Jericho Water District PWS ID No. NY2902831 MCL Exemption for 1,4-Dioxane Quarterly Report – Second Quarter 2024

Introduction

On behalf of the Jericho Water District (JWD or District), D&B Engineers and Architects (D&B) has prepared this document in accordance with the requirements of the New York State Department of Health (NYSDOH) for public water suppliers who have been granted exemptions from maximum contaminant level (MCL) violations for 1,4-dioxane. The District was granted an MCL deferral for 1,4-dioxane in 2020, which was renewed in 2022 with the expiration of the renewal in August 2023. JWD was granted an exemption in August 2023 because it has been proactive in its efforts to establish and implement an action plan for managing the above-referenced compounds. This exemption expires in August 2024, and JWD plans to apply for a second exemption that would extend the compliance deadline until August 2025 to allow for time to complete and place into service multiple treatment projects.

The last three years have been a time of unprecedented disruption in the supply chain of chemical supplies, equipment, infrastructure components, pipe and materials (e.g., steel), and treatment systems. Contractors and water suppliers, locally and nationwide, have been impacted by these issues in completing both small-scale and large-scale projects. Shortages of necessary items have significantly impacted the District, primarily in terms of price increases, decreased availability, and longer lead times. In addition, due to the rapidly changing regulatory environment through an expanded list of contaminants with lower regulatory advisory levels or MCLs, local and state regulators are experiencing a large number of capital project submissions, in addition to their regular responsibilities. This increased workload has led to longer regulatory review times of engineering reports, detailed design plans, and specifications. In many cases, these factors, which are out of the District's control, have caused delays in obtaining final regulatory approval, commencing construction, procuring equipment and necessary components, and conforming to the construction schedules proposed in the District's original application for a deferral.

The District has done everything within its power to adhere to the project schedules approved in the original deferral request, as described in the previous quarterly deferral reports. The wide reach of the impact of supply chain issues and delays was not known at the time of the original compliance deferrals and, as such, these delays were expected to become worse before improving because of increased national demand. Recognizing these exceptional circumstances, the District requested and received a 12-month deferral renewal, which extended our MCL compliance deadline to August 25, 2023, and a 12-month exemption, which extended our MCL compliance deadline to August 25, 2024. However, the supply chain issues and delays have not lessened and, therefore, additional time is necessary to achieve compliance. As such, the District plans to apply for another 12-month MCL exemption to extend its compliance deadline to August 25, 2025.

Despite the challenges of the current supply chain along with the ever-changing regulatory environment, the District has worked tirelessly to preserve the quality of its drinking water. There are currently four different treatment plants being constructed specifically for the removal of 1,4-dioxane from seven District wells. The combined cost of these projects is greater than \$50 million and this does not include the other construction projects that the District currently has ongoing to enhance other components of its water infrastructure.

The District's goal, as always, is to provide an adequate supply of potable water to its community and will continue to move forward on these projects to further that goal.

The following is a report describing JWD's progress towards maintaining the highest quality of water for our customers and working to meet the deadlines set forth in the original deferral approval. Updated schedules for each project are contained in Attachment A.

Corrective Action Plan Milestones

Wells 9 and 14

The NYSDOH issued an Approval of Completed Works for the project in May 2024. The new AOP and GAC treatment systems were placed online on May 20, 2024.

Although it has been granted an exemption, JWD had been able to minimize the usage of these wells during the second quarter of 2024 until the new treatment was online..

Wells 20 and 21

This project is currently in the construction phase. The NCDH and NYSDOH issued approval of the engineering report during August and September 2022 and of the design plans in June and July 2023. Process piping installation is underway and works continues within the AOP and granular activated carbon (GAC) buildings. The electrical equipment and service gear delivery scheduled for the end of December 2023 remains delayed. The best case timeline for the site to be operational would be summer of 2024, but only using the GAC treatment system (as approved by the NYSDOH and NCDH) used last pumping season while continuing to progress the AOP. A submittal was made to NCDH and NYSDOH for approval to operate through the AOP equipment as pipes until it is ready to be put in service. Even though the District is working with its contractor, vendors, and manufacturers to bring the project to completion as quickly as possible, it may not be able to return the site to full operation until early in 2025.

Even though it has been granted an exemption, JWD removed these wells from service for most of the second quarter 2024 and will continue its monitoring and minimization strategy for the usage of these wells to the greatest extent practicable while meeting system demands. JWD will continue to monitor the 1,4-dioxane concentrations and work to minimize future run times of the wells where the concentration exceeds the MCL.

Well 22

This project is currently in the construction phase. The NCDH and NYSDOH issued approval of the engineering report in October 2022 and approval of the design specifications and plans in November 2023. The general construction contract of the project was re-bid and bids were received on March 15, 2024. The well is removed from service and will continue to be out of service for the duration of construction and throughout the 2024 pumping season. The well, with treatment installed, is anticipated to be returned to service in the 2025 pumping season.

Wells 25 and 26 (Kirby Lane Facility)

This project is currently in the construction phase. The District received NCDH approval of the engineering report in September 2021. The District received NCDH approval of the detailed design documents on July 12, 2022 and NYSDOH approval of the engineering report and detailed design documents on July 25, 2022. Construction has been progressing on-site. The AOP and GAC systems are fully installed, where initial testing of the first treatment train was completed in November 2023 and initial testing of the second treatment train was completed in January 2024. Performance testing and sampling was completed for both treatment trains in March 2024. A request for approval to operate was made on June 5, 2024 and the District is awaiting a response from the NCDH and NYSDOH.

Although it has been granted an exemption, JWD continues to monitor and minimize the usage of these wells to the greatest extent practicable while meeting system demands. JWD will continue to monitor the 1,4-dioxane concentrations and work to minimize future run times of the wells where the concentration exceeds the MCL.

Public Notification

In accordance with the terms of the exemption, JWD has maintained an open line of communication with the public regarding its exemption. The exemption public notification documentation and the previous deferral and exemption quarterly reports are still featured prominently on the District website.

Analytical Sampling

Sample results for Wells 20 and 21 (two of the wells for which the exemption was granted) taken during the second quarter of 2024 are contained in the table below. Full laboratory reports for each sample are contained in Attachment B. Wells 9, 14, 22, 25 and 26 were not sampled during the second quarter of 2024 due to well performance testing and ongoing construction.

1,4-Dioxane (parts per billion, ppb)

Wall		Date	
Well	April 2024	May 2024	June 2024
Well 20 (N-10149)	0.44	NS	NS
Well 21 (N-12795)	2.8	NS	NS

NS – Not Sampled

Conclusion

As demonstrated above, JWD is actively working to preserve the quality of water for its customers and comply with the requirements put forth by the NYSDOH. The District looks forward to continuing to work towards completion of its treatment facilities.

Should you have any questions, please contact Superintendent Peter Logan at 516-921-8280 or visit the website, www.jerichowater.org.

Very truly yours,

Board of Commissioners Jericho Water District

Enclosures

cc: K. Wheeler (NYSDOH)

B. Rogers (NYSDOH)

W. Provoncha (NCDH)

P. Young (NCDH)

R. Putnam (NCDH)

P. Logan (JWD)

W. Merklin (D&B)

M. Savarese (D&B)

L. Ortiz (D&B)

P. Connell (D&B)

ATTACHMENT A

Project Schedules Associated with MCL Exemption

Jericho Water District

Wells 9 and 14

ask Name	2023 Qtr 1	Qtr 2	Qtr 3	Qtr 4	2024 Qtr 1	Qtr 2
Pilot Test and Planning (Complete)	Qui	Qti 2	Qu 3	Qti 4	<u> </u>	Qti 2
Engineering Report (Complete)						
NCDH and NYSDOH Review of Engineering Report (Complete)						
Detailed Design (Complete)						
NCDH and NYSDOH Review of Contract Documents (Complete)						
Bidding and Construction (Complete)						
Startup and Testing (Complete); NCDH Approval (Complete)						

Jericho Water District

Wells 20 and 21

MCL Exemption	AOP P	roject Sch	edule						
Quarterly Report - Q2 2024		•							
Task Name	2023				2024				2025
Dilat Tost and Diagning (Complete)	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1
Pilot Test and Planning (Complete)									
Engineering Report (Complete)									
NCDH and NYSDOH Review of Engineering Report (Complete)									
Detailed Design (Complete)									
NCDH and NYSDOH Review of Contract Documents (Complete)									
Bidding and Award of Contracts (Complete)									
Construction (In Progress)									
Startup and Testing								Y	

Jericho Water District MCL Exemption Quarterly Report - Q2 2024

Well 22 AOP Project Schedule

ask Name	2023 Qtr 1	Qtr 2	Qtr 3	Qtr 4	2024 Qtr 1	Qtr 2	Qtr 3	Ot = 4	2025 Qtr 1	Qtr 2	Qtr
Pilot Test and Planning (Complete)	Qtri	Qtr 2	QIF 3	Qtr 4	Qtr i	Qtr 2	QIF 3	Qtr 4	Qtri	Qtr 2	<u> </u>
Engineering Report (Complete)											
NCDH and NYSDOH Review/Approval of Engineering Report (Complete)											
Detailed Design (Complete)											
NCDH and NYSDOH Review of Contract Documents (Complete)											
Bidding (Complete) and Construction (In Progress)											
Startup and Testing											

Jericho Water District

Wells 25 and 26

MCL Exemption	AOP Proj	ect Schedule					
Quarterly Report - Q2 2024							
ask Name					lass.		
uskitume	2023 Qtr 1	Qtr 2	Qtr 3	Qtr 4	2024 Qtr 1	Qtr 2	Qtr 3
Pilot Test (Complete)							
Ingineering Report (Complete)							
ICDH and NYSDOH Review of Engineering Report (Complete)							
Detailed Design (Complete)							
NCDH and NYSDOH Review of Contract Documents (Complete)							
Bidding (Complete) and Construction (Complete)						■1	
startup and Testing (In Progress)						•	

ATTACHMENT B

Water Quality Data



Pace

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: Raw Well
Routine

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

Jericho Water District 125 Convent Rd. Syosset, NY 11791 Lab No. : 70293595001 Client Sample ID.: N-10149

Attn To: Peter Logan Federal ID: 2902831

> 04/09/2024 11:15 AM Point N-10149 04/09/2024 01:51 PM Location Well 20

Collected By CLIENT Sample Comments:
RUN TO WASTE

Collected:

Received:

Analytical Method: EPA 522]	Prep Method:	EPA 522		Prep Date	: 04/12/2024 7:30 AM	
Parameter(s)	Results	Qualifier	<u>D.F.</u>	<u>Units</u>	<u>Limit</u>	Analyzed:	Container:
1,4-Dioxane (p-Dioxane)	0.44		1	ug/L	1	04/13/2024 2:26 PM	001 AG2R1/2
Surr: 1,4-Dioxane-d8 (S)	101%		1	%REC		04/13/2024 2:26 PM	001 AG2R1/2

page 1 of 5

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

Test results meet the requirements of NELAC

unless otherwise noted.

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

Date Reported: 04/15/2024

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



WorkOrder:

70293595

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

Date Reported: 04/15/2024 page 2 of 5



Sample Request Form PUBLIC WATER SUPPLIER

Date: 4/a/a4

Collected By:

SYSTEM	
0	
RUN N	
WELL	
J	

DWELL OFF LINE Pan to waste

☐ YES ☐ NO VOC'S PRESERVED WITH HCI

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Name or Code: Jencho Waker

Client Info:

Syossed, MY 11791

Address:

(SES-) 921-8380)

Phone #:

Attn:

Proj. # or (Name):

Origin D - Distribution RW - Raw Well TW - Treated Well T - Tank MW - Monitoring Well I - Influent E - Effluent
Purpose RO - Routine RE - Resample S - Special
Sample Types PW - Potable Water GW - Groundwater SW - Surface Water WW - Waste Water AQ - Aqueous S - Soil

Lab No.								
Analysis	1,4 Droxane							
Field Readings Cl ₂ pH/Temp								
Purpose	P.O.							
Treatment Type								
Orlgin	Rw							
Location	PW Well 30 HIOHG							
Sample Type	D.W.							
	11/21/24 11:15 Am						Remarks:	

page 3 of 5

Sample Info:

Copies To:

Bill To:

WO#: 70293595 PM: JSA Due Date: 04/19/24 The Labor

Pacer Analytical Services, LLC

Cust 5v to 167537

PM (Project Manager) review is documented electronically in LIMS.

Laboratory Results

Pace°
575 Broad Hollow Road, Melville, NY 11747

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

Type: Drinking Water
Origin: Raw Well
Routine

Sample Information:

TEL: (516) 370-6000 FAX: (516) 886-5526 www.pacelabs.com

Jericho Water District 125 Convent Rd. Syosset, NY 11791 Lab No. : 70295605001 Client Sample ID.: N-12795

Attn To: Peter Logan Federal ID: 2902831

Collected: 04/25/2024 12:00 PM Point N-12795 Received: 04/25/2024 01:40 PM Location Well 21

Collected By CLIENT **Sample Comments:**

Samples were received on the same day of collection on ice and are above 6 degrees Celcius. Samples were placed on ice by the lab and the cooling process has begun.

RUN TO WASTE

Analytical Method:EPA 522		Prep Method:	EPA 522		Prep Date	⊆ 04/27/2024 6:49 PM	
Parameter(s)	Results	Qualifier	<u>D.F.</u>	<u>Units</u>	<u>Limit</u>	Analyzed:	Container:
1,4-Dioxane (p-Dioxane)	2.8*		1	ug/L	1	04/30/2024 2:47 AM	001 AG2R1/2
Surr: 1.4-Dioxane-d8 (S)	82%		1	%REC		04/30/2024 2:47 AM	001 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

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.

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

Date Reported: 04/30/2024



WorkOrder:

70295605

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

Date Reported: 04/30/2024 page 2 of 5



Sample Request Form PUBLIC WATER SUPPLIER

78	
X	0
5	
Date:	
	•

Collected By: CS
Accepted By: PSF 8ACE L
Cooler Temp: 10 · \ °C

Name or Code: Jencho Waker

Client Info:

Syssed, MY 11791 (SIG) 921-8280

Address: __

Phone #:

Attn:

Proj. # or (Name):

1	5/24 13.	
	7	1
	5	33
_	*CE	

Lost
Sen to
OFF LINE
GWELL.

☐ WELL RUN TO SYSTEM

☐ YES ☐ NO VOC'S PRESERVED WITH HCI

	Purpose	Origin	Treatment Types
PW - Potable Water GW - Groundwater SW - Surface Water WW - Waste Water AQ - Aqueous S - Soil	RO - Routine RE - Resample S - Special	D - Distribution RW - Raw Well TW - Treated Well T - Tank MW - Monitoring Well I - Influent E - Effluent	AST - Air Stripper GAC - Granular Activated Charcoal N - Nitrate Removal Plant FE - Iron Removal Plant O - Other

Date/Time Collected:	Sample Type	Location	Origin	Treatment Type	Purpose	Field Readings Cl ₂ pH/Temp	Analysis	Lab No.
1125174 1000-41	20	Pw Leal 21 H-12795	Rw		120		1, Ll Dioxon	
_							9	
						(4		
Remarks:								

page 3 of 5

Sample Info:

Copies To:

Bill To:

DC#_Title: Excel Form Template Effective Bate

DC#_Title: ENV-FRM-MELV-0024 v07 Effective Date: 4/12/2024	_SCUR				WO#	:70	29560	5
Client Name:	<u>M</u>			Project	# PM: JS		Due Date:	05/07/24
Courier: Fed Ex UPS USP	S Clie	nt 🗆 Co	mmercial	□ Pace □ Other				
Tracking #:					L-			
Custody Seal on Cooler/Box Prese Packing Material: Bubble Wrap					Temperature Type of Ice:			ō
Thermometer Used: Cooler Temperature(°C): Temp should be above freezing to 6.0°C		tion Fac Tempe		rected(°C): 9, 7			rocess has begun aced in freezer	
USDA Regulated Soil (N/A, water	er sample	e)						
Did samples originate in a quarantine	e zone wi			tes: AL, AR, CA, Fl map)? □ Yes□		S, NC, NM, 1	NY, OK, OR, SC, TI	N, TX, or
Did samples o	rignate fr	om a for	eign sourc	e including Hawaii	and Puerto Rico)	? □ Yes □	□ No	
If Yes to either question, fill or	ut a Regu	ilated Se	oil Checkl					ork.
				Date and Initia	ils of person	examının	g contents:	D 27 412512
					CON	MMENTS:		
Chain of Custody Present:	eYes	□No		1,::				=
Chain of Custody Filled Out:	Yes	□No		2.				
Chain of Custody Relinquished:	PYes	□No	□N/A	3.				
Sampler Name & Signature on COC: Samples Arrived within Hold Time:	eYes	□No	UN/A	5.		_		
Short Hold Time Analysis (<72hr):	□Yes	aNo .		6.				
Rush Turn Around Time Requeste		dNo		7. 6				
Sufficient Volume: (Triple volume	eyes	□No		8.				
provided for MS/MSD)								
Correct Containers Used:	erres	□No		9.				
-Pace Containers Used:	,□Yes	□No						-
Containers Intact:	rives	□No	1 10%	10.				
Filtered volume received for Dissolved tests	□Yes	□No	□N/A	11. Note: if s	ediment is visible i	in the dissolve	ed container.	
Sample Labels match COC:	DYes	~■No		12.				
-Includes date/time/ID/Analysis Matri:		WT OIL	OTHER			i i		
				Date and Initia	ls of person	checking	preservation:	AD4 25 24
All containers needing preservation			FRONTAN	13. □ HNO ₃	□ H ₂ SO ₄ □ N	VaOH □	HCI	100 10 1
have been	□Yes	□No	ONA]	2.12004 3.			
pH paper Lot #				Sample				
All containers needing preservation a		to be		#				
in compliance with method recomme		8.1-	- 1114-					
(HNO₃, H₂SO₄, HCl, NaOH>9 Sulfide NAOH>12 Cyanide)	a, □Yes	□INO	DINITA	1				
Exceptions: VOA, Coliform, TOC/DO	C. Oil an	d Grease	2					
DRO/8015 (water).	0, 0		-1	Initial when completed		Date/	Time preservative adde	d:
Per Method, VOA pH is checked after	er analysi:	S			preservative:			
Samples checked for dechlorination:	□Yes	□No	DNA	14.				
KI starch test strips Lot #								
Residual chlorine strips Lot #				Positive for Res.	Chlorine? Y I	N		
SM 4500 CN samples checked for si	Yes الد ⊃Yes	□No	DINA	15	- 0 V I	A.1		
Lead Acetate Strips Lot #	-Voc	=No	eN/A	Positive for Sulfid	e? Y I	IN		
Headspace in ALK Bottle (>6mm): Headspace in VOA Vials (>6mm):	_ □Yes □Yes	□No □No	eN/A	16.				
Trip Blank Present:	□Yes	□No	-eN/A	17.				
Trip Blank Custody Seals Present	□Yes	□No	AWA	÷ *			-	
,								
Client Notification/ Resolution:				Field Data Requi	red? Y	/ N		
Person Contacted:	30			Date/Ti	ne <u>:</u>			
Comments/ Resolution:								
·								

DC#_Title: ENV-FRM-MELV-0024 v07_SCUR

^{*} PM (Project Manager) review (which includes the SCUR) is documented electronically in LIMS.