstrate the concentrations are consistently and reliably below any existing LHA.

These recommendations are based on the best available and most current information and may change depending on additional information related to site conditions; the availability of new data; or other new information as it becomes available. We may recommend further action at that time.

ROSE PIONEER ELEMENTARY
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As part of the MDEQ's proactive statewide sampling initiative, the results of this sampling will be posted online on the MPART website within 48 hours of this notification. The results can be found online by going to the MPART website address listed below, and by clicking on "Michigan PFAS Sites," and scrolling down and selecting "Public Water Supply Information." We recommend you inform your consumers as soon as possible. If you need assistance, please contact me.

For information on PFOS, PFOA, and other PFAS, including possible health outcomes, you may visit these websites:

- State of Michigan PFAS Action Response Team (MPART) website serving as the main resource for public information on PFAS contamination in Michigan: www.michigan.gov/pfasresponse
- United States Environmental Protection Agency (USEPA) website including basic information, USEPA actions, and links to informational resources: www.epa.gov/pfas
- Agency for Toxic Substances and Disease Registry (ATSDR) website including health information, exposure, and links to additional resources: www.atsdr.cdc.gov/pfas

Thank you once again for your continued collaboration with this investigation. The ongoing partnership between the MDEQ and Michigan's public water supplies plays an integral role in the state's continued efforts to ascertain and address the incidence of PFAS in drinking water for Michiganders.

If you have any questions concerning this sampling, please contact me at the telephone number below; by email at <u>DEQ-PFAS-DrinkingWater@michigan.gov</u>; or by mail at DEQ-DWMAD, P.O. Box 30817, Lansing, Michigan 48909-8311.

Sincerely,

Lois Elliott Graham
Lois Elliott Graham, R.S., M.S.A.

Drinking Water and Municipal Assistance Division 810-730-8674

Enclosure

cc: Mr. Anthony Drautz, Oakland County Health Division

Mr. Steven Crider, Supervisor, Drinking Water Unit, MDHHS

Mr. Dan Dettweiler, MDEQ



August 02, 2018

Vista Work Order No. 1801731

Ms. Maya Murshak Merit Laboratories, Inc. 2680 East Lansing Drive East Lansing, MI 48823

Dear Ms. Murshak,

Enclosed are the results for the sample set received at Vista Analytical Laboratory on July 13, 2018. This sample set was analyzed on a standard turn-around time, under your Project Name 'MDEQ State Municipal Sampling'.

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at mmaier@vista-analytical.com.

Thank you for choosing Vista as part of your analytical support team.

Sincerely.

Martha Maier

Laboratory Director

Martho Maier



Vista Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAP for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of Vista.

Vista Analytical Laboratory 1104 Windfield Way El Dorado Hills, CA 95762 ph: 916-673-1520 fx: 916-673-0106 www.vista-analytical.com

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Vista Work Order No. 1801731 Case Narrative

Sample Condition on Receipt:

One drinking water sample was received in good condition and within the method temperature requirements. The sample was received and stored securely in accordance with Vista standard operating procedures and EPA methodology.

Analytical Notes:

EPA Method 537, Rev. 1.1

The sample was extracted and analyzed for a selected list of 14 PFAS using EPA Method 537, Rev. 1.1. The results have been reported following the conventions specified by the Michigan Department of Environmental Quality.

Holding Times

The sample was extracted and analyzed within the method hold times.

Quality Control

The Initial Calibration and Continuing Calibration Verifications met the method acceptance criteria.

Two Laboratory Fortified Blanks (LFB/LFBD) and a Laboratory Reagent Blank (LRB) were extracted and analyzed with the preparation batch. No analytes were detected in the Laboratory Reagent Blank. The LFB/LFBD recoveries were within the method acceptance criteria.

The surrogate recoveries for all QC and field samples were within the acceptance criteria.

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Sample Inventory Report

Vista Sample ID

1801731-01

Client Sample ID

GWEF1807121200GSC

Sampled

Received

Components/Containers

12-Jul-18 12:00

13-Jul-18 09:58

HDPE Bottle, 250 mL HDPE Bottle, 250 mL

Vista Project: 1801731

Client Project: MDEQ State Municipal Sampling

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Sample ID: Ll	RB								EPA Meth	nod 537
Client Data Name: Project:	Merit Laboratories, Inc. MDEQ State Municipal Sampling	Matrix:	Aqueous	1000	oratory Data Sample:	B8G0125-	BLKI	Column:	ВЕН С18	
Analyte	CAS Number	Conc. (ng/L)		RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND		2		B8G0125	21-Jul-18	0,25 L	29-Jul-18 13;21	1
PFHxA	307-24-4	ND		2		B8G0125	21-Jul-18	0.25 L	29-Jul-18 13:21	1
PFHpA	375-85-9	ND		2		B8G0125	21-Jul-18	0.25 L	29-Jul-18 13:21	1
PFHxS	355-46-4	ND		2		B8G0125	21-Jul-18	0.25 L	29-Jul-18 13:21	1
PFOA	335-67-1	ND		2		B8G0125	21-Jul-18	0.25 L	29-Jul-18 13:21	1
PFNA	375-95-1	ND		2		B8G0125	21-Jul-18	0.25 L	29-Jul-18 13:21	1
PFOS	1763-23-1	ND		2		B8G0125	21-Jul-18	0.25 L	29-Jul-18 13:21	1
PFDA	335-76-2	ND		2		B8G0125	21-Jul-18	0.25 L	29-Jul-18 13:21	1
MeFOSAA	2355-31-9	ND		4		B8G0125	21-Jul-18	0.25 L	29-Jul-18 13:21	1
EtFOSAA	2991-50-6	ND		4		B8G0125	21-Jul-18	0.25 L	29-Jul-18 13:21	1
PFUnA	2058-94-8	ND		4		B8G0125	21-Jul-18	0.25 L	29-Jul-18 13:21	1
PFDoA	307-55-1	ND		4		B8G0125	21-Jul-18	0.25 L	29-Jul-18 13:21	1
PFTrDA	72629-94-8	ND		4		B8G0125	21-Jul-18	0.25 L	29-Jul-18 13:21	1
PFTeDA	376-06-7	ND		4		B8G0125	21-Jul-18	0.25 L	29-Jul-18 13:21	1
Labeled Standar	ds Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	96	70 - 130			B8G0125	21-Jul-18	0.25 L	29-Jul-18 13:21	1
13C2-PFDA	SURR	95	70 - 130			B8G0125	21-Jul-18	0.25 L	29-Jul-18 13:21	1
d5-EtFOSAA	SURR	85	70 - 130			B8G0125	21-Jul-18	0.25 L	29-Jul-18 13:21	1

RL - Reporting limit

Results reported to RL.
Reporting convention specified by MI DEQ.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

ANALYTICAL RESULTS

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Sample I	D: LFBD													EPA Method	d 537
Name: Merit Laboratories, Inc. Project: MDEQ State Municipal Sampling Matrix: Aqueous			Lab Sample: QC Batch: Samp Size:	B80	G0125-BS1/B G0125 5/0.25 L					Date Extracted: Column:		21-Jul-18 BEH C18			
Analyte	CAS Number	LFB (ng/L)	LFB Spike Amt	LFB % Rec	LFB Quals	LFBD (ng/L)	LFBD Spike Amt	LFBD % Rec	RPD	LFBD Quals	%Rec RPD Limits Limits	LFB Analyzed	LFB Dil	LFBD Analyzed	LFBD Dil
PFBS	375-73-5	12	18	69		12	18	68	1		50-150	29-Jul-18 12:56	- 1	29-Jul-18 13:08	1
PFHxA	307-24-4	17	20	85		16	20	80	6		50-150	29-Jul-18 12:56	1	29-Jul-18 13:08	1
PFHpA	375-85-9	16	20	80		15	20	78	3		50-150	29-Jul-18 12:56	1	29-Jul-18 13:08	1
PFHxS	355-46-4	15	18	81		14	18	76	7		50-150	29-Jul-18 12:56	1	29-Jul-18 13:08	1
PFOA	335-67-1	18	20	91		18	20	88	4		50-150	29-Jul-18 12:56	1	29-Jul-18 13:08	1
PFNA	375-95-1	19	20	93		18	20	88	5		50-150	29-Jul-18 12:56	1	29-Jul-18 13:08	. 1
PFOS	1763-23-1	13	19	70		12	19	65	7		50-150	29-Jul-18 12:56	1	29-Jul-18 13:08	1
PFDA	335-76-2	19	20	93		17	20	86	8		50-150	29-Jul-18 12:56	1	29-Jul-18 13:08	1
MeFOSAA	2355-31-9	17	20	88		16	20	79	11		50-150	29-Jul-18 12:56	1	29-Jul-18 13:08	. 1
EtFOSAA	2991-50-6	17	20	85		15	20	75	14		50-150	29-Jul-18 12:56	1	29-Jul-18 13:08	1
PFUnA	2058-94-8	19	20	97		18	20	88	10		50-150	29-Jul-18 12:56	1	29-Jul-18 13:08	1
PFDoA	307-55-1	16	20	82		16	20	82	0	CALL DE CONTRACTOR	50-150	29-Jul-18 12:56	1	29-Jul-18 13:08	1
PFTrDA	72629-94-8	19	20	93		16	20	79	17		50-150	29-Jul-18 12:56	1	29-Jul-18 13:08	1
PFTeDA	376-06-7	19	20	94		18	20	88	6		50-150	29-Jul-18 12:56	1	29-Jul-18 13:08	1
Labeled St	andards	Туре		LFB % Rec	LFB Quals			LFBD % Rec		LFBD Ouals	Limits	LFB Analyzed	LFB Dil	LFBD Analyzed	LFBD Dil
13C2-PFHx	A	SURR		93				87		diam.	70-130	29-Jul-18 12:56	1	29-Jul-18 13:08	1
13C2-PFD		SURR		101				93			70-130	29-Jul-18 12:56	1	29-Jul-18 13:08	1
d5-EtFOSA		SURR		83				76			70-130	29-Jul-18 12:56	1	29-Jul-18 13:08	1

Data Reported per Michigan DEQ instructions.



Sample ID: GV	VEF1807121200GSC								EPA Metl	hod 537
Client Data Name: Project: Location:	Merit Laboratories, Inc. MDEQ State Municipal Sampling ROSEELEM-2244363	Matrix: Date Collected:	Drinking Water 12-Jul-18 12:00	Lab	oratory Data Sample: Received:	1801731-0 13-Jul-18		Column:	BEH C18	
Analyte	CAS Number	Conc. (ng/L)		RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND		2	Mediana and	B8G0125	21-Jul-18	0.25 L	29-Jul-18 14:50	1
PFHxA	307-24-4	ND		2		B8G0125	21-Jul-18	0.25 L	29-Jul-18 14:50	1
PFHpA	375-85-9	ND		2		B8G0125	21-Jul-18	0.25 L	29-Jul-18 14:50	1
PFHxS	355-46-4	ND		2		B8G0125	21-Jul-18	0.25 L	29-Jul-18 14:50	1
PFOA	335-67-1	ND		2		B8G0125	21-Jul-18	0.25 L	29-Jul-18 14:50	1
PFNA	375-95-1	ND		2		B8G0125	21-Jul-18	0.25 L	29-Jul-18 14:50	1
PFOS	1763-23-1	ND		2		B8G0125	21-Jul-18	0.25 L	29-Jul-18 14:50	1
PFDA	335-76-2	ND		2		B8G0125	21-Jul-18	0.25 L	29-Jul-18 14:50	1
MeFOSAA	2355-31-9	ND		4		B8G0125	21-Jul-18	0.25 L	29-Jul-18 14:50	1
EtFOSAA	2991-50-6	ND		4		B8G0125	21-Jul-18	0.25 L	29-Jul-18 14:50	1
PFUnA	2058-94-8	ND		4		B8G0125	21-Jul-18	0.25 L	29-Jul-18 14:50	1
PFDoA	307-55-1	ND		4		B8G0125	21-Jul-18	0.25 L	29-Jul-18 14:50	1
PFTrDA	72629-94-8	ND		4		B8G0125	21-Jul-18	0.25 L	29-Jul-18 14:50	1
PFTeDA	376-06-7	ND		4		B8G0125	21-Jul-18	0.25 L	29-Jul-18 14:50	1
Labeled Standard	ls Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	88	70 - 130			B8G0125	21-Jul-18	0.25 L	29-Jul-18 14:50	1
13C2-PFDA	SURR	97	70 - 130			B8G0125	21-Jul-18	0.25 L	29-Jul-18 14:50	1
d5-EtFOSAA	SURR	92	70 - 130			B8G0125	21-Jul-18	0.25 L	29-Jul-18 14:50	1

RL - Reporting limit

Results reported to RL.
Reporting convention specified by MI DEQ..

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

DATA QUALIFIERS & ABBREVIATIONS

В	This compound was also detected in the method blank
Conc.	Concentration
D	Dilution
DL	Detection limit
E	The associated compound concentration exceeded the calibration range of the instrument
H	Recovery and/or RPD was outside laboratory acceptance limits
I	Chemical Interference
J	The amount detected is below the Reporting Limit/LOQ
LOD	Limits of Detection
LOQ	Limits of Quantitation
M	Estimated Maximum Possible Concentration (CA Region 2 projects only)
NA	Not applicable
ND	Not Detected
Q	Ion ratio outside of 70-130% of Standard Ratio. (DOD PFAS projects only)
TEQ	Toxic Equivalency
U	Not Detected (specific projects only)
*	See Cover Letter

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

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CERTIFICATIONS

Accrediting Authority	Certificate Number
Alaska Department of Environmental Conservation	17-013
Arkansas Department of Environmental Quality	17-015-0
	2892
DoD ELAP - A2LA Accredited - ISO/IEC 17025:2005	3091.01
Florida Department of Health	E87777-18
Hawaii Department of Health	N/A
Louisiana Department of Environmental Quality	01977
Maine Department of Health	2016026
Minnesota Department of Health	1322288
New Hampshire Environmental Accreditation Program	207717
New Jersey Department of Environmental Protection	CA003
New York Department of Health	11411
Oregon Laboratory Accreditation Program	4042-008
Pennsylvania Department of Environmental Protection	014
Texas Commission on Environmental Quality	T104704189-17-8
Virginia Department of General Services	9077
Washington Department of Ecology	C584
Wisconsin Department of Natural Resources	998036160

Current certificates and lists of licensed parameters are located in the Quality Assurance office and are available upon request.

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2	VISTO Analytical Laboratory

18	Vista Analytical Laboratory	CHAIN O	CHAIN OF CUSTODY										For Laboratory Use Prof 173 Temp: 3.2 Work Order #: VR 2 Storage Secured: Yes &					
Project ID:	MDEQ STATE MUNICIPA	AL SAMPL	.ING	PO#:60570309		Sampler: GARTH COUSINEAU (name)								TA1		x 21 days arge may apply) 7 days Sp	pecify:	
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Santana de Contrata de	MIKE JURY		MDEQ			401	KETO	HUM	ST, S	UITE	В		BAY CI	TY	MI	989-894-6255	989-891-9237	
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SHIP TO:	Vista Analytical Laboratory 1104 Windfield Way El Dorado Hills, CA 95762 Ph: (916) 673-1520; Fax: (2	0106	Method of Shipment:		710.0.450	is(es)	Reque:	sted	/		2 50 50 50 50 50 50 50 50 50 50 50 50 50		/	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$			
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y e-mail to	Vista,											SEND MENTATION	Company:			1,000		
								-		Α	ND R	ESULTS TO:			ETCHUM ST, SUITE		40700	
				*				-						989-8		Fax: 989-891-92	48708	
								100000					100000000000000000000000000000000000000	Water Street	bogdan@aecom.com	1 900-001-02.	.,	
Container Typ	oes: P= HDPE, PJ= HDPE Ja	ır		Bottle Preservation Type	: T = Th	iosulfa	ite,		М	atrix T	/pes:	AQ = Aqueous, D\			= Effluent, PP = Pulp/Pa	per, SD = Sediment		



Sample Log-in Checklist

Vista Work Orde	r#:	18	017	13)			TAT_ 510	<u> </u>		
Samples Arrival:	Date/Tin		0958		nitials: - N		Location: W\$-2 Shelf/Rack: N#			
Logged In:	Date/Tim 07 14 1		224	Initials	: 'E	Location: WR-2				
Delivered By:	FEGEX	UPS	On Tra	c GS0	D D	IL.	Hand Delivered	Other		
Preservation:	lo	e)	Blu	ie Ice			Dry Ice	None		
Temp °C: ろパ	· ·	i m	me: \g	ed: Yesl	□ Nob	TI	hermometer ID:	IR-4		

					YES	NO	NA
Adequate Sample Volun	ne Received?				KE		
Holding Time Acceptable		We					
Shipping Container(s) In		100					
Shipping Custody Seals			H	M			
Shipping Documentation		M					
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Sample Custody Seals I	itact?		1			L	MID
Chain of Custody / Samp	le Documentation Pr	esent?			M		
COC Anomaly/Sample A	cceptance Form com	pleted?			, C	Pally	
If Chlorinated or Drinking	Water Samples, Acc	ceptable Pres	ervation?		KE		
Preservation Documente		Trizma	None		(Yes	No ·	NA
Shipping Container	Vista	Client	Retain	Re	turn	Disp	ose

Comments: