



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

Date: JUN 16 2022

Mr. Miguel C. Bordallo, P.E.
General Manager
Guam Waterworks Authority
Gloria B. Nelson Public Service Building
Mangilao, Guam 96913

RE: Compliance Order Achieved of the Guam EPA Safe Drinking Water Regulations
Guam Waterworks Authority (GWA) Central Water System
PWS ID# GU0000003

Hafa Adai Mr. Bordallo:

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 Safe 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 GWA Central Water System's response letter to the Notice of Violation/Compliance Order dated May 27, 2022 of the following:

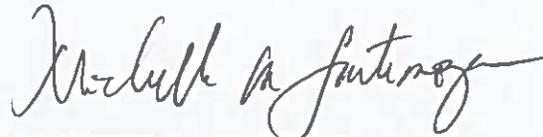
1. GWA Central Water System's Notice of Defense Form admitting to the accusation in whole received on May 27, 2022.
2. GWA Central Water System's Tier 1 notification that GWA notified its affected customers within 24 hours from the time and date of the MCL violation received on April 28, 2022.
3. GWA Central Water System's Tier 1 certification that GWA provided a copy of the notice to Guam EPA no later than 24 hours after providing the notification received on April 28, 2022.
4. GWA Central Water System's Level 2 Assessment Form and associated corrective actions within 30 days from the time and date of the MCL violation received on May 27, 2022.
5. GWA Central Water System's Level 2 Assessor Certification Application Form for Mr. Paul Kemp and Mr. Vincent Pangelinan received on May 27, 2022.

This submittal shall satisfy the Notice of Violation/Compliance Order that was issued to GWA Central Water System for E.coli MCL. Guam EPA Safe Drinking Water Program has determined

that GWA Central Water System has achieved the NOV/Compliance Order and has returned to compliance effective June 07, 2022.

If you have any questions regarding this letter, please contact Ms. Juliana Mendoza, Environmental Health Specialist II at (671) 300-9026 or our Chief Engineer CAPT. Brian Bearden, PE. BCEE at (671) 300-4779.

Si Yu'us Ma'ase,



WALTER S. LEON GUERRERO
Administrator

Cc: Ms. Corine Li, USEPA Region 9
Mr. Jacob Jenzen, USEPA Region 9
Mr. Everett Pringle, USEPA Region 9 Enforcement and Compliance Assurance Division
Attorney General Office

22-0861
received
5/29/22
3:19



GUAM WATERWORKS AUTHORITY
"Better Water. Better Lives."

Gloria B. Nelson Public Service Building | 688 Route 15, Mangilao, Guam 96913
P.O. Box 3010, Hagatna, Guam 96932

May 27, 2022

Memorandum

To: Administrator, Guam Environmental Protection Agency (GEPA)
Via: Chief Engineer, Guam Environmental Protection Agency (GEPA)
From: General Manager, Guam Waterworks Authority (GWA)
Subject: Notice of Violation/Compliance Order
Guam Waterworks Authority Central System
PWS ID#: GU0000003

Hafa Adai Mr. Leon Guerrero:

On April 29, 2022, GWA received the Notice of Violation/Compliance Order as a result of a positive E. coli (EC) MCL Violation for Agat-GHURA Southwest Site Base Office. GWA is transmitting herein in response to the NOV the Revised Total Coliform Rule (RTCR) Level 2 Assessment Form, Notice of Defense, and the RTCR Level 2 Assessor Certification Application signed by the O&M Manger for Water Distribution as well as the Assistant General Manager for Compliance and Safety. The following is GWA's understanding of the general chronology of events regarding the matter.

On April 27, GWA Lab routine distribution system sampling resulted in four TC positive samples, two of which tested EC positive, in Agat. GEPA was promptly notified and resamples were taken from each positive site, including the upstream and downstream locations.

On April 28, GWA promptly informed GEPA of one positive TC result from the resampling of Agat- GHURA Southwest Site Base Office, which was one of two E. coli positive on the routine sampling. As required, GWA issued a Boil Water Notice (BWN) on April 28, 2022 to the affected area and posted at the Agat Mayor's Office. GEPA team joined GWA team on another resampling at this TC positive site, along with the upstream and downstream locations.

On April 29, 2022, the resample resulted negative for TC and a BWN cancellation was issued, but the posted BWN remained for 7 days. GWA continued to conduct in-dept assessment to identify the potential sources of contamination from April 28 to May 13, 2022.

GWA assessment included inspection of customers who recorded any reverse flow, lack a backflow preventer on agricultural meter, and areas where customers made complaints of smelling foul odor. Although there were some customers that did not have a backflow preventer (BFF) installed, the level of hazard was not deemed high, however a Notice to Comply was issued and the customers were instructed to install a BFF as soon as possible. GWA did not observe anything of significance that can be identified as the cause of the contamination.

After reviewing a chronology of events that occurred prior to and after the positive results and the review of the water distribution system in the service area, GWA has concluded that the potential cause of the positive results was due to a main water line break that occurred which caused fluctuation in the pressure in the system in the Sinifa service area that has the capacity to flow into the Agat service area and introduce contaminants in the system.

GWA reacted responsively to this event. Preventative measures and corrective action were taken immediately to include repeat sampling, increase flushing of the Agat area, distribution of the Boil Water Notice to Mayor's office and affected residents, and subsequent sampling to confirm the system was clear.

To mitigate this situation from occurring in the future, GWA will increase the amount of flushing in the area after a main waterline break, issue a precautionary BWN to affected areas, make efforts to keep the pressure above the minimum requirements of above 20 psi, and continue pipe replacement and other critical water system upgrades.

If you have any questions or comments, please feel free to contact Mr. Vince Pangelinan at vpangelinan@guamwaterworks.org or Mr. Thomas Cruz at thomas@guamwaterworks.org.

Sincerely,



Thomas A. Cruz, P.E.
Acting - General Manager

Cc: Paul Kemp, AGM Compliance and Safety
Vincent Pangelinan, O&M Manger Water Distribution
Ray Quintanilla, O&M Manager Water Production
Jennifer Cruz, GWA Laboratory Administrator

Attachments:

Notice of Defense
Revise Total Coliform Rule (RTCR) Level 2 Assessment Form
RTCR Level 2 Assessor Certification Application – Vince Pangelinan
RTCR Level 2 Assessor Certification Application – Paul Kemp



GUAM ENVIRONMENTAL PROTECTION AGENCY - AHENSIAN PRUTEKSIÓN LINA'LA' GUÁHAN
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GUAM EPA CASE# _____

NOTICE OF DEFENSE

I, MIGUEL C. BORDALLO, GWA GENERAL MANAGER, have received your Notice of Violations and/or Order of Compliance, dated April 29, 2022, 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.

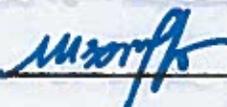
4. Admit to the accusation in part.

B. Admit the accusation in whole.

My mailing address is:

PO BOX 3010, HAGATNA, GU 96932

Signature:



Date:

5-27-2022



GUAM ENVIRONMENTAL PROTECTION AGENCY
Revised Total Coliform Rule (RTCR) Level 2 Assessment Form

PWS ID#: GU0000003 PWS Name: Central System

Primary Operator (print name): Vincent Pangelinan
 Assessment trigger date: 4/28/2022
 SEASONAL: YES NO

Phone: 671-300-6343
 Date Assessment Completed: 5/27/2022
 Reason for Assessment: NOV/Compliance Order

Assessment Elements	Issues?			Issue Description	Corrective Action Taken or Planned to be Taken and Date
	Y	N	N/A		
1. Review of the sample sites					
1.1 Was the sample taken at the routine coliform site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Indicate Element number being described. 1.9 Location is at a dead end	
1.2 Was the tap area unsanitary at the time of sampling?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
1.3 Was this sample taken from an outside faucet?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
1.4 Was the sample taken from a swivel tap?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
1.5 Did the tap have a point of use treatment device on it?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
1.6 Does the building where the sample was taken have a point of entry device?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
1.7 Has this location undergone any plumbing replacements or repairs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
1.8 Are there any possible cross connections around the sample site (including yard hydrants and stock tanks)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
1.9 Is this location near a storage tank or dead end?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
1.10. Any other sample site issues not previously mentioned?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
2. Review of sample protocol					
2.1 Is the sampler a regular, trained sampler?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
2.2 Was a laboratory-provided TC sample bottle used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
2.3 Was the aerator removed?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
2.4 Was the water tap flushed for at least 5 minutes?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
2.5 Was the tap disinfected or flamed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
2.6 Did the sample get too warm prior to being placed on ice?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
2.7 Was there other sampler error? Describe	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
2.8 If it is a seasonal system, were there any problems during the most recent start-up procedure?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
2.9 Any other sample protocol issues not previously mentioned?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
3. Review of the distribution system.					
3.1 Have any mains been recently replaced or service lines recently added?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
3.2 Have fire hydrants or blow offs been recently flushed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

GUAM ENVIRONMENTAL PROTECTION AGENCY
Revised Total Coliform Rule (RTCR) Level 2 Assessment Form

Assessment Elements	Issues?			Issue Description	Corrective Action Taken or Planned to be Taken and Date		
	Y	N	N/A				
3.3 Have valves been recently exercised to direct flow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>3.4 4/21/22 Joaquin Perez Road – Repairs made on the service lateral off of the main line. Water outage was required.</p> <p>4/22/22 Chalan Kirido St. – 2" line leak repaired, crew installed a 2" valve under pressure and replaced fittings downstream of valve. Only the houses on that street were affected.</p> <p>3.5 Pressure during water outage was below 20 psi.</p> <p>3.10 Standing water in altitude valve vault</p>			
3.4 Any leaks or main breaks noted?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
3.5 Are all of the backflow prevention devices operational and maintained?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
3.6 Was there a total loss of pressure, low pressure (<20 psi) or changes in water pressure? If yes, when?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
3.7 Any areas of the distribution with low disinfectant levels (<0.2 mg/L)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
3.8 Any recent pump station failures or repairs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
3.9 Air relief valve leaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
3.10 Standing water or debris in valve vault?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
3.11 Any recent power loss?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
3.12 Any unprotected cross connections (including yard hydrants and stock tanks)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
3.13 Any other distribution issue not previously mentioned?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
4. Review of storage tank(s) <i>(Note: the specific facility if any issues are found)</i>							
4.1 Is there a presence of animals or insects in the tank(s)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			<p>4.2 Santa Rita Springs - gap is located between roof and wall where metal beams sit on.</p> <p>4.5 Santa Rita Springs was last cleaned in 2018 when the cover was replaced.</p> <p>4.7 Santa Rita Springs installation of #24 mesh screen completed.</p> <p>4.9 Santa Rita Springs has properly sealed hatch.</p> <p>4.10 Hatch at Santa Rita Springs was secured.</p>	<p>4.2 Cover installed between the gap and the wall.</p>
4.2 Are there breaches or holes of any sort into tank(s)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
4.3 Is there any presence of animal droppings around openings, vents or overflows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
4.4 Is there sediment buildup and floating debris in tank(s)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
4.5 Have the tank(s) been cleaned within the last 5 years? If not, list when it was last cleaned.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
4.6 Is there a #24 mesh screen installed on vents and overflows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
4.7 Is the #24 mesh screen damaged or not properly installed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
4.8 Is the overflow pipe directly connected to a tank drain, sanitary sewer or storm drain?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
4.9 Does the hatch have a solid, water proof, shoebox type lid that is properly sealed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
4.10 Was the hatch locked or secured?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
4.11 Has the tank been accidentally drained?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
4.12 Have there been high flows through the tank?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
4.13 Was there high water age in the tank (infrequent water use)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
4.14 Was the sample taken when the tank was at the low level mark?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				

GUAM ENVIRONMENTAL PROTECTION AGENCY
Revised Total Coliform Rule (RTCRC) Level 2 Assessment Form

Assessment Elements	Issues?		Issue Description	Corrective Action Taken or Planned to be Taken and Date
	Y	N		
4.15 Failure or improper operation on tank telemetry/altitude valves/controls?	<input type="checkbox"/>	<input type="checkbox"/>		
4.16 Any recent repairs on the tank(s)?	<input type="checkbox"/>	<input type="checkbox"/>		
4.17 Was there any power loss?	<input type="checkbox"/>	<input type="checkbox"/>		
4.18 Was the tank vandalized or subject to tampering?	<input type="checkbox"/>	<input type="checkbox"/>		
4.19 Any other storage tank issues not previously mentioned above?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4.19 4/26/22 .Santa Ana area outage during the replacement valve at the Santa Ana tank.	4.19 During restoration fire hydrants were open to bleed and flush the lines .
5. Review of treatment process (if applicable)				
5.1 Has the treatment been bypassed altogether at any time or have individual processes been interrupted by power outages or other causes? If yes, provide details on when, which processes and for how long?	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
5.2 Have there been any new treatment processes added or new equipment installed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
5.3 Have there been any recent repairs of major unit processes or treatment equipment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
5.4 Have there been any changes in the operational procedures used for treating the water such as, changes in chemical dosages or changes in coagulant chemicals used? If yes, provide details of the change and when it occurred.	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
5.5 Has a coagulant been added at all times the plant has been filtering water?	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
5.6 Have there been changes in raw water quality?	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
5.7 Was the finished water turbidity increasing?	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
5.8 Have filter clogging algae caused more frequent backwashing?	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
5.9 Has a disinfectant been added at all times or have there been any failures in adding disinfectant for any length of time?	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
5.10 Has there been any vandalism or tampering at the plant?	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
5.11 Any other treatment plant issues not previously mentioned above?				
6. Source – Well(s) 6. (Note the specific facility if any issues are found)				
6.1 Is the sanitary seal intact?	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
6.2 Is the well cap defective or damaged or not water tight?	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
6.3 Does the vent have a #24 mesh screen?	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
6.4 Is the vent screen damaged or not installed properly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>		

GUAM ENVIRONMENTAL PROTECTION AGENCY
Revised Total Coliform Rule (RTCR) Level 2 Assessment Form

Assessment Elements	Issues?			Issue Description	Corrective Action Taken or Planned to be Taken and Date
	Y	N	N/A		
6.5 Does the vent and pump to waste terminate in an air gap of at least three pipe diameters above the ground?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
6.6 How is the well used? (Circle if applicable)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Primary Backup Emergency	
6.7 Are there any unprotected cross connections at the wellhead? Are there any unprotected openings in the pump or pump assembly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
6.8 Is the pitless adapter damaged?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
6.9 Is there a missing or damaged grout seal?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
6.10 Has there been any recent work performed on the pump?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
6.11 Is the wellhead secured to prevent unauthorized access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
6.12 Have there been any sewer spills, source water spills or other disturbances near the well?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
6.13 Is the well pit in standing water or evidence of flooding?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
6.14 Any other well issues not previously mentioned above?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Source - Spring(s) (Note the specific facility if any issues are found)					
6.15 Is there evidence of flooding or infiltration of surface water runoff around the spring?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
6.16 Is the spring box improperly developed or poorly maintained?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
6.17 Are there dead animals near the spring?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
6.18 Any other issues about springs not previously mentioned above?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Source - Purchased water					
6.19 Water quality issues with supplier?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
6.20 Low disinfectant residual from supplier (typically <0.02 mg/L)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
6.21 Any other purchased water issues not previously mentioned above?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Applicable to all sources					
6.22 Has an unapproved source been used?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
6.23 Has there been a change in sources?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
6.24 Has there been recent rapid snowmelt, heavy rainfall or flooding?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
6.25 Any evidence of animals near the source?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
6.26 Have there been algae blooms?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		

GUAM ENVIRONMENTAL PROTECTION AGENCY
Revised Total Coliform Rule (RTC) Level 2 Assessment Form

Assessment Elements	Issues?		Issue Description	Corrective Action Taken or Planned to be Taken and Date
	Y	N		
6.27 Is the source water sample for ground water systems E. coli positive? This may indicate that the positive sample is originating from the source and may be a continuous source of contamination.	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
6.28 Any other source issues not previously mentioned above?	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
7. Significant Deficiencies				
7.1 Are there any unaddressed significant deficiencies? This may indicate that the problem is known and is in the process of being remedied. Include approved corrective action date and status of each corrective action.	<input type="checkbox"/>	<input type="checkbox"/>	7.1 Item 4.2 gap between roof and concrete wall.	7.1 Gap between cover and wall completed 5-26-22.

Additional Comments:
 GWA conducted field inspection and assessment from April 28 to May 13, 2022 to determine the potential cause of the positive TC/ E.coli results. GWA conducted inspection of customers who recorded any reverse flow, lack a backflow preventers on agricultural meter, and areas where customers made complaints of smelling foul odor. GWA did not observe anything of significance that can be identified as the cause of the contamination. After reviewing a chronology of events that occurred prior to and after the positive results and the review of the water distribution system in the service area, GWA has concluded that the potential cause of the positive result was due to a main water line break that occurred which caused fluctuation to the pressure in the system in the Sinifa service area which has the capacity to flow into the Agat service area and introduce contaminants into the system. Preventative and corrective action were taken immediately to included repeat sampling, increase flushing of the Agat area, distribution of the Boil Water Notice to Mayor's office and affected residents, and subsequent sampling to confirm that the system was clear. To ensure this does not happen again, GWA will increase the amount of flushing in the area after a main waterline break, issue a precautionary BWN to affected areas, make efforts to keep the pressure above the minimum requirements of above 20 psi, continue pipe replacement and other critical water system upgrades and ensure agricultural customers have backflow preventers installed.

Name of Assessor completing the form (PRINTED): VINCENT E.C. PAN GERMAN Date: 5/27/22
 Signature: [Signature]
 Water system responsible party (PRINTED): VINCENT E.C. PAN GERMAN Date: 5/07/22
 Signature: [Signature]

Reserved for GUAM EPA Review	Yes	No	Comments
1. Has assessment been successfully completed?	<input type="checkbox"/>	<input type="checkbox"/>	
2. Likely reason for EC+ occurrence has been found.	<input type="checkbox"/>	<input type="checkbox"/>	
3. System has corrected the problem.	<input type="checkbox"/>	<input type="checkbox"/>	
4. Corrective Action Approved?	<input type="checkbox"/>	<input type="checkbox"/>	

**GUAM ENVIRONMENTAL PROTECTION AGENCY
RTCR LEVEL 2 ASSESSOR CERTIFICATION APPLICATION (V.1 DEC 2021)**



Applicant Information			
Last Name:	Pangelinan	First Name:	Vincent
Address:	Suite 200, 688 Rt.15, Mangilao, GU 96913-6203		
Water Purveyor:	Guam Waterworks Authority	PWS ID:	GU 0000003
Water System Name:	Central Distribution		
Certification Type:	WD IV	Expiration date:	February 6, 2023
Certification Type:		Expiration date:	
Certification Type:		Expiration date:	
Certification Type:		Expiration date:	

Work Experience Summary				
Water Purveyor	Job Title	From (month/year)	To (month/year)	Duration (yrs/months)
GWA	O&M Manager	September 2015	Present	6 years 8 months

If you have worked on more than one system, list the systems. Each job listed in the summary requires a separate Work Experience Record. If you need additional Work Experience Record sheets, please duplicate the 2nd page. Resumes or job descriptions will be considered optional information and will not substitute for the Work Experience Record.

Work Experience Record
<p>Work Experience (summarize your experience in your own words):</p> <p>Oversee and manage daily operations for the central distribution system. Assign task and assignments to maintenance teams and operators. Ensure all facilities and distribution system are working properly. Address any issues that affect the distribution system and make necessary adjustments to continue delivery of service.</p>
<p>Water System Description (indicate type of treatments, for example, chlorination, granular activated carbon filtration):</p> <p>Water distribution system.</p>

<input checked="" type="checkbox"/>	I understand the objectives and structure of the RTCR.
<input checked="" type="checkbox"/>	I understand the nature of coliforms and E. coli, and bacteriological sampling.
<input checked="" type="checkbox"/>	I have a working knowledge of water system operation.
<input checked="" type="checkbox"/>	I have a working knowledge of treatment operations.
<input checked="" type="checkbox"/>	I have a working knowledge of distribution system operations.

Certification: I certify that I am the person authorized to fill out this form, and the information contained herein is true, accurate and complete to the best of my knowledge and belief.		
Print Name:	Vincent Pangelinan	Title: O&M Manager
Signature:		Date: 5-13-22
Phone #:	671-898-4851	Email: vpangelinan@guamwaterworks.org

Work Experience Record				
Water Purveyor	Job Title	From (month/year)	To (month/year)	Duration (yrs/months)
Work Experience (summarize your experience in your own words):				
Water System Description (indicate type of treatments, for example, chlorination, granular activated carbon filtration):				

Work Experience Record				
Water Purveyor	Job Title	From (month/year)	To (month/year)	Duration (yrs/months)
Work Experience (summarize your experience in your own words):				
Water System Description (indicate type of treatments, for example, chlorination, granular activated carbon filtration):				

Please return this form to the SDWP at:

**Guam Environmental Protection Agency
3304 Mariner Avenue #17, Barrigada, Guam 96913**

For additional questions, please contact the SDWP at 671-300-4751/4752.

GUAM ENVIRONMENTAL PROTECTION AGENCY
RTCR LEVEL 2 ASSESSOR CERTIFICATION APPLICATION (V.1 DEC 2021)



Applicant Information			
Last Name:	Kemp	First Name:	Paul
Address:	Suite 200, 688 Rt.15, Mangilao, GU 96913-6203		
Water Purveyor:	GWA	PWS ID:	GU0000003
Water System Name:	Central System		
Certification Type:	WWT-4 (S4-519)	Expiration date:	12/20/2023
Certification Type:	WD-4 (D4-540)	Expiration date:	12/20/2023
Certification Type:	WT4T4-552)	Expiration date:	05/07/2023
Certification Type:	WWC-4 (C4-556)	Expiration date:	06/14/2024

Work Experience Summary				
Water Purveyor	Job Title	From (month/year)	To (month/year)	Duration (yrs/months)
Deep Springs College	Water Treatment plant Operator	09/01/1960	08/31/2062	2/0
Guam Waterworks Authority	AGM-C&S	03/01/2023	Current	18/10

If you have worked on more than one system, list the systems. Each job listed in the summary requires a separate Work Experience Record. If you need additional Work Experience Record sheets, please duplicate the 2nd page. Resumes or job descriptions will be considered optional information and will not substitute for the Work Experience Record.

Work Experience Record
<p>Work Experience (summarize your experience in your own words): 61 years of water quality, water analysis and water treatment experience. Experience in industrial, as well as Potable water as well as in wastewater.</p>
<p>Water System Description (indicate type of treatments, for example, chlorination, granular activated carbon filtration): GWA Central System, (GU0000003) is a blended water system using purchased water from the Navy's Fena Surface water system and ground water from the GWA Northern System (GU0000006). Both sources are disinfected with chlorine. The Navy system is certified to meet the LT2ESWTR.</p>

<input checked="" type="checkbox"/>	I understand the objectives and structure of the RTCR.
<input checked="" type="checkbox"/>	I understand the nature of coliforms and E. coli, and bacteriological sampling.
<input checked="" type="checkbox"/>	I have a working knowledge of water system operation.
<input checked="" type="checkbox"/>	I have a working knowledge of treatment operations.
<input checked="" type="checkbox"/>	I have a working knowledge of distribution system operations.

Certification: I certify that I am the person authorized to fill out this form, and the information contained herein is true, accurate and complete to the best of my knowledge and belief.

Print Name:	Paul J. Kemp	Title:	Assistant General Manager - Compliance and Safety
Signature:		Date:	05/26/2022
Phone #:	671 300 6985	Email:	paulkemp@guamwaterworks.org

Work Experience Record				
Water Purveyor	Job Title	From (month/year)	To (month/year)	Duration (yrs/months)
GWA	AGM-C&S	03/01/2003	Current	18/10
Work Experience (summarize your experience in your own words):				
<p>Primary oversight of all GWA water quality; managing compliance with the SDWA, CWA and CAA; including the oversight of the GWA Ugum SWTP meeting LT2ESWTR. Continuous management adjustment as the federal and Guam regulations evolve. Working closely with the Guam EPA to optimize communication and adjust compliance to keep up with new knowledge/rules.</p>				
Water System Description (indicate type of treatments, for example, chlorination, granular activated carbon filtration):				
<p>GWA has 3 potable water systems: Northern (GU0000006) deep well water, disinfected with chlorine at every point of entry. Central (GU0000003) a blend of GWA Northern deepwell water and Navy Fena Surface Water, both disinfected with chlorine, Fena water certified to SDWA LT2ESWTR quality. Southern (GU0000001) fed by the Ugum Surface Water Treatment Plant a continuous microfiltration (CMF) Memcor plant with preconditioning of the water before the membranes to control TOC for DBP reduction, and final disinfection with chlorine.</p>				

Work Experience Record				
Water Purveyor	Job Title	From (month/year)	To (month/year)	Duration (yrs/months)
Work Experience (summarize your experience in your own words):				
Water System Description (indicate type of treatments, for example, chlorination, granular activated carbon filtration):				

Please return this form to the SDWP at:

Guam Environmental Protection Agency
3304 Mariner Avenue #17, Barrigada, Guam 96913

For additional questions, please contact the SDWP at 671-300-4751/4752.



GUAM ENVIRONMENTAL PROTECTION AGENCY
Revised Total Coliform Rule (RTCR) Level 2 Assessment Form

PWS ID#: GU0000003 PWS Name: Central System

Primary Operator (print name): Vincent Pangellinan
 Assessment trigger date: 4/28/2022
 SEASONAL: YES NO

Phone: 671-300-6343
 Date Assessment Completed: 5/27/2022
 Reason for Assessment: NOV/Compliance Order

Assessment Elements	Issues?			Issue Description	Corrective Action Taken or Planned to be Taken and Date
	Y	N	N/A		
1. Review of the sample sites					
1.1 Was the sample taken at the routine coliform site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Indicate Element number being described. 1.9 Location is at a dead end	
1.2 Was the tap area unsanitary at the time of sampling?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
1.3 Was this sample taken from an outside faucet?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
1.4 Was the sample taken from a swivel tap?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
1.5 Did the tap have a point of use treatment device on it?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
1.6 Does the building where the sample was taken have a point of entry device?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
1.7 Has this location undergone any plumbing replacements or repairs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
1.8 Are there any possible cross connections around the sample site (including yard hydrants and stock tanks)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
1.9 Is this location near a storage tank or dead end?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
1.10. Any other sample site issues not previously mentioned?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
2. Review of sample protocol					
2.1 Is the sampler a regular, trained sampler?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
2.2 Was a laboratory-provided TC sample bottle used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
2.3 Was the aerator removed?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
2.4 Was the water tap flushed for at least 5 minutes?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
2.5 Was the tap disinfected or flamed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
2.6 Did the sample get too warm prior to being placed on ice?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
2.7 Was there other sampler error? Describe	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
2.8 If it is a seasonal system, were there any problems during the most recent start-up procedure?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
2.9 Any other sample protocol issues not previously mentioned?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
3. Review of the distribution system.					
3.1 Have any mains been recently replaced or service lines recently added?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
3.2 Have fire hydrants or blow offs been recently flushed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		

GUAM ENVIRONMENTAL PROTECTION AGENCY

Revised Total Coliform Rule (RTCR) Level 2 Assessment Form

Assessment Elements	Issues?			Issue Description	Corrective Action Taken or Planned to be Taken and Date
	Y	N	N/A		
3.3 Have valves been recently exercised to direct flow?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
3.4 Any leaks or main breaks noted?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.4 On 4/21/22, leak repair was conducted at Joaquin Perez Road - repairs made on the service lateral off of the main line. Water outage was required to repair the leak. On 4/22/22 leak repair was conducted on Chalan Kindo St. - 2" line leak repaired. Only houses on the Chalan Kindo St. were affected.	3.4 Upon completion of repair of Joaquin Perez Road, water line was flushed.
3.5 Are all of the backflow prevention devices operational and maintained?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		Chalan Kindo repair consisted of 2" valve was repaired under pressures and fittings downstream of the valve was replaced.
3.6 Was there a total loss of pressure, low pressure (<20 psi) or changes in water pressure? If yes, when?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		3.6 When leak was repaired and lines were flushed, the pressure in the line was measured to be above 20 psi.
3.7 Any areas of the distribution with low disinfectant levels (<0.2 mg/L)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3.6 4-21-22 Loss of water pressure occurred during water outage at Joaquin Perez Road. Pressure during water outage was below 20 psi from 11:16 am to 2:00 pm on 4/21/2022.	
3.8 Any recent pump station failures or repairs?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
3.9 Air relief valve leaking?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		3.10. Water in altitude valve vault was drained.
3.10 Standing water or debris in valve vault?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.10 Standing water in the altitude valve vault	
3.11 Any recent power loss?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
3.12 Any unprotected cross connections (including yard hydrants and stock tanks)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
3.13 Any other distribution issue not previously mentioned?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
4. Review of storage tank(s) (Note the specific facility if any issues are found)					
4.1 Is there a presence of animals or insects in the tank(s)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
4.2 Are there breaches or holes of any sort into tank(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.2 Santa Rita Springs - gap is located between roof and wall where metal beams sit on.	4.2 Cover was installed at the Santa Rita Springs between the gap and the wall.
4.3 Is there any presence of animal droppings around openings, vents or overflows?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
4.4 Is there sediment buildup and floating debris in tank(s)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
4.5 Have the tank(s) been cleaned within the last 5 years? If not, list when it was last cleaned.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.5 Santa Rita Springs was last cleaned in 2018 when the cover was replaced.	4.6 Installation of Vent and Overflow mesh screen at Santa Rita Springs were completed on 5-26-2022.
4.6 Is there a #24 mesh screen installed on vents and overflows?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		4.7 Santa Rita Springs #24 mesh screen on vent and overflow were installed on 5-26-2022
4.7 Is the #24 mesh screen damaged or not properly installed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
4.8 Is the overflow pipe directly connected to a tank drain, sanitary sewer or storm drain?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
4.9 Does the hatch have a solid, water proof, shoebox type lid that is properly sealed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
4.10 Was the hatch locked or secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
4.11 Has the tank been accidentally drained?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
4.12 Have there been high flows through the tank?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
4.13 Was there high water age in the tank (infrequent water use)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
4.14 Was the sample taken when the tank was at the low level mark?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		

GUAM ENVIRONMENTAL PROTECTION AGENCY
Revised Total Coliform Rule (RTCR) Level 2 Assessment Form

Assessment Elements	Issues?			Issue Description	Corrective Action Taken or Planned to be Taken and Date
	Y	N	N/A		
4.15 Failure or improper operation on tank telemetry/altitude valves/controls?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
4.16 Any recent repairs on the tank(s)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
4.17 Was there any power loss?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
4.18 Was the tank vandalized or subject to tampering?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
4.19 Any other storage tank issues not previously mentioned above?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.19 4/26/ 22 Santa Ann area had water outage during the replacement valve at the Santa Ana tank.	4.19 During restoration fire hydrants were open to bleed and flush the lines.
5. Review of treatment process (if applicable)					
5.1 Has the treatment been bypassed altogether at any time or have individual processes been interrupted by power outages or other causes? If yes, provide details on when, which processes and for how long?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
5.2 Have there been any new treatment processes added or new equipment installed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
5.3 Have there been any recent repairs of major unit processes or treatment equipment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
5.4 Have there been any changes in the operational procedures used for treating the water such as, changes in chemical dosages or changes in coagulant chemicals used? If yes, provide details of the change and when it occurred.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
5.5 Has a coagulant been added at all times the plant has been filtering water?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
5.6 Have there been changes in raw water quality?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
5.7 Was the finished water turbidity increasing?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
5.8 Have filter clogging algae caused more frequent backwashing?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
5.9 Has a disinfectant been added at all times or have there been any failures in adding disinfectant for any length of time?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
5.10 Has there been any vandalism or tampering at the plant?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
5.11 Any other treatment plant issues not previously mentioned above?					
6. Sources – Well(s)					
6. (Note the specific facility if any issues are found)					
6.1 Is the sanitary seal intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
6.2 Is the well cap defective or damaged or not water tight?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
6.3 Does the vent have a #24 mesh screen?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
6.4 Is the vent screen damaged or not installed properly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		

GUAM ENVIRONMENTAL PROTECTION AGENCY
Revised Total Coliform Rule (RTC) Level 2 Assessment Form

Assessment Elements	Issues?			Issue Description			Corrective Action Taken or Planned to be Taken and Date
	Y	N	N/A	Primary	Backup	Emergency	
6.5 Does the vent and pump to waste terminate in an air gap of at least three pipe diameters above the ground?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>				
6.6 How is the well used? (Circle if applicable)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
6.7 Are there any unprotected cross connections at the wellhead? Are there any unprotected openings in the pump or pump assembly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>				
6.8 Is the pitless adapter damaged?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>				
6.9 Is there a missing or damaged grout seal?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>				
6.10 Has there been any recent work performed on the pump?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>				
6.11 Is the wellhead secured to prevent unauthorized access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>				
6.12 Have there been any sewer spills, source water spills or other disturbances near the well?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>				
6.13 Is the well pit in standing water or evidence of flooding?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>				
6.14 Any other well issues not previously mentioned above?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>				
Sources - Spring(s) (Note the specific facility if any issues are found)							
6.15 Is there evidence of flooding or infiltration of surface water runoff around the spring?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
6.16 Is the spring box improperly developed or poorly maintained?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
6.17 Are there dead animals near the spring?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
6.18 Any other issues about springs not previously mentioned above?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
Sources-purchased water							
6.19 Water quality issues with supplier?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
6.20 Low disinfectant residual from supplier (typically ≤ 0.02 mg/L)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
6.21 Any other purchased water issues not previously mentioned above?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
Applicable to all sources							
6.22 Has an unapproved source been used?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
6.23 Has there been a change in sources?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
6.24 Has there been recent rapid snowmelt, heavy rainfall or flooding?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
6.25 Any evidence of animals near the source?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
6.26 Have there been algae blooms?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				

GUAM ENVIRONMENTAL PROTECTION AGENCY

Revised Total Coliform Rule (RTC) Level 2 Assessment Form

Assessment Elements	Issues?			Issue Description	Corrective Action Taken or Planned to be Taken and Date
	Y	N	N/A		
6.27 Is the source water sample for ground water systems E. coli positive? This may indicate that the positive sample is originating from the source and may be a continuous source of contamination.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
6.28 Any other source issues not previously mentioned above?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
7. Significant Deficiencies					
7.1 Are there any unaddressed significant deficiencies? This may indicate that the problem is known and is in the process of being remedied. Include approved corrective action date and status of each corrective action.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7.1 Gap between roof and wall where metal beams sits at Santa Rita Springs was identified as a significant deficiency at the last sanitary survey inspection.	7.1 Santa Rita Springs - cover was constructed for gap between roof and wall was completed 5-26-22.

Additional Comments:
 GWA conducted field inspection and assessment from April 28 to May 13, 2022 to determine the potential cause of the positive TC/E.coli results. GWA conducted inspection of customers who recorded any reverse flow, lack a backflow preventers on agricultural meter, and areas where customers made complaints of smelling foul odor. GWA did not observe anything of significance that can be identified as the cause of the contamination. After reviewing a chronology of events that occurred prior to and after the positive results and the review of the water distribution system in the service area, GWA has concluded that the potential cause of the positive result was due to a main water line break that occurred which caused fluctuation to the pressure in the system in the Shinfa service area which has the capacity to flow into the Agat service area and introduce contaminates into the system. Preventative and corrective action were taken immediately to included repeat sampling, increase flushing of the Agat area, distribution of the Boil Water Notice to Mayor's office and affected residents, and subsequent sampling to confirm that the system was clear. To ensure this does not happen again, GWA will increase the amount of flushing in the area after a main waterline break, issue a precautionary BWN to affected areas, make efforts to keep the pressure above the minimum requirements of above 20 psi, continue pipe replacement and other critical water system upgrades and ensure agricultural customers have backflow preventers installed.

Name of Assessor completing the form (PRINTED): Vincent E.C. Pangellinan
 Signature:  Date: 5-27-22
 Water system responsible party (PRINTED):
 Signature: M.C. BORDALLO  Date: 6-3-2022

Reserved for GUAM EPA Review

	Yes	No	Comments
1. Has assessment been successfully completed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2. Likely reason for EC+ occurrence has been found.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3. System has corrected the problem.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4. Corrective Action Approved?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

RCD/RND By: JULIANA MENDOZA


DATE : JUNE 07, 2022



Julie Mendoza <julie.mendoza@epa.guam.gov>

RE: GWA submittal to GEPA RTCR Level 2 Assessment -signed version

3 messages

vangle@guamwaterworks.org <vangle@guamwaterworks.org>

Fri, Jun 3, 2022 at 4:39 PM

To: Julie Mendoza <julie.mendoza@epa.guam.gov>

Cc: "Miguel Bordallo (GWA)" <mcbordallo@guamwaterworks.org>, thomas@guamwaterworks.org, "Paul J. Kemp" <paulkemp@guamwaterworks.org>, Vincent Pangelinan <vpangelinan@guamwaterworks.org>, Ray Quintanilla <rayq@guamwaterworks.org>, "Jennifer O. Cruz" <jocruz@guamwaterworks.org>, Brian Bearden <brian.bearden@epa.guam.gov>, "Walter S. Leon Guerrero" <walter.leonguerrero@epa.guam.gov>, "Ann D. Borja-Gallardes" <aborjagallardes@guamwaterworks.org>, lizg@guamwaterworks.org, Jerry Aquino - GEPA <jerry.aquino@epa.guam.gov>, Sierra Bettis <sierra.bettis@epa.guam.gov>

Hafa Adai,

Attached is the signed version of the Level 2 Assessment form. Please let us know if there is anything else you needed. Thank you

Vangie

From: Julie Mendoza <julie.mendoza@epa.guam.gov>**Sent:** Wednesday, June 1, 2022 2:16 PM**To:** Vangie Lujan <vangle@guamwaterworks.org>**Cc:** Miguel Bordallo (GWA) <mcbordallo@guamwaterworks.org>; thomas@guamwaterworks.org; Paul J. Kemp <paulkemp@guamwaterworks.org>; Vincent Pangelinan <vpangelinan@guamwaterworks.org>; Ray Quintanilla <rayq@guamwaterworks.org>; Jennifer O. Cruz <jocruz@guamwaterworks.org>; Brian Bearden <brian.bearden@epa.guam.gov>; Walter S. Leon Guerrero <walter.leonguerrero@epa.guam.gov>; Ann D. Borja-Gallardes <aborjagallardes@guamwaterworks.org>; lizg@guamwaterworks.org; Jerry Aquino - GEPA <jerry.aquino@epa.guam.gov>; Sierra Bettis <sierra.bettis@epa.guam.gov>**Subject:** Re: GWA submittal to GEPA RTCR Level 2 Assessment

Hafa Adai:

On Page 2 item 3.4 - Please give a description of the issue for 4/21/2022 under the column "Issue Description". The corrective response for the issue should be described and noted under the column "Corrective Action Taken".

On Page 2 item 3.6 - Please change your response under Issue Description to 3.6 not 3.5 and indicate a date of when the water pressure was below 20 psi and what was the corrective action taken on the next column.

On Page 2 item 4.6 - Please indicate the facility name of the storage tank. Describe the issue for example "no #24 non-corrosive mesh screen on vents and overflow" and on the next column describe the corrective action taken, for example "installed #24 non-corrosive mesh screen on vents and overflow." You must indicated a date of when the mesh screen will be installed at the overflow pipe.

On Page 2 item 4.7 and 4.9 - Please describe the issues and findings for these items under the column Issue Description and on the next column describe corrective actions taken.

On Page 2 item 4.10 - remove response. Only describe if there are issues.

On Page 5 item 7.1 - Please indicate the name of the facility with the deficiency. Describe what the corrective actions taken.

On Page 5, either Miguel Bordallo or Tom Cruz (as acting GM) needs to sign as the Water System Responsible Party.

For now these are my comments that needs to be corrected and addressed. Please re-submit the corrections.

Please let me know if you have any questions or concerns.

Si Yu'us Ma'ase and Thank You!

JULIANA DLR. MENDOZA | Environmental Health Specialist II |

Safe Drinking Water Information System (SDWIS) Administrator

Safe Drinking Water Program | Guam Environmental Protection Agency

3304 Mariner Avenue #17, Barrigada, Guam 96913

Telephone: 671-300-9026/4751/4752

Guam EPA Website: epa.guam.gov | email: julie.mendoza@epa.guam.gov

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On Wed, Jun 1, 2022 at 12:56 PM Julie Mendoza <julie.mendoza@epa.guam.gov> wrote:

Hafa Adai Vangie:

Thank you so much for your quick response. The Level 2 Assessment form is now showing that all questions have been answered.

If I have any questions or concerns, I will let you know.

Si Yu'us Ma'ase and Thank You!

JULIANA DLR. MENDOZA | Environmental Health Specialist II |

Safe Drinking Water Information System (SDWIS) Administrator

Safe Drinking Water Program | Guam Environmental Protection Agency

3304 Mariner Avenue #17, Barrigada, Guam 96913

Telephone: 671-300-9026/4751/4752

Guam EPA Website: epa.guam.gov | email: julie.mendoza@epa.guam.gov

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On Wed, Jun 1, 2022 at 12:53 PM <vangie@guamwaterworks.org> wrote:

Julie

The attached is the Level 2 Assessment form with all the questions answered. I am so very sorry, I apologize . It seems that it was not correctly printed. Sorry for the inconvenient. It was responded to in the digital file but something happened in the printed version. Please let me know if there is anything else.

Vangie

From: Julie Mendoza <julie.mendoza@epa.guam.gov>

Sent: Wednesday, June 1, 2022 12:35 PM

To: Vangie Lujan <vangie@guamwaterworks.org>

Cc: Miguel Bordallo (GWA) <mcbordallo@guamwaterworks.org>; thomas@guamwaterworks.org; Paul J. Kemp <paulkemp@guamwaterworks.org>; Vincent Pangelinan <vpangelinan@guamwaterworks.org>; Ray Quintanilla <rayq@guamwaterworks.org>; Jennifer O. Cruz <jocruz@guamwaterworks.org>; Brian Bearden <brian.bearden@epa.guam.gov>; Walter S. Leon Guerrero <walter.leonguerrero@epa.guam.gov>; aborjagallardes@guamwaterworks.org; lizg@guamwaterworks.org; Jerry Aquino - GEPA

<jerry.aquino@epa.guam.gov>; Sierra Bettis <sierra.bettis@epa.guam.gov>
Subject: Re: GWA submittal to GEPA RTCR Level 2 Assessment

Hafa Adai Vangie:

I reviewing GWA South's Level 2 Assessment form that you submitted to GEPA on May 27, 2022. After reviewing the Level II Assessment, it is not complete. Please review the questions in the form and a response is needed for each question either YES or NO or NA.

Please re-submit and an electronic copy is acceptable.

Si Yu'us Ma'ase and Thank You!

JULIANA DLR. MENDOZA | Environmental Health Specialist II |

Safe Drinking Water Information System (SDWIS) Administrator

Safe Drinking Water Program | Guam Environmental Protection Agency

3304 Mariner Avenue #17, Barrigada, Guam 96913

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On Fri, May 27, 2022 at 4:47 PM <vangie@guamwaterworks.org> wrote:

Hafa adai

Attached please find the signed documents.

Si Yu' us Ma'ase'

Evangeline Lujan

Senior Regulatory Analyst

1-671-300-6887

 **GEPA rtrc_level_2_assessment_form-Final corrected MCB Signed.pdf**
1067K

Julie Mendoza <julie.mendoza@epa.guam.gov>

Fri, Jun 3, 2022 at 4:44 PM

To: Vangie Lujan <vangie@guamwaterworks.org>

Cc: "Miguel Bordallo (GWA)" <mcbordallo@guamwaterworks.org>, "thomas@guamwaterworks.org" <thomas@guamwaterworks.org>, "Paul J. Kemp" <paulkemp@guamwaterworks.org>, Vincent Pangelinan <vpangelinan@guamwaterworks.org>, Ray Quintanilla <rayq@guamwaterworks.org>, "Jennifer O. Cruz" <jocruz@guamwaterworks.org>, Brian Bearden <brian.bearden@epa.guam.gov>, "Walter S. Leon Guerrero" <walter.leonguerrero@epa.guam.gov>, "Ann D. Borja-Gallardes" <aborjagallardes@guamwaterworks.org>, "lizg@guamwaterworks.org" <lizg@guamwaterworks.org>, Jerry Aquino - GEPA <jerry.aquino@epa.guam.gov>, Sierra Bettis <sierra.bettis@epa.guam.gov>

Thank you. I will review it and get back to you if I have any questions.

Juliana Mendoza

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vangie@guamwaterworks.org <vangie@guamwaterworks.org>

Fri, Jun 3, 2022 at 4:53 PM

To: Julie Mendoza <julie.mendoza@epa.guam.gov>

Cc: "Miguel Bordallo (GWA)" <mcbordallo@guamwaterworks.org>, thomas@guamwaterworks.org, "Paul J. Kemp" <paulkemp@guamwaterworks.org>, Vincent Pangelinan <vpangelinan@guamwaterworks.org>, Ray Quintanilla <rayq@guamwaterworks.org>, "Jennifer O. Cruz" <jocruz@guamwaterworks.org>, Brian Bearden <brian.bearden@epa.guam.gov>, "Walter S. Leon Guerrero" <walter.leonguerrero@epa.guam.gov>, "Ann D. Borja-Gallardes" <aborjagallardes@guamwaterworks.org>, lizg@guamwaterworks.org, Jerry Aquino - GEPA <jerry.aquino@epa.guam.gov>, Sierra Bettis <sierra.bettis@epa.guam.gov>

Thank you

vangie

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