

July 7, 2021

New York State Department of Health Empire State Plaza Corning Tower Albany, New York 12237

Re: Deferral Update PFOA, PFOS, 1,4 – dioxane

Dear Sirs:

This letter with attachment represents the second quarter 2021 Capital Project updates for wells which received deferral from MCL violations regarding PFOA, PFOS, and 1,4 – dioxane. The Water Authority of Western Nassau County ("Water Authority") continues to aggressively install new wellhead treatment systems to bring all wells into compliance with the regulation which became effective on August 26, 2020.

In that regard, the Water Authority successfully issued \$62 million of new Series 2021 Revenue Bonds on June 15, 2021 which secured sufficient funding to see all capital projects through to completion. These project updates will be posted on our website.

Sincerely,

Michael J. Tierney

Superintendent



# Station 20, Well 20 Evergreen Avenue, New Hyde Park, N.Y.

**Update: July 7, 2021** 

Status:

In Service May 14, 2021

1,4 – dioxane (1 part per billion)

**NYS Allowable levels:** 

PFOS (10 parts per trillion)

PFOA (10 parts per trillion)

**Most Recent Raw Water Test Results:** 

1,4 - dioxane (.380 parts per billion)

(Samples Collected on June 3, 2021 for PFOS/PFOA and June 17, 2021 for 1,4 -

PFOS (11.0 parts per trillion) PFOA (12.4 parts per trillion)

dioxane)

**Most Recent Treated Water Test Results:** 

(Samples Collected on June 3, 2021 for

PFOS/PFOA)

PFOS (<1.9 parts per trillion)

PFOA (<1.9 parts per trillion)

Construction Project for the Installation of Granular Activated Carbon ("GAC") vessels to remove PFOS/PFOA.

### **Phase 1 Construction Project Chronological Progress:**

May 2020 Pilot Study Performed

August 2020 Pilot Study Report Sent to NYS Department of Health ("NYSDOH")

October 2020 Full Site Engineering Report Complete and Sent to NYSDOH

November 2020 Project Plans and Specifications Complete and sent to NYSDOH

December 2020 Construction Start Date with Estimated Completion Date of April 2021

March 15, 2021 GAC Vessels Arrived

May 2021 Well Startup and Completed Works Approval

Pilot Study Report April 2021

Full Engineering Report April 2021

Approval of Overall Project May 13, 2021

TOWN DPW Drainage Approval April 29, 2021

**Regulatory Approvals Dates** 

County DPW Drainage Approval March 29, 2021

### **Phase 1 Current Status**

All water assets are now installed and in-service effective May 14, 2021. On July 3, 2021 the booster motor failed and the well is temporarily out of service. Emergency protocol is being taken to replace the motor, and possibly the well pump, to return to service for peak demand season.

### Phase 2 Construction Project Permanent Building and Site Work Chronological Progress:

January 2021 Design of Permanent GAC Building

March 2021 Bid Date

July 1, 2021 Construction Start Date

December 2021 Estimated Completion Date

# Phase 3 Construction Project Installation of AOP Treatment, Replacement of Elevated Storage Tank and Site Rehabilitation

Estimated Date of Engineering Report December 2022

Project Start Date September 2023

Estimated Completion Date December 2024



Results for the samples and analytes requested The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests

Client Sample ID.: N-00017

Lab No.: 70175477001

Sample Information:

Type: Drinking Water Origin: Raw Well

Routine

575 Broad Hollow Road, Melville, NY 11747 TEL: (631) 694-3040 FAX: (631) 420-8436

www.pacelabs.com

Water Auth, of Western Nassau

1580 Union Tpke.

New Hyde Park, NY 11040 Attn To: Michael Leiner

Federal ID: Collected:

2902857

06/03/2021 10:56 AM

Point

N-00017

06/03/2021 03:15 PM Received: Collected By PACE

Location Well #20 No NHP

Sample Comments:

Samples were received outside of the recommended temperature range of 0-6 degrees Celsius. The samples were received from the field on ice and the cooling process has begun.

Analytical Method:EPA 537.1		Prep Method:	EPA 537.	1	Prep Dat	te: 06/09/2021 10:32	
Parameter(s)	Results	<u>Qualifier</u>	D.F.	<u>Units</u>	<u>Limit</u>	<u>Analyzed:</u>	Container:
Perfluorobutanesulfonic acid	<1.9		1	ng/L		06/20/2021 6:50 AM	001 BP3T1/2
Perfluoroheptanoic acid	2.1		1	ng/L		06/20/2021 6:50 AM	001 BP3T1/2
Perfluorohexanesulfonic acid	4.1		1	ng/L		06/20/2021 6:50 AM	001 BP3T1/2
Perfluoronexamesunonic acid	5.0		1	ng/L		06/20/2021 6:50 AM	001 BP3T1/2
⊃erfluorooctanesulfonic acid	11.0*		1	ng/L	10	06/20/2021 6:50 AM	001 BP3T1/2
	12.4*		1	ng/L	10	06/20/2021 6:50 AM	001 BP3T1/2
Perfluorooctanoic acid	88%		1	%REC		06/20/2021 6:50 AM	001 BP3T1/2
Surr: 13C2-PFDA (S)			1	%REC		06/20/2021 6:50 AM	001 BP3T1/2
Surr: 13C2-PFHxA (S) Surr: HFPO-DAS (S)	75% 66%	S0	1	%REC		06/20/2021 6:50 AM	001 BP3T1/2

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Qualifiers:

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.Estimated value - below calibration range

U - Indicates the compound was analyzed for, but not detected

Result(s) reported meet(s) NYS Regulatory Limit(s). Result(s) flagged with \* Exceed NYS Regulatory Limit(s). Limit Noted.

Date Reported: 06/28/2021

Jennifer Aracri

Test results meet the requirements of NELAC unless otherwise noted.



Results for the samples and analytes requested The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests

Lab No.: 70175477002

Client Sample ID.: AS/GAC-00017

Sample Information: Type: Drinking Water

Origin: Treated Well Routine

> **Treatment** Air Stripper/GAC

TEL: (631) 694-3040 FAX: (631) 420-8436

www.pacelabs.com

Water Auth. of Western Nassau

1580 Union Tpke.

New Hyde Park, NY 11040 Attn To: Michael Leiner

Federal ID:

2902857

Collected:

06/03/2021 11:06 AM

Point

AS/GAC-00017

Received:

06/03/2021 03:15 PM

Location Well 20

Collected By PACE

Analytical Method: EPA 537.1		Prep Method:	EPA 537.	1	<u>Prep Da</u>	te: 06/09/2021 10:32	
Parameter(s)	Results	Qualifier	D.F.	<u>Units</u>	<u>Limit</u>	Analyzed:	Container
Perfluorobutanesulfonic acid	<1.9		1	ng/L		06/20/2021 7:06 AM	002 BP3T1/2
Perfluoroheptanoic acid	<1.9		1	ng/L		06/20/2021 7:06 AM	002 BP3T1/2
Perfluorohexanesulfonic acid	<1.9		1	ng/L		06/20/2021 7:06 AM	002 BP3T1/2
Perfluorononanoic acid	<1.9		1	ng/L		06/20/2021 7:06 AM	002 BP3T1/2
Perfluorooctanesulfonic acid	<1.9		1	ng/L	10	06/20/2021 7:06 AM	002 BP3T1/2
Perfluorooctanoic acid	<1.9		1	ng/L	10	06/20/2021 7:06 AM	002 BP3T1/2
Surr: 13C2-PFDA (S)	104%		1	%REC		06/20/2021 7:06 AM	002 BP3T1/2
Surr: 13C2-PFHxA (S)	73%		1	%REC		06/20/2021 7:06 AM	002 BP3T1/2
Surr: HFPO-DAS (S)	70%		1	%REC		06/20/2021 7:06 AM	002 BP3T1/2

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Result(s) reported meet(s) NYS Regulatory Limit(s).
Result(s) flagged with \* Exceed NYS Regulatory Limit(s). Limit Noted.

Date Reported: 06/28/2021

Jennifer Aracri

Test results meet the requirements of NELAC unless otherwise noted.

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page 2 of 13

Results for the samples and analytes requested The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests

Lab No.: 70177395001

Client Sample ID.: N-00017

Sample Information:

Type: Drinking Water Origin: Raw Well Routine

575 Broad Hollow Road, Melville, NY 11747

TEL: (631) 694-3040 FAX: (631) 420-8436 www.pacelabs.com

Water Auth. of Western Nassau

1580 Union Tpke.

New Hyde Park, NY 11040 Attn To: Michael Leiner

Federal ID: Collected: Received:

2902830

06/17/2021 11:44 AM 06/17/2021 12:00 PM

Point

N-00017

Location Well #20 No NHP

Collected By PACE Sample Comments:

Samples were received outside of the recommended temperature range of 0-6 degrees Celsius. The samples were received from the field on ice and the cooling process has begun.

							004 DD 4144
Chloride	58.2		1	mg/L	250	06/28/2021 7:40 PM	001 BP1U1/1
Fluoride	<0.10		1	mg/L	2.2	06/28/2021 7:40 PM	001 BP1U1/1
Sulfate	22.7		1	mg/L	250	06/28/2021 7:40 PM	001 BP1U1/1
Analytical Method;EPA 314.0							
Parameter(s)	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	Limit	Analyzed:	Container:
Perchlorate	<4.00	D8	1	ug/L	18	06/30/2021 2:38 PM	
Analytical Method:EPA 353.2							
Parameter(s)	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Limit</u>	<u>Analyzed:</u>	<u>Container:</u>
Nitrate as N	3.3		5	mg/L	10	06/18/2021 12:08	001 BP1U1/1
Nitrate-Nitrite (as N)	3.4		5	mg/L		06/18/2021 12:08	001 BP1U1/1
Analytical Method: EPA 353.2							
Parameter(s)	Results	Qualifier	<u>D.F.</u>	<u>Units</u>	<u>Limit</u>	Analyzed:	<u>Container:</u>
Nitrite as N	<0.050	M1	1	mg/L	1	06/17/2021 11:13	001 BP1U1/1
Analytical Method:EPA 522		Prep Method:	EPA 522		Prep Date	e: 06/24/2021 9:59 AM	
Parameter(s)	<u>Results</u>	Qualifier	<u>D.F.</u>	<u>Units</u>	<u>Limit</u>	Analyzed:	Container:
1,4-Dioxane (p-Dioxane)	0.38		1	ug/L	1	06/24/2021 7:50 PM	001 AG2R1/2
Surr: 1,4-Dioxane-d8 (S)	97%		1	%REC		06/24/2021 7:50 PM	001 AG2R1/2
Analytical Method:Field Method							
Parameter(s)	<u>Results</u>	<u>Qualifier</u>	D.F.	<u>Units</u>	<u>Limit</u>	Analyzed:	<u>Container:</u>
Field Temperature	14.7	N3	1	deg C		06/17/2021 11:46	001 BP1U1/1
Field pH	6.15	N3	1	Std. Units		06/17/2021 11:46	001 BP1U1/1
Analytical Method:SM22 2120B							
Parameter(s)	Results	Qualifier	<u>D.F.</u>	<u>Units</u>	<u>Limit</u>	Analyzed:	Container:
Apparent Color	<5.0		1	units		06/18/2021 10:20	001 BP1U1/1
рН	6.6		1	Std. Units		06/18/2021 10:20	001 BP1U1/1
Analytical Method:SM22 2150B							
Parameter(s)	Results	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Limit</u>	<u>Analyzed:</u>	Container:
Odor @ 60 Degrees C	1		1		3	06/18/2021 10:15	001 BP1U1/1

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See qualifiers page for additional qualifier definitions.

Jennifer Aracri Test results meet the requirements of NELAC unless otherwise noted.

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Result(s) reported meet(s) NYS Regulatory Limit(s). Result(s) flagged with \* Exceed NYS Regulatory Limit(s). Limit Noted.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.Estimated value - below calibration range

# <sup>g</sup>ace Analytical

**Laboratory Results** 

Results for the samples and analytes requested The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests

Lab No.: 70177395001

Client Sample ID.: N-00017

Sample Information:

Type: Drinking Water Origin: Raw Well Routine

575 Broad Hollow Road, Melville, NY 11747 TEL: (631) 694-3040 FAX: (631) 420-8436 www.pacelabs.com

Water Auth. of Western Nassau 1580 Union Tpke.

New Hyde Park, NY 11040 Attn To: Michael Leiner

Federal ID: Collected:

2902830

06/17/2021 11:44 AM 06/17/2021 12:00 PM

Point

N-00017 Location Well #20

No NHP

Received: Collected By PACE

Sample Comments: Samples were received outside of the recommended temperature range of 0-6 degrees Celsius. The samples were received from the field on ice and the cooling process has begun.

, s							
Analytical Method:SM22 2320B				11-14-	Limit	Analyzed:	Container:
Parameter(s)	<u>Results</u>	Qualifier	D.F.	<u>Units</u>			
Alkalinity, Total as CaCO3	25.1		1	mg/L		06/29/2021 12:16	001 BP1U1/1
Analytical Method:SM22 2330 I	_SI						Cantalnam
Parameter(s)	Results	<u>Qualifier</u>	D.F.	<u>Units</u>	<u>Limit</u>	Analyzed:	Container:
Corrosivity	-2.93		1			06/30/2021 1:46 PM	001 BP1U1/1
Analytical Method:SM22 25400	·						0
Parameter(s)	<u>Results</u>	<u>Qualifier</u>	D.F.	<u>Units</u>	<u>Limit</u>	Analyzed:	<u>Container:</u>
Total Dissolved Solids	188		1	mg/L		06/24/2021 3:57 PM	001 BP1U1/1
Analytical Method;SM22 4500	NH3 H						
Parameter(s)	Results	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Limit</u>	Analyzed:	Container:
Nitrogen, Ammonia	0.32		1	mg/L		06/29/2021 12:56	001 BP1U1/1
Analytical Method:SM22 55400	<u> </u>						
Parameter(s)	Results	Qualifier	D.F.	<u>Units</u>	<u>Limit</u>	<u>Analyzed:</u>	<u>Container:</u>
LAS Molecular Weight, g/mol	320		1			06/18/2021 8:35 PM	001 BP1U1/1 001 BP1U1/1
MBAS, Calculated as LAS	<0.080		1	mg/L		06/18/2021 8:35 PM	001 55 10 1/1

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Test results meet the requirements of NELAC unless otherwise noted.



Results for the samples and analytes requested The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests

Lab No.: 70177395002

Client Sample ID.: AS/GAC-00017

Sample Information:

Type: Drinking Water Origin: Treated Well Routine

> **Treatment** Air Stripper/GAC

TEL: (631) 694-3040 FAX: (631) 420-8436 www.pacelabs.com

Water Auth. of Western Nassau

1580 Union Tpke.

New Hyde Park, NY 11040 Attn To: Michael Leiner

Federal ID:

2902830

Collected:

06/17/2021 12:00 PM

Point

AS/GAC-00017

Received:

06/17/2021 12:00 PM

Location Well 20

Collected By

PACE

Analytical Method: ASTM D7237		Qualifier	D. <u>F.</u>	Units_	Limi <u>t</u>	Analyzed:	Container:
Parameter(s)	<u>Results</u>	Quaimer			200	06/24/2021 2:16 PM	002 BP3C1/1
yanide, Free	<10.0		1	ug/L		00/2 //2021 2000	
Analytical Method:EPA 180.1					1.1	Analyzed:	Container:
Parameter(s)	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Limit</u>		
urbidity	<1.0		1	NTU	5	06/18/2021 9:37 PM	002 BP1U1/1
Analytical Method:EPA 200.7							0 t - l
Parameter(s)	Results	Qualifier	D.E.	<u>Units</u>	<u>Limit</u>	Analyzed:	<u>Container:</u>
a Hardness as CaCO3 (SM 2340B	35.0		1	mg/L		06/28/2021 5:22 PM	002 BP4N1/1
	14.0		1	mg/L		06/28/2021 5:22 PM	002 BP4N1/1
alcium	<0.020		1	mg/L	0.3	06/28/2021 5:22 PM	002 BP4N1/1
on town	7.4		1	mg/L		06/28/2021 5:22 PM	002 BP4N1/1
agnesium	<0.010		1	mg/L	0.3	06/28/2021 5:22 PM	002 BP4N1/1
langanese	33.9		1	mg/L		06/28/2021 5:22 PM	002 BP4N1/1
odium	65.2	N3	1	mg/L		06/28/2021 5:22 PM	002 BP4N1/1
ot Hardness asCaCO3 (SM 2340B	0.37		1	mg/L	5	06/28/2021 5:22 PM	002 BP4N1/1
(inc							
Analytical Method:EPA 200.8	Results	Qualifier	D.F.	Units	<u>Limit</u>	Analyzed:	Container:
Parameter(s)		goomor		ug/L	6	07/01/2021 11:19	002 BP4N1/1
ntimony	<0.40		1		10	07/01/2021 11:19	002 BP4N1/1
rsenic	<1.0		1	ug/L	2	07/01/2021 11:19	002 BP4N1/1
arium	0.0099		1	mg/L	4	07/01/2021 11:19	002 BP4N1/1
Beryllium	<0.30		1	ug/L	5	07/01/2021 11:19	002 BP4N1/1
Cadmium	<1.0		1	ug/L "	0.1	07/01/2021 11:19	002 BP4N1/1
Chromium .	<0.0070		1	mg/L	1.3	07/01/2021 11:19	002 BP4N1/1
Copper	0.039		1	mg/L	1.5	07/01/2021 11:19	002 BP4N1/1
ead	<1.0		1	ug/L	2	07/01/2021 11:19	002 BP4N1/1
Mercury	<0.20		1	ug/L	۷	07/01/2021 11:19	002 BP4N1/1
lickel	0.0016		1	mg/L	50	07/01/2021 11:19	002 BP4N1/1
Selenium	<2.0	-	1	ug/L	50	07/01/2021 11:19	002 BP4N1/1
Silver	< 0.0010		1	mg/L	0.1	07/01/2021 11:19	002 BP4N1/1
Thallium	<0.30		1	ug/L	2	07/01/2021 11.19	
Analytical Method:EPA 300.0				<del></del>		A al. mia -l-	Container
Parameter(s)	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Limit</u>	Analyzed:	
	60.5		1	mg/L	250	06/28/2021 7:54 PM	002 BP1U1/1
Chloride	<0.10		1	mg/L	2.2	06/28/2021 7:54 PM	002 BP1U1/1
Fluoride	23.5		1	mg/L	250	06/28/2021 7:54 PM	002 BP1U1/1
Sulfate	23.0		•	J .			

### Sulfate

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ND - Not Detected at or above adjusted reporting limit.

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Jennifer Aracri

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Lab No.: 70177395002

Client Sample ID.: AS/GAC-00017

Sample Information:

Type: Drinking Water Origin: Treated Well Routine

> **Treatment** Air Stripper/GAC

575 Broad Hollow Road, Melville, NY 11747 TEL: (631) 694-3040 FAX: (631) 420-8436

www.pacelabs.com

Water Auth. of Western Nassau 1580 Union Tpke.

New Hyde Park, NY 11040 Attn To: Michael Leiner

Federal ID: 2902830 Collected:

06/17/2021 12:00 PM

Point

AS/GAC-00017

Received:

06/17/2021 12:00 PM

Location Well 20

Collected By PACE

Analytical Method:EPA 353.2							0
Parameter(s)	<u>Results</u>	<u>Qualifier</u>	D.F.	<u>Units</u>	<u>Limit</u>	Analyzed:	<u>Container:</u>
Nitrate as N	3.7		5 5	mg/L mg/L	10	06/18/2021 12:14 06/18/2021 12:14	002 BP1U1/1 002 BP1U1/1
Nitrate-Nitrite (as N)	3.7						·
Analytical Method:EPA 353.2	Darulta	Qualifier	D.F.	Units	Limit	Analyzed:	. <u>Container:</u>
Parameter(s)	<u>Results</u>	Qualifier			1	06/17/2021 11:19	002 BP1U1/1
Nitrite as N	<0.050		1	mg/L		00/11/2021 11/10	
Analytical Method:Field Method							O contains and
Parameter(s)	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Limit</u>	Analyzed:	Container:
Field Temperature	14.7	N3	1	deg C		06/17/2021 12:02	002 BP1U1/1 002 BP1U1/1
Field pH	6.15	N3	1	Std. Units		06/17/2021 12:02	002 01 10 1/1
Analytical Method:SM22 2120B							Cantainas
<u>Parameter(s)</u>	Results	Qualifier	<u>D.F.</u>	<u>Units</u>	<u>Limit</u>	<u>Analyzed:</u>	<u>Container:</u>
Apparent Color	<5.0		1	units		06/18/2021 10:20	002 BP1U1/1 002 BP1U1/1
pH	7.2		1	Std. Units		06/18/2021 10:20	002 BF 10 1/1:
Analytical Method:SM22 2150B							0
<u>Parameter(s)</u>	Results	Qualifier	<u>D.F.</u>	<u>Units</u>	Limit	<u>Analyzed:</u>	<u>Container:</u>
Odor @ 60 Degrees C	No odor observed		1		3	06/18/2021 10:16	002 BP1U1/1
Analytical Method:SM22 2320B							
Parameter(s)	Results	Qualifier	D.F.	<u>Units</u>	<u>Limit</u>	<u>Analyzed:</u>	<u>Container:</u>
Alkalinity, Total as CaCO3	21.8		1	mg/L		06/29/2021 12:34	002 BP1U1/1
Analytical Method:SM22 2330 L	SI			7			0 1 1 1
<u>Parameter(s)</u>	<u>Results</u>	Qualifier	D.E.	<u>Units</u>	<u>Limit</u>	Analyzed:	<u>Container</u>
Corrosivity	-2.99		1			06/30/2021 1:46 PM	002 BP1U1/1
Analytical Method:SM22 2540C	·						
Parameter(s)	Results	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Limit</u>	Analyzed:	<u>Container</u>
Total Dissolved Solids	192		1	mg/L		06/24/2021 4:12 PM	002 BP1U1/1
Analytical Method:SM22 4500 N	JH3 H						
Parameter(s)	Results	Qualifier	<u>D.F.</u>	<u>Units</u>	<u>Limit</u>	Analyzed:	<u>Container</u>
	<0.10		1	mg/L		06/29/2021 12:57	002 BP1U1/1
Nitrogen, Ammonia	~U. IU						

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DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting U - Indicates the compound was analyzed for, but not detected

See qualifiers page for additional qualifier definitions.

Result(s) reported meet(s) NYS Regulatory Limit(s). Result(s) flagged with \* Exceed NYS Regulatory Limit(s). Limit Noted.

Jennifer Aracri

Test results meet the requirements of NELAC unless otherwise noted.

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

page 5 of 11



Results for the samples and analytes requested The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests

Lab No.: 70177395002

Client Sample ID.: AS/GAC-00017

Sample Information:

Type: Drinking Water Origin: Treated Well Routine

> **Treatment** Air Stripper/GAC

TEL: (631) 694-3040 FAX: (631) 420-8436

www.pacelabs.com

Water Auth. of Western Nassau

1580 Union Tpke.

New Hyde Park, NY 11040 Attn To: Michael Leiner

Federal ID:

2902830

Collected: Received: 06/17/2021 12:00 PM

Point

AS/GAC-00017

06/17/2021 12:00 PM

PACE Collected By

Location Well 20

Analytical Method:SM22 554	OC				Limit	Analyzed:	Container:
Parameter(s)	Results	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Limit</u>		
LAS Molecular Weight, g/mol	320		1			00/10/2021 0:00 1 111	
MBAS, Calculated as LAS	<0.080		1	mg/L		06/18/2021 8:35 PM	002 BP1U1/1

Qualifiers:

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit. Estimated value - below calibration range U - Indicates the compound was analyzed for, but not detected

See qualifiers page for additional qualifier definitions.

Jennifer Aracri

Test results meet the requirements of NELAC unless otherwise noted.



### WorkOrder:

70177395

### **Laboratory Certifications**

### Pace Analytical Services Long Island

575 Broad Hollow Rd, Melville, NY 11747

Connecticut Certification #: PH-0435

Delaware Certification # NY 10478

Maryland Certification #: 208

Massachusetts Certification #: M-NY026

New Hampshire Certification #: 2987

New Jersey Certification #: NY158

New York Certification #: 10478 Primary Accrediting Body

Pennsylvania Certification #: 68-00350

Rhode Island Certification #: LAO00340

Virginia Certification # 460302

### Pace Analytical Services National

12065 Lebanon Road, Mt. Juliet, TN 37122

Alabama Certification #: 40660

Alaska Certification 17-026

Arizona Certification #: AZ0612

Arkansas Certification #: 88-0469

California Certification #: 2932

Canada Certification #: 1461.01

Colorado Certification #: TN00003

Connecticut Certification #: PH-0197

DOD Certification: #1461.01

EPA# TN00003

Florida Certification #: E87487

Georgia DW Certification #: 923

Georgia Certification: NELAP

Idaho Certification #: TN00003

Illinois Certification #: 200008

Indiana Certification #: C-TN-01

Iowa Certification #: 364

Kansas Certification #: E-10277

Kentucky UST Certification #: 16

Kentucky Certification #: 90010

Louisiana Certification #: Al30792

Louisiana DW Certification #: LA180010

Maine Certification #: TN0002

Maryland Certification #: 324

Massachusetts Certification #: M-TN003

Michigan Certification #: 9958

Minnesota Certification #: 047-999-395

Mississippi Certification #: TN00003

Missouri Certification #: 340

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Date Reported: 07/02/2021



575 Broad Hollow Road, Melville, NY 11747 TEL: (631) 694-3040 FAX: (631) 420-8436 www.pacelabs.com

### WorkOrder:

70177395

### **Laboratory Certifications**

### Pace Analytical Services National

New York Certification #: 11742

Montana Certification #: CERT0086 Nebraska Certification #: NE-OS-15-05 Nevada Certification #: TN-03-2002-34 New Hampshire Certification #: 2975 New Jersey Certification #: TN002 New Mexico DW Certification

North Carolina Aquatic Toxicity Certification #: 41 North Carolina Drinking Water Certification #: 21704 North Carolina Environmental Certificate #: 375

North Dakota Certification #: R-140
Ohio VAP Certification #: CL0069

Oklahoma Certification #: 9915 Oregon Certification #: TN200002 Pennsylvania Certification #: 68-02979 Rhode Island Certification #: LAO00356 South Carolina Certification #: 84004

South Dakota Certification

Tennessee DW/Chem/Micro Certification #: 2006

Texas Certification #: T 104704245-17-14
Texas Mold Certification #: LAB0152
USDA Soil Permit #: P330-15-00234

Utah Certification #: TN00003

Vermont Dept. of Health: ID# VT-2006

Virginia Certification #: VT2006 Virginia Certification #: 460132 Washington Certification #: C847 West Virginia Certification #: 233 Wisconsin Certification #: 998093910

Wyoming UST Certification #: via A2LA 2926.01 A2LA-ISO 17025 Certification #: 1461.01 A2LA-ISO 17025 Certification #: 1461.02 AIHA-LAP/LLC EMLAP Certification #:100789

Date Reported: 07/02/2021

page 8 of 11



### WorkOrder:

70177395

### **Additional Qualifiers**

M1 - Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

N3 - Accreditation is not offered by the relevant laboratory accrediting body for this parameter.

Date Reported: 07/02/2021 page 9 of 11

CHAIN-OF-CUSTODY / Analytical Request

WO#:70177395 Regulatory Agency State / Location 70177395 The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields

which the Pace Terms and Conditions found at https://info

Section C Company Name:
Address:
Pace Quote:
Pace Project Manager: jennifer.aracri@pacelabs.com.
Pace Profile #: 5131 Invoice Information: Altentlon: Purchase Order #:
Project Name: IOC/Perc/1.4-DIOXANE 6/17
Project # Report To: Joseph Corbisiero Required Project Information: Capy Ta: Water Auth, of Western Nassar 1580 Union Tpke. Email: jcorbisiero@wawnc.org Phone: (516)327-4053 Required Client Information: New Hyde Park, NY 11040 Requested Due Date Section A

Reques	Requested Due Date:	Project #:						Pace	Pace Profile #:	\$ 5131,	-	***************************************					-			ž	ا		
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		MM	1 pc			CLIENT: WAWN	
Courier:□ Fed Ex□ UPS□ USPS □Client		rcial 🗷	ace 00the				
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Custody Seal on Cooler/Box Present LIVE	s 🗀 No	Seals in	tact. Yes	□ No		Temperature Blan	k Present: Yea Wo
Packing Material:   Bubble Wrap   Bubble	Bags 🗇	Ziploc 🗀	None 🔲 Oth	ner		Type of Ice: Wet	
Thermometer Used: TH091	Correcti	on Factor	10.0	<u> </u>		Samples on ice, coo	oling process has begun
Cooler Temperature(°C); 11,9	Cooler T	emperatu	re Correcte	ed(°C); //	,9	Date/Time 5035A	kits placed in freeze <u>r</u>
Temp should be above freezing to 6.0°C	PHO				***		ntents: 6(17/2) EU
USDA Regulated Soil ( \sum N/A, water sample	)			Date and Ir	nitials of <sub>l</sub>	person examining cor	Konton Gray (1901)
Did samples originate in a quarantine zone w	ithin the U	nited State	es: AL, AR, CA	, FL, GA, ID, L	A, MS, NC,	Did samples origna	te from a foreign source
	) IIVor	- I INO				including Hawaii ar	d Puerto Rico)? ☐ Yesl 🕱 No
NM, NY, OK, OR, SC, TN, TX, or VA Icheck mapped If Yes to either question, fill out a Regulat	ed Soil Ch	ecklist (F	-LI-C-010) a	nd include v	with SCUF	R/COC paperwork.	
If tes to either question, in our a restance	9,4 99,1, 1,1					COMMENTS	
Chain of Custody Present:	ZYes	□No		1.			
Chain of Custody Filled Out:	ziyes	□No		2.			
Chain of Custody Relinquished:	⊿Yes	□No		3,	7 100		
Sampler Name & Signature on COC:	Z Yes	□No	□N/A	4.			
Samples Arrived within Hold Time:	CYes	□Nö		5.		The state of the s	
Short Hold Time Analysis (<72hr):	ÇZY és	□No		6,			
Rush Turn Around Time Requested:	□Yes	/ENO		7.			
Sufficient Volume: (Triple volume provided fo	r ⊡Yés	□No		8.			
Correct Containers Used:	J⊒Yes	□No		9.			
-Pace Containers Used:	≱Yes	□No					
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Filtered volume received for Dissolved tests	⊏Yes	□No	en/a	11.	Note it se	BOILDEUr iz Alzime ur rue	diggolian contrainois
Sample Labels match COC:	\ EYes	□No		12.			
-Includes date/time/ID, Matrix: St WT_		7		17	□ HNO <sub>3</sub>	□H <sub>2</sub> SO <sub>4</sub> □N	aOH □ HCI
All containers needing preservation have be	eni⊡Yes	□No	□N/A	13.	Г1 ⊔и∩3	□112304 □111	1011
checked?							
pH paper Lot # HC\55968	ed to bo			Sample #			3
All containers needing preservation are four	יייייייט וע נט טפ						
in compliance with method recommendatio	*Yes	□No	□N/A				
(HNO <sub>3</sub> , H <sub>2</sub> SO <sub>4</sub> , HCl, NaOH>9 Sulfide,	W-11'GO						
NAOH>12 Cyanide) Exceptions: VOA, Coliform, TOC/DOC, Oil and	Grease						
DRO/8015 (water).	0,0000,			Initial whe	n complet		Date/Time preservative
Per Method, VOA pH is checked after analys	is.					preservative:	added:
Samples checked for dechlorination:	□Yes	□No	⊠Ñ/A	14.			
KI starch test strips Lot #							
Residual chlorine strips Lot #					Positive fo	r Res. Chlorine? Y N	
SM 4500 CN samples checked for sulfide?	Yes	□No	□N7A	15.	•		
Lead Acetate Strips Lot #			بمين بم			<u></u>	
Headspace in VOA Vials (>6mm):	□Yes	□No	jań/a	16,			
Trip Blank Present:	⊡Yes	□No	JAN/A/	17.			
Trip Blank Custody Seals Present	⊏Yes	□No	CINYA				
Pace Trip Blank Lot # (if applicable):	- AA		<i>"</i> .				11
Client Notification/ Resolution:				Field Data			N
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<sup>\*</sup> PM (Project Manager) review is documented electronically in LIMS.

# Station 28, Well 28 Miriam Parkway, Elmont, N.Y.

Update: July 7, 2021	
Status:	June 2021 In Service
	1,4 – dioxane (1 part per billion)
NYS Allowable levels:	PFOS (10 parts per trillion)
en e	PFOA (10 parts per trillion)
Most Recent Raw Water Test Results:	1 (1) (1) (1) (1) (1) (1) (1) (1) (1) (1
(PFOS/PFOA Samples collected on June 1,	1,4 – dioxane (ND parts per billion)
2021)	PFOS (5.5 parts per trillion)
Quarterly 1,4 – dioxane samples collected on	PFOA (14.5 parts per trillion)
April 6, 2021	
Most Recent Treated Water Test Results:	PFOS (<1.8 parts per trillion)
(Samples collected on June 1, 2021)	PFOA (<1.8 parts per trillion)
Construction Project for the Installation of Gr PFOS/PFOA.	anular Activated Carbon ("GAC") vessels to remove
Phase 1 Construction Project Chronologic	al Progress:
November 2019 Full Site Engineering Report	
November 2019 Project Plans and Specificat	
December 2019 Construction Start Date with	
June 2020 Well Startup and Completed Wor	
	Full Engineering Report March 2020
Regulatory Approvals Dates	Approval of Overall Project June 2020
Phase 2 Construction Project Temporary	Fabric Enclosures:
January 2021 Enclosure Installation Started	
February 2021 Enclosure Installation Comple	ete .
Phase 3 Construction of Permanent Build	ing around GAC Vessels

Permanent building installation to take place beginning January 2023

\*\*\*\* Well 28 running to system through new treatment. Water quality is in compliance with all NYSDOH Standards



Results for the samples and analytes requested The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests

Lab No.: 70175107003

Client Sample ID.: N-02414

Sample Information:

Type: Drinking Water Origin: Raw Well Routine

575 Broad Hollow Road, Melville, NY 11747 TEL: (631) 694-3040 FAX: (631) 420-8436 www.pacelabs.com

Water Auth. of Western Nassau

1580 Union Tpke.

New Hyde Park, NY 11040 Attn To: Michael Leiner

Federal ID: Collected:

2902857

06/01/2021 03:45 PM

06/01/2021 11:26 AM

Point N-02414

Location Well #28 **Elmont** 

Received: Collected By

PACE

Analytical Method:EPA 537.1		Prep Method:	EPA 537.	1	Prep Da	te: 06/08/2021 11:28	
Parameter(s)	Results	Qualifier	<u>D.F.</u>	<u>Units</u>	<u>Limit</u>	Analyzed:	<u>Container:</u>
Perfluorobutanesulfonic acid	3.1		1	ng/L		06/18/2021 12:02	003 BP3T1/2
	4.0		1	ng/L		06/18/2021 12:02	003 BP3T1/2
Perfluoroheptanoic acid	5.3		1	ng/L		06/18/2021 12:02	003 BP3T1/2
erfluorohexanesulfonic acid			1	ng/L		06/18/2021 12:02	003 BP3T1/2
erfluorononanoic acid	4.4		1	ng/L	10	06/18/2021 12:02	003 BP3T1/2
erfluorooctanesulfonic acid	5.5		l .	•	10	06/18/2021 12:02	003 BP3T1/2
erfluorooctanoic acid	14.5*		1	ng/L	10	06/18/2021 12:02	003 BP3T1/2
surr: 13C2-PFDA (S)	71%		1	%REC			003 BF3T1/2
urr: 13C2-PFHxA (S)	78%		1	%REC		06/18/2021 12:02	
Surr: HFPO-DAS (S)	71%		1	%REC		06/18/2021 12:02	003 BP3T1/2

Qualifiers:

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in

sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit. J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting

limit.Estimated value - below calibration range U - Indicates the compound was analyzed for, but not detected

Result(s) reported meet(s) NYS Regulatory Limit(s). Result(s) flagged with \* Exceed NYS Regulatory Limit(s). Limit Noted.

Date Reported: 06/21/2021

page 3 of 13

Jennifer Aracri

Test results meet the requirements of NELAC unless otherwise noted.



Results for the samples and analytes requested The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests

Lab No.: 70175107004

Client Sample ID.: GAC-02414

Sample Information:

Type: Drinking Water Origin: Treated Well Routine

> **Treatment** GAC

575 Broad Hollow Road, Melville, NY 11747 TEL: (631) 694-3040 FAX: (631) 420-8436

www.pacelabs.com

Water Auth. of Western Nassau

1580 Union Tpke.

New Hyde Park, NY 11040 Attn To: Michael Leiner

Federal ID: 2902857

Collected: 06/01/2021 11:22 AM

Received: Collected By

06/01/2021 03:45 PM PACE

GAC-02414 Point

Location Well #28

Analytical Method: EPA 537.1		Prep Method:	EPA 537.	i	Prep Da	te: 06/08/2021 11:28	
Parameter(s)	<u>Results</u>	Qualifier	<u>D.F.</u>	<u>Units</u>	<u>Limit</u>	Analyzed:	<u>Container:</u>
Perfluorobutanesulfonic acid	<1.8		1	ng/L		06/17/2021 11:46	004 BP3T1/2
Perfluoroheptanoic acid	<1.8		1	ng/L		06/17/2021 11:46	004 BP3T1/2
Perfluorohexanesulfonic acid	<1.8		1	ng/L		06/17/2021 11:46	004 BP3T1/2
Perfluorononanoic acid	<1.8		1	ng/L		06/17/2021 11:46	004 BP3T1/2
Perfluorooctanesulfonic acid	<1.8		1 .	ng/L	10	06/17/2021 11:46	004 BP3T1/2
Perfluorooctanoic acid	<1,8		1	ng/L	10	06/17/2021 11:46	004 BP3T1/2
Surr: 13C2-PFDA (S)	102%		1	%REC		06/17/2021 11:46	004 BP3T1/2
Surr: 13C2-PFHxA (S)	100%		1	%REC		06/17/2021 11:46	004 BP3T1/2
Surr: HFPO-DAS (S)	96%		1	%REC		06/17/2021 11:46	004 BP3T1/2

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit. Estimated value - below calibration range

U - Indicates the compound was analyzed for, but not detected

Result(s) reported meet(s) NYS Regulatory Limit(s).
Result(s) flagged with \* Exceed NYS Regulatory Limit(s). Limit Noted,

Date Reported: 06/21/2021

Test results meet the requirements of NELAC unless otherwise noted. This report shall not be reproduced except in full, without the written approval of the laboratory.

Jennifer Aracri

page 4 of 13

# Station 35, Well 35A Cisney Avenue, Floral Park, N.Y.

Update: July 7, 2021

Status:

June 2021 In Service

1,4 – dioxane (1 part per billion)

**NYS Allowable levels:** 

PFOS (10 parts per trillion)

PFOA (10 parts per trillion)

1,4 - dioxane (.590 parts per billion)

**Most Recent Raw Water Test Results:** 

(Samples collected June 3, 2021)

PFOS (6.0 parts per trillion)

PFOA (9.4 parts per trillion)

Construction Project for the Installation of Granular Activated Carbon ("GAC") vessels to remove PFOS/PFOA and installation of Ultraviolet Advanced Oxidation Process ("AOP") to remove 1,4 – dioxane.

### **Phase 1 Construction Project Chronological Progress:**

April 2020 Pilot Study Performed

August 2020 Pilot Study Report Sent to NYS Department of Health ("NYSDOH")

October 2020 Full Site Engineering Report Complete and Sent to NYSDOH

December 2020 Project Plans and Specifications Complete and sent to NYSDOH

January 2021 Construction Start Date with Estimated Completion Date of August 2021

GAC Vessels Arrived April 26, 2021

AOP Enclosure Arrived March 4, 2021

AOP Reactor Arrived April 13, 2021

August 2021 Estimated Well Startup and Completed Works Approval

Pilot Study Report March 2021

Full Engineering Report NCDOH April 2021

**Regulatory Approvals Dates**(Awaiting return comments from NYSDOH following response to initial comments by H2M

on May 6, 2021)

Approval of Overall Project August 2021

### **Phase 1 Current Status**

The Water Authority experienced several weeks of delay due to weather conditions. The AOP enclosure arrived on March 4, 2021 and is set. The AOP reactor arrived on April 13, 2021. The GAC vessel manufacturer delayed delivery by one month and were ultimately delivered on April 26th. Given the proximity of this site to the LIRR we were required to receive Coordination approval which delayed setting the vessels for over one additional month. During these delays contractors continued to work on site piping and other essential project items. The Station was shut down during the last week of June 2021 and the AOP reactor was then energized. The contractor is currently addressing the AOP reactor checklist which will be followed with a full review by Trojan Industries to perform a full review and sign off. Carbon delivery has taken place. Target date for Station start-up is now the end of August 2021.

# Phase 2 Construction Project Permanent GAC Building and Site Work Chronological Progress:

April 2021 Design of Permanent GAC Building

April 26, 2021 Was Bid Opening for Permanent GAC Building

July 2021 Estimated Construction Start Date for Permanent GAC Building; expected to take 6 months

# Phase 3 Construction Project Demolition of Existing Well House to Raise Wells and Site Rehabilitation Work:

Project will start in 2024 following the installation of all Water Authority wellhead treatment for emerging contaminants for all Water Authority impacted wells.

Note: Well 35 at this site is out of service due to high levels of iron.



# Laboratory Results Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests

Client Sample ID.: N-04298

Lab No.: 70175477003

Sample Information:

Type: Drinking Water Origin: Raw Well

Routine

TEL: (631) 694-3040 FAX: (631) 420-8436

www.pacelabs.com

Water Auth. of Western Nassau

1580 Union Tpke.

New Hyde Park, NY 11040 Attn To: Michael Leiner

Federal ID: Collected:

2902857

06/03/2021 12:01 PM

Point

N-04298

06/03/2021 03:15 PM

Location Well #35A FI Pk

Received: Collected By PACE

Analytical Method: EPA 522		Prep Method:	EPA 522		Prep Date	2: 06/05/2021 9:29 AM	
Parameter(s)	Results	Qualifier	<u>D.F.</u>	<u>Units</u>	<u>Limit</u>	Analyzed:	<u>Container:</u>
1,4-Dioxane (p-Dioxane)	0.59		1	ug/L	1	06/09/2021 2:55 AM 06/09/2021 2:55 AM	003 AG2R1/2 003 AG2R1/2
Surr: 1,4-Dioxane-d8 (S)	94%		1	%REC		00/09/2021 2.55 AW	003 AGZIV112
Analytical Method:EPA 537.1		Prep Method:	EPA 537.		Prep Date	2: 06/09/2021 10:32	
Parameter(s)	Results	<u>Qualifier</u>	D.F.	<u>Units</u>	Limit	Analyzed:	Container:
Perfluorobutanesulfonic acid	2.6		1	ng/L		06/27/2021 4:25 AM	003 BP3T1/2
Perfluoroheptanoic acid	4.1		1	ng/L		06/27/2021 4:25 AM	003 BP3T1/2
Perfluorohexanesulfonic acid	4.2		1	ng/L		06/27/2021 4:25 AM	003 BP3T1/2
Perfluorononanoic acid	4.5	•	1	ng/L		06/27/2021 4:25 AM	003 BP3T1/2
Perfluorooctanesulfonic acid	6.0		1	ng/L	10	06/27/2021 4:25 AM	003 BP3T1/2
Perfluorooctanoic acid	9.4		1	ng/L	10	06/27/2021 4:25 AM	003 BP3T1/2
Surr: 13C2-PFDA (S)	106%		1	%REC		06/27/2021 4:25 AM	003 BP3T1/2
Surr: 13C2-PFHxA (S)	105%		1	%REC		06/27/2021 4:25 AM	003 BP3T1/2
Surr: HFPO-DAS (S)	77%		1	%REC		06/27/2021 4:25 AM	003 BP3T1/2

Qualifiers:

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.Estimated value - below calibration range

U - Indicates the compound was analyzed for, but not detected

Result(s) reported meet(s) NYS Regulatory Limit(s).
Result(s) flagged with \* Exceed NYS Regulatory Limit(s). Limit Noted.

Date Reported: 06/28/2021

page 3 of 13

Jennifer Aracri

Test results meet the requirements of NELAC unless otherwise noted.

# Station 40, Wells 40 & 40A (Headquarters Site)

# Union Turnpike, New Hyde Park, N.Y.

July 7, 2021

Status:

June 2021 In Service

1,4 - dioxane (1 part per billion)

**NYS Allowable levels:** 

PFOS (10 parts per trillion)

PFOA (10 parts per trillion)

**Most Recent Raw Water Test Results:** 

Well 40

(Samples collected June 3, 2021)

1,4 - dioxane (.540 parts per billion)

PFOS (4.6 parts per trillion)

PFOA (10.3 parts per trillion)

1,4 – dioxane (1.10 parts per billion)

Well 40A

(Samples collected June 3, 2021)

PFOS (7.4 parts per trillion)

PFOA (11.9 parts per trillion)

Construction Project for the Installation of Granular Activated Carbon ("GAC") vessels to remove PFOS/PFOA and installation of Ultraviolet Advanced Oxidation Process ("AOP") to remove 1,4 – dioxane.

### **Phase 1 Construction Project Chronological Progress:**

April 2020 Pilot Study Performed

**Regulatory Approvals Dates** 

August 2020 Pilot Study Report Sent to NYS Department of Health ("NYSDOH")

Pilot Study Report March 2021

Full Engineering Report NCDOH April 2021

(Awaiting comments from NYSDOH)

Approval of Overall Project December 2021

Blending Application Sent to NYSDOH and

NCDOH on April 20, 2021

<sup>\*</sup>Water Authority is awaiting NYSDOH comments on Pilot Study.

Available space for wellhead treatment at this site is an obstacle to preparing the full engineering report and to prepare project design and specifications. This site serves as the Water Authority headquarters location.

In December 2020 the Water Authority acquired one section of property adjacent to this well station. The Water Authority has begun action to acquire a second property adjacent to this site which will provide adequate space for the installation of new wellhead treatment systems. Eminent Domain procedures have begun, a public hearing was scheduled for April and May of 2021 but were adjourned due to ongoing negotiations with owner. A Public hearing is again scheduled for July 2021 and will move forward unless a price agreement is reached before that date.

The Water Authority has instructed the engineering firm of H2M Group to prepare a request for blending proposal of the two wells located at Station 40. This report was sent on April 20, 2021 and comments have not yet been received. The Engineering Report is expected to be complete by August 2021 using the assumption that the adjacent property is acquired. Water currently produced is blended.

Potential delays could occur toward the procurement of necessary treatment system assets. It is expected to take 3-4 months to obtain GAC vessels and 6-7 months to obtain an AOP reactor.



Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests

Client Sample ID.: N-04390

Lab No.: 70175477004

Sample Information:

Type: Drinking Water Origin: Raw Well

Routine

TEL: (631) 694-3040 FAX: (631) 420-8436

www.pacelabs.com

Water Auth. of Western Nassau

1580 Union Tpke.

New Hyde Park, NY 11040 Attn To: Michael Leiner

Federal ID: Collected:

2902857

06/03/2021 10:29 AM 06/03/2021 03:15 PM Point

N-04390 Location Well #40

Received: Collected By PACE

No NHP

Collected By PACE		NO IVIII			<u></u>		
Analytical Method:EPA 522	***	Prep Method:	EPA 522		Prep Date: 06/05/2021 9:29 AM		
Parameter(s)	Results	Qualifier	D.F.	<u>Units</u>	<u>Limit</u>	Analyzed:	Container:
1,4-Dioxane (p-Dioxane) Surr: 1,4-Dioxane-d8 (S)	0.54 95%		1 1	ug/L %REC	1	06/09/2021 3:11 AM 06/09/2021 3:11 AM	004 AG2R1/2 004 AG2R1/2
Analytical Method:EPA 537.1		Prep Method:	EPA 537.		Prep Dat	te: 06/09/2021 10:32	
Parameter(s)	<u>Results</u>	<u>Qualifier</u>	D.F.	<u>Units</u>	<u>Limit</u>	Analyzed:	Container:
Perfluorobutanesulfonic acid	<1.9		1	ng/L		06/20/2021 6:03 AM	004 BP3T1/2
Perfluoroheptanoic acid	3.3		1	ng/L		06/20/2021 6:03 AM	004 BP3T1/2
Perfluorohexanesulfonic acid	5.6		1	ng/L		06/20/2021 6:03 AM	004 BP3T1/2
Perfluorononanoic acid	<1.9		1	ng/L		06/20/2021 6:03 AM	004 BP3T1/2
Perfluorooctanesulfonic acid	4.6		1	ng/L	10	06/20/2021 6:03 AM	004 BP3T1/2
Perfluorooctanoic acid	10.3*		1	ng/L	10	06/20/2021 6:03 AM	004 BP3T1/2
Surr: 13C2-PFDA (S)	85%		1	%REC	,	06/20/2021 6:03 AM	004 BP3T1/2
Surr: 13C2-PFHxA (S)	80%		1	%REC		06/20/2021 6:03 AM	004 BP3T1/2
Surr: HFPO-DAS (S)	70%		1	%REC		06/20/2021 6:03 AM	004 BP3T1/2
Surr: NEtFOSAA-d5 (S)	109%		1	%REC		06/20/2021 6:03 AM	004 BP3T1/2

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit. Estimated value - below calibration range

U - Indicates the compound was analyzed for, but not detected

Result(s) reported meet(s) NYS Regulatory Limit(s).
Result(s) flagged with \* Exceed NYS Regulatory Limit(s). Limit Noted.

Date Reported: 06/28/2021

page 4 of 13

Test results meet the requirements of NELAC unless otherwise noted.



Results for the samples and analytes requested The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests

Client Sample ID.: N-07445

Lab No.: 70175477005

Sample Information:

Type: Drinking Water Origin: Raw Well Routine

575 Broad Hollow Road, Melville, NY 11747 TEL: (631) 694-3040 FAX: (631) 420-8436

www.pacelabs.com

Water Auth. of Western Nassau

1580 Union Tpke.

New Hyde Park, NY 11040 Attn To: Michael Leiner 2902857

Federal ID: Collected:

06/03/2021 10:34 AM

Point

N-07445 Location Well #40A

Received: Collected By PACE

06/03/2021 03:15 PM

No NHP

Collected by FACE		110 11111			nei'i		
Analytical Method:EPA 522		Prep Method:	EPA 522		Prep Date:	06/05/2021 9:29 AM	
Parameter(s)	<u>Results</u>	<u>Qualifier</u>	D.F.	<u>Units</u>	<u>Limit</u>	Analyzed:	<u>Container:</u>
1,4-Dioxane (p-Dioxane)	1.1* 94%		1	ug/L %REC	1	06/09/2021 3:28 AM 06/09/2021 3:28 AM	005 AG2R1/2 005 AG2R1/2

Surr: 1,4-Dioxane-d8 (5)	9470			701120			
Analytical Method:EPA 537.1		Prep Method:	EPA 537.	1	Prep Dat	e: 06/09/2021 10:32	
Parameter(s)	Results	Qualifier	D.F.	<u>Units</u>	<u>Limit</u>	Analyzed:	Container:
Perfluorobutanesulfonic acid	<1.8		1	ng/L		06/20/2021 6:34 AM	005 BP3T1/2
Perfluoroheptanoic acid	2.2		1	ng/L		06/20/2021 6:34 AM	005 BP3T1/2
Perfluorohexanesulfonic acid	3.4		1	ng/L		06/20/2021 6:34 AM	005 BP3T1/2
Perfluorononanoic acid	2.5		1	ng/L		06/20/2021 6:34 AM	005 BP3T1/2
Perfluorooctanesulfonic acid	7.4		1	ng/L	10	06/20/2021 6:34 AM	005 BP3T1/2
Perfluorooctaneic acid	11.9*		1	ng/L	10	06/20/2021 6:34 AM	005 BP3T1/2
	86%		1	%REC		06/20/2021 6:34 AM	005 BP3T1/2
Surr: 13C2-PFDA (S)	78%		1	%REC		06/20/2021 6:34 AM	005 BP3T1/2
Surr: 13C2-PFHxA (S) Surr: HFPO-DAS (S)	68%	S0	1	%REC		06/20/2021 6:34 AM	005 BP3T1/2

Qualifiers:

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.Estimated value - below calibration range

U - Indicates the compound was analyzed for, but not detected

Result(s) reported meet(s) NYS Regulatory Limit(s). Result(s) flagged with \* Exceed NYS Regulatory Limit(s). Limit Noted.

Date Reported: 06/28/2021

page 5 of 13

Jennifer Aracri

Test results meet the requirements of NELAC unless otherwise noted.



Results for the samples and analytes requested The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests

Lab No.: 70175477006

Client Sample ID.: AS-07445

### Sample Information:

Type: Drinking Water Origin: Treated Well Routine

> **Treatment** Air Stripper

575 Broad Hollow Road, Melville, NY 11747 TEL: (631) 694-3040 FAX: (631) 420-8436 www.pacelabs.com

Water Auth. of Western Nassau

1580 Union Tpke.

New Hyde Park, NY 11040

Attn To: Michael Leiner Federal ID:

2902857

06/03/2021 10:18 AM

Point

AS-07445

Collected: 06/03/2021 03:15 PM Received:

Location Well 40,40A

Collected By PACE

Analytical Method:EPA 522		Prep Method:	EPA 522		Prep Dat	te: 06/05/2021 9:29 AM	
Parameter(s)	Results	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Limit</u>	<u>Analyzed:</u>	Container:
,4-Dioxane (p-Dioxane)	0.65	*	1	ug/L	1	06/09/2021 3:45 AM	006 AG2R1/2
Surr: 1,4-Dioxane-d8 (S)	92%	•	1	%REC		06/09/2021 3:45 AM	006 AG2R1/2
Analytical Method:EPA 537.1		Prep Method:	EPA 537.	1	Prep Dat	te: 06/09/2021 10:32	
Parameter(s)	Results	Qualifier	D.F.	<u>Units</u>	<u>Limit</u>	Analyzed:	Container:
Perfluorobutanesulfonic acid	<1.9		1	ng/L		06/20/2021 5:31 AM	006 BP3T1/2
Perfluoroheptanoic acid	3.1		1	ng/L		06/20/2021 5:31 AM	006 BP3T1/2
Perfluorohexanesulfonic acid	6.2	M1	1	ng/L		06/20/2021 5:31 AM	006 BP3T1/2
Perfluorononanoic acid	<1.9		1	ng/L		06/20/2021 5:31 AM	006 BP3T1/2
Perfluorooctanesulfonic acid	5.3		1	ng/L	` 10	06/20/2021 5:31 AM	006 BP3T1/2
Perfluorooctanoic acid	11,3*		1	ng/L	10	06/20/2021 5:31 AM	006 BP3T1/2
Surr: 13C2-PFDA (S)	90%		1	%REC		06/20/2021 5:31 AM	006 BP3T1/2
Surr: 13C2-PFHxA (S)	80%		1	%REC		06/20/2021 5:31 AM	006 BP3T1/2
Surr: HFPO-DAS (S)	70%		1	%REC		06/20/2021 5:31 AM	006 BP3T1/2
Gurr: NEtFOSAA-d5 (S)	115%		1	%REC		06/20/2021 5:31 AM	006 BP3T1/2

Qualifiers:
DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.
ND - Not Detected at or above adjusted reporting limit.
J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit. Estimated value - below calibration range
U - Indicates the compound was analyzed for, but not detected

Result(s) reported meet(s) NYS Regulatory Limit(s).
Result(s) flagged with \* Exceed NYS Regulatory Limit(s). Limit Noted.

Date Reported: 06/28/2021

page 6 of 13

Jennifer Aracri

Test results meet the requirements of NELAC unless otherwise noted.

# Station 44, Wells 44, 44A, 44B, 44C Chelsea Street, Elmont, N.Y.

Update: July 7, 2021	
Status:	June 2021 In Service
	1,4 – dioxane (1 part per billion)
NYS Allowable levels:	PFOS (10 parts per trillion)
	PFOA (10 parts per trillion)
Most Recent Raw Water Test Results:	
Well 44  (PFOS/PFOA Samples collected June 1, 2021)  Quarterly 1, 4 – dioxane samples collected April 6, 2021	1,4 – dioxane (0.027 parts per billion) PFOS (8.1 parts per trillion) PFOA (14.5 parts per trillion)
Well 44A	1.4 diama (0.130 parta par billian)
(PFOS/PFOA Samples collected June 1, 2021)	1,4 – dioxane (0.130 parts per billion)  PFOS (11.7 parts per trillion)
Quarterly 1, 4 – dioxane samples collected April 6, 2021	PFOA (5.8 parts per trillion)
Well 44B	1,4 – dioxane (0.044 parts per billion)
(PFOS/PFOA Samples collected June 1, 2021)	PFOS (15.3 parts per trillion)
Quarterly 1, 4 – dioxane samples collected April 8, 2021	PFOA (21.7 parts per trillion)
Well 44C	1,4 – dioxane (0.032 parts per billion)
(PFOS/PFOA Samples collected June 1, 2021)	PFOS (4.5 parts per trillion)
Quarterly 1, 4 – dioxane samples collected April 8, 2021	PFOA (5.9 parts per trillion)
Most Recent Treated Water Test Results:	
Well 44 / 44A	
(Samples collected June 1, 2021)	PFOS (<1.8 parts per trillion)
	PFOA (<1.8 parts per trillion)
Well 44B / 44C	
(Samples collected June 1, 2021)	PFOS (<1.8 parts per trillion)

PFOA (<1.8 parts per trillion)

Construction Project for the Installation of Granular Activated Carbon ("GAC") vessels to remove PFOS/PFOA.

### **Phase 1 Construction Project Chronological Progress:**

September 2019 Full Engineering report complete and sent to NYSDOH

November 2019 Project design and specifications complete and sent to NYSDOH

December 2019 Project Construction begins

January 2020 Calgon Carbon column testing performed

Full Engineering Report March 2020

**Actual Regulatory Approval Dates** 

Design Approval April 2020

Approval of Overall Project in Service June 2020

### **Phase 2 Construction Project Temporary Fabric Vessel Enclosures:**

December 2020 Construction of Fabric tent enclosures around 2 sets of vessels

January 2021 Tent Enclosures are Complete

# Phase 3 Construction Project Permanent Treatment Buildings, Raising Wells and full site Rehabilitation:

October 2021 Design and Specifications for Public Bidding

December 2021 Construction starts

Project length is estimated at 1 ½ years

\*\*\*\*Wells 44, 44A, 44B and 44C running to system through new treatment. Water quality is in compliance with all NYSDOH Standards.



Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests

Lab No.: 70175107005

Client Sample ID.: N-05155

### Sample Information:

Type: Drinking Water Origin: Raw Well Routine

575 Broad Hollow Road, Melville, NY 11747 TEL: (631) 694-3040 FAX: (631) 420-8436 www.pacelabs.com

Water Auth. of Western Nassau

1580 Union Tpke.

New Hyde Park, NY 11040 Attn To: Michael Leiner

Federal ID: 2902857

Collected: Received:

06/01/2021 01:06 PM

N-05155 Point

Location Well #44 06/01/2021 03:45 PM Collected By PACE

Elmont

Analytical Method:EPA 537.1	Results	Prep Method: Qualifier	EPA 537.	1 Units	<u>Prep Dat</u> <u>Limit</u>	e: 06/08/2021 11:28 Analyzed:	Container:
Parameter(s)  Perfluorobutanesulfonic acid  Perfluoroheptanoic acid  Perfluorohexanesulfonic acid  Perfluorononanoic acid  Perfluorocatanesulfonic acid  Perfluorocatanoic acid  Surr: 13C2-PFDA (S)  Surr: 13C2-PFHXA (S)  Surr: HFPO-DAS (S)	3.9 4.7 6.4 <1.8 8.1 14.5* 72% 80% 71%	<u>squaimer</u>	1 1 1 1 1 1 1 1 1 1	ng/L ng/L ng/L ng/L ng/L ng/L %REC %REC %REC	10 10	06/18/2021 12:49 06/18/2021 12:49 06/18/2021 12:49 06/18/2021 12:49 06/18/2021 12:49 06/18/2021 12:49 06/18/2021 12:49 06/18/2021 12:49 06/18/2021 12:49	005 BP3T1/2 005 BP3T1/2 005 BP3T1/2 005 BP3T1/2 005 BP3T1/2 005 BP3T1/2 005 BP3T1/2 005 BP3T1/2

page 5 of 13

Qualifiers:

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit. Estimated value - below calibration range

U - Indicates the compound was analyzed for, but not detected

Result(s) reported meet(s) NYS Regulatory Limit(s). Result(s) flagged with \* Exceed NYS Regulatory Limit(s). Limit Noted.

Date Reported: 06/21/2021

Jennifer Aracri

Test results meet the requirements of NELAC unless otherwise noted.



Results for the samples and analytes requested The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests

Lab No.: 70175107006

Client Sample ID.: N-05156

Sample Information:

Type: Drinking Water Origin: Raw Well Routine

575 Broad Hollow Road, Melville, NY 11747 TEL: (631) 694-3040 FAX: (631) 420-8436 www.pacelabs.com

Water Auth, of Western Nassau

1580 Union Tpke.

New Hyde Park, NY 11040 Attn To: Michael Leiner

Federal ID: Collected:

2902857

.06/01/2021 01:08 PM 06/01/2021 03:45 PM Point

N-05156

Location Well #44A

Received: PACE Collected By

Elmont

Analytical Method:EPA 537.1		Prep Method:	EPA 537.	1	Prep Dat		
Parameter(s)	Results	Qualifier	<u>D.F.</u>	<u>Units</u>	<u>Limit</u>	<u>Analyzed:</u>	<u>Container</u>
Perfluorobutanesulfonic acid	<1.9		1	ng/L		06/18/2021 1:05 AM	006 BP3T1/2
	2.4		1	ng/L		06/18/2021 1:05 AM	006 BP3T1/2
Perfluoroheptanoic acid			1	ng/L		06/18/2021 1:05 AM	006 BP3T1/2
Perfluorohexanesulfonic acid	5.9		1	ng/L		06/18/2021 1:05 AM	006 BP3T1/2
Perfluorononanoic acid	3.3		1	ng/L	10	06/18/2021 1:05 AM	006 BP3T1/2
Perfluorooctanesulfonic acid	11.7*		1	ū	10	06/18/2021 1:05 AM	006 BP3T1/2
Perfluorooctanoic acid	5.8		1	ng/L	10	* *** * * * * * * * * * * * * * * * * *	006 BP3T1/2
Surr: 13C2-PFDA (S)	85%		1	%REC		06/18/2021 1:05 AM	
Surr: 13C2-PFHxA (S)	88%		1	%REC		06/18/2021 1:05 AM	006 BP3T1/2
Surr: HFPO-DAS (S)	78%		1	%REC		06/18/2021 1:05 AM	006 BP3T1/2

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.Estimated value - below calibration range

U - Indicates the compound was analyzed for, but not detected

Result(s) reported meet(s) NYS Regulatory Limit(s). Result(s) flagged with \* Exceed NYS Regulatory Limit(s). Limit Noted.

Date Reported: 06/21/2021

page 6 of 13

Jennifer Aracri

Test results meet the requirements of NELAC unless otherwise noted.



Results for the samples and analytes requested The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests

Lab No.: 70175107007

Client Sample ID.: AS/GAC-44/44A

Sample Information:

Type: Drinking Water Origin: Treated Well Routine

> **Treatment** Air Stripper/GAC

575 Broad Hollow Road, Melville, NY 11747 TEL: (631) 694-3040 FAX: (631) 420-8436

www.pacelabs.com

Water Auth. of Western Nassau 1580 Union Tpke.

New Hyde Park, NY 11040 Attn To: Michael Leiner

Federal ID:

2902857

Collected:

06/01/2021 01:11 PM

Point Location Well 44,44A

AS/GAC-44/44A

06/01/2021 03:45 PM Received:

Collected By PACE

Analytical Method:EPA 537.1		Prep Method:	EPA 537.	1	Prep Da		
Parameter(s)	Results	Qualifier	<u>D.F.</u>	<u>Units</u>	<u>Limit</u>	<u>Analyzed:</u>	Container:
Perfluorobutanesulfonic acid Perfluoroheptanoic acid Perfluorohexanesulfonic acid Perfluorononanoic acid Perfluorooctanesulfonic acid Perfluorocctanoic acid	<1.8 <1.8 <1.8 <1.8 <1.8 <1.8		1 1 1 1 1	ng/L ng/L ng/L ng/L ng/L	10 10	06/18/2021 1:21 AM 06/18/2021 1:21 AM 06/18/2021 1:21 AM 06/18/2021 1:21 AM 06/18/2021 1:21 AM 06/18/2021 1:21 AM 06/18/2021 1:21 AM	007 BP3T1/2 007 BP3T1/2 007 BP3T1/2 007 BP3T1/2 007 BP3T1/2 007 BP3T1/2 007 BP3T1/2
Surr: 13C2-PFDA (S) Surr: 13C2-PFHxA (S) Surr: HFPO-DAS (S)	111% 107% 99%		1 1 1	%REC %REC %REC		06/18/2021 1:21 AM 06/18/2021 1:21 AM 06/18/2021 1:21 AM	007 BP3T1/2 007 BP3T1/2

Qualifiers:

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.Estimated value - below calibration range

U - Indicates the compound was analyzed for, but not detected

Result(s) reported meet(s) NYS Regulatory Limit(s). Result(s) flagged with \* Exceed NYS Regulatory Limit(s). Limit Noted.

Date Reported: 06/21/2021

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Jennifer Aracri

Test results meet the requirements of NELAC unless otherwise noted.



Results for the samples and analytes requested The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests

Lab No.: 70175107008

Client Sample ID.: N-06744

### Sample Information:

Type: Drinking Water Origin: Raw Well Routine

TEL: (631) 694-3040 FAX: (631) 420-8436

www.pacelabs.com

Water Auth. of Western Nassau

1580 Union Tpke.

New Hyde Park, NY 11040 Attn To: Michael Leiner

Federal ID: Collected:

2902857

06/01/2021 01:26 PM

Point

N-06744

06/01/2021 03:45 PM

Location Well #44B **Elmont** 

Received: Collected By

PACE

Analytical Method:EPA 537.1  Parameter(s)  Perfluorobutanesulfonic acid	Results 4.9	Qualifier	D.F.	<u>Units</u>	<u>Limit</u>	<u>Analyzed:</u>	Container:
	49					_	
			1	ng/L		06/18/2021 3:11 AM	008 BP3T1/2
	6.3		1	ng/L		06/18/2021 3:11 AM	008 BP3T1/2
Perfluoroheptanoic acid		L1	1	ng/L		06/18/2021 3:11 AM	008 BP3T1/2
Perfluorohexanesulfonic acid	8.9	LI	1	<del>-</del>		06/18/2021 3:11 AM	008 BP3T1/2
Perfluorononanoic acid	<1.8		1	ng/L	40	06/18/2021 3:11 AM	008 BP3T1/2
Perfluorooctanesulfonic acid	15.3*	L1	1	ng/L	10	00,10.00	008 BP3T1/2
Perfluorooctanoic acid	21.7*		1	ng/L	10	06/18/2021 3:11 AM	
Surr: 13C2-PFDA (S)	70%		1	%REC		06/18/2021 3:11 AM	008 BP3T1/2
• •	79%		1	%REC		06/18/2021 3:11 AM	008 BP3T1/2
Surr: 13C2-PFHxA (S) Surr: HFPO-DAS (S)	74%		1	%REC		06/18/2021 3:11 AM	008 BP3T1/2

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.Estimated value - below calibration rangé

U - Indicates the compound was analyzed for, but not detected

Result(s) reported meet(s) NYS Regulatory Limit(s).
Result(s) flagged with \* Exceed NYS Regulatory Limit(s). Limit Noted.

Jennifer Aracri

Test results meet the requirements of NELAC unless otherwise noted.



Results for the samples and analytes requested The lab is not directly responsible for the Integrity of the sample before receipt at the lab and is responsible only for the certified tests

Lab No.: 70175107009

Client Sample ID.: N-06745

Sample Information:

Type: Drinking Water Origin: Raw Well Routine

TEL: (631) 694-3040 FAX: (631) 420-8436 www.pacelabs.com

Water Auth. of Western Nassau

1580 Union Tpke. New Hyde Park, NY 11040 Attn To: Michael Leiner

Federal ID: Collected: Received:

2902857

06/01/2021 01:28 PM 06/01/2021 03:45 PM Point

N-06745 Location Well #44C

PACE Collected By

Elmont

<u>.</u>							
Analytical Method:EPA 537.1		Prep Method:	EPA 537.	1	Prep Dat		
Parameter(s)	Results	Qualifier	<u>D.F.</u>	<u>Units</u>	<u>Limit</u>	<u>Analyzed:</u>	Container:
Perfluorobutanesulfonic acid Perfluoroheptanoic acid Perfluorohexanesulfonic acid Perfluorononanoic acid Perfluorooctanesulfonic acid Perfluorooctanesulfonic acid	<1.8 2.3 4.1 <1.8 4.5 5.9 78%	L1	1 1 1 1 1 1	ng/L ng/L ng/L ng/L ng/L ng/L %REC	10 10	06/18/2021 3:27 AM 06/18/2021 3:27 AM 06/18/2021 3:27 AM 06/18/2021 3:27 AM 06/18/2021 3:27 AM 06/18/2021 3:27 AM 06/18/2021 3:27 AM	009 BP3T1/2 009 BP3T1/2 009 BP3T1/2 009 BP3T1/2 009 BP3T1/2 009 BP3T1/2 009 BP3T1/2
Surr: 13C2-PFDA (S) Surr: 13C2-PFHxA (S) Surr: HFPO-DAS (S)	84% 77%		1 1	%REC %REC		06/18/2021 3:27 AM 06/18/2021 3:27 AM	009 BP3T1/2 009 BP3T1/2

page 9 of 13

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.
ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.Estimated value - below calibration range
U - Indicates the compound was analyzed for, but not detected

Result(s) reported meet(s) NYS Regulatory Limit(s).
Result(s) flagged with \* Exceed NYS Regulatory Limit(s). Limit Noted.

Date Reported: 06/21/2021

Jennifer Aracri

Test results meet the requirements of NELAC unless otherwise noted.



## Laboratory Results Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests

Lab No.: 70175107010

Client Sample ID.: AS/GAC-44B/44C

Sample Information:

Type: Drinking Water Origin: Treated Well

Routine

**Treatment** Air Stripper/GAC

575 Broad Hollow Road, Melville, NY 11747 TEL: (631) 694-3040 FAX: (631) 420-8436

www.pacelabs.com

Water Auth. of Western Nassau

1580 Union Tpke.

New Hyde Park, NY 11040 Attn To: Michael Leiner

Federal ID: Collected:

2902857

06/01/2021 01:22 PM

Point

AS/GAC-44B/44C

Location Well 44B,44C

Received: 06/01/2021 03:45 PM Collected By PACE

Analytical Method: EPA 537.1		Prep Method:	EPA 537.	1	Prep Date: 06/08/2021 11:28		
Parameter(s)	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Limit</u>	Analyzed:	Container:
Perfluorobutanesulfonic acid	<1.8		1	ng/L		06/18/2021 2:56 AM	010 BP3T1/2
Perfluoroheptanoic acid	<1.8		1	ng/L		06/18/2021 2:56 AM	010 BP3T1/2
Perfluorohexanesulfonic acid	<1.8	L3	1	ng/L		06/18/2021 2:56 AM	010 BP3T1/2
Perfluorononanoic acid	<1.8		1	ng/L		06/18/2021 2:56 AM	010 BP3T1/2
Perfluorooctanesulfonic acid	<1.8	L3	1	ng/L	10	06/18/2021 2:56 AM	010 BP3T1/2
⊃erfluorooctanesunonic acid ⊃erfluorooctanoic acid	<1.8		1	ng/L	10	06/18/2021 2:56 AM	010 BP3T1/2
	98%		1	%REC		06/18/2021 2:56 AM	010 BP3T1/2
Surr: 13C2-PFDA (S)	97%		1	%REC		06/18/2021 2:56 AM	010 BP3T1/2
Surr: 13C2-PFHxA (S) Surr: HFPO-DAS (S)	92%		1	%REC		06/18/2021 2:56 AM	010 BP3T1/2

Qualifiers:
DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.
ND - Not Detected at or above adjusted reporting limit.
J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit. Estimated value - below calibration range
U - Indicates the compound was analyzed for, but not detected

Result(s) reported meet(s) NYS Regulatory Limit(s).
Result(s) flagged with \* Exceed NYS Regulatory Limit(s). Limit Noted.

Date Reported: 06/21/2021

Jennifer Aracri

Test results meet the requirements of NELAC unless otherwise noted.

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

page 10 of 13

Pace Analytical®

575 Broad Hollow Road, Melville, NY 11747 TEL: (631) 694-3040 FAX: (631) 420-8436 www.pacelabs.com

### WorkOrder:

70175107

### **Laboratory Certifications**

### Pace Analytical Services Ormond Beach

8 East Tower Circle, Ormond Beach, FL 32174

Alaska DEC- CS/UST/LUST Alabama Certification #: 41320

Arizona Certification# AZ0819

Colorado Certification: FL NELAC Reciprocity

Connecticut Certification #: PH-0216

Delaware Certification: FL NELAC Reciprocity

Florida Certification #: E83079 Georgia Certification #: 955

Guam Certification: FL NELAC Reciprocity Hawaii Certification: FL NELAC Reciprocity

Illinois Certification #: 200068

Indiana Certification: FL NELAC Reciprocity

Kansas Certification #: E-10383 Kentucky Certification #: 90050

Louisiana Certification #: FL NELAC Reciprocity Louisiana Environmental Certificate #: 05007

Maryland Certification: #346 Michigan Certification #: 9911

Mississippi Certification: FL NELAC Reciprocity

Missouri Certification #: 236 Montana Certification #: Cert 0074 Nebraska Certification: NE-OS-28-14 New Hampshire Certification #: 2958

New Jersey Certification #: FL022

New York Certification #: 11608

North Carolina Environmental Certificate #: 667

North Carolina Certification #: 12710 North Dakota Certification #: R-216

Ohio DEP 87780

Date Reported: 06/21/2021

Oklahoma Certification #: D9947
Pennsylvania Certification #: 68-00547
Puerto Rico Certification #: FL01264
South Carolina Certification: #96042001
Tennessee Certification #: TN02974
Texas Certification: FL NELAC Reciprocity

US Virgin Islands Certification: FL NELAC Reciprocity

Virginia Environmental Certification #: 460165

West Virginia Certification #: 9962C Wisconsin Certification #: 399079670

Wyoming (EPA Region 8): FL NELAC Reciprocity

page 11 of 13

MO#:70175107

# CHAIN-OF-CUSTODY / Analytical Request D

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields mu was water and acceptance of the Pace Terms and Conditions found at https://info.pac

SAMPLE CONDITIONS Regulatory Agency State / Location Residual Chlorine (Y/N) TIME 1019/10/ 1019/10/ DATE Remissing Analysis jennifer aracri@pacelabs.com, ACCEPTED BY I AFFILIATION × PFAS by 537 Analyses Test N/A lonsriieM Na2S2O3 Preservatives HOBM Pace Project Manager... Pace Profile #: 5131 HCI Invoice Information: EONH Company Name: 12804 Pace Quote: Section C Attention: Address: Jupreserved ¥ ОF СОИТАІИЕЯ 6/1/91 SAMPLE TEMP AT COLLECTION DATE 11.26 13.28 1322 19:44 11.22 1306 1308 1326 6/1/2/11242 TIME 1311 END DATE. > COLLECTED RELINQUISHED BY / AFFILIATION TIME START DATE Report To: Joseph Corbisiero Required Project Information: PFAS 6/1 SAMPLE TYPE (G=GRAB C=COMP) ΔV Μ Ã <u>M</u> ≥ Ν Š Š ă M Purchase Order #: MATRIX CODE (see valid codes to left) Přoject Name: Copy To: Section B Project #: MATRIX
Drinking Water
Drinking Water
Water
Waste Water
Product
Soulfsolid
Oil
Wipe
Air
Air
Tissue ADDITIONAL COMMENTS One Character per box. (A-Z, 0-9 /, -) Sample Ids must be unique Water Auth. of Western Nassau Fax SAMPLE ID New Hyde Park, NY 11040 Email: jcorbisiero@wawnc.org 1580 Union Tpke. (516)327-4053 Required Client Information: AS/GAC-44B/44C AS/GAC-44/44A GAC-02414 Requested Due Date: N-05156 N-06745 N-10206 N-10207 N-02414 N-05155 N-06744 Company Address: က 8 6 5 TEM # V. φ O

ntact (V/V) Samples (N/A)

Cooler

palsa Custody

(Y/N)

~

11/9

DATE Signed:

TLIK

HITTON

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: SIGNATURE of SAMPLER:

Received on

TEMP in C

	Sample Condition Upon Receipt  Proj. WO#: 70175107							
Pace Analytical *	Client Name:			Pro	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	B	ate: 06/11,	/21
		WA			PM:	A 9 la		
Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client	Comm	ercial 🖙	ace Othe	er	CLIE	MI: Mann		
Tending #			***			Dili Di-	anost DyodZ	Mn
Custody Saal on Conter/Box Present: IVIY	s: 🗆 No	Seals in	tact: 🗆 Yes	s⊟: No		remperature Blank Pro	Sellic Liest	1 140
Packing Material: Bubble Wrap Bubble Bags Zipioc India								110
Thermometer Used: TH091 Correction Factor: 70.0								۱۱۱ ما
Cooler Temperature(°C): 3·3	_ Cooler 1	Temperatu	re Correct	ed(°C): <u>3.2</u>	<u>) </u>	Date/Time 5035A kits j	olaced in Heeze	T. Tal
Temp should be above freezing to 6.0°C	<del></del> :						-	1/21
USDA Regulated Soil ( \sum N/A, water sample	el			Date and Initi		son examining content		543
ALL ALL IN THE CHARLES ALL AD CALEL GALID LA MS NC. LING SAMDIES OFIGNATE (FUTIL à l'UTEIGN SOULCE								
Did samples originate in a quarantific zone within the office office of the samples originate in a quarantific zone within the office of the samples originate in a quarantific zone within the office of the samples originate in a quarantific zone within the office of the samples originate in a quarantific zone within the office of the samples originate in a quarantific zone within the office of the samples originate in a quarantific zone within the office of the samples originate in a quarantific zone within the office of the samples originate in a quarantific zone within the office of the samples originate in a quarantific zone within the office of the samples originate in a quarantific zone with the office of the samples originate in the samples originate in the samples or t								
NM, NY, OK, OR, SC, TN, TX, or VA (check map) If Yes to either question, fill out a Regula	ויים כייון נו ה וה	ancklist (F	_U_C_010) a	and include wit	h SCUR/CO	OC paperwork,		, , ,
If Yes to either question, fill out a kegula	ten son ei	IEOKIIOC (1	LI O O.O,			COMMENTS:	11	
	r∕lYes	□No		1.				
Chain of Custody Present:	(Z)Yes	□No		2.				
Chain of Custody Filled Out:	ØYes	□No		3.				
Chain of Custody Relinquished:	ZYes:		□N/A	4,				
Sampler Name & Signature on COC:		□No		<u> </u>				
Samples Arrived within Hold Time:	z/Yes	DNO DNO		6.	<del></del>			
Short Hold Time Analysis (<72hr):	□Yes	ZNO ZNO		17			-	
Rush Turn Around Time Requested:	□Yes	□No		8.	.i.,			
Sufficient Volume: (Triple volume provided fo	OL L'XVBS.			9.				
Correct Containers Used:	⊠Yes	□No						
-Pace Containers Used:	rziYes	□No		10.				
Containers Intact:	ZYes	No	radi/A	11. NO	te if sedin	nent is visible in the diss	olved container,	
Filtered volume received for Dissolved tests	□Yes	□No	en/A	12,	70 11 00 011			
Sample Labels match COC:	ZYes }	□No		16.				
-Includes date/time/ID, Matrix: SL Wi		-11-	-Δ1/Λ	13.	HNO <sub>3</sub>	□H <sub>2</sub> SO <sub>4</sub> □NaOH	□HCl	
All containers needing preservation have be	en 🗆 Yes	□No	ZN/A	10.	11103			1
checked?								
pH paper Lot #	nd to ho			Sample #				1
All containers needing preservation are fou	ກາໃ							
in compliance with method recommendation	,,,,, ⊟Yes	□No	ΓZN/A					
(HNO <sub>3</sub> , H <sub>2</sub> SO <sub>4</sub> , HCl, NaOH>9 Sulfide,	C169		$\mathcal{F}^{-1}$					
NAOH>12 Cyanide)	Groseo							
Exceptions: VOA, Coliform, TOC/DOC, Oil and	olease,			Initial when c	ompleted:	Lot # of added	Date/Time pro	eservative
DRO/8015 (water).	Ja					preservative:	added:	
Per Method, VOA pH is checked after analys	□Yes	□No	ZN/A	14.				
Samples checked for dechlorination:	□162		у_,, ч, т ч			•		
KI starch test strips Lot #				Pos	itive for Re	es. Chlorine? Y N		<del></del>
Residual chlorine strips Lot #	□Yes	□No	ØN/A	15.				
SM 4500 CN samples checked for sulfide?	[]  E3	-i40	4,					
Lead Acetate Strips Lot #	□Yes	□No	IDN/A	16.				
Headspace in VOA Vials ( >6mm):	□Yes	□No	diN/A.	17.				
Trip Blank Present:	⊡Yes	□No	IDN/A	:				
Trip Blank Custody Seals Present	L169	L)10	T	ì				
Pace Trip Blank Lot # (if applicable):				Field Data Re	quired?	Y / N	*	
Client Notification/ Resolution:						· Someone and the second secon		
Person Contacted:				· · · · · · · · · · · · · · · · · · ·				
· ·								
			<del> </del>					

<sup>•</sup> PM (Project Manager) review is documented electronically in LIMS,

# Station 57, Wells 57, 57A South 6th Street, New Hyde Park, N.Y.

Update: July 7, 2021				
Status:	Out of Service since October 15, 2020			
	1,4 – dioxane (1 part per billion)			
NYS Allowable levels:	PFOS (10 parts per trillion)			
	PFOA (10 parts per trillion)			
Most Recent Raw Water Test Results (last test October 2020):				
	1,4 – dioxane (14.5 parts per billion)			
Well 57	PFOS (7.9 parts per trillion)			
f. Kanada ana ang sagarang sagar	PFOA (68.7 parts per trillion)			
	1,4 – dioxane (11.9 parts per billion)			
Well 57A	PFOS (4.8 parts per trillion)			
	PFOA (61.9 parts per trillion)			

Construction Project for the Installation of Granular Activated Carbon ("GAC") vessels to remove PFOS/PFOA and installation of Ultraviolet Advanced Oxidation Process ("AOP) to remove 1,4 – dioxane.

### Phase 1 Construction Project Chronological Progress of Full Site Rehabilitation:

December 2016 Acquired property adjacent to this site

September 2018 Pilot Study Performed

March 2019 Pilot Study Report Sent to NYS Department of Health ("NYSDOH")

June 2019 Full Engineering report complete and sent to NYSDOH

January 2020 Project design and specifications complete and sent to NYSDOH

October 2020 Project Construction begins with Estimated Completion Date of December 2021

Pilot Study Report July 2019

**Estimated Regulatory Approval Dates** Full Engineering Report May 2020

Approval of Overall Project December 2021

This project includes a full site rehabilitation including demolition of all existing buildings, raising wells, new air stripper tower, new emergency generator, replacement of all water assets and appurtenances and new wellhead treatment for the removal of emerging contaminants.

### **Current Status**

The Water Authority experienced several weeks delay resulting from Winter weather conditions. There were also delays due to unexpected storage tank piping. This project includes full demolition of assets which is complete. The Air Stripper and GAC buildings have foundations in place and walls are being formed at this time. Site piping was delayed for one month and is now well underway. Walls to the Air Stripper building and GAC building began last week. The AOP reactor has already been delivered and is stored off site. The Air Stripper and GAC vessels were set in place during the week of May 14, 2021. The Emergency Generator was delivered to the site on June 9, 2021. National Grid has informed us that a new larger size, high pressure gas line is now required for this generator.

We expect completion of this project in December 2021 for approval to go into service.