



GUAM ENVIRONMENTAL PROTECTION AGENCY • AHENSIAN PRUTEKSIÓN LINA'LA' GUÅHAN  
LOURDES A. LEON GUERRERO • GOVERNOR OF GUAM | JOSHUA F. TENORIO • LIEUTENANT GOVERNOR OF GUAM  
MICHELLE C. R. LASTIMOZA • ADMINISTRATOR

Date: **MAY 08 2025**

Ms. Yoko Pipes  
Program Manager  
Guam Plaza Resort  
P.O. BOX 22439 GMF  
Barrigada, Guam 96921

RE: **COMPLIANCE ORDER ACHIEVED - NOV/OC 25-001**  
**GUAM PLAZA RESORT**  
**PWS ID: GU0000015**

*Hafa Adai Ms. Pipes:*

Pursuant to 10 Guam Code Annotated (GCA) Chapter 53, known as the Safe Drinking Water Act (SDWA), Guam Environmental Protection Agency is authorized to perform any and all acts necessary to fulfill the functions and requirements of the Act in order to promulgate and enforce the Guam Primary and Secondary Drinking Water Regulations (GSDWR) covered under Guam Public Law No.35-115 that shall apply to each Public Water Systems (PWSs) in Guam including those owned and operated by the Government of Guam and Federal Agencies.

Guam Environmental Protection Agency (Guam EPA) received Guam Plaza Resort Water System's response letter to the Notice of Violation/Compliance Order dated April 25, 2025 of the following:

1. Guam Plaza Resort Water System's Notice of Defense Form admitting to the accusation in whole received on April 25, 2025.
2. Guam Plaza Resort Water System's Tier 3 Public Notification that Guam Plaza Resort posted on April 18, 2025 in a conspicuous place to notify its affected customers within one-year of receiving the Notice of Violation/Compliance Order.
3. Guam Plaza Resort Water System's Tier 3 Public Notification certification received on April 25, 2025.
4. Guam Plaza Resort Water System's maintained GEPA-determined concentration each day water from the ground water source is delivered.

This submission shall satisfy the Notice of Violation/Compliance Order that was issued to Guam Plaza Resort Water System for the Tier 3 Public Notification Failure to Conduct required Compliance Monitoring. Guam EPA Safe Drinking Water Program has determined that Guam



GUAM EPA | 17-3304 Mariner Avenue Tiyan Barrigada, Guam 96913-1617 | Tel: (671) 588.4751 | Fax: (671) 588.4531 | [epa.guam.gov](http://epa.guam.gov)  
ALL LIVING THINGS OF THE EARTH ARE ONE • MANUNU TODU I MANLĀLA'LA'

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GUAM PLAZA RESORT  
COMPLIANCE ORDER ACHIEVED - NOV/OC 25-001

Plaza Resort Water System has achieved the Compliance Order and has returned to compliance effective April 25, 2025.

In addition, if Guam Plaza wishes to discontinue 4-log treatment of viruses before or at the first customer, then becomes subject to the Ground Water Rule (GWR) triggered source water monitoring requirements. You may contact us to have further discussion if you decide to discontinue 4-log treatment of virus.

If you have any questions regarding this letter, contact our SDWP Staff Ms. Julie Mendoza at [Julie.mendoza@epa.guam.gov](mailto:Julie.mendoza@epa.guam.gov) or Nicole Diras at [nicole.diras@epa.guam.gov](mailto:nicole.diras@epa.guam.gov) or our Acting Chief Engineer Johnny Abedania at [johnny.abedania@epa.guam.gov](mailto:johnny.abedania@epa.guam.gov).

*Dangkolu na si Yu'us ma'ase'.*

*Senseramente,*

  
MICHELLE C.R. LASTIMOZA  
Administrator

Cc: Ms. Amanda Quay, USEPA Region 9  
Mr. Everett Pringle, USEPA Region 9 Enforcement and Compliance Assurance Division  
Attorney General Office

Attachments:

GEPA Approved GWR Declaration Letter  
Tier 3 Public Notice  
Public Notice for Problem Corrected Form  
Public Notice Certification Form  
Notice of Defense





AHENSIAN PRUTEKSION LINA'LA GUÅHAN

LOURDES A. LEON GUERRERO, GOVERNOR OF GUAM • JOSHUA F. TENORIO, LIEUTENANT GOVERNOR OF GUAM  
WALTER S. LEON GUERRERO, ADMINISTRATOR

Date: FEB 04 2020

Mr. Sudipta Basu  
General Manager  
Guam Plaza Resort and Spa  
P.O. BOX 22439 GMF  
Barrigada, Guam 96921

Subject: Acknowledgement of Receipt of 4-log Virus Treatment Declaration  
Guam Plaza Resort and Spa (GU0000015)

*Hafa Adai* Mr. Basu:

Guam Environmental Protection Agency (GEPA) received your Ground Water Rule Declaration dated on November 19, 2019 to determine if your system provides 4-log treatment for viruses. You provided a sketch and calculations that demonstrated that you believe that your system provides 4-log virus treatment. GEPA concurs with your findings.

Your system is now classified as a ground water system that provides 4-log virus treatment. As a system that provides 4-log virus treatment, you will NOT be required to conduct "source water monitoring" if there is a total-coliform positive sample during your routine monthly monitoring. However, your system must continue "compliance monitoring."

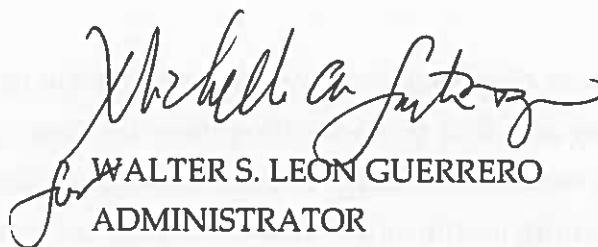
Since your system uses chlorine to disinfect the water, "compliance monitoring" entails testing the chlorine residual at the first user in your distribution system and recording the result at least once a day. You are not required to send the records to GEPA, but you are required to keep them at your facility available for inspection for a minimum of 5 years. Based on the sketch and calculations you provided, GEPA has determined that the minimum chlorine residual for the following:

1. First User Sample Point with One (1) Well On: Tarza Waterpark Men's Restroom is 0.48 mg/l.
2. First User Sample Point with Two (2) Wells On: Tarza Waterpark Men's Restroom is 0.95 mg/l.
3. Alternate First User Sample Point with One (1) Well On: Booster Pump after the Water Storage Tank in the hotel's parking structure is 0.11 mg/l.
4. Alternate First User Sample Point with Two (2) Wells On: Booster Pump after the Water Storage Tank in the hotel's parking structure is 0.22 mg/l.

Please continue to maintain the system's ability to produce and distribute safe drinking water in accordance to with the Guam Safe Drinking Water Regulations (GSDWR) and Primary Drinking Water Regulations.

If you have any questions regarding this letter, please contact SDW Staff Ms. Juliana Mendoza, Environmental Health Specialist II at telephone number (671) 300-9026 or our Chief Engineer CDR Brian Bearden, P.E. at (671) 300-4779.

*Dangkolo na Si Yu'os Ma'ase,*

  
WALTER S. LEON GUERRERO  
ADMINISTRATOR

water div.  
11/21/19

20-217



CITY HILL COMPANY (GUAM) LTD.

1328 Pale San Vitores Road; Tamuning, Guam 96913-4209  
P.O. Box 7755; Tamuning, Guam 96931  
Tel: (671) 646-7803-8 • Fax: (671) 646-7809

November 19, 2019

RECEIVED

NOV 20 2019  
Guam Environmental  
Protection Agency

Mr. Walter Leon Guerrero, Administrator  
GUAM ENVIRONMENTAL PROTECTION AGENCY  
P. O. BOX 22439 G.M.F.  
Barrigada, Guam 96921

HAND DELIVER

ATTN:Ms. Carmencita Cortez

RE: Submittal of:  
Ground Water Rule  
Public Water System Declaration on 4-log Virus Treatment Form for the Guam Plaza  
Resort & Spa Water System (PWS ID No. GU0000015)

Dear Mr. Leon Guerrero:

Enclosed is the form that your office requested us to submit by November 30<sup>th</sup>, 2019.

We have declared that we have providing 4-log virus removal in 2016 and have been measuring and recording daily chlorine residual at the sample sites.

If you have any questions regarding our 4-log virus removal, please contact me at 988-6042.  
Thank you.

Sincerely,

Yoko Pipes  
Project/Development Manger

REC'D 12/21/19 jh  
REV'D 12/21/19 jh



## Ground Water Rule

### Public Water System Declaration on 4-log Virus Treatment

PWSID Number:	<PWS ID>	GU-0000015
System Name:	<System Name>	Guam Plaza Resort & Spa Public Water System
Contact Person:	<Contact Person>	Yoko Pipes
Phone Number:	<Phone Number>	979-5683

#### Does Your System Provide 4-log Treatment of Viruses?

If your system disinfects with gaseous or liquid chlorine, use the calculation below to determine the CT that is provided for your ground water. "CT" is an abbreviation for chlorine Concentration multiplied by Time. Since the temperature of the groundwater in the Guam is consistently above 25°C throughout the year, and the pH of the groundwater is between 6.0 and 9.0, a CT of 2.0 (or greater) is required in the Guam to provide 4-log inactivation of viruses. An example of a CT = 2.0 is if the chlorine residual is 0.5 mg/l (C=0.5) at the first user and the time the chlorine is in contact with the water is 4.1 minutes (T=4.1), then  $C \times T = 0.5 \times 4.1 = 2.05$  which is greater than 2.0.

To calculate your system's CT, multiply the free chlorine residual (in mg/L) at your first user's service connection by the shortest amount of time (in minutes) water comes into contact with the chlorine.

The free chlorine residual (mg/L) at the first user is: C = 0.95

The shortest amount of time (minutes)  
the water is in contact with the chlorine is: T = 2.10

Multiply C 0.95 x T 2.10 CT = 2.0

Is your system's CT 2.0 = 2.0 circle YES or NO

If your answer is YES, then your system provides 4-log virus treatment for its groundwater source. If your answer is NO, then your system does not provide 4-log virus treatment for its groundwater source.

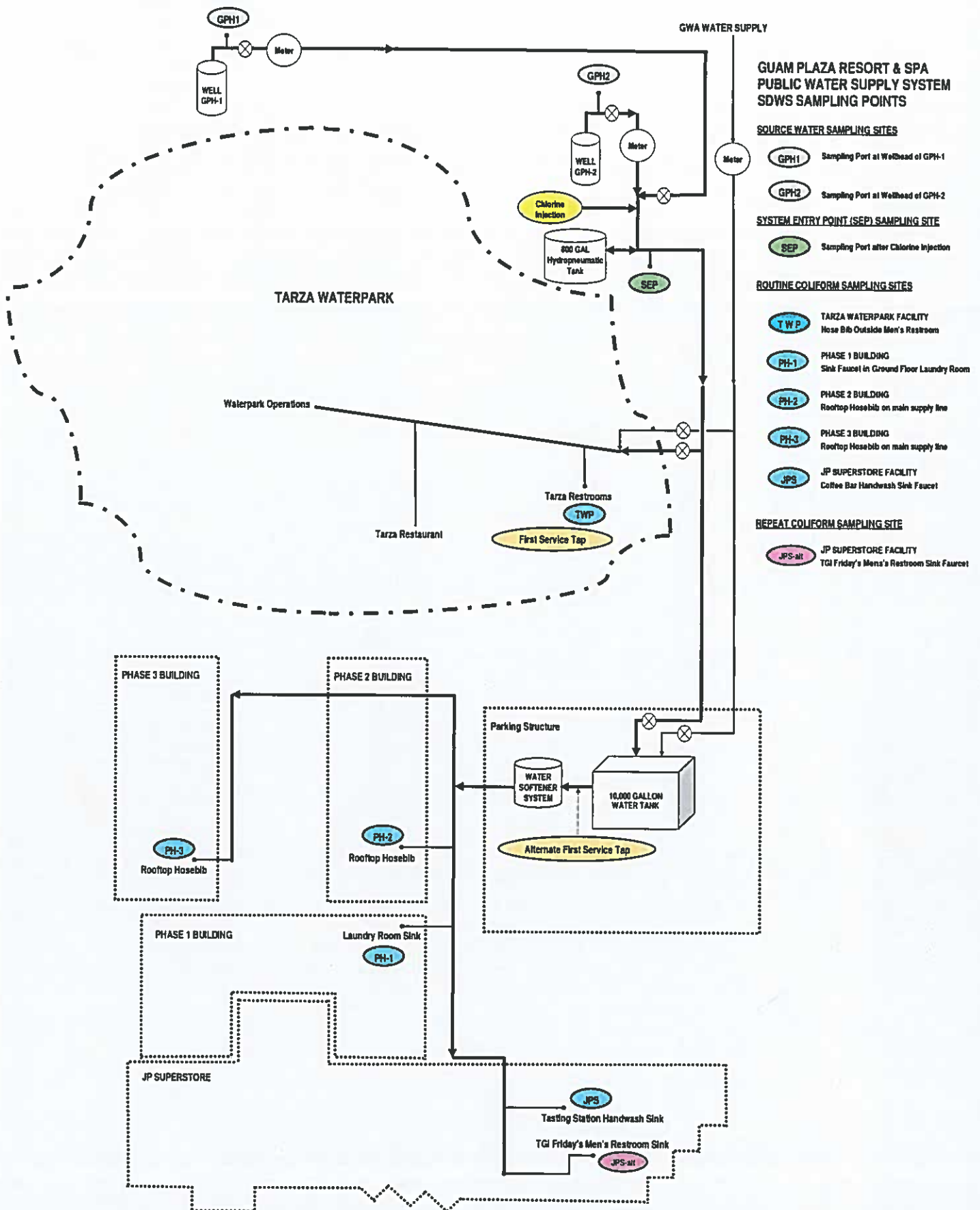
If your system uses a different kind of disinfection (e.g., UV, ozone, chloramines) and/or filters its ground water, call the Safe Drinking Water Program at 300-9026. We will work with you to determine how many logs of virus treatment your system provides.

Check the line below that applies to your ground water system:

- ☐ Our ground water system probably does not provide 4-log treatment of viruses  
☒ Our groundwater system probably provides 4-log treatment of viruses  
☐ We do not know if our groundwater system provides 4-log treatment of viruses

Please return this form to: Guam Environmental Protection Agency  
3304 Mariner Avenue Bldg. 17 Tiyan Barrigada, Guam 96913

Water System Representative: [Signature] date: Nov. 19, 2019



## GPH PWS Potential Operating Conditions

As discussed above, there are two variables in the possible operating conditions of the GPH PWS and these two variables create four potential operating conditions, as follows:

- FST-1: First Service Tap (Tarza on GPH PWS) with One Well ON
- FST-2: First Service Tap (Tarza on GPH PWS) with Both Wells ON
- AFST-1: Alternate First Service Tap (Tarza on GWA) with One Well ON
- AFST-2: Alternate First Service Tap (Tarza on GWA) with Both Wells ON

Whenever the Tarza Waterpark facility is being supplied water by the GPH PWS, the first service tap (FST) location will be used for determining 4-log inactivation. Only when the Tarza Waterpark is supplied by GWA will the Alternative First Service Tap (AFST) location be used for determining 4-log inactivation.

## Calculation of Contact Time

The contact time is a function of the volume of water in the system piping, storage tank and the maximum flow rate.

Volume of Water in System: The volume of water in the system piping between the chlorine injection and the first service tap is calculated, based on the pipe diameters and lengths, as follows:

Pipe volume (cubic feet): length x area ( $\pi r^2$ )  
Conversion to gallons: 7.48 gallons per cubic foot

### First Service Tap (FST) Water Volume

325 l.f. of 6" diameter pipe:  $325 \times \pi ((6/12) \div 2)^2 \times 7.48 = 477$  gallons  
40 l.f. of 4" diameter pipe:  $40 \times \pi ((4/12) \div 2)^2 \times 7.48 = 26$  gallons  
30 l.f. of 1" diameter pipe:  $30 \times \pi ((1/12) \div 2)^2 \times 7.48 = 1$  gallons  
Volume of water in system prior to FST = 504 gallons

### Alternative First Service Tap (AFST) Water Volume

800 l.f. of 6" diameter pipe:  $800 \times \pi ((6/12) \div 2)^2 \times 7.48 = 1,175$  gallons

Storage Tank: 10,000 gallon capacity with assumed minimum operating volume of 10%, or 1,000 gallons.

Volume of water in system prior to AFST = 2,175 gallons



### Location of the Alternate First Service Connection

The attached schematic diagram of the GPH PWS identifies the primary first service connection (FST), located at the Tarza Waterpark Men's restroom facility. When the Tarza Waterpark water supply is from GWA, the next closest location of a service tap is located immediately after the storage tank in the hotel parking structure. This site is identified as the Alternative First Service Tap (AFST).

It should be noted that there is no actual service tap immediately after the storage tank. The sampling point identified is a port on one of the booster pumps between the water tank and softener system. Due to a lack of as-built drawings on the water supply system for the hotel structures, the exact size, location and length of pipes supplying each of the hotel facilities is not know. Therefore, it is not possible to determine accurately the contact time for any of the taps after the storage tank and thus, in order to be conservative on the determination of contact time, this location was selected.

First Service Tap (FST): Tarza Waterpark Men's Restroom

Alternative First Service Tap (AFST): Sample port on booster pump after Water Storage Tank in Hotel Parking Structure

### Requirements

Compliance Monitoring Required. The GPH PWS is a small system, serving less than 3,300 persons. Therefore, based on the USEPA SDWS GWR (§141.403), the GPH PWS is required to monitor the free chlorine level on a daily basis via a grab sample (i.e., continuous disinfectant monitoring is not required for systems serving less than 3,300 persons).

Required CT for 4-log Inactivation. The CT value required to meet 4-log Inactivation varies based on the temperature and pH of the water. For the GPH PWS the temperature is always greater than 25 °C and the pH is always between 6 and 9 pH units. Based upon the USEPA Guidance Manual for Compliance with Filtration and Disinfection Requirements for PWS, the CT required for GPH PWS to meet 4-log Inactivation is 2.0.

## SUMMARY AND CONCLUSION

The minimum disinfectant residuals required for each of the four potential operating conditions at GPH PWS are summarized below. As shown below, there is a significant difference in minimum disinfectant residual required depending on the whether Tarza Waterpark is supplied by GPH PWS and whether one or both well pumps are operating.

GPH PWS has historically maintained a chlorine residual of 0.6 mg/l or greater and operates with only one well pump on at a time. Therefore, GPH PWS has met the requirements for 4-log inactivation. However, should the system choose to operate with both wells pumps on simultaneously while supplying water to Tarza Waterpark the chlorine level will need to be increased in order to maintain 4-log inactivation.

GPH PWS will continue to keep accurate logs of the operating conditions and take daily free chlorine residual readings at the appropriate first tap location and compare the actual reading to the minimum required as shown below.

If the free chloride residual measured at any of the daily grab samples taken at the first service connection falls below the level shown below for the operating conditions, the GPH PWS will take follow-up samples every four hours until the free chlorine residual increases to above the level shown.

During any time period when the GPH PWS does not meet the 4-Log inactivation the system is subject to Triggered Source Water Monitoring requirements.

If GPH PWS does not restore the chlorine residual to the level presented in the below for the operating conditions within 24 hours of determining it is low, GPH PWS will notify GEPA of this occurrence.

### Minimum Disinfectant Residual Required to Maintain 4-Log Inactivation

FST-1:	2.0 mg-min/L	÷	4.20 min.	=	0.48 mg/L
FST-2:	2.0 mg-min/L	÷	2.10 min.	=	0.95 mg/L
AFST-1:	2.0 mg-min/L	÷	18.12 min.	=	0.11 mg/L
AFST-2:	2.0 mg-min/L	÷	9.06 min.	=	0.22 mg/L

#### Operating Conditions:

FST-1:	First Service Tap (Tarza on GPH PWS) with One Well ON
FST-2:	First Service Tap (Tarza on GPH PWS) with Both Wells ON
AFST-1:	Alternate First Service Tap (Tarza on GWA) with One Well ON
AFST-2:	Alternate First Service Tap (Tarza on GWA) with Both Wells ON

Maximum Flow Rate: The flow rate of the GPH PWS is dictated by whether one or both well pumps are operating. Each well pump is capable of pumping 120 gallons per minute. Thus with both wells operating simultaneously, the maximum flow rate is 240 gpm.

Contact Time: Contact time is determined by the volume of water divided by the flow rate; thus for the four potential operating conditions at GPH PWS, the contact times are as follows:

FST-1:	504 gallons	÷	120 gpm	=	4.20 minutes
FST-2:	504 gallons	÷	240 gpm	=	2.10 minutes
AFST-1:	2,175 gallons	÷	120 gpm	=	18.12 minutes
AFST-2:	2,175 gallons	÷	240 gpm	=	9.06 minutes

#### Minimum Disinfectant Residual Concentration

Based upon the CT required for 4-log inactivation of 2.0, the minimum free chlorine residual concentration is calculated by dividing the CT of 2 by the contact time. For the four potential operating conditions at GPH PWS the minimum free chlorine residual values are as follows:

FST-1:	2.0 mg-min/L	÷	4.20 min.	=	0.48 mg/L
FST-2:	2.0 mg-min/L	÷	2.10 min.	=	0.95 mg/L
AFST-1:	2.0 mg-min/L	÷	18.12 min.	=	0.11 mg/L
AFST-2:	2.0 mg-min/L	÷	9.06 min.	=	0.22 mg/L

# IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Reported by

## **Guam Plaza Resort Public Water System** **PWS ID No. GU0000015**

### **Requirement not met:**

We are required to report to Guam EPA whenever the residual chlorine in our system drops below a prescribed level and to monitor the chlorine every 4 hours until it is at or above the prescribed level. The chlorine level is an indicator of whether or not your drinking water meets health standards. On some days in month of **March 2025** we did not monitor the chlorine level every 4 hours when required and we did not report as soon as possible to Guam EPA that the residual chlorine had dropped below the prescribed level.

### **What should I do?**

There is nothing you need to do at this time. You **DO NOT** need to boil your water or take other actions.

### **What is being done?**

While we did not notify Guam EPA as quickly as we should have, we have notified them and we have increased the residual chlorine to above the prescribed level on April 11, 2025. We are no longer in violation.

For more information, please contact Yoko Pipes, Program Manager at 671-979-5683 or by email to [ypipes@guamplaza.com](mailto:ypipes@guamplaza.com).

*Please share this information with all other people who drink this water, especially those who may not have received this notice directly. You can do this by posting this notice in a public place or distributing copies by hand or mail.*

This notice is being sent to you by Guam Plaza Resort. State Water System ID# GU0000015.

This notice is being distributed and posted on April 18, 2025

# IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Reported by

**Guam Plaza Resort Public Water System**  
**PWS ID No. GU0000015**

## DRINKING WATER PROBLEM CORRECTED

Customers of Guam Plaza Resort were notified on April , 2025 of a problem with our drinking water and were advised to increase and maintain the chlorine residual to above the prescribed level. We are pleased to report that the problem has been corrected. We apologize for any inconvenience and thank you for your patience.

As always, you may contact Yoko Pipes at 671-979-5683 or [ypipes@guamplaza.com](mailto:ypipes@guamplaza.com) with any questions.

*Please share this information with all other people who drink this water, especially those who may not have received this notice directly. You can do this by posting this notice in a public place or distributing copies by hand or mail.*

This notice is being sent to you by Guam Plaza Resort. State Water System ID# GU0000015. Date distributed: April 18, 2025.

## Public Notice Certification

I Yoko Pipes certify that the public notice(s) that I am submitting here before you have been posted, hand delivered, mailed, published in the newspaper, or submitted to the media (T.V. / Radio station). I also acknowledge that anybody who knowingly and willfully makes false statement, presentation, or certification in any application, records, report plan or other documentation filed or required to be maintained under the Guam Safe Drinking Water Regulations, or by any certification, or order issued under the Guam Safe Drinking Water Regulations, or who falsifies, tampers with or knowingly renders inaccurate information shall be subject to the penalties.

Notice distributed by Posting in the public places on April 18, 2025.  
(Method of Notification) (Date of Notification)

Public Notice Locations: Guam Plaza Resort Lobby, Employees Entrance Hallway & Cafeteria

Public Notice has required Elements;

A description of the violation (MCL or FTM, etc...)

When the violation or situation occurred (MCL or FTM, etc...)

Potential adverse health effects, using the standard mandatory language(MCL)

Population at risk (MCL)

Whether alternative water supply is needed (MCL or FTM, etc...)


Actions consumers should take to reduce their exposure to the contaminant (MCL)

What are you doing to correct the violation or situation (MCL or FTM, etc...)

When you expect to return to compliance (MCL or FTM, etc...)

Name, business address, and phone number for additional information, and (MCL or FTM, etc...)

Standard language encouraging distribution to all persons served. (Where applicable)

  
(Signature of PWS contact)

Program Manager  
(PWS contact title)

Guam Plaza Resort PWS  
(PWS Name)

GU0000015  
(PWS I.D. Number)





GUAM ENVIRONMENTAL PROTECTION AGENCY • AHENSIAN PRUTEKSIÓN LINA'LA GUÅHAN  
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MICHELLE C. R. LASTIMOZA • ADMINISTRATOR

GUAM EPA CASE# NOV/OC 25-001

## NOTICE OF DEFENSE

I, Yoko Pipes, have received your Notice of Violations and/or Order of Compliance, dated April 11, 2025, charging me for violations, and I wish to:

(Please check appropriate sections)

☐ A. Request for a hearing and

☐ 1. Object to the accusation on the ground that it does not state acts or omissions upon which the Agency can proceed.

☐ 2. Object to the form of accusation on the ground that it is so indefinite or ambiguous that I cannot identify the infraction or prepare my defense.

☐ 3. Wish to prepare new matter in my defense.

☐ 4. Admit to the accusation in part.

☒ B. Admit the accusation in whole.

My mailing address is:

City Hill Company (Guam) Ltd.

P.O. Box 7755, Tamuning, Guam 96931

Signature:

Date:

April 25, 2025



GUAM EPA | 17-3304 Mariner Avenue Tiyan Barrigada, Guam 96913-1617 | Tel: (671) 588.4751 | Fax: (671) 588.4531 | epa.guam.gov  
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Like and follow guamepa