

September 8, 2023

Ms. Kristine Wheeler, P.E., Director
Bureau of Water Supply Protection
New York State Department of Health
Corning Tower
Empire State Plaza, Rm 1110
Albany, New York 12237

Emailed To: bpwsp@health.ny.gov

Mr. Jason Hime, P.E.
Suffolk County Department of Health Services
360 Yaphank Avenue, Ste. 1C
Yaphank, New York 11980-9653

**Re South Huntington Water District
1,4-Dioxane MCL Deferral
Emerging Contaminant Quarterly Update – 3rd Quarter 2023
Public Water System ID# NY5103263**

Dear Ms. Wheeler and Mr. Hime:

On behalf of the South Huntington Water District, our office has prepared the enclosed emerging contaminant quarterly update for the 3rd quarter of 2023 (July 1, 2023, through September 30, 2023). This is the final quarterly update.

The South Huntington Water District has, for the past several years, been proactively addressing the issues of emerging contaminants in their supply wells. However, with the MCL being established for 1,4-dioxane in August 2020, the District did not have sufficient time to implement wellhead treatment for the removal of 1,4-dioxane. The District requested a Deferral for the 1,4-dioxane MCL which was approved on January 7, 2021 and shall be effective until July 31, 2022. A formal request for an extension of the MCL deferral period was requested in June 2022 with a deferral extension being granted until July 31, 2023, which has recently expired.

As requested by the deferral extension approval, the District provided the residents with the Public Notice and it is posted on their website. In addition, this Quarterly Update has been prepared to present the progress the District is making to install treatment systems to remove 1,4-dioxane. More specifically, this update provides:

- A. A summary of 1,4-dioxane sampling results for this quarter.
- B. Progress Reports on 1,4-dioxane treatment projects and any potential issues that could delay progress in meeting milestone dates presented in the Corrective Action Plan in the original Deferral request.

The 3rd Quarter samples were taken between 8/3/2023 and 8/29/2023. Some of the results for the 3rd Quarter of 2023 are pending. The results included within this report are preliminary and do not have a lab report attached to the deferral letter. The 3rd Quarter deferral report will be updated and reissued as soon as the sampling results have been processed and received.

In summary, during the 3rd Quarter of 2023, **all water delivered by the District was below the MCL for 1,4-dioxane**. Well No. 4 had a 3rd Quarter 1,4-dioxane result of .66 ug/l and Well No. 15-1 had a 3rd Quarter

1,4-dioxane result of .57 ug/l. Well Nos. 4 and 15-1 are being monitored for 1,4-dioxane in order to determine if wellhead treatment is necessary for 1,4-dioxane removal.

The AOP treatment at Plant No. 10 is substantially complete. Completed works approval has been received from the Department of Health. Plant No. 10 AOP treatment is currently online and 1,4-dioxane sampling results are non-detect. The AOP treatment at Plant No. 3 is substantially complete. Completed works approval has been received from the Department of Health -February 2023. Plant No. 3 AOP treatment is currently online and 1,4-dioxane results are non-detect.

As noted in the attached progress report, the District is proceeding with AOP treatment at Plant No. 8 at this time. A formal request for an extension of the MCL deferral period was granted until July 2023 to allow for the treatment system at Plant No. 8 to be completed. Design and construction for the interim AOP treatment has been completed with completed works approval being received in May 2023. Design of the permanent AOP treatment at Well No. 8 is currently underway.

The District has detected elevated levels of 1,4-dioxane at Well No. 4. The District has approved the installation of an additional well at the Plant No. 8 site in order to provide sufficient water distribution while Well No. 4 is being monitored for 1,4-dioxane in order to determine if wellhead treatment is necessary for 1,4-dioxane removal. The District has also detected increasing levels of 1,4-dioxane in Well No. 15-1. The District has approved and an engineering report is being prepared for the determination of potential options for wellhead treatment of 1,4-dioxane removal at Plant No. 15.

The District has posted this Final Quarterly Update on the South Huntington Water District website.

Please contact our office should you have any comments concerning this Deferral Update.

Very truly yours,

H2M architects + engineers

Timothy J. McGuire, P.E.
Department Manager

TJM:ejm

Enclosure

cc: Board of Commissioners
Mr. Brian O'Donnell
Mr. Mike McGovern
Dennis Kelleher, P.E.

South Huntington Water District
PWS ID No. NY5103263
1,4-dioxane Water Quality Summary



Status as of: July 1, 2023 through September 30, 2023
Prepared By: H2M architects+engineers

Location	Date Sampled	1,4-Dioxane (ug/L)	AOP	Notes and Comments
		Finished Water Levels	Treatment in Place (Y/N)	
Well 3-2	8/3/2023	<0.02	Y	AOP/GAC
Well 3-3	8/3/2023	<0.02	Y	AOP/GAC
Well 4	8/29/2023	0.66*	N	
Well 6	8/15/2023	0.39*	N	GAC
Well 7-1 & 7-2 Blended	8/29/2023	0.089*	N	GAC, TOTAL BLENDED EFFLUENT WELL NOS. 7-1/7-2
Well 7-1	8/29/2023	0.11*	N	
Well 7-2	8/29/2023	0.046*	N	
Well 8	-	NS	N	OUT OF SERVICE FOR WELL REHABILITATION
Well 9	8/15/2023	0.23*	N	
Well 10-1	8/3/2023	<0.02	Y	AOP/GAC
Well 10-2	8/3/2023	<0.02	Y	AOP/GAC
Well 15-1 & 15-2 Blended	8/24/2023	0.45*	N	GAC, TOTAL BLENDED EFFLUENT WELL NOS. 15-1/15-2
Well 15-1	8/24/2023	0.57*	N	
Well 15-2	5/5/2023	0.25**	N	
Well 17	8/10/2023	0.38*	N	
Well 18-1	8/10/2023	<0.02*	N	
Well 18-2	8/10/2023	0.13*	N	
Well 19-1	8/10/2023	<0.02*	N	
Well 19-2	8/10/2023	<0.02*	N	
Well 20	8/15/2023	0.18*	N	GAC

Notes:	<p>Blended wells include:</p> <ul style="list-style-type: none"> - Well Nos. 3-2 & 3-3 - Well Nos. 7-1 & 7-2 - Well Nos. 15-1 & 15-2 <p>These blended wells have been sampled for below the MCL for 1,4-dioxane.</p>
ND	Non-detect Bold results exceed MCL
MCL	Maximum Contaminant Level
NS	Not Sampled
*	Results for the 3rd Quarter of 2023 are pending. The results shown are preliminary and do not have an accompanying lab report. The 3rd Quarter deferral report will be updated and reissued as soon as the sampling results have been processed and received.
**	Results for the 3rd Quarter are pending. The result shown is from the 2nd Quarter sampling as there is no preliminary data at the time of this report. The 3rd Quarter deferral report will be updated and reissued as soon as the sampling results have been processed and received.
TBD	Results are not available at the time of publishing this report. Once results are received the report will be revised and reposted.

South Huntington Water District
PWS ID No. NY5103263
Progress, Potential Issues and Water Quality Update



Quarterly Report Date: 8/8/2023

Prepared By: H2M architects+engineers

Milestone Description	Original Date	Revised Date	Completed (Y/N)	Delayed (Y/N)	Notes and Comments
Project No. 1 - Plant No. 10 AOP					
Pilot Test			Y	-	
Engineering Report			Y	-	Submitted to NYSDOH May 14, 2020
Design Complete			Y	-	Submitted to NYSDOH May 14, 2020
Start Construction	8/2020		-	N	Contracts awarded July 2020
Complete Construction	8/2021	10/2022	-	Y	System operational to distribution December 2022
Project No. 2 - Plant No. 3 AOP					
Pilot Test	12/2020	1/2021	Y	N	
Engineering Report	1/2021	3/2021	Y	Y	Submitted to NYSDOH March 3, 2021
Design Complete	4/2021	8/2021	Y	Y	Submitted to NYSDOH September 16, 2021
Start Construction	6/2021	10/2021	N	Y	Contracts awarded October 2021
Complete Construction	6/2022	2/2023	N	Y	System operational to distribution June 2023
Project No. 3 - Plant No. 4 AOP					
Pilot Test	1/2021		-	Y	The District is continuing to monitor the water quality at Well No. 4 before the District determines if wellhead treatment is necessary.
Engineering Report	3/2021		-	-	
Design Complete	7/2021		-	-	
Start Construction	9/2021		-	-	
Complete Construction	10/2022		-	-	
Project No.4 - Plant No. 8 AOP					
Pilot Test	2/2021	6/2021	Y	Y	
Engineering Report	4/2021	12/2021	N	Y	Submitted to NYSDOH February 25, 2022
Design Complete	8/2021	4/2022	N	Y	Formal design progressing at this time, expected completion 7/2022
Start Construction	10/2021	10/2022	N	Y	Interim AOP construction
Complete Construction	11/2022	7/2023	-	-	Received DOH Completed Works Approval May 2023
Project No. 5 - Plant No. 15 AOP					
Pilot Test	10/2023		-	-	The District is continuing to monitor the water quality at Well No. 15-1 before the District determines if wellhead treatment is necessary.
Engineering Report	12/2023		-	-	An Engineering Report is being prepared for wellhead treatment of 1,4-dioxane at Well No. 15-1
Potential Issues/Concerns/Delays Explanation:					
<p>Implementation of Project No. 4 was delayed while the District continued to monitor water quality at Well No. 8 through the 1st and 2nd quarter of 2021. The District has since determined that wellhead treatment for 1,4-dioxane is required at Plant No. 8. As per the above, a pilot test waiver/engineering report has been prepared and approved, and interim AOP treatment has been completed. Permanent AOP treatment is underway. The District is continuing to monitor the water quality at Well No. 4 before the District determines if wellhead treatment is necessary. The District has approved the installation of an additional well at the Plant No. 8 site in order to provide sufficient water distribution while Well No. 4 is being monitored for 1,4-dioxane in order to determine if wellhead treatment is necessary for 1,4-dioxane removal. The District will continue to monitor and will implement the necessary steps for treatment when/if applicable. An extension of the MCL deferral date was requested in June 2022 with a deferral extension being granted that remains in effect until July 31, 2023.</p>					



575 Broad Hollow Road, Melville, NY 11747
 TEL: (516) 370-6000 FAX: (516) 886-5526
www.pacelabs.com

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

Sample Information:

Type: Drinking Water
 Origin: Effluent
 Routine

S. Huntington Water District
P.O. BOX 370
Huntington Station, NY 11746

Lab No. : 70265583003
Client Sample ID.: S-72580 AOP GAC EFF COMBINED

Attn To : Mike McGovern
 Federal ID : 5103263
 Collected : 08/03/2023 02:40 PM Point S-72580 AOP GAC
 Received : 08/03/2023 04:00 PM Location Well 3-2 GAC Combined Effluent
 Collected By CLIENT

<u>Analytical Method:</u> EPA 522		<u>Prep Method:</u> EPA 522			<u>Prep Date:</u> 08/09/2023 7:22 AM		
<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Limit</u>	<u>Analyzed:</u>	<u>Container:</u>
1,4-Dioxane (p-Dioxane)	<0.020		1	ug/L	1	08/17/2023 1:49 PM	003 AG2R1/2
Surr: 1,4-Dioxane-d8 (S)	148%	S3	1	%REC		08/17/2023 1:49 PM	003 AG2R1/2

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
 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.



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Sample Information:

Type: Drinking Water
 Origin: Effluent
 Routine

S. Huntington Water District
P.O. BOX 370
Huntington Station, NY 11746

Lab No. : 70265583006
Client Sample ID.: S-111778 GAC COMB.EFF

Attn To : Mike McGovern
 Federal ID : 5103263
 Collected : 08/03/2023 02:55 PM Point S-111778 GAC
 Received : 08/03/2023 04:00 PM Location Well 3-3 GAC Combined Effluent
 Collected By CLIENT

<u>Analytical Method:</u> EPA 522		<u>Prep Method:</u> EPA 522			<u>Prep Date:</u> 08/09/2023 7:22 AM		
<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Limit</u>	<u>Analyzed:</u>	<u>Container:</u>
1,4-Dioxane (p-Dioxane)	<0.020		1	ug/L	1	08/09/2023 11:01	006 AG2R1/2
Surr: 1,4-Dioxane-d8 (S)	123%		1	%REC		08/09/2023 11:01	006 AG2R1/2

Qualifiers:

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Date Reported: 08/22/2023



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Sample Information:

Type: Drinking Water
 Origin: Effluent
 Routine

S. Huntington Water District
P.O. BOX 370
Huntington Station, NY 11746

Lab No. : 70265579003
Client Sample ID.: S-26247 AOP GAC EFF COMBO

Attn To : Mike McGovern

Federal ID : 5103263

Collected : 08/03/2023 01:30 PM Point S-26247 AOP GAC

Received : 08/03/2023 04:07 PM Location Well 10-1 AOP GAC EFF COMBINED

Collected By CLIENT

<u>Analytical Method:</u> EPA 522		<u>Prep Method:</u> EPA 522			<u>Prep Date:</u> 08/08/2023 1:42 PM		
<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Limit</u>	<u>Analyzed:</u>	<u>Container:</u>
1,4-Dioxane (p-Dioxane)	<0.020		1	ug/L	1	08/09/2023 8:30 PM	003 AG2R1/2
Surr: 1,4-Dioxane-d8 (S)	113%		1	%REC		08/09/2023 8:30 PM	003 AG2R1/2

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: 08/22/2023

Jennifer Aracri

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Sample Information:

Type: Drinking Water
 Origin: Effluent
 Routine

S. Huntington Water District
P.O. BOX 370
Huntington Station, NY 11746

Lab No. : 70265579006
Client Sample ID.: S-30008 AOP GAC EFF COMBO

Attn To : Mike McGovern
 Federal ID : 5103263
 Collected : 08/03/2023 01:45 PM Point S-30008 AOP GAC
 Received : 08/03/2023 04:07 PM Location Well 10-2 AOP GAC EFF COMBINED
 Collected By CLIENT

<u>Analytical Method:</u> EPA 522		<u>Prep Method:</u> EPA 522			<u>Prep Date:</u> 08/09/2023 7:22 AM		
<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Limit</u>	<u>Analyzed:</u>	<u>Container:</u>
1,4-Dioxane (p-Dioxane)	<0.020		1	ug/L	1	08/09/2023 8:24 PM	006 AG2R1/2
Surr: 1,4-Dioxane-d8 (S)	129%		1	%REC		08/09/2023 8:24 PM	006 AG2R1/2

Qualifiers:

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 J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit. Estimated value - below calibration range
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Date Reported: 08/22/2023



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Sample Information:

Type: Drinking Water
 Origin: Effluent
 Routine

S. Huntington Water District
P.O. BOX 370
Huntington Station, NY 11746

Lab No. : 70255435004
Client Sample ID.: S-77126 VESSEL A+B

Attn To : Mike McGovern

Federal ID : 5103263

Collected : 05/05/2023 01:40 PM Point S-77126 VESSEL

Received : 05/05/2023 02:10 PM Location WELL 15-2 VESSEL A+B

Collected By CLIENT

Sample Comments:

RUN TO WASTE

Analytical Method: EPA 522		Prep Method: EPA 522			Prep Date: 05/12/2023 11:28		
Parameter(s)	Results	Qualifier	D.F.	Units	Limit	Analyzed:	Container:
1,4-Dioxane (p-Dioxane)	0.25		1	ug/L	1	05/14/2023 11:08	004 AG2R1/2
Surr: 1,4-Dioxane-d8 (S)	100%		1	%REC		05/14/2023 11:08	004 AG2R1/2

Analytical Method: EPA 524.2							
Parameter(s)	Results	Qualifier	D.F.	Units	Limit	Analyzed:	Container:
1,1,1,2-Tetrachloroethane	<0.50		1	ug/L	5	05/11/2023 5:13 PM	004 VG9C1/2
1,1,1-Trichloroethane	<0.50		1	ug/L	5	05/11/2023 5:13 PM	004 VG9C1/2
1,1,2,2-Tetrachloroethane	<0.50		1	ug/L	5	05/11/2023 5:13 PM	004 VG9C1/2
1,1,2-Trichloroethane	<0.50		1	ug/L	5	05/11/2023 5:13 PM	004 VG9C1/2
1,1,2-Trichlorotrifluoroethane	<0.50	N3,L1	1	ug/L	5	05/11/2023 5:13 PM	004 VG9C1/2
1,1-Dichloroethane	0.56		1	ug/L	5	05/11/2023 5:13 PM	004 VG9C1/2
1,1-Dichloroethene	<0.50		1	ug/L	5	05/11/2023 5:13 PM	004 VG9C1/2
1,1-Dichloropropene	<0.50		1	ug/L	5	05/11/2023 5:13 PM	004 VG9C1/2
1,2,3-Trichlorobenzene	<0.50		1	ug/L	5	05/11/2023 5:13 PM	004 VG9C1/2
1,2,3-Trichloropropane	<0.50		1	ug/L	5	05/11/2023 5:13 PM	004 VG9C1/2
1,2,4-Trichlorobenzene	<0.50		1	ug/L	5	05/11/2023 5:13 PM	004 VG9C1/2
1,2,4-Trimethylbenzene	<0.50		1	ug/L	5	05/11/2023 5:13 PM	004 VG9C1/2
1,2-Dichlorobenzene	<0.50		1	ug/L	5	05/11/2023 5:13 PM	004 VG9C1/2
1,2-Dichloroethane	<0.50		1	ug/L	5	05/11/2023 5:13 PM	004 VG9C1/2
1,2-Dichloropropane	<0.50		1	ug/L	5	05/11/2023 5:13 PM	004 VG9C1/2
1,3,5-Trimethylbenzene	<0.50		1	ug/L	5	05/11/2023 5:13 PM	004 VG9C1/2
1,3-Dichlorobenzene	<0.50		1	ug/L	5	05/11/2023 5:13 PM	004 VG9C1/2
1,3-Dichloropropane	<0.50		1	ug/L	5	05/11/2023 5:13 PM	004 VG9C1/2
1,4-Dichlorobenzene	<0.50		1	ug/L	5	05/11/2023 5:13 PM	004 VG9C1/2
2,2-Dichloropropane	<0.50		1	ug/L	5	05/11/2023 5:13 PM	004 VG9C1/2
2-Chlorotoluene	<0.50		1	ug/L	5	05/11/2023 5:13 PM	004 VG9C1/2
4-Chlorotoluene	<0.50		1	ug/L	5	05/11/2023 5:13 PM	004 VG9C1/2
Benzene	<0.50		1	ug/L	5	05/11/2023 5:13 PM	004 VG9C1/2
Bromobenzene	<0.50		1	ug/L	5	05/11/2023 5:13 PM	004 VG9C1/2
Bromochloromethane	<0.50		1	ug/L	5	05/11/2023 5:13 PM	004 VG9C1/2
Bromodichloromethane	<0.50		1	ug/L		05/11/2023 5:13 PM	004 VG9C1/2
Bromoform	<0.50		1	ug/L		05/11/2023 5:13 PM	004 VG9C1/2
Bromomethane	<0.50		1	ug/L	5	05/11/2023 5:13 PM	004 VG9C1/2
Carbon tetrachloride	<0.50		1	ug/L	5	05/11/2023 5:13 PM	004 VG9C1/2
Chlorobenzene	<0.50		1	ug/L	5	05/11/2023 5:13 PM	004 VG9C1/2
Chlorodifluoromethane	<0.50	N3	1	ug/L	5	05/11/2023 5:13 PM	004 VG9C1/2
Chloroethane	<0.50		1	ug/L	5	05/11/2023 5:13 PM	004 VG9C1/2

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