



## GUAM WATERWORKS AUTHORITY

Government of Guam

Post Office Box 3010, Agana, Guam 96932

Phone: (671) 479-7813 Fax: (671) 479-7879

JUL 03 2002

Mr. Michael Lee, CMD-5  
Office of the Pacific Insular & native American Projects  
U.S. Environmental Protection Agency  
Region IX-75 Hawthorne Street  
San Francisco, CA 94105

RE: Raw Sewage Spill (Notification June 29, 2002)

Hafa Adai Mr. Lee:


This is the final report concerning the recent overflow at the old Chaot Pump Station that was reported on Saturday, June 29, 2002 at approximately 8:30 a.m.

The roving crew discovered that pumps #1 & #3 had tripped. Attempts to restart the pumps failed and it was at this point a decision was made to divert the flow to the new Chaot SPS. Our electrician was immediately notified.

A power surge had occurred which tripped the control system shutting down the pumps. According to Guam Waterworks Authority electricians, the magnetic line starter burnt on pump #3. The situation was corrected within a 30-minute period.

Approximately 6,000 gallons had spilled into the Chaot River. Heavy downpour helped dilute the spillage.

Should you have any questions regarding this matter, please contact Mr. Ed Reyes, Assistant Wastewater Manager at (671)479-7885/7861.

  
GIL A. SHINOHARA  
Acting General Manager

Cc: GEPA  
Lab  
Wastewater



# GUAM WATERWORKS AUTHORITY

Aturidåt Kinalamten Hånom Guåhan

Post Office Box 3010, Hagåtña, Guam 96932

Phone: (671) 479-7823/7808

Fax: (671) 479-7879

## FAX TRANSMITTAL COVER SHEET

Transmittal Date: July 09, 2002

Transmittal Time: 4:40 PM

From: Gil A. Shinohara

Title: Acting GM

Division: \_\_\_\_\_

Subject & Message: \_\_\_\_\_

To: Michael Lee

Title: \_\_\_\_\_

Company: USEPA

Location: \_\_\_\_\_

Fax No.: (415) 947-7560

Number of pages - this page inclusive: 2

Should any or all of your copies be not legible or incomplete, please contact the undersigned at the numbers listed above.

Transmitted by: Shelby C. Crosby

Please Print

Initial when completed SC

# Transmission Report

Date/Time 7- 3-02; 4:55PM  
 Local ID 6716490158  
 Local Name G. W. A GENERALMANAGER  
 Company Logo G. W. A GENERAL MANAGER OFFICE.

This document was confirmed.  
 (reduced sample and details below)  
 Document Size Letter-S



**GUAM WATERWORKS AUTHORITY**  
 Aturiddit Kinalamten Hanom Guahan  
 Post Office Box 3010, Hagåtña, Guam 96932  
 Phone: (671) 479-7823/7808  
 Fax: (671) 479-7879

## FAX TRANSMITTAL COVER SHEET

Transmittal Date: July 09, 2002 Transmittal Time: 4:40 PM  
 From: Gil A. Shirohara  
 Title: Acting GM Division: \_\_\_\_\_  
 Subject & Message: \_\_\_\_\_  
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 \_\_\_\_\_  
 To: Michael Lee Title: \_\_\_\_\_  
 Company: USEPA Location: \_\_\_\_\_  
 Fax No.: (416) 947-7560

Number of pages - this page inclusive: 2

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Transmitted by: Shelly P. Cross  
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Total Pages Scanned : 2 Total Pages Confirmed : 2

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1	83	914159473560	7- 3-02; 4:52PM	2'50"	2/ 2	EC		CP 4800

tes :

: Error Correct  
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 : Host Scan  
 : Host Fax

RE: Resend  
 MP: Multi-Poll  
 RM: Receive to Memory  
 HP: Host Print  
 HR: Host Receive

PD: Polled by Remote  
 PG: Polling a Remote  
 DR: Document Removed  
 FO: Forced Output  
 FM: Forward Mailbox Doc.

MB: Receive to Mailbox  
 PI: Power Interruption  
 TM: Terminated by user  
 WT: Waiting Transfer  
 WS: Waiting Send



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Post Office Box 3010, Hagåtña, Guam 96932

Phone: (671) 479-7823/7808

Fax: (671) 479-7879

## FAX TRANSMITTAL COVER SHEET

Transmittal Date: July 07 2002

Transmittal Time: 4:45 PM

From: Gil A. Shirohara

Title: Acting GM

Division: \_\_\_\_\_

Subject & Message: \_\_\_\_\_

To: Jesus Salas

Title: \_\_\_\_\_

Company: GEPA

Location: \_\_\_\_\_

Fax No.: 477-9402

Number of pages - this page inclusive: 1

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Transmitted by: Shelby P. Anagnostou

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# Transmission Report

Date/Time  
Local ID  
Local Name  
Company Logo

7- 3-02; 4:57PM  
6716490158  
G. W. A GENERALMANAGER  
G. W. A GENERAL MANAGER OFFICE.

This document was confirmed.  
(reduced sample and details below)  
Document Size Letter-S



**GUAM WATERWORKS AUTHORITY**  
Aturidat Kinalauten Hanom Guahan  
Post Office Box 3010, Hagåtña, Guam 96932  
Phone: (671) 479-7823/7808  
Fax: (671) 479-7879

## FAX TRANSMITTAL COVER SHEET

Transmittal Date: July 07, 2002 Transmittal Time: 4:45 AM  
From: Gil A. Shirahara  
Title: Acting Gen Division: \_\_\_\_\_  
Subject & Message: \_\_\_\_\_

To: Jesus Salas Title: \_\_\_\_\_  
Company: GEPA Location: \_\_\_\_\_  
Fax No.: 477-9402

Number of pages - this page inclusive: 1

Should any or all of your copies be not legible or incomplete, please contact the undersigned at the numbers listed above.

Transmitted by: Shelley P. Anagnostou  
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Total Pages Scanned : 2 Total Pages Confirmed : 2

No.	Doc	Remote Station	Start Time	Duration	Pages	Mode	Comments	Results
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Notes :

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C: Completed  
HS: Host Scan  
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MP: Multi-Poll  
RM: Receive to Memory  
HP: Host Print  
HR: Host Receive

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Post Office Box 3010, Hagåtña, Guam 96932

Phone: (671) 479-7823/7808

Fax: (671) 479-7879

## FAX TRANSMITTAL COVER SHEET

Transmittal Date: July 03, 2002

Transmittal Time: 4:45 PM

From: Gil A. Shimohara

Title: Acting GM

Division: \_\_\_\_\_

Subject & Message: \_\_\_\_\_

To: Comer

Title: \_\_\_\_\_

Company: Lab

Location: \_\_\_\_\_

Fax No.: 631-2592

Number of pages - this page inclusive: 1

Should any or all of your copies be not legible or incomplete, please contact the undersigned at the numbers listed above.

Transmitted by: Shelby P. Cristofani

Please Print

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# Transmission Report

7- 3-02; 4:51PM  
6716490158

Company Logo G. W. A GENERAL MANAGER OFFICE.

This document was confirmed.  
(reduced sample and details below)  
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## FAX TRANSMITTAL COVER SHEET

Transmittal Date: July 03, 2002 Transmittal Time: 4:45 PM  
From: SA [illegible]

From: Gil R. Shirohara Transmittal Time: 4:45 p.

Title: Acting Gm Division: \_\_\_\_\_

Subject & Message: \_\_\_\_\_

To: Carver Title: \_\_\_\_\_  
Company: Lab Location: \_\_\_\_\_  
Fax No.: 631-2592

Number of pages - this page inclusive: 1

Should any or all of your copies be not legible or incomplete, please contact the undersigned at the numbers listed above.

Transmitted by: Shelley P. Cross  
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: Completed
: Host Scan
: 1st Fax

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JUN 28 2002

Mr. Michael Lee, CMD-5  
Office of the Pacific Insular & Native American Projects  
U.S. Environmental Protection Agency  
Region IX-75 Hawthorne Street  
San Francisco, CA 94105



RE: Raw Sewage Spill, (Notification June 25, 2002)

Hafa Adai Mr. Lee:

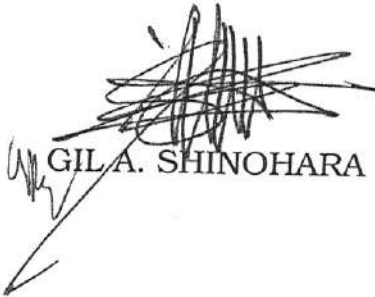
This is the final report regarding a force-main break that occurred along Marine Drive in Piti.

The spill was initially reported on Sunday, June 23, 2002 but our crews were not able to locate the leak until late Monday afternoon, June 24, 2002. This is due to the intermittent flow of sewage occurring from the Piti SPS force-main line. The contractor damaged a 12" force-main line while installing a utility pole. It is the same line our crew had recently repaired.

Sewage spills were basically eliminated by securing Piti SPS and pumping out sewage from the pump station's wet pit and a manhole nearby. During the repair work, another break occurred. The contractor damaged a 8" gravity line located within a foot from the damage line. This caused a delay in repairing the line. The force-main line was completed June 27, 2002 at approximately 9:50 a.m. We will provide you more information regarding the gravity line issue ASAP. We estimate the spillage to be 9,000 galloons based on pump run time, physical line damage and the length of time.

Page (2)

Should you have any questions regarding this matter, please call the Mr. Eddie Reyes, Assistant Wastewater Manager at (671)479-7885/7861.



GIL A. SHINOHARA

Cc: AGMA  
Laboratory  
GEPA  
Wastewater



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Michael Lee, CMD-5  
Office of the Pacific Insular & Native American Projects  
U.S. Environmental Protection Agency  
Region IX-75 Hawthorne Street  
San Francisco, CA 94105

RE: Raw Sewage Spill, (Notification June 27, 2002)


Hafa Adai Mr. Lee:

This is a follow-up report concerning sewage spill that occurred along Marine Drive in Piti on Wednesday, June 26, 2002 at approximately 8:30 p.m.

As reported earlier, the contractor damaged an 8" gravity line while making repairs on the 12' force-main break, which was also reported earlier. The gravity line is within a foot from the force-main line. The repair was completed Thursday, June 27, 2002 at approximately 10:00 p.m.

Sewage spills were kept to a minimal by pumping out Piti SPS's wet pit and a manhole nearby. We estimate the spillage to be less than 1,000 gallons.

Should you have any questions, Please contact Mr. Ed Reyes, Assistant Wastewater Manager at 479-7885/7861.

  
GIL A. SHINOHARA  
Acting General Manager

Cc: AGMA  
Laboratory  
GEPA  
Wastewater



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JUN 28 2002

Mr. Michael Lee, CMD-5  
Office of the Pacific Insular & Native American Projects  
U.S. Environmental Protection Agency  
Region IX-75 Hawthorne Street  
San Francisco, CA 94105

RE: Raw Sewage Spill, (Notification June 25, 2002)

Hafa Adai Mr. Lee:

This is the final report regarding a force-main break that occurred along Marine Drive in Piti.

The spill was initially reported on Sunday, June 23, 2002 but our crews were not able to locate the leak until late Monday afternoon, June 24, 2002. This is due to the intermittent flow of sewage occurring from the Piti SPS force-main line. The contractor damaged a 12" force-main line while installing a utility pole. It is the same line our crew had recently repaired.

Sewage spills were basically eliminated by securing Piti SPS and pumping out sewage from the pump station's wet pit and a manhole nearby. During the repair work, another break occurred. The contractor damaged a 8" gravity line located within a foot from the damage line. This caused a delay in repairing the line. The force-main line was completed June 27, 2002 at approximately 9:50 a.m. We will provide you more information regarding the gravity line issue ASAP. We estimate the spillage to be 9,000 galloons based on pump run time, physical line damage and the length of time.



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Post Office Box 3010, Hagåtña, Guam 96932

Phone: (671) 479-7823/7808

Fax: (671) 479-7879

## FAX TRANSMITTAL COVER SHEET

Transmittal Date: June 28, 2002

Transmittal Time: 4:40 PM

From: Gil A. Shinohara

Title: Acting GM

Division: \_\_\_\_\_

Subject & Message: \_\_\_\_\_

- ① Raw Sewage spill (notification June 27, 2002)
- ② Raw Sewage spill (notification June 25, 2002)

To: Mike Lee

Title: \_\_\_\_\_

Company: USEPA

Location: \_\_\_\_\_

Fax No.: (415) 947-3560

Number of pages - this page inclusive: 2

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# Transmission Report

Date/Time

Local ID

Local Name

Company Logo

6-28-02; 5:03P

671649015

G. W. A. GENERALMANAGE

G. W. A. GENERAL MANAGER OFFICE.

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Post Office Box 3010, Hagåtña, Guam 96932

Phone: (671) 479-7823/7808

Fax: (671) 479-7879

### FAX TRANSMITTAL COVER SHEET

Transmittal Date: June 28, 2002

Transmittal Time: 4:40 PM

From: Gil A. Shimamura

Title: Acting GM

Division:

Subject & Message:

(1) Raw Sewage spill (Notification June 27, 2002)

(2) Raw Sewage spill (Notification June 25, 2002)

To: Mike Lee

Title:

Company: USGPA

Location:

Fax No.: (416) 947-9560

Number of pages - this page inclusive: 2

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Shelby P. Croston

Total Pages Scanned : 4 Total Pages Confirmed : 4

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Host Fax

RE: Resend  
MP: Multi-Poll  
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HR: Host Receive

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Post Office Box 3010, Agana, Guam 96932

Phone: (671)479-7847 Fax: (671)479-7879

U.S. EPA, Region 9  
Grants Management Office, PMD-7  
75 Hawthorne Street  
San Francisco, CA 94105

JUN 21 2002

ATTN: Ms. Elizabeth Stahl, EPA Grants Specialist

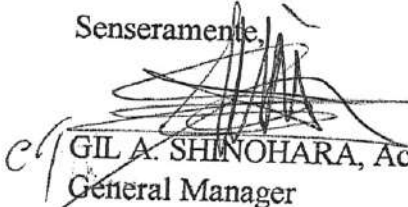
RE: Revised Scope of Work

Enclosed we are forwarding the revised scope of work and updated status report for the following projects:

1. FS-97910601-0, Rehabilitation of Ugum Water Treatment Plant.
2. FS-97910501-0, Rehabilitation of Sta. Rita Booster Pump Chlorination System and Spring Impound Reservoir.
3. Construction of Water Transmission Line and Rehabilitation of A-, D- and MJ-Series Wells.
4. Rehabilitation of Deepwells Chlorination System.

Should you have any queries, please call my office at (671)-479-7676 or call our CIP Supervisor, Mr. Danilo R. Galiza at (671)-479-7827.

Senseramente,

  
GIL A. SHINOHARA, Acting  
General Manager

Enclosure

cc: Jesus T. Salas, Administrator, GEPA  
Barry Pollock, USEPA



## GUAM WATERWORKS AUTHORITY

Government of Guam

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Phone: (671)479-7847 Fax: (671)479-7879

U.S.EPA, Region 9  
Grants Management Office, PMD-7  
75 Hawthorne Street  
San Francisco, CA 94105

JUN 20 2002

ATTN: Ms. Elizabeth Stahl, U.S. EPA Grants Specialist

RE: FS-97911902-0  
Drinking Water Infrastructure Territorial Set-Aside-  
Rehabilitation of A,D, MJ Wells

Hafa Adai:

The Guam Waterworks Authority (GWA) is pleased to accept the Federal Grant Award dated May 08, 2002 for the above referenced project.

Enclosed is one of the original signed and dated Grant Agreement you required.

Should you have any queries, please call my office at (671) 479-7676 or call our CIP Supervisor, Mr. Danilo R. Galiza, at (671) 479-7827.

Senseramente,

  
GIL A. SHINOHARA

Acting General Manager

cc: Jesus T. Salas, Administrator, GEPA

FS - 97911902 - 0 Page 2

FUNDS	FORMER AWARD	THIS ACTION	AMENDED TOTAL
EPA Amount This Action	\$	\$ 2,086,969	\$ 2,086,969
EPA In-Kind Amount	\$	\$	\$ 0
Unexpended Prior Year Balance	\$	\$	\$ 0
Other Federal Funds	\$	\$	\$ 0
Recipient Contribution	\$	\$	\$ 0
State Contribution	\$	\$	\$ 0
Local Contribution	\$	\$	\$ 0
Other Contribution	\$	\$	\$ 0
Allowable Project Cost	\$ 0	\$ 2,086,969	\$ 2,086,969

Assistance Program (CFDA)	Statutory Authority	Regulatory Authority
56.468 - Safe Drinking Water State Revolving Fund	Safe Drinking Water Act Section 1452	40 CFR PART 31

Fiscal									
Site Name	DCN	FY	Approp. Code	Budget Organization	PRC	Object Class	Site/Project	Cost Organization	Obligation / Deobligation
	W1E002	02	E3C	096C	20101B	4109	01DA	-	1,412,969
	W1E002	02	E3	096	20101B	4109	02DA	-	674,000
									2,086,969

### Administrative Conditions

1. An interim Financial Status Report (FSR), Standard Form 269A (Rev. 7/97), covering the period from "project/budget period start date" to September 30 of each calendar year shall be submitted to the Grants Management Office, PMD-7, no later than December 31 of the same calendar year. **The initial FSR is due December 31, 2003.** The FSR covering the entire project period shall be submitted within 90 days after the end of the project period (40 CFR Part 31.23(b)).

2. The recipient shall comply with the Single Audit Act and the reporting requirements set forth in OMB Circular A-133.

3. The recipient must ensure to the fullest extent possible that at least 8% (6%=MBE/2%=WBE) of Federal funds for prime contracts or subcontracts for supplies, construction, equipment or services are made available to organizations owned or controlled by socially and economically disadvantaged individuals, women, and historically black colleges and universities.

The recipient agrees to include in its bid documents an 8% (6%=MBE/2%=WBE) "Fair Share" percentage and require all of its prime contractors to include in their bid documents for subcontracts an 8% (6%=MBE/2%=WBE) "Fair Share" percentage.

To evaluate compliance with the "Fair Share" policy, the recipient also agrees to comply with the six affirmative steps stated in 40 CFR Section 30.44(b), Section 31.36(e), or Section 35.6580(a), as appropriate.

4. The cost principles of OMB Circular A-87 are applicable to this award. Since there are no indirect costs included in the assistance budget, they are not allowable under this Assistance Agreement.

5. "In accordance with OMB Circular A-21, A-87, or A-122, as appropriate, the recipient agrees that it will not use project funds, including the Federal and non-Federal share, to engage in lobbying the Federal Government or in litigation against the United States. The recipient also agrees to provide the information mandated by EPA's annual appropriations acts for fiscal year 2000, 2001 and fiscal year 2002 (PL 106-74, §426, PL 106-377, §424 and PL 107-73, §424 respectively) which require as follows: 'A chief executive officer of any entity receiving funds under this Act shall certify that none of these funds have been used to engage in the lobbying of the Federal Government or in litigation against the United States unless authorized under existing law.' The recipient may satisfy this certification requirement in any reasonable manner. The certification must be submitted to EPA after all grant funds have been expended."

6. Pursuant to EPA Order 1000.25, dated January 24, 1990, the recipient agrees to use recycled paper for all reports which are prepared as a part of this agreement and delivered to EPA. This requirement does not apply to Standard Forms. These forms are printed on recycled paper as available through the General Services Administration.

7. Effective October 1, 1994, the recipient agrees to ensure that all conference, meeting, convention, or training space funded in whole or in part with Federal funds

for Construction of Treatment Works).

17. The grantee shall submit all Architectural/Engineering design scopes of work to the EPA Project Officer for review and comments prior to solicitation of such services.
18. Prior to award of any contract, the grantee shall submit to the EPA Project Officer for review and comments, the contracts, the contractor's name, and the contract cost breakdown for all contracts they plan to issue for activities provided for in the agreed upon work plan and any work plan amendments thereto. No contract may awarded under this grant until the EPA Project Officer has issued approval to award.
19. Construction shall be performed by the recipient in accordance with plans and specifications prepared by the engineer and approved by EPA.
20. The grantee shall notify the EPA Project Officer, Army Corps of Engineers (ACOE) and the Guam Environmental Protection Agency (GEPA) before contracted field work begins, to allow oversight inspection and to ensure that work is conducted in accordance with the approved scopes of work, specifications, and schedules. The grantee shall be available during the active stages of the project to ensure the project progresses in a timely manner and on a continuous basis.
21. The grantee shall prepare up-to-date "as-builts" of the project and submit copies to EPA, GEPA and the ACOE.
22. No payment beyond 90% of the Federal Share shall be made until the O&M manual has been approved.
23. EPA or its designate may inspect the project at any time. In addition, any construction contract must provide that representatives of EPA will have access to the work and any books, documents, papers, and records of the contractor. The project will be evaluated to the ensure timely completion and expenditure of allowable costs.
24. All contract modifications and amendments must be submitted to the EPA Project Officer. Any contract modifications and amendments that increase the contract cost by \$10,000 or more, change the scope or objectives of the project, or substantially alter the design must receive prior written approval from the EPA Project Officer before construction is initiated on work items requiring the modification.
25. The grantee shall notify the EPA Project Officer at any point in time should any significant developments arise, such as those that might alter or delay the project.
26. The grantee must submit to the EPA Project Officer a copy of the bid tabulations for the project for Approval to Award.
27. A performance certification will be necessary a year after the project has been completed. To certify the project, EPA (or our designate) will inspect the construction site to determine if the project is operating as designed and is meeting its design standards.





## GUAM WATERWORKS AUTHORITY

Aturidåt Kinalamten Hånom Guåhan

Post Office Box 3010, Hagåtña, Guam 96932

Phone: (671) 479-7861/7886 Fax: (671) 649-0158

Mr. Michael Lee, CMD-5

Office of the Pacific Insular & Native American Projects

U.S. Environmental Protection Agency

Region IX - 75 Hawthorne Street

San Francisco, CA 94105

JUN 20 2002

RE: Raw Sewage Overflows  
(Notification June 16, 2002)



Hafa Adai Mike!

This is the final report on the sewage overflows that resulted due to the loss of island wide power on Saturday June 15, 2002 at approximately 8:10 p.m. The following is the list of SPSs where sewage spills occurred:

a. **Chaot SPS**

The station was reported overflowing directly into the Chaot River shortly after the power outage occurred. Because the Old Chaot SPS did not have an operational generator, crews decided to divert the sewage flow into the new Chaot SPS. The new station operated for approximately 35 minutes before a fuel problem caused the generator to shut down. We were not able to get the problem corrected and had to wait for the restoration of island power. Overflow period lasted for about 1.5 hours and amounted to an estimated amount to 22,500 gallons.

b. **Hagatna Main SPS**

Due to problems with the emergency generator, we were not able to operate this station. The generator would run, but would not produce power. However, because the Chaot SPS was not operational, and because it took quite some time before the large sewer collector lines filled up, sewage overflow lasted for about 0.5 hours. Approximately 5,000 gallons were spilled from several manholes and into the storm drains.



## GUAM WATERWORKS AUTHORITY

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Mr. Michael Lee, CMD-5  
Office of the Pacific Insular & Native American Projects  
U.S. Environmental Protection Agency  
Region IX - 75 Hawthorne Street  
San Francisco, CA 94105

JUN 20 2002

RE: Raw Sewage Overflows  
(Notification June 16, 2002)

Hafa Adai Mike!

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b. **Hagatna Main SPS**

Due to problems with the emergency generator, we were not able to operate this station. The generator would run, but would not produce power. However, because the Chaot SPS was not operational, and because it took quite some time before the large sewer collector lines filled up, sewage overflow lasted for about 0.5 hours. Approximately 5,000 gallons were spilled from several manholes and into the storm drains.



c. **Ypao SPS**

Emergency generator inoperable; estimated overflow approximately 2,500 gallons.

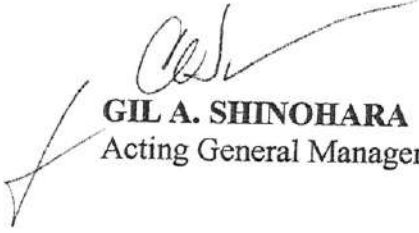
d. **Astumbo #1 and #2 SPSs**

Both these stations have no working generators. We estimate the combined total overflow at approximately 4,000 gallons.

GWA is presently conducting an assessment of all emergency generators in its inventory. The outcome of that assessment will eventually result in either the repair or replacement of defective generators and their associated support equipment.

If you have any questions regarding this matter, please do not hesitate to call the Wastewater Division at (671) 479-7886.

Sincerely,



**GIL A. SHINOHARA**  
Acting General Manager

cc: GEPA  
Lab  
Wastewater



# GUAM WATERWORKS AUTHORITY

Aturidåt Kinalamten Hånom Guåhan

Post Office Box 3010, Hagåtña, Guam 96932

Phone: (671) 479-7823/7808

Fax: (671) 479-7879

## FAX TRANSMITTAL COVER SHEET

Transmittal Date: 6-20-02 Transmittal Time: \_\_\_\_\_

From: mark miller

Title: \_\_\_\_\_ Division: Wastewater

Subject & Message: \_\_\_\_\_

Hi Mike,  
Here is the final  
report on the recent overflows caused  
by power loss.

To: Mike Lee Title: \_\_\_\_\_

Company: USEPA Location: \_\_\_\_\_

Fax No.: (415) 947-3560

Number of pages - this page inclusive: 3

Should any or all of your copies be not legible or incomplete, please contact the undersigned at the numbers listed above.

Transmitted by: \_\_\_\_\_

Please Print

[Signature]  
Initial when completed

# Transmission Report

Date/Time  
Local ID  
Local Name  
Company Logo

6-20-02; 4:08PM  
6716490158  
G. W. A GENERALMANAGER  
G. W. A GENERAL MANAGER OFFICE.

This document was confirmed.  
(reduced sample and details below)  
Document Size Letter-S



**GUAM WATERWORKS AUTHORITY**  
Aturidat Kinalamten Hanom Guahan  
Post Office Box 3010, Hagåtña, Guam 96932  
Phone: (671) 479-7823/7808  
Fax: (671) 479-7879

## FAX TRANSMITTAL COVER SHEET

Transmittal Date: 6-20-02 Transmittal Time: \_\_\_\_\_  
From: Mike Miller  
Title: \_\_\_\_\_ Division: Wastewater  
Subject & Message: Hi Mike,  
Here is the final  
report on the recent overflows caused  
by power loss.  
To: Mike Lee Title: \_\_\_\_\_  
Company: USEPA Location: \_\_\_\_\_  
Fax No.: (415) 947-3560

Number of pages - this page inclusive: 3

Should any or all of your copies be not legible or incomplete, please contact the undersigned at the numbers listed above.

Transmitted by: \_\_\_\_\_  
Please Print Initial when completed

Total Pages Scanned : 3 Total Pages Confirmed : 3

No.	Doc	Remote Station	Start Time	Duration	Pages	Mode	Comments	Results
1	683	914159473560	6-20-02; 4:04PM	3'27"	3/ 3	EC		CP 4800

Notes :

:: Error Correct :: Broadcast Send :: Completed :: Host Scan :: Host Fax	RE: Resend MP: Multi-Poll RM: Receive to Memory HP: Host Print HR: Host Receive	PD: Polled by Remote PG: Polling a Remote DR: Document Removed FO: Forced Output FM: Forward Mailbox Doc.	MB: Receive to Mailbox PI: Power Interruption TM: Terminated by user WT: Waiting Transfer WS: Waiting Send
--------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------



# GUAM WATERWORKS AUTHORITY

Aturidat Kinalamten Hanom Guahan

Post Office Box 3010, Hagatña, Guam 96932

Phone: (671) 479-7823/7808

Fax: (671) 479-7879

## FAX TRANSMITTAL COVER SHEET

Transmittal Date: 6-20-02

Transmittal Time: \_\_\_\_\_

From: Gil A. Shirohara

Title: Acting GM

Division: \_\_\_\_\_

Subject & Message: \_\_\_\_\_

To: Jesus Salas

Title: Administrator

Company: CEPA

Location: \_\_\_\_\_

Fax No.: 477-9402

Number of pages - this page inclusive: 3

Should any or all of your copies be not legible or incomplete, please contact the undersigned at the numbers listed above.

Transmitted by: Shelley P. Cusumano SPC  
Please Print Initial when completed

# Transmission Report

Date/Time

6-20-02; 10:22PM

Local ID

6716490158

Local Name

G. W. A GENERALMANAGER

Company Logo

G. W. A GENERAL MANAGER OFFICE.

This document was confirmed.

(reduced sample and details below)

Document Size Letter-S



## GUAM WATERWORKS AUTHORITY

Aturidat Kinalamten Hanom Guahan

Post Office Box 3010, Hagåtña, Guam 96932

Phone: (671) 479-7823/7808

Fax: (671) 479-7879

### FAX TRANSMITTAL COVER SHEET

Transmittal Date: 6/20/02 Transmittal Time: \_\_\_\_\_  
 From: Col A Shurkham  
 Title: Acting GM Division: \_\_\_\_\_  
 Subject & Message: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

To: Jesus Salas Title: Administrator  
 Company: CEPA Location: \_\_\_\_\_  
 Fax No.: 477-9402

Number of pages - this page inclusive: 3

Should any or all of your copies be not legible or incomplete, please contact the undersigned at the numbers listed above.

Transmitted by: Shelly P. Crawford  
 Please Print Initial when completed

Total Pages Scanned : 3 Total Pages Confirmed : 3

o.	Doc	Remote Station	Start Time	Duration	Pages	Mode	Comments	Results
1	698	9--4779402	6-20-02; 10:20PM	1'22"	3/ 3	EC		CP 14.4

tes :

: Error Correct  
 : Broadcast Send  
 : Completed  
 : St Scan  
 : St Fax

RE: Resend  
 MP: Multi-Poll  
 RM: Receive to Memory  
 HP: Host Print  
 HR: Host Receive

PD: Polled by Remote  
 PG: Polling a Remote  
 DR: Document Removed  
 FO: Forced Output  
 FM: Forward Mailbox Doc.

MB: Receive to Mailbox  
 PI: Power Interruption  
 TM: Terminated by user  
 WT: Waiting Transfer  
 WS: Waiting Send



# GUAM WATERWORKS AUTHORITY

Aturidat Kinalamten Hånom Guåhan

Post Office Box 3010, Hagåtña, Guam 96932

Phone: (671) 479-7823/7808

Fax: (671) 479-7879

## FAX TRANSMITTAL COVER SHEET

Transmittal Date: 6-20-02 Transmittal Time: \_\_\_\_\_

From: GWA A. Shirohara

Title: Acting GM Division: \_\_\_\_\_

Subject & Message: \_\_\_\_\_

To: Cannon Title: \_\_\_\_\_

Company: GWA Lab. Location: \_\_\_\_\_

Fax No.: 631-2592

Number of pages - this page inclusive: 3

Should any or all of your copies be not legible or incomplete, please contact the undersigned at the numbers listed above.

Transmitted by: Shelley P. Anagnost Initial when completed: SPC  
Please Print

# Transmission Report

Date/Time  
Local ID  
Local Name  
Company Logo

6-20-02; 10:23PM  
6716490158  
G. W. A. GENERALMANAGER  
G. W. A. GENERAL MANAGER OFFICE.

This document was confirmed.  
(reduced sample and details below)  
Document Size Letter-S



**GUAM WATERWORKS AUTHORITY**  
Aturidat Kinnamten Hanom Guahan  
Post Office Box 3010, Hagåtña, Guam 96932  
Phone: (671) 479-7823/7808  
Fax: (671) 479-7879

## FAX TRANSMITTAL COVER SHEET

Transmittal Date: 6-20-02 Transmittal Time: \_\_\_\_\_  
From: GWA A. Shirohara  
Title: Acting GM Division: \_\_\_\_\_  
Subject & Message: \_\_\_\_\_

To: Common Title: \_\_\_\_\_  
Company: GWA Lab. Location: \_\_\_\_\_  
Fax No.: 691-2592

Number of pages - this page inclusive: 3

Should any or all of your copies be not legible or incomplete, please contact the undersigned at the numbers listed above.

Transmitted by: Shelley P. Christy  
Please Print Initial when completed

Total Pages Scanned : 3 Total Pages Confirmed : 3

Doc	Remote Station	Start Time	Duration	Pages	Mode	Comments	Results
700	G. W. A. LABORATORY	6-20-02; 10:22PM	45"	3/ 3	EC		CP 26.4

S :  
Error Correct  
Broadcast Send  
Completed  
Scan  
Fax

RE: Resend  
MP: Multi-Poll  
RM: Receive to Memory  
HP: Host Print  
HR: Host Receive

PD: Polled by Remote  
PG: Polling a Remote  
DR: Document Removed  
FO: Forced Output  
FM: Forward Mailbox Doc.

MB: Receive to Mailbox  
PI: Power Interruption  
TM: Terminated by user  
WT: Waiting Transfer  
WS: Waiting Send



## GUAM WATERWORKS AUTHORITY

Aturidat Kinalamten Hanon Guahan

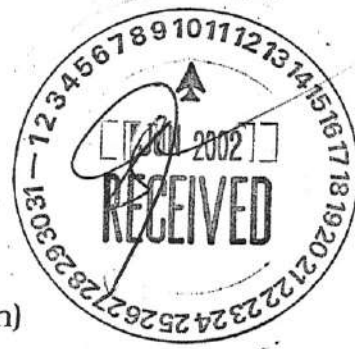
Government of Guam

P.O. Box 3010, Agana, Guam 96932

Phone: (671) 479-7823 • Fax: (671) 479-7879

JUN 06 2002

Mr. Michael Lee, CMD-5  
Office of the Pacific Insular & Native American Projects  
U.S. Environmental Protection Agency, Region IX  
75 Hawthorne Street, San Francisco, Ca. 94105



RE: Raw Sewage Overflow (Astumbo #1 Sewer Pump Station)  
Notification e-mail - 6/3/02

Dear Mr. Lee:

This is an update on the recent overflow at the Astumbo #1 SPS. The pump station had been operating with a single pump due to an earlier failure of the standby pump. The standby pump was undergoing repairs in the shop. The remaining pump failed on Saturday, June 01, 2002, which resulted in the overflow. To reduce the amount of overflow, pumping trucks periodically drained the wet pit at the station.

On Tuesday, crews picked up and installed the repaired pump. Upon start-up, crews noticed that the newly repaired pump would vibrate violently even before reaching operating speed. The pump had to be removed and returned back to the shop that had done the repairs. They are giving us an estimated (1) week time frame for completing the repairs to the pump.

We are examining alternatives to restore pumping operations at this station in the shortest time possible. In the interim, we will continue to periodically pump out the wet pit. Guam Waterworks Authority remains committed to preventing sewage overflows.



Page 2

Should you have any questions regarding this matter, please call Mr. Mark Miller, Wastewater Manager at (671)479-7886/7861.

Sincerely,



GIL A. SHINOHARA  
Acting General Manager

Cc: AGMA  
GEPA  
LAB  
Wastewater



# GUAM WATERWORKS AUTHORITY

Aturidat Kinalamten Hånom Guåhan

Post Office Box 3010, Hagåtña, Guam 96932

Phone: (671) 479-7823/7808

Fax: (671) 479-7879

## FAX TRANSMITTAL COVER SHEET

Transmittal Date: 6.7.02 Transmittal Time: 9:25 am  
From: Gil A. Shirohara  
Title: Acting GM Division: \_\_\_\_\_  
Subject & Message: \_\_\_\_\_

Re: Raw sewage over flow (Astumbo  
#1 sewer pump station)  
Notification e-mail - 6/3/02

To: Mike Lee Title: \_\_\_\_\_  
Company: USEPA Location: \_\_\_\_\_  
Fax No.: (415) 947-3560

Number of pages - this page inclusive: 3

Should any or all of your copies be not legible or incomplete, please contact the undersigned at the numbers listed above.

Transmitted by: Shelby P. Cruseform SPC  
Please Print Initial when completed

# Transmission Report

Date/Time  
Local ID  
Local Name  
Company Logo

6- 7-02; 9:42AM  
6716490158  
G.W.A GENERALMANAGER  
G.W.A GENERAL MANAGER OFFICE.

This document was confirmed.  
(reduced sample and details below)  
Document Size Letter-S



**GUAM WATERWORKS AUTHORITY**  
Aturidat Kinalamten Hanom Guahan  
Post Office Box 3010, Hagåtña, Guam 96932  
Phone: (671) 479-7823/7808  
Fax: (671) 479-7879

## FAX TRANSMITTAL COVER SHEET

Transmittal Date: 6/7/02 Transmittal Time: 9:45 am  
From: Carl A. Shirohara  
Title: Acting GM Division: \_\_\_\_\_  
Subject & Message: \_\_\_\_\_

Re: Raw sewage over flow (Astumbo  
#1 sewer pump station)  
Notification e-mail - 6/3/02

To: Mike Lee Title: \_\_\_\_\_  
Company: USCPA Location: \_\_\_\_\_  
Fax No.: 6455 947-7560

Number of pages - this page inclusive: 3

Should any or all of your copies be not legible or incomplete, please contact the undersigned at the numbers listed above.

Transmitted by: Shelby P. Crawford  
Please Print Initial when completed

Total Pages Scanned : 3 Total Pages Confirmed : 3

S.	Doc	Remote Station	Start Time	Duration	Pages	Mode	Comments	Results
1	181	914159473560	6- 7-02; 9:38AM	3'18"	3/ 3	EC		CP 4800

tes :

: Error Correct  
: Broadcast Send  
: Completed  
: Host Scan  
: t Fax

RE: Resend  
MP: Multi-Poll  
RM: Receive to Memory  
HP: Host Print  
HR: Host Receive

PD: Polled by Remote  
PG: Polling a Remote  
DR: Document Removed  
FO: Forced Output  
FM: Forward Mailbox Doc.

MB: Receive to Mailbox  
PI: Power Interruption  
TM: Terminated by user  
WT: Waiting Transfer  
WS: Waiting Send

# Transmission Report

Date/Time  
Local ID  
Local Name  
Company Logo

6- 7-02; 9:50AM  
6716490158  
G. W. A GENERALMANAGER  
G. W. A GENERAL MANAGER OFFICE.

This document was confirmed.  
(reduced sample and details below)  
Document Size Letter-S



**GUAM WATERWORKS AUTHORITY**  
Aturidat Kinalamten Hanom Guahan  
Post Office Box 3010, Hagåtña, Guam 96932  
Phone: (671) 479-7823/7808  
Fax: (671) 479-7879

## FAX TRANSMITTAL COVER SHEET

Transmittal Date: 6-7-02 Transmittal Time: 9:45 am  
From: Gil A. Shirohara  
Title: Acting GM Division: \_\_\_\_\_  
Subject & Message: \_\_\_\_\_

Raw Sewage overflow (Astumbo #1 Sewer Pump station)

To: Jesus Salas Title: \_\_\_\_\_  
Company: GEPA Location: \_\_\_\_\_  
Fax No.: 477-9402

Number of pages - this page inclusive: 3

Should any or all of your copies be not legible or incomplete, please contact the undersigned at the numbers listed above.

Transmitted by: Shelby P. Cnsobfano  
Please Print Initial when completed

Total Pages Scanned : 3 Total Pages Confirmed : 3

S.	Doc	Remote Station	Start Time	Duration	Pages	Mode	Comments	Results
1	186	9--4779402	6- 7-02; 9:49AM	1'22"	3/ 3	EC		CP 14.4

ies :

Error Correct  
Broadcast Send  
Completed  
Host Scan  
t Fax

RE: Resend  
MP: Multi-Poll  
RM: Receive to Memory  
HP: Host Print  
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PD: Polled by Remote  
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FO: Forced Output  
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MB: Receive to Mailbox  
PI: Power Interruption  
TM: Terminated by user  
WT: Waiting Transfer  
WS: Waiting Send



## GUAM WATERWORKS AUTHORITY

Government of Guam

Post Office Box 3010, Agana, Guam 96932

Phone: (671) 479-7823 Fax: (671) 479-7879

MAY 22 2002

Mr. Michael Lee, CMD-5  
Office of the Pacific Insular & Native American Projects  
U.S. Environmental Protection Agency  
Region IX  
75 Hawthorne Street  
San Francisco, CA 94105

RE: Raw Sewage Overflows  
(Notification May 20, 2002)

Hafa Adai Mike:

This is an update on the sewage overflows that resulted due to the loss of Power Island wide on Saturday, May 18, 2002 at approximately 12:00 p.m. The following is the list of SPS's where sewage spills occurred.

A. Chaot SPS

The station was reported overflowing directly into the Chaot River when the loss of power occurred. Just as the roving crew diverted the sewage flow into the new Chaot SPS for generator power, the island power was restored. Within a (1) hour period, the spill to the Chaot River was estimated at 14,000 gallons. Intermittent downpour and river flow helped to dilute the spillage.

B. Hagåtña Main SPS

As a measure to keep the manhole covers from coming off from their basis, a decision was made to relieve some of the pressure in the sewer line along Marine Drive in Tamuning by securing (1) one pump at the Mamahanao SPS and shutting down Alupang Cove and Bayside SPS's for a (2) two hour period. This is done intermittently during the outage and has kept the overflow along Marine Drive to a minimal. Approximately 1,000 gallons were spilled from several manholes and into the storm drains.

C. Ypao SPS

Pumper trucks were immediately dispatched to pump out sewage from the overflowing manhole located in the park. To release pressure from the overflowing manhole, trucks were also extracting sewage from the Ypao SPS's headworks. Of the 15,000 gallons we believe have spilled, more than 12,500 gallons were extracted which were all confined in one area. The remaining sewage may have dissipated or infiltrated into the ground. Disinfections and cleanup were completed.

Guam Waterworks Authority remains diligent in its efforts to prevent sewage spills and overflows. Should you have any questions regarding this matter, please do not hesitate to call Mr. Ed Reyes, Assistant Wastewater Manager at (671)479-7885/7861.

Sincerely,

A handwritten signature in black ink, appearing to read 'GIL A. SHINOZAWA', with several horizontal and vertical strokes crossing it.

GIL A. SHINOHARA  
Acting General Manager

Cc: GEPA  
Lab  
Wastewater



## GUAM WATERWORKS AUTHORITY

Government of Guam

Post Office Box 3010, Agana, Guam 96932

Phone: (671) 479-7823 Fax: (671) 479-7879

MAY 22 2002

Mr. Michael Lee, CMD-5  
Office of the Pacific Insular & Native American Projects  
U.S. Environmental Protection Agency  
Region IX  
75 Hawthorne Street  
San Francisco, CA 94105

RE: Raw Sewage Overflows  
(Notification May 20, 2002)

Hafa Adai Mike:



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Sincerely,



GIL A. SHINOHARA  
Acting General Manager

Cc: GEPA  
Lab  
Wastewater



5.22.02 Letter stamped as per  
Gil SHELM.



## GUAM WATERWORKS AUTHORITY

Aturidat Kinalamten Hånom Guåhan

Post Office Box 3010, Hagåtña, Guam 96932

Phone: (671) 479-7823/7808

Fax: (671) 479-7879

### FAX TRANSMITTAL COVER SHEET

Transmittal Date: 5.22.02

Transmittal Time: 4:45 PM

From: Gil A. Shinohara

Title: Acting GM

Division: \_\_\_\_\_

Subject & Message: \_\_\_\_\_

Re: Raw Sewage overflows (notification  
May 20, 2002)

To: Michael Lee

Title: \_\_\_\_\_

Company: USEPA

Location: \_\_\_\_\_

Fax No.: (415) 947-3560

Number of pages - this page inclusive: 3

Should any or all of your copies be not legible or incomplete, please contact the undersigned at the numbers listed above.

Transmitted by: Shelby P. Cusack

Please Print

SPC  
Initial when completed

# Transmission Report

Date/Time 5-22-02; 4:48PM  
 Local ID 6716490158  
 Local Name G. W. A GENERALMANAGER  
 Company Logo G. W. A GENERAL MANAGER OFFICE.

This document was confirmed.  
 (reduced sample and details below)  
 Document Size Letter-S



**GUAM WATERWORKS AUTHORITY**  
 Aturidat Kinalamten Hanom Guahan  
 Post Office Box 3010, Hagåtña, Guam 96932  
 Phone: (671) 479-7823/7808  
 Fax: (671) 479-7879

## FAX TRANSMITTAL COVER SHEET

Transmittal Date: 5-22-02 Transmittal Time: 4:45PM  
 From: Gil A. Shinohara  
 Title: Acting GM Division: \_\_\_\_\_  
 Subject & Message: \_\_\_\_\_

Re: Raw Sewage overflows (notification  
May 20, 2002)

To: Michael Lee Title: \_\_\_\_\_  
 Company: USEPA Location: \_\_\_\_\_  
 Fax No.: (415) 947-3560

Number of pages - this page inclusive: 3

Should any or all of your copies be not legible or incomplete, please contact the undersigned at the numbers listed above.

Transmitted by: Shelby P. Crockett  
 Please Print Initial when completed

Total Pages Scanned : 3 Total Pages Confirmed : 3

Doc	Remote Station	Start Time	Duration	Pages	Mode	Comments	Results
1 458	914159473560	5-22-02; 4:44PM	3'39"	3/ 3	EC		CP 4800

es :

Error Correct  
 Broadcast Send  
 Completed  
 Post Scan  
 t Fax

RE: Resend  
 MP: Multi-Poll  
 RM: Receive to Memory  
 HP: Host Print  
 HR: Host Receive

PD: Polled by Remote  
 PG: Polling a Remote  
 DR: Document Removed  
 FO: Forced Output  
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 PI: Power Interruption  
 TM: Terminated by user  
 WT: Waiting Transfer  
 WS: Waiting Send



# GUAM WATERWORKS AUTHORITY

Aturidat Kinalamten Hånom Guåhan

Post Office Box 3010, Hagåtña, Guam 96932

Phone: (671) 479-7823/7808

Fax: (671) 479-7879

## FAX TRANSMITTAL COVER SHEET

Transmittal Date: 5.22.02

Transmittal Time: 4:45 PM

From: Gil A. Shinohara

Title: Acting GM

Division: \_\_\_\_\_

Subject & Message: \_\_\_\_\_

Re: Raw Sewage overflows (notification  
May 20, 2002)

To: Jesus Salas

Title: Administrator

Company: GEPA

Location: \_\_\_\_\_

Fax No.: 477-9402

Number of pages - this page inclusive: 3

Should any or all of your copies be not legible or incomplete, please contact the undersigned at the numbers listed above.

Transmitted by: Shelby P. Cusostano

Please Print

Initial when completed SPC

# Transmission Report

Date/Time 5-22-02; 4:50PM  
 Local ID 6716490158  
 Local Name G. W. A GENERALMANAGER  
 Company Logo G. W. A GENERAL MANAGER OFFICE.

This document was confirmed.  
 (reduced sample and details below)  
 Document Size Letter-S



**GUAM WATERWORKS AUTHORITY**  
 Aturidat Kinalamten Hanom Guahan  
 Post Office Box 3016, Hagåtña, Guam 96932  
 Phone: (671) 479-7823/7808  
 Fax: (671) 479-7879

## FAX TRANSMITTAL COVER SHEET

Transmittal Date: 5-22-02 Transmittal Time: 4:45 PM  
 From: Gil A. Shinohara  
 Title: Acting GM Division: \_\_\_\_\_  
 Subject & Message: \_\_\_\_\_

Re: Raw Sewage overflows (notification)  
May 20, 2002

To: Jesus Salas Title: Administrator  
 Company: GEPA Location: \_\_\_\_\_  
 Fax No.: 477-9402

Number of pages - this page inclusive: 3

Should any or all of your copies be not legible or incomplete, please contact the undersigned at the numbers listed above.

Transmitted by: Shelby P. Casotano  
 Please Print Initial when completed

Total Pages Scanned : 3 Total Pages Confirmed : 3

O.	Doc	Remote Station	Start Time	Duration	Pages	Mode	Comments	Results
1	460	9--4779402	5-22-02; 4:48PM	1'21"	3/ 3	EC		CP 14.4

tes :

: Error Correct  
 : Broadcast Send  
 : Completed  
 : Post Scan  
 : Post Fax

RE: Resend  
 MP: Multi-Poll  
 RM: Receive to Memory  
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PD: Polled by Remote  
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 DR: Document Removed  
 FO: Forced Output  
 FM: Forward Mailbox Doc.

MB: Receive to Mailbox  
 PI: Power Interruption  
 TM: Terminated by user  
 WT: Waiting Transfer  
 WS: Waiting Send

# Transmission Report

Date/Time 5-22-02; 4:51PM  
 Local ID 6716490158  
 Local Name G. W. A. GENERALMANAGER  
 Company Logo G. W. A. GENERAL MANAGER OFFICE.

This document was confirmed.  
 (reduced sample and details below)  
 Document Size Letter-S



**GUAM WATERWORKS AUTHORITY**  
 Aturidat Kinalamten Hanom Guahan  
 Post Office Box 3010, Hagåtña, Guam 96932  
 Phone: (671) 479-7823/7808  
 Fax: (671) 479-7879

## FAX TRANSMITTAL COVER SHEET

Transmittal Date: 5-22-02 Transmittal Time: 4:45 PM  
 From: Gil A. Shirohara  
 Title: Acting GM Division: \_\_\_\_\_  
 Subject & Message: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 To: Common Title: \_\_\_\_\_  
 Company: Lab Location: \_\_\_\_\_  
 Fax No.: 637-2592

Number of pages - this page inclusive: 3

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RE: Resend  
 MP: Multi-Poll  
 RM: Receive to Memory  
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PD: Polled by Remote  
 PG: Polling a Remote  
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 FO: Forced Output  
 FM: Forward Mailbox Doc.

MB: Receive to Mailbox  
 PI: Power Interruption  
 TM: Terminated by user  
 WT: Waiting Transfer  
 WS: Waiting Send



## GUAM WATERWORKS AUTHORITY

Aturidat Kinalamten Hanon Guah'ian

Government of Guam

P.O. Box 3010, Agana, Guam 96932

Phone: (671) 479-7823 • Fax: (671) 479-7879

MAY 17 2002

Mr. Michael Lee, CMD-5  
Office of the Pacific Insular & Native American Projects  
U.S. Environmental Protection Agency, Region IX  
75 Hawthorne Street, San Francisco, CA 94105

RE: Raw Sewage Overflow (Southern Link Forcemain Line)  
Notification e-mail- 5/13/02 & Fax - 5/14/02

Hafa Adai Mr. Lee:

This is an update on the recent overflow at the Southern Link forcemain line. The roving crew had discovered sewage spewing from the pressure relieve manhole and reported the matter to our attention at approximately 1:30 p.m. on May 13, 2002. Our crew was dispatched immediately to excavate near the defective PRV manhole in order to divert the flowing sewage away from the pump station nearby. Signs were posted to warn bikers to refrain from entering the contaminated area.


The maintenance crew removed the damaged pressure relieve valve after hours of pumping from the manhole. It was later replaced with a unit located upstream from the same forcemain line. The installation was completed and the line was operational at approximately 12:00 p.m., May 14, 2002, however, the pump station was secured for an additional hour to allow the crew from Black Construction to install new plug valves for the remaining renovation of the Southern Link SPS. The SPS was placed back on line at 1:30 p.m. that same afternoon and will be operating with only one (1) pump to ensure the line will continue to function until a replacement parts arrives.

The PRV disc (seat) and flange gasket were worn-out and the floater (ball) was severely damaged. We believe excessive pressure exceeded the current PRV's 125psi, which caused the valve to fail. Maeda Construction Co. (the contractor for the forcemain) agreed to order a repair kit off-island (which will take one (1) week for the damaged valve. The contractors are working diligently on the problem and will provide us more information regarding this matter.

Within a 24-hour period, the spill was estimated at 3,000,000. Sewage was extracted and the area was disinfected after work was completed. Guam Waterworks Authority remains committed to preventing sewage overflows.

Should you have any questions regarding this matter, please contact Mr. Ed Reyes, Assistant Wastewater Manager at 47-7885/7861.

Sincerely,

  
GIL A. SHINOHARA  
Acting General Manager

Cc: GEPA  
Lab/Wastewater





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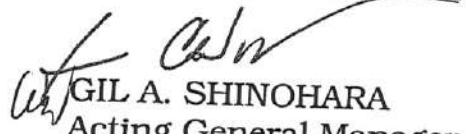
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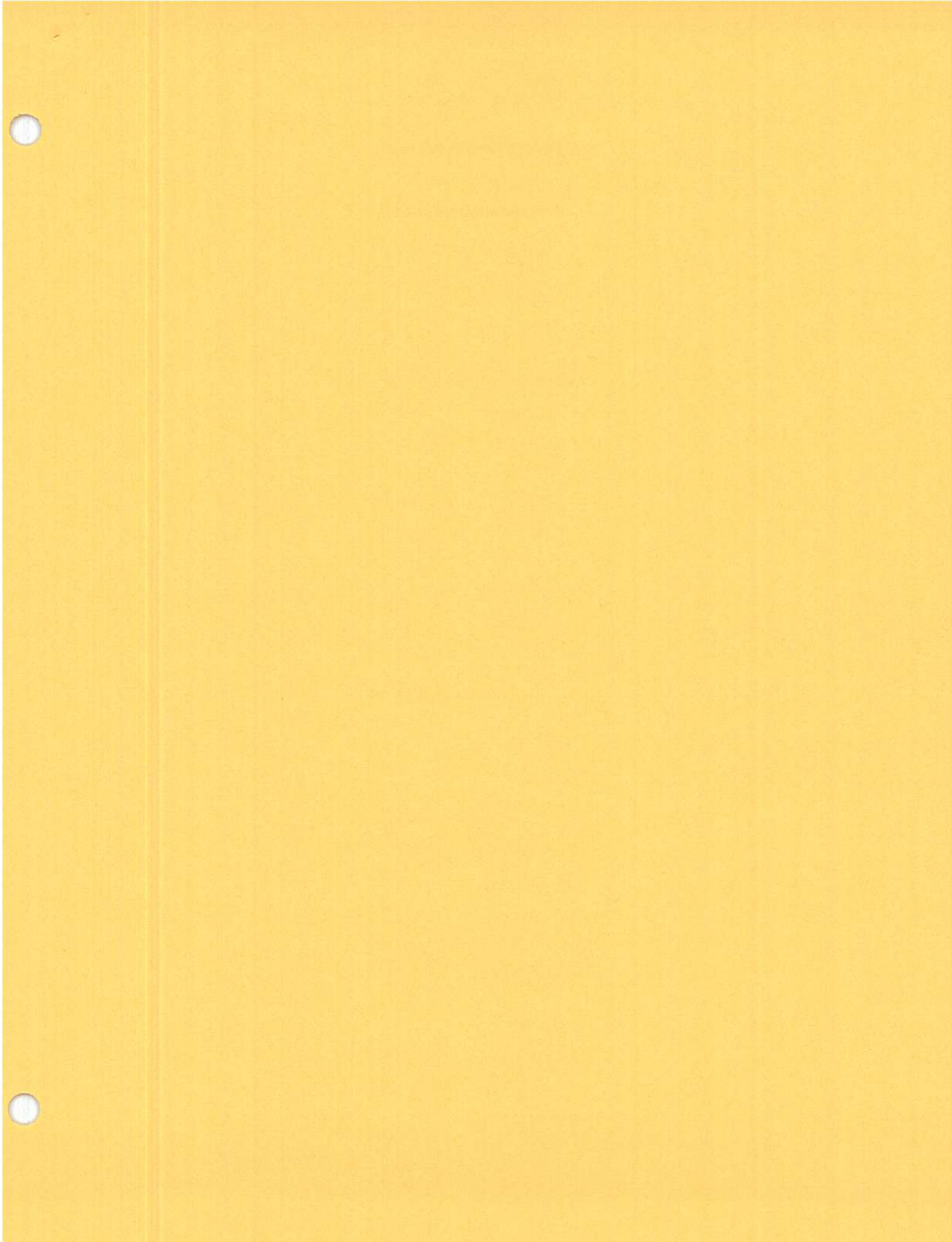
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Acting General Manager

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Lab/Wastewater





## GUAM WATERWORKS AUTHORITY

Aturidåt Kinalamten Hånom Guåhan

Post Office Box 3010, Hagåtña, Guam 96932

Phone: (671) 479-7861/7886 Fax: (671) 649-0158

Mr. Michael Lee, CMD-5  
Office of the Pacific Insular & Native American Projects  
U.S. Environmental Protection Agency, Region IX  
75 Hawthorne Street, San Francisco, CA 94105

MAY 15 2002

RE: Raw Sewage overflows  
(Notification May 13, 2002)

Hafa Adai Mike,

This is an update of the recent overflows that occurred in the early morning hours on May 13, 2002 at approximately 5:15a.m. The overflows were directly caused by the loss of island-wide power.

### Ypao SPS

- a. Station was out for 6 hours
- b. Back on line at 11:00 a.m.
- c. Spill – approximately 60,000 gallons

Rental trucks were utilized to minimize overflow. Crews vacuumed, cleaned and disinfected the affected area.

### Chaot SPS (old)

- a. Station was out for 5 hours
- b. Back on line at 9:50a.m.
- c. Spill – approximately 70,000 gallons

Operators diverted the flow to the new station but had problem with the emergency generator. Just as the generator problem was corrected the power came back on.

### Mamahanao SPS

Two pumps were secured at the Mamahanao SPS, and the Alupang Cove SPS to prevent overflows along Marine Drive. There were no spills reported at these stations even with the additional flow from the Route 16 SPS.

GWA remains diligent in its efforts to prevent sewage spills and overflows. If you should have any questions regarding this matter, please do not hesitate to call the Wastewater Operations at (671) 479-7886.

Sincerely,

  
GIL A. SHINOHARA  
General Manager, Acting

cc: AGMO, LAB, GEPA  
Wastewater Operations





## GUAM WATERWORKS AUTHORITY

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Phone: (671) 479-7861/7886 Fax: (671) 649-0158

Mr. Michael Lee, CMD-5

Office of the Pacific Insular & Native American Projects

U.S. Environmental Protection Agency, Region IX

75 Hawthorne Street, San Francisco, CA 94105

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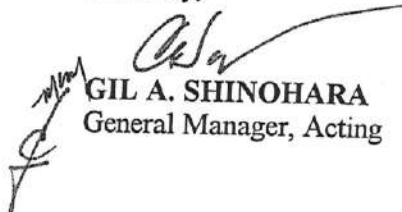
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General Manager, Acting

cc: AGMO, LAB, GEPA  
Wastewater Operations







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Phone: (671) 479-7861/7886 Fax: (671) 649-0158

Manager, Pacific Insular Area Programs  
U.S. Environmental Protection Agency  
Region IX  
75 Hawthorne Street  
San Francisco, California 94105-3901

MAY 10 2002

Subject: Second Quarter, FY 2002 Wastewater Operations and  
Maintenance (O&M) Progress Report

Dear Sir:

Included in this quarter's Wastewater O&M Progress Report are the following:

1. Status of activities at each plant
2. Administrative Order Compliance Status Reports for applicable plants
3. Monthly Discharge Monitoring Reports (DMRs) for applicable plants (Attachment A)
4. Heavy Metals, Pesticides, Other Heavy Metals and Whole Effluent Toxicity Results for the Agat STP (Attachment B)
5. Receiving Water Quality Report (Attachment C)
6. Analytical Methods (Attachment D)

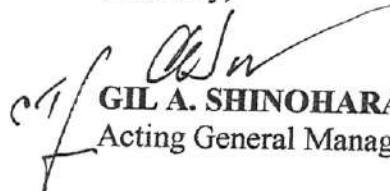
The Order on Consent Financial Plan was mailed out to your Office on January 31, 2002. The plan details the financial considerations and schedules for accomplishing the sixteen mandates outlined in the Order on Consent covering fiscal years 2002 through 2006. The plan was approved and formally adopted through Board Resolution during the GWA Board of Directors meeting held on February 01, 2002.

GWA has completed its review and has accepted the design drawings, scope of work, and bid documents prepared by its consultant for the refurbishment work required at the Agana STP. We are working towards placing the project out for bid during the month of May. We have yet to receive the same for the Northern District STP, but have been assured by the consultant that they are within a week of completion. Once received, our engineers and wastewater operations staff will expedite their final review of the package; bid advertisement will immediately follow that review.

The New Chaot SPS was placed on line on March 12, 2002. The new station operated for approximately two hours before GWA crews decided to shut it down due to its inability to operate in the "auto" mode. The contractor is presently negotiating with a local vender to program the Programmable Logic Controller at the station. Once the programming is completed, the station will be able to operate properly. GWA crews were able to utilize the new station by redirecting the sewage flow from the new sewer line to the old line at sewer manhole number 3 (Route 4, in front of McDonald's). The severe I&I situation that presently exist in the new sewer line that runs from sewer manhole number 3 to the Agana SPS, prevented GWA from utilizing the entire length of new sewer line. Field inspections and evaluations by both GWA engineering and maintenance crews continue. Their findings and recommendations to correct the remaining deficiencies will be forwarded to your Office once completed. The leak in the wet pit has been corrected.

I certify that under penalty of law that this document and all attachments have been prepared under my supervision in accordance with a process designed to assure that qualified personnel properly gathered and evaluated the information submitted. Furthermore, I certify that the information submitted is complete and accurate to the best of my knowledge and that I am aware of the penalties of submitting false information, including the possibility of fines and imprisonment for known violations.

Sincerely,

  
**GIL A. SHINOHARA**  
Acting General Manager

cc: Administrator, GEPA  
AGMA  
Wastewater  
Lab  
Wastewater CIP

## **GWA WASTEWATER O&M PROGRESS REPORT 2ND QUARTER, FY' 2002**

### **I. WASTEWATER TREATMENT PLANTS**

#### **A. AGANA**

The Agana STP continues to operate with only one of its three clarifiers. Both clarifiers No. 1 and No. 2 have been completely drained and are awaiting either the repair and/or replacement of collector system components. In the interim, plant operators have gone ahead and cannibalized collector system components from clarifier No. 2 and have brought clarifier No.1 to within a week of repair completion. Repairs have included the replacement of effluent launders, cross-collector flights, chain links, and the fastening of flight wear strips.

Only two of the plant's four aerobic digesters remain in operation. The drive motor for digester No. 4 is in need of a complete motor rewind. The impeller for digester No. 2 has come off its shaft; digester No. 2 remains secured awaiting major repairs. Digester No. 2 is also in need of a motor and gearbox assembly. Due to the difficulty of the repair work required, the repair work to digester No. 2 will have to be contracted out.

Plant operators and maintenance crews continue to pump the plant's digested sludge into "Honey Trucks" for further processing at the sludge drying beds located at the Northern District Sewage Treatment Plant. They will continue these efforts until the delivery and installation of a new centrifuge is complete.

#### **1. Administrative Order Compliance Status Report**

##### **a. Primary Sludge Pumps**

All four primary sludge pumps have been replaced and are fully functional.

##### **b. Centrifuges**

Management has deemed both centrifuges beyond economical repair. We have included the purchase and installation of a new centrifuge and its associated equipment package as part of the scope of work that will go out for bid in May of 2002.

##### **c. Clarifiers**

As mentioned in the report's cover letter, the refurbishment needed for all three (3) clarifiers, are presently in the process of being contracted out.



## **B. AGAT**

The plant now has one operational blower; blower No. 1 was installed in November and remains in operation. Blower No. 2 has exceeded its life expectancy and will need to be replaced rather than repaired.

The plant's clarifier collector drive motor was installed during the month of August and remains operational.

### **1. Administrative Order Compliance Status Report**

#### **a. Sub-phase IB: Land Portion – Pump Stations and Force-main**

The new pump stations and force-main are presently being utilized.

### **2. Improvements**

- a. During the month of March, plant operators began chlorinating the treated effluent leaving the plant. Chlorine residual readings were conducted at the No. 2 Agat SPS every two hours during dayshift with a reduction in chlorine dosage during the plant's non-manned hours. Every residual reading to date has shown a zero (0) reading at the station. Operators hope to significantly reduce the Fecal coliform bacteria in the plant effluent. We are keeping accurate records of this pilot program.

## **C. BAZA GARDENS**

Although, we are starting to see improvements concerning the BOD at this plant, the plant continues to exceed fecal coliform bacteria permit limitations and will do so until a system is put in place to reduce fecal coliform bacteria to an acceptable level. GWA is considering the possibility of utilizing either a filtration/UV system or a chlorination/de-chlorination system to remedy this longstanding problem.

### **1. Administrative Order Compliance Status Report**

Exceedences in fecal coliform will continue until such time as a corrective system is purchased and put in place. GWA has included the need for a corrective system in the Order on Consent, thereby incorporating the corrective system into its Corrective Action Plan Schedule.

2. Improvements

- a. Sludge Processing – Recent plant modifications that allow operators to decide whether to recycle clarifier settled sludge, or dispose it directly into the digester has markedly improve the effluent quality at the plant. While these improvements are based on visual observation, we are confident that the DMR for April will confirm our observation.
- b. BOD – Plant operators and maintenance crews have repaired and/or replaced over half of the aeration diffusers and air control valves in the extended aeration chamber. This has significantly improved the treatment process throughout the plant. There is a marked improvement (visually) in both the sewage being treated in the plant and the effluent leaving the plant.

**C. COMMERCIAL PORT**

The operation of the treatment plant ended on October 12, 2001. Electrical power to the plant has been terminated and the plant drained of all sewage. The outfall was sealed on October 31, 2001. GEPA completed their inspection of the decommissioned STP on November 1, 2001 and confirmed its decommissioned state. A formal letter was submitted to USEPA Region IX to inform them of the decommissioning of the STP with the request that the STP be removed from the NPDES STP listing. According to the correspondence received from your office, the plant's NPDES permit terminated on February 27, 2002.

The new Commercial Port SPS was placed on line on October 12, 2001. It has operated without incident and will be under warranty for a year from this date.

1. Administrative Order Compliance Status Report

The Commercial Port STP is no longer in operation. It has been replaced with the new Commercial Port SPS effectively ending the need for the STP. GWA assumes that the Administrative Order also terminated concurrently with the termination of the NPDES Permit.

**D. INARAJAN**

The plant is presently operating with two lagoons on-line in a series configuration. The plant has had no significant problems during this reporting period.

**E. NORTHERN DISTRICT**

1. Administrative Order Compliance Status Report

a. Demonstrate compliance with STP's NPDES Permit Requirements

The operation of the plant remains consistent with the last reporting period. We are however, increasing the frequency of sludge removal from the clarifier and processing larger amounts of digested sludge through the drying beds. We hope that these interim efforts will help to improve the quality of effluent leaving the plant.

**F. UMATAC - MERIZO**

With the recent restoration and resulting utilization of the western terrace, effluent discharges into the Toguan River have become intermittent. We are within a few weeks of fully restoring the eastern terrace; once activated, having both terraces restored will allow crews to schedule the maintenance of the terraces with out disrupting treatment processes. The restoration of the terraces will not only reduce the quantity of discharge entering the river, but should improve the quality of the effluent itself.

The lagoon is presently operating with both aerators on-line. The second aerator was placed on-line during the first week of the month of April.

1. Administrative Order Compliance Report

a. Commence I/I Corrective Actions for the Umatac-Merizo STP Collection System

1. Phase I: Completed

2. Phase II: Renovation of the pump station, STP, and percolation field and the correction of seasonal discharges into the river

The Phase II portion of the Project has been included in the Order on Consent Corrective Action Plan Schedule.

## **G. PAGO SOCIO STP**

This sewage treatment plant (secondary) is currently operating outside its design parameters mainly due to the complete lack of air supply. GWA has concluded that it will be more feasible to replace the STP with a pump station. We will provide your office an update in the next quarter Wastewater O&M Progress Report.

## **II. NPDES REQUIREMENTS**

Final NPDES Permits for the Baza Gardens and Umatac-Merizo sewage treatment plants were received on August 21, 2000. The Final NPDES Permit for the Agat sewage treatment plant was received on March 26, 2001. Lab personnel continually strive to make routine the protocols needed to meet the requirements of the issued permits.

GWA and the Navy have completed the final draft of the Memorandum of Understanding to divide up the monitoring requirements for the Tipalao outfall and shoreline. GWA has submitted a copy to its attorney for review and is presently awaiting their recommendation. Until such time that the MOU is in place, each party will continue to comply with the monitor requirements as set forth in their respective NPDES permit.

## **III. GENERAL ISSUES**

### **A. 301(h) MODIFIED PERMIT APPLICATION**

The revised Agana 301(h) NPDES Permit Application was mailed out on June 16, 2000.

The revised Northern District 301(h) NPDES Permit Application was mailed out on February 02, 2001.

Both the Agana and Northern District STP NPDES Permit Applications remain under review by USEPA.

GWA has been informed by the consultant who had conducted the initial baseline survey, that it would take them approximately 45-days from the time they are given the notice to proceed to complete another baseline survey. GWA is presently identifying the funding source to pay for the re-sampling. We will keep you informed regarding this matter.

Wastewater O&M Progress Report  
2nd Quarter, FY 2002

The quarterly Biological Monitoring program will proceed immediately after the completion of the effluent outfall extensions. In the meantime, biological and other pertinent baseline survey findings (outfall extensions) will be forwarded to your office as GWA receives them.

## MILESTONES

Jan 17 2002	Joint GWA/GEPA presentation to Mr. Tony Babauta, Congressional Representative (\$500K for chlorination)
Jan 23, 2002	GWA Board Workshop on CIPs
Jan 29, 2002	GWA Board Members tour GWA facilities
Feb 14, 2002	Operators Certification exams conducted
Mar 22, 2002	Bill 282 - Order on Consent Financial Plan
Mar 14, 2002	PUC Docket 02-02 supporting Order on Consent Financial Plan
Mar 26, 2002	Committee on Natural Resources tours the Fujita SPS
Mar 27, 2002	Bill 282 passes in Legislature

**ATTACHMENT A**

**MONTHLY DISCHARGE MONITORING  
REPORTS**

**2nd QUARTER 2002**

Facility Name/Address (Include location if different)

NAME: Guam Waterworks Authority  
ADDRESS: P.O. Box 3010

FACILITY: Agaña Sewage Treatment Plant  
LOCATION: Agaña, Guam

NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES)  
DISCHARGE MONITORING REPORT (DMR)

(2-16)  
GU0020087  
PERMIT NUMBER

(17-19)  
001  
DISCHARGE NUMBER

MONITORING PERIOD			
YEAR	MO	DAY	TO
2002	1	1	31
(20-21) (22-23) (24-25) (26-27) (28-29) (30-31)			

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card only) (46-53)		QUANTITY OR LOADING (54-61)		(4 Card Only) (38-45)		QUANTITY OR CONCENTRATION (46-53)		UNITS	NO. EX. (62-63)	FREQUENCY OF ANALYSIS (64-69)	SAMPLE TYPE (69-70)
		AVERAGE	MAXIMUM	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM	AVERAGE	MAXIMUM				
FLOW	SAMPLE MEASUREMENT PERMIT REQUIREMENT	9.0	12.7							mgd		30/31	HOURLY
INFLUENT BOD	SAMPLE MEASUREMENT PERMIT REQUIREMENT	7973	9451			83		107	133	mg/l		4/31	COMPOSITE
EFFLUENT BOD	SAMPLE MEASUREMENT PERMIT REQUIREMENT	9023	13430			71		123	189	mg/l	3	4/31	COMPOSITE
INFLUENT SUSPENDED SOLIDS	SAMPLE MEASUREMENT PERMIT REQUIREMENT	8011	16022					80	160	mg/l		1/7	COMPOSITE
EFFLUENT SUSPENDED SOLIDS	SAMPLE MEASUREMENT PERMIT REQUIREMENT	5262	10893			42		66	116	mg/l		15/31	COMPOSITE
EFFLUENT SETTLEABLE SOLIDS	SAMPLE MEASUREMENT PERMIT REQUIREMENT	3752	4585			28		52	66	mg/l		15/31	COMPOSITE
EFFLUENT OIL & GREASE	SAMPLE MEASUREMENT PERMIT REQUIREMENT	6008	12016					50	120	mg/l		1/7	COMPOSITE
EFFLUENT pH	SAMPLE MEASUREMENT PERMIT REQUIREMENT	1480	1480			1.3		1.5	1.8	ml/l	1	15/31	DISCRETE
	SAMPLE MEASUREMENT PERMIT REQUIREMENT					19.9		19.9	19.9	mg/l		1/31	DISCRETE
	SAMPLE MEASUREMENT PERMIT REQUIREMENT					6.8		6.9	7.0			1/30	DISCRETE
	SAMPLE MEASUREMENT PERMIT REQUIREMENT					7.0			9.0			15/31	DISCRETE
	SAMPLE MEASUREMENT PERMIT REQUIREMENT											1/7	DISCRETE
NAME/TITLE PRINCIPLE EXECUTIVE OFFICER													
GIL A. SHINOHARA ACTING GENERAL MANAGER, GWA													
TYPED OR PRINTED													
COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)													
BOD (mg/l) DAILY MAX (1 VIOLATION) AND MONTHLY AVERAGE													
SETTLEABLE SOLIDS (mg/l) MONTHLY AVERAGE													
BOD (lbs/day) MONTHLY AVERAGE													
Explanation of violations attached at end of DMR's													

Form Approved.  
OMB No. 2040-0004  
Approval expires 9-30-85



INFLUENT

DATE	pH	SUSP. SOLIDS mg/l	BOD mg/l	SETTL. SOLID ml/l	SUSP. SOLIDS lbs/day	BOD lbs/day	FLOW mgd
1							8.84
2	7.15	42	124	3.6	2918	8615	8.33
3							8.68
4							8.48
5							8.66
6							9.46
7							9.16
8							12.70
9	7.10	116	87	2.7	10893	8170	11.26
10							9.05
11							9.02
12							8.44
13							8.27
14							9.21
15	7.10	52	133	4.5	3695	9451	8.52
16							8.67
17							8.96
18							8.44
19							8.43
20							8.85
21							9.50
22							8.70
23	7.10	52	83	4.5	3543	5655	8.17
24							8.69
25							9.15
26							8.70
27							8.85
28							8.94
29							8.51
30							8.33
31							9.33
AVG	7.11	66	107	3.83	5262	7973	8.98
MIN	7.10	42	83	2.70	2918	5655	8.17
MAX	7.15	116	133	4.5	10893	9451	12.70

VIOLATIONS

BOD (mg/l) DAILY MAX (1 VIOLATION) AND MONTHLY AVERAGE  
 SETTLEABLE SOLIDS (ml/l) MONTHLY AVERAGE  
 BOD (lbs/day) MONTHLY AVERAGE

PERMIT REQUIREMENTS

MAX	12	60	80	1	6008	8011
monthly avg		120	160	2	12016	16022
daily max						

EFFLUENT

DATE	pH	SUSP. SOLIDS mg/l	BOD mg/l	SETTL. SOLID ml/l	SUSP. SOLIDS lbs/day	BOD lbs/day	SUSP. SOLIDS %removal	BOD %removal	OIL & GREASE mg/l	OIL & GREASE lbs/day
1										
2	6.77	66	140	1.4	4585	9726	-57%	-13%		
3										
4										
5										
6										
7										
8										
9	6.98	28	71	1.8	2629	6667	76%	18%		
10										
11										
12										
13										
14										
15	6.83	56	189	1.3	3979	13430	-8%	-42%		
16										
17										
18										
19										
20										
21										
22										
23	6.83	56	92	1.3	3816	6269	-8%	-11%		
24										
25										
26										
27										
28										
29										
30									33.4	2370.5
31									33.4	2370.5
AVG	6.85	52	123	1.5	3752	9023	1%	-12%	33.4	2370.5
MIN	6.77	28	71	1.3	2629	6269	-57%	-42%	33.4	2370.5
MAX	6.98	66	189	1.8	4585	13430	76%	18%	33.4	2370.5

PERMIT LOCATION (Include location if different)

NAME: Guam Waterworks Authority  
ADDRESS: P.O. Box 3010

FACILITY: Agaña Sewage Treatment Plant  
LOCATION: Agaña, Guam

NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES)  
DISCHARGE MONITORING REPORT (DMR)

Form Approved.  
OMB No. 2040-0004  
Approval expires 9-30-85

(2-16) GU0020087  
PERMIT NUMBER

(17-19) 001  
DISCHARGE NUMBER

MONITORING PERIOD

YEAR	MO	DAY	YEAR	MO	DAY
2002	2	1	2002	2	28

FROM (20-21) (22-23) (24-25) TO (26-27) (28-29) (30-31)

NOTE: Read instructions before completing this form.

PARAMETER (32-37)	(3 Card only) (46-53)			QUANTITY OR LOADING (54-61)			(4 Card only) (39-45)			QUANTITY OR CONCENTRATION (54-61)			NO. EX. (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
	AVERAGE	MAXIMUM	UNITS	AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS					
FLOW	9.0	10.4	MGD											30/31	HOURLY
INFLUENT BOD	6858	8772	lbs/day				62	97	114					4/31	COMPOSITE
EFFLUENT BOD	8209	9226	lbs/day				96	111	134			2	4/31	COMPOSITE	COMPOSITE
INFLUENT SUSPENDED SOLIDS	8011	16022	lbs/day					80	160				1/7	COMPOSITE	COMPOSITE
EFFLUENT SUSPENDED SOLIDS	3665	3928	lbs/day				42	50	56				15/31	COMPOSITE	COMPOSITE
EFFLUENT SETTLABLE SOLIDS	3220	4246	lbs/day				24	43	54				15/31	COMPOSITE	COMPOSITE
EFFLUENT OIL & GREASE	6008	12016	lbs/day					60	120				1/7	COMPOSITE	COMPOSITE
EFFLUENT PH	3426	3426	lbs/day				0.3	2.2	3.3			4	15/31	DISCRETE	DISCRETE
							43.8	43.8	43.8				1/7	DISCRETE	DISCRETE
							6.8	6.9	7.0				1/30	DISCRETE	DISCRETE
							7.0		9.0				15/31	DISCRETE	DISCRETE
													1/7	DISCRETE	DISCRETE

(I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED INFORMATION IS TRUE ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT SEE: 18 USC §1001 AND 33 USC §1319 (Penalties under these statutes may include fines up to \$10,000 and or a maximum imprisonment of between 6 months and 5 years)

NAME/TITLE PRINCIPLE EXECUTIVE OFFICER  
GIL A. SHINOHARA  
ACTING GENERAL MANAGER,  
GWA

TELEPHONE  
671 479-7844

DATE  
MAY 03 2002

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

AREA CODE  
671

NUMBER  
479-7844

YEAR  
2002

MO  
03

DAY  
03

5/2/02

TYPED OR PRINTED  
COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)  
BOD (mg/L) monthly average  
BOD (lbs/day) monthly average  
SETTLABLE SOLIDS (mL/L) daily max (3 violations) and monthly average

Explanation of violations attached at end of DMR's

INFLUENT

DATE	pH	SUSP. SOLIDS mg/l	BOD mg/l	SETTL. SOLID ml/l	SUSP. SOLIDS lbs/day	BOD lbs/day	FLOW mgd
1							8.62
2							8.05
3							10.37
4							8.70
5	7.09	54	114	2.1	3531	7454	9.47
6							7.84
7							9.24
8							8.82
9							9.02
10							8.33
11							9.59
12	6.87	46	107	10.1	3771	8772	9.91
13							9.83
14							9.33
15							8.32
16							8.88
17							9.22
18							9.32
19							9.09
20	7.03	56	62	3.5	3928	4349	8.41
21							9.35
22							9.12
23							9.70
24							8.64
25							9.68
26							8.22
27	7.19	42	104	0.4	3429	8491	9.79
28							9.38
29							
30							
31							
AVG	7.05	50	97	4.03	3665	6858	9.05
MIN	6.87	42	62	0.40	3429	4349	7.84
MAX	7.19	56	114	10.1	3928	8772	10.37

VIOLATIONS

BOD (mg/L) monthly average  
 BOD (lbs/day) monthly average  
 SETTLEABLE SOLIDS (mL/L) daily max (3 violations) and monthly average

EFFLUENT

DATE	pH	SUSP. SOLIDS mg/l	BOD mg/l	SETTL. SOLID ml/l	SUSP. SOLIDS lbs/day	BOD lbs/day	SUSP. SOLIDS %removal	BOD %removal	OIL & GREASE mg/l	OIL & GREASE lbs/day
1										
2										
3										
4										
5										
6	6.85	24	134	3.3	1569	8762	56%	-18%		
7										
8										
9										
10										
11										
12										
13	6.80	40	99	2.5	3279	8116	13%	7%		
14										
15										
16										
17										
18										
19										
20	6.83	54	96	2.5	3788	6733	4%	-55%		
21										
22										
23										
24										
25										
26										
27	7.02	52	113	0.3	4246	9226	-24%	-9%		
28										
29										
30									43.8	3426.44
31										
AVG	6.88	43	111	2.2	3220	8209	12%	-18%	43.8	3426
MIN	6.80	24	96	0.3	1569	6733	-24%	-55%	43.8	3426
MAX	7.02	54	134	3.3	4246	9226	56%	7%	43.8	3426

PERMIT REQUIREMENTS

MAX	12	60	80	1	6008	8011
monthly avg		120	160	2	12016	16022
daily max						

PERMITTEE NAME/ADDRESS (Include facility Name and location if Different)

NAME: Guam Waterworks Authority  
ADDRESS: P.O. Box 3010

FACILITY: Agana Sewage Treatment Plant  
LOCATION: Agana, Guam

NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES)  
DISCHARGE MONITORING REPORT (DMR)

(2-16)  
GU0020087  
PERMIT NUMBER

(17-19)  
001  
DISCHARGE NUMBER

MONITORING PERIOD  
FROM YEAR MO DAY TO YEAR MO DAY  
(20-21) (22-23) (24-25) (26-27) (28-29) (30-31)  
2002 3 1 2002 3 31

Form Approved.  
OMB No. 2040-0004  
Approval expires 9-30-85

NOTE: Read instructions before completing this form.

PARAMETER (32-37)	SAMPLE MEASUREMENT PERMIT REQUIREMENT	(3 Card only) (46-53)		QUANTITY OR LOADING (54-61)		QUANTITY OR CONCENTRATION (46-53)		UNITS	NO. EX. (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
		AVERAGE	MAXIMUM	MAXIMUM	AVERAGE	MINIMUM	MAXIMUM				
FLOW		8.9	10.2	MGD				mgd		30/31	HOURLY
INFLUENT BOD		6452	9691	lbs/day		48	80	mg/l		4/31	COMPOSITE
EFFLUENT BOD		6498	9199	lbs/day		59	91	mg/l	1	4/31	COMPOSITE
INFLUENT SUSPENDED SOLIDS		8011	16022	lbs/day		42	80	mg/l		1/7	COMPOSITE
EFFLUENT SUSPENDED SOLIDS		4146	5731	lbs/day			59	mg/l		15/31	COMPOSITE
EFFLUENT SETTLABLE SOLIDS		5114	6679	lbs/day		48	72	mg/l	1	15/31	COMPOSITE
EFFLUENT OIL & GREASE		6008	12016			2.5	3.2	ml/l	5	15/31	DISCRETE
EFFLUENT pH		4005	4005	lbs/day		48.6	48.6	mg/l		1/7	DISCRETE
						6.8	6.9			1/31	DISCRETE
						7.0	9.0			1/30	DISCRETE
										15/31	DISCRETE
										1/7	DISCRETE
I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT SEE, 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to \$10,000 and or a maximum imprisonment of between 6 months and 5 years)											
NAME/TITLE PRINCIPLE EXECUTIVE OFFICER											
GIL A. SHINOHARA ACTING GENERAL MANAGER, GWA											
TELEPHONE											
DATE											
MAY 03 2002											
AREA CODE											
NUMBER											
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT											
TYPED OR PRINTED											
COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)											
SUSPENDED SOLIDS (mg/L) monthly average											
BOD (mg/L) monthly average											
SETTLABLE SOLIDS (mL/L) daily max (4 violations) and monthly average											

5/2/02

Explanation of violations attached at end of DMR's



ACANA TREATMENT PLANT WASTEWATER RESULTS  
THE MONTH OF MARCH 2002

INFLUENT

DATE	pH	SUSP. SOLIDS mg/l	BOD mg/l	SETTL. SOLID ml/l	SUSP. SOLIDS lbs/day	BOD lbs/day	FLOW mgd
1							8.83
2							9.67
3							8.80
4							9.33
5							8.78
6	7.14	42	83	4.0	3093	6112	8.83
7							9.33
8							8.78
9							8.51
10							8.56
11							8.80
12							8.98
13	7.09	42	50	4.7	2984	3553	8.52
14							9.04
15							8.82
16							8.66
17							9.13
18							9.32
19							8.42
20	7.24	68	138	7.7	4775	9691	8.42
21							10.24
22							9.07
23							8.78
24							9.25
25							9.88
26	7.08	82	48	3.9	5731	3355	8.38
27							8.80
28							8.56
29							8.80
30							9.00
31							9.07
AVG	7.14	59	80	5.08	4146	6452	8.94
MIN	7.08	42	48	3.90	2984	3355	8.38
MAX	7.24	82	138	7.7	5731	9691	10.24

VIOLATIONS

SUSPENDED SOLIDS (mg/L) monthly average  
BOD (mg/L) monthly average  
SETTLABLE SOLIDS (mL/L) daily max (4 violations) and monthly average

EFFLUENT

DATE	pH	SUSP. SOLIDS mg/l	BOD mg/l	SETTL. SOLID ml/l	SUSP. SOLIDS lbs/day	BOD lbs/day	SUSP. SOLIDS %removal	BOD %removal	OIL & GREASE mg/l	OIL & GREASE lbs/day
1										
2										
3										
4										
5										
6	6.91	54	91	3.8	3977	6701	-29%	-10%		
7										
8										
9										
10										
11										
12										
13	6.83	94	84	2.8	6679	5969	-124%	-68%		
14										
15										
16										
17										
18										
19										
20	6.86	46	131	2.5	3230	9199	32%	5%		
21										
22										
23										
24										
25										
26	6.92	94	59	3.8	6570	4123	-15%	-23%	48.6	4004.6011
27										
28										
29										
30										
31										
AVG	6.88	72	91	3.2	5114	6498	-34%	-24%	48.6	4004.6
MIN	6.83	46	59	2.5	3230	4123	-124%	-68%	48.6	4004.6
MAX	6.92	94	131	3.8	6679	9199	32%	5%	48.6	4004.6

PERMIT REQUIREMENTS

MAX	monthly avg	60	80	1	6008	8011
12	daily max	120	160	2	12016	16022

PERMITTEE NAME AND ADDRESS (Include facility Name/Location if Different)

NAME: Guam Waterworks Authority  
ADDRESS: P.O. Box 3010  
AGANA, GUAM 96932

LOCATION: Rt 2, Agat, Guam

NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES)  
DISCHARGE MONITORING REPORT (DMR)

Form Approved,  
OMB No. 2040-0004  
Approval expires 9-30-85

(2-16)		(17-19)	
GU00202222		001	
PERMIT NUMBER		DISCHARGE NUMBER	

MONITORING PERIOD				
FROM	YEAR	MO	DAY	
	2002	1	1	
	TO	YEAR	MO	DAY
		2002	1	31

NOTE: Read Instructions before completing this form.

PARAMETER (32-37)	(3 Card only) (46-53)			QUANTITY OR LOADING (54-61)			(4 Card only) (38-45)			QUANTITY OR CONCENTRATION (54-61)			NO. EX. (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
	AVERAGE	MAXIMUM	UNITS	MAXIMUM	MINIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS	MAXIMUM	AVERAGE			
FLOW	SAMPLE MEASUREMENT	1.29		2.04		mgd								30/30	HOURLY
	PERMIT REQUIREMENT			1.50											
INFLUENT BOD	SAMPLE MEASUREMENT	750		984		lbs/day	47	53	59	mg/l				4/30	COMPOSITE
	PERMIT REQUIREMENT														
EFFLUENT BOD	SAMPLE MEASUREMENT	492		751		lbs/day	18	33	45	mg/l			5	4/30	COMPOSITE
	PERMIT REQUIREMENT			1752				70	140					1/7	COMPOSITE
INFLUENT SUSPENDED SOLIDS	SAMPLE MEASUREMENT	876		1429		lbs/day	6	36	84	mg/l				4/30	COMPOSITE
	PERMIT REQUIREMENT														
EFFLUENT SUSPENDED SOLIDS	SAMPLE MEASUREMENT	462		1259		lbs/day	10	30	74	mg/l			4	4/30	COMPOSITE
	PERMIT REQUIREMENT			1628				65	130					1/7	COMPOSITE
EFFLUENT SETTLEABLE SOLIDS	SAMPLE MEASUREMENT	814					0.35	1.7	3.0	ml/l				4/30	DISCRETE
	PERMIT REQUIREMENT							1.0	2.0					1/7	DISCRETE
FECAL COLIFORM BACTERIA	SAMPLE MEASUREMENT						> 24192	> 26500	TNTC	CFU/100ml			5	3/31	DISCRETE
	PERMIT REQUIREMENT							200	400					1/7	DISCRETE
ENTEROCOCCI	SAMPLE MEASUREMENT						740	> 38641	> 24192	CFU/100ml			5	2/31	DISCRETE
	PERMIT REQUIREMENT							35	57					1/7	DISCRETE
AMMONIA	SAMPLE MEASUREMENT						4	6.3	8.9	mg/l				2/31	DISCRETE
	PERMIT REQUIREMENT													1/7	DISCRETE
EFFLUENT pH	SAMPLE MEASUREMENT						7.2	7.3	7.4	UNITS				4/30	DISCRETE
	PERMIT REQUIREMENT						6.0		9.0					1/7	DISCRETE
CHLORINE RESIDUAL	SAMPLE MEASUREMENT						0.01	0.00	0.01	µg/l				4/30	DISCRETE
	PERMIT REQUIREMENT							7.5	12.3						MONTHLY

COPY

NAME/TITLE	PRINCIPLE EXECUTIVE OFFICER	MEASUREMENT PERMIT	0.092	0.092	lbs/day	11.000	11.000	11.000	µg/l	3	1/30	MONTHLY
NICKEL	PERMIT	REQUIREMENT	0.037	0.060			2.900	4.800				
	SAMPLE	MEASUREMENT	0.043	0.169			5.100	5.100			1/30	MONTHLY
	PERMIT	REQUIREMENT	0.103	0.292			8.200	13.000				
	SAMPLE	MEASUREMENT	0.724	1.190			35.000	35.000			1/30	MONTHLY
ZINC	PERMIT	REQUIREMENT	2.419	2.419			58.000	95.000				
	SAMPLE	MEASUREMENT	1.520	2.500			290	290		3	1/30	MONTHLY
	PERMIT	REQUIREMENT					120.000	200.000				
	SAMPLE	MEASUREMENT									1/30	MONTHLY
ALUMINUM	PERMIT	REQUIREMENT										
	SAMPLE	MEASUREMENT									1/30	MONTHLY
	PERMIT	REQUIREMENT										
	SAMPLE	MEASUREMENT									1/30	MONTHLY
OTHER HEAVY METALS	PERMIT	REQUIREMENT										
	SAMPLE	MEASUREMENT									1/30	MONTHLY
	PERMIT	REQUIREMENT										
	SAMPLE	MEASUREMENT									1/30	MONTHLY
4,4-DDE	PERMIT	REQUIREMENT										
	SAMPLE	MEASUREMENT									1/30	MONTHLY
	PERMIT	REQUIREMENT										
	SAMPLE	MEASUREMENT									1/30	MONTHLY
4,4-DDD	PERMIT	REQUIREMENT										
	SAMPLE	MEASUREMENT									1/30	MONTHLY
	PERMIT	REQUIREMENT										
	SAMPLE	MEASUREMENT									1/30	MONTHLY
CHLORDANE	PERMIT	REQUIREMENT										
	SAMPLE	MEASUREMENT									1/30	MONTHLY
	PERMIT	REQUIREMENT										
	SAMPLE	MEASUREMENT									1/30	MONTHLY
DIELDRIN	PERMIT	REQUIREMENT										
	SAMPLE	MEASUREMENT									1/30	MONTHLY
	PERMIT	REQUIREMENT										
	SAMPLE	MEASUREMENT									1/30	MONTHLY
PESTICIDES	PERMIT	REQUIREMENT										
	SAMPLE	MEASUREMENT									1/30	MONTHLY
	PERMIT	REQUIREMENT										
	SAMPLE	MEASUREMENT									1/30	MONTHLY
WHOLE EFFLUENT TOXICITY	PERMIT	REQUIREMENT										
	SAMPLE	MEASUREMENT									1/30	MONTHLY
	PERMIT	REQUIREMENT										
	SAMPLE	MEASUREMENT									1/30	MONTHLY
OIL & GREASE	PERMIT	REQUIREMENT										
	SAMPLE	MEASUREMENT									1/90	QUARTERLY
	PERMIT	REQUIREMENT										
	SAMPLE	MEASUREMENT									1/30	MONTHLY

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED INFORMATION IS TRUE ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT SEE, 18 USC §1001 AND 33 USC §1319 (Penalties under these statutes may include fines up to \$10,000 and or a maximum imprisonment of between 6 months and 5 years)

GIL A. SHINOHARA  
ACTING GENERAL MANAGER,  
GWA

TYPED OR PRINTED  
VIOLATIONS

SUSPENDED SOLIDS DAILY MAX EXCEEDED (1 VIOLATION)  
BOD (lbs/day) DAILY MAX (2 VIOLATIONS) AND MONTHLY AVERAGE  
SUSPENDED SOLIDS % REDUCTION LESS THAN 85%  
BOD % REDUCTION LESS THAN 85%  
BOD (mg/l) MONTHLY AVERAGE  
SUSPENDED SOLIDS (lbs/day) DAILY MAX (1 VIOLATION) AND MONTHLY AVERAGE

ENTEROCOCCCI daily max (4 violations) and monthly average  
FECAL COLIFORM daily max (4 violations) and monthly average  
COPPER (ug/L) daily max and monthly average  
ALUMINUM (ug/L) monthly average  
COPPER (lbs/day) daily max  
ALUMINUM (lbs/day) monthly average

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

AREA CODE

NUMBER

YEAR

MO

DAY

671 479-7676 MAY 03 2012

85/2/02

AGAT TREATMENT PLANT WASTEWATER RESULTS  
FOR THE MONTH OF JANUARY 2002

INFLUENT

DATE	pH	SUSP. SOLIDS mg/l	BOD mg/l	SETTL. SOLID ml/l	SUSP. SOLIDS lbs/day	BOD lbs/day	FLOW mgd
1							
2	7.25	34	50	5.0	425	626	1.00
3							1.50
4							1.00
5							1.00
6							1.50
7							1.00
8							1.00
9	7.10	6	59	5.2	100	984	2.00
10							2.00
11							1.50
12							1.50
13							1.70
14							1.60
15							1.60
16	7.22	20	57	5.8	207	589	1.00
17							1.24
18							2.00
19							1.00
20							1.00
21							1.40
22							1.00
23	7.33	84	47	8.5	1429	800	1.00
24							2.04
25							1.00
26							1.00
27							1.00
28							1.00
29							1.00
30							1.00
31							1.00
AVG	7.23	36	53	6.1	540	750	1.293
MIN	7.10	6	47	5.0	100	589	1.000
MAX	7.33	84	59	8.5	1429	984	2.040

EFFLUENT

DATE	pH	SUSP. SOLIDS mg/l	BOD mg/l	SETTL. SOLID ml/l	SUSP. SOLIDS lbs/day	BOD lbs/day	SUSP. SOLIDS %removal	BOD %removal
1								
2	7.43	20	24	0.4	250	300	41%	52%
3								
4								
5								
6								
7								
8								
9	7.22	14	45	3.0	234	751	-133%	24%
10								
11								
12								
13								
14								
15								
16	7.21	10	18	3.0	103	186	50%	68%
17								
18								
19								
20								
21								
22								
23	7.26	74	43	0.5	1259	732	12%	9%
24								
25								
26								
27								
28								
29								
30								
31								
AVG	7.28	30	33	1.7	462	492	-8%	-38%
MIN	7.21	10	18	0.4	103	186	-133%	9%
MAX	7.43	74	45	3.0	1259	751	50%	68%

PERMIT REQUIREMENTS

monthly avg	6	30	30	375	375	85%	85%
daily max	9	45	45	563	563		

VIOLATIONS

SUSPENDED SOLIDS DAILY MAX EXCEEDED (1 VIOLATION)  
BOD (lbs/day) DAILY MAX (2 VIOLATIONS) AND MONTHLY AVERAGE  
SUSPENDED SOLIDS % REDUCTION LESS THAN 85%  
BOD % REDUCTION LESS THAN 85%  
BOD (mg/l) MONTHLY AVERAGE  
SUSPENDED SOLIDS (lbs/day) DAILY MAX (1 VIOLATION) AND MONTHLY AVERAGE

ENTEROCOCCI daily max (4 violations) and monthly average  
FECAL COLIFORM daily max (4 violations) and monthly average  
COPPER (ug/L) daily max and monthly average  
ALUMINUM (ug/L) monthly average  
COPPER (lbs/day) daily max  
ALUMINUM (lbs/day) monthly average



WASTEWATER TREATMENT PLANT WASTEWATER RESULTS  
FOR THE MONTH OF NOVEMBER 2001

EFFLUENT (CONTINUED)

DATE	AMMONIA	ENTEROCOCCI CFU/100 ml	FECAL COLIFORM FC/100ml	CHLORINE RESIDUAL µg/l	CHLORINE RESIDUAL lbs/day	COPPER µg/l	NICKEL µg/l	ZINC µg/l	ALUMINUM µg/l
1									
2	8.91	57480	31,000	0.01	0.00				
3									
4									
5									
6									
7									
8									
9	3.53	72150	TNTC	0.01	0.00				
10									
11									
12									
13									
14									
15									
16	6.37	740	22,000	0.01	0.00				
17									
18									
19									
20									
21									
22									
23	N/S	> 24192	TNTC	0.01	0.00	11	5.1	35	290
24									
25									
26									
27									
28									
29									
30									
31									
AVG	6.27	> 38641	> 26500	0.01	0.00	11.00	5.10	35.00	290.00
MIN	3.53	740.00	> 24192	0.01	0.00	11.00	5.10	35.00	290.00
MAX	8.91	> 24192	TNTC	0.01	0.00	11.00	5.10	35.00	290.00

35/100ml	200/100ml	7.50	0.094	2.9	8.2	58	120
57/100ml	400/100ml	12.3	0.154	4.8	13	95	200

AGAT TREATMENT PLANT WASTEWATER RESULTS  
FOR THE MONTH OF DECEMBER 2001

EFFLUENT (CONTINUED)

DATE	COPPER lbs/day	NICKEL lbs/day	ZINC lbs/day	ALUMINUM lbs/day	4,4-DDE µg/l	4,4-DDD µg/l	CHLORDANE µg/l	DIELDRIN µg/l
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22	0.09174	0.042534	0.2919	2.4186	sample was not analyzed for pesticides or PCB's because samples were received from the courier past the allowable holding time (see attachment B.1)			
23								
24								
25								
26								
27								
28								
29								
30								
31								
AVG	0.09	0.04	0.29	2				
MIN	0.09	0.04	0.29	2				
MAX	0.09	0.04	0.29	2				

0.037	0.103	0.724	1.52
0.06	0.169	1.19	2.5


AGAT TREATMENT PLANT WASTEWATER RESULTS  
FOR THE MONTH OF DECEMBER 2001

EFFLUENT (CONTINUED)

DATE	OTHER HEAVY METALS µg/l	PESTICIDES µg/l	WHOLE EFFLU- ENT TOXICITY TuC	OIL & GREASE mg/l
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22	sample was not analyzed for pesticides or PCB's because samples were received from the courier past the allowable holding time		31.75	
23			(see attachment B.3)	
24				
25				
26				11.3
27				
28				
29				
30				
31				
AVG				
MIN				
MAX				

PERMITTEE NAME/ADDRESS (Include facility Name/Location if Different)

NAME: Guam Waterworks Authority  
ADDRESS: P.O. Box 3010  
AGANA, GUAM 96932

LOCATION: Rt. 2, Agat, Guam

NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES)  
DISCHARGE MONITORING REPORT (DMR)

Form Approved.  
OMB No. 2040-0004  
Approval expires 9-30-85

(2-16)		(17-19)	
GU0020222	001	DISCHARGE NUMBER	
PERMIT NUMBER			

MONITORING PERIOD			
FROM	YEAR	MO	DAY
	2001	2	28
(20-21) (22-23) (24-25)			
TO	YEAR	MO	DAY
	2001	2	28
(26-27) (28-29) (30-31)			

NOTE: Read instructions before completing this form.

PARAMETER (32-37)	(3 Card only) (46-53)		QUANTITY OR LOADING (54-61)		(4 Card only) (38-45)		QUANTITY OR CONCENTRATION (54-61)		NO. EX. (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
	AVERAGE	MEASUREMENT PERMIT REQUIREMENT	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
FLOW	1.20		1.50	mgd						30/30	HOURLY
			1.50								
INFLUENT BOD	1028		1249	lbs/day	77	95	128	mg/l		4/30	COMPOSITE
EFFLUENT BOD	722		917	lbs/day	38	66	94	mg/l	7	4/30	COMPOSITE
INFLUENT SUSPENDED SOLIDS	876		1752	lbs/day		70	140	mg/l		1/7	COMPOSITE
EFFLUENT SUSPENDED SOLIDS	701		956	lbs/day	18	64	98	mg/l		4/30	COMPOSITE
EFFLUENT SETTLABLE SOLIDS	658		1176	lbs/day	34	57	94	mg/l	5	4/30	COMPOSITE
EFFLUENT SETTLABLE SOLIDS	814		1628		34	64.0	94.0	ml/l		1/7	COMPOSITE
FECAL COLIFORM BACTERIA						1.0	2.0			4/30	DISCRETE
FECAL COLIFORM BACTERIA					150,000	960,000	TNTC	CFU/100ml	5	3/31	DISCRETE
ENTEROCOCCI					150,000	200	400	CFU/100ml		1/7	DISCRETE
AMMONIA					17,523	35	57	CFU/100ml	5	2/31	DISCRETE
AMMONIA					3	6.9	10.9	mg/l		1/7	DISCRETE
EFFLUENT pH					7.2	7.2	7.3	UNITS		2/31	DISCRETE
EFFLUENT pH					6.0	9.0	9.0	UNITS		1/7	DISCRETE
CHLORINE RESIDUAL					0.00	0.00	0.00	ug/l		4/30	DISCRETE
CHLORINE RESIDUAL							0.01				MONTHLY





AGAT TREATMENT PLANT WASTEWATER RESULTS  
FOR THE MONTH OF FEBRUARY 2002

INFLUENT

DATE	pH	SUSP. SOLIDS mg/l	BOD mg/l	SETTL. SOLID ml/l	SUSP. SOLIDS lbs/day	BOD lbs/day	FLOW mgd
1							1.000
2							1.000
3							1.000
4							1.000
5							1.000
6	7.25	98	128	N/S	956	1249	1.000
7							1.170
8							1.000
9							1.000
10							1.500
11							1.000
12							1.000
13							1.000
14							1.500
15							1.500
16							1.500
17							1.500
18							1.000
19							1.000
20	7.39	76	80	76.0	951	1001	1.000
21							1.500
22							1.500
23							1.000
24							1.000
25							1.000
26							1.000
27	6.99	18	77	18.0	195	835	1.000
28							1.300
29							1.000
30							
31							
AVG	7.21	64	95	47.0	701	1028	1.195
MIN	6.99	18	77	18.0	195	835	1.000
MAX	7.39	98	128	76.0	956	1249	1.500

Agat STP not processing wastewater (2/13/02)

EFFLUENT

DATE	pH	SUSP. SOLIDS mg/l	BOD mg/l	SETTL. SOLID ml/l	SUSP. SOLIDS lbs/day	BOD lbs/day	SUSP. SOLIDS %removal	BOD %removal
1								
2								
3								
4								
5								
6	7.19	44	94	N/S	429	917	55%	27%
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20	7.16	94	67	94.0	1176	838	-24%	16%
21								
22								
23								
24								
25								
26								
27	7.33	34	38	34.0	369	412	-89%	51%
28								
29								
30								
31								
AVG	7.23	57	66	64.0	658	722	-19%	31%
MIN	7.16	34	38	34.0	369	412	-89%	16%
MAX	7.33	94	94	94.0	1176	917	55%	51%

Agat STP not processing wastewater (2/13/02)

PERMIT REQUIREMENTS

monthly avg	6	30	30	375	375	85%	85%
daily max	9	45	45	563	563		

VIOLATIONS

COMMENTS:

Suspended solids (mg/l and lbs/day) daily max (1 violation each) and monthly average  
BOD (mg/l and lbs/day) daily max (2 violations each) and monthly average  
BOD % removal less than 85%  
Suspended Solids % removal less than 85%  
ENTEROCOCCI DAILY MAX (4 VIOLATIONS) AND MONTHLY AVERAGE  
FECAL COLIFORM DAILY MAX (4 VIOLATIONS) AND MONTHLY AVERAGE

AGAT TREATMENT PLANT WASTEWATER RESULTS  
FOR THE MONTH OF FEBRUARY 2002

EFFLUENT (CONTINUED)

DATE	AMMONIA mg/L	ENTEROCOCCI CFU/100 ml	FECAL COLIFORM FC/100ml	CHLORINE RESIDUAL µg/l	CHLORINE RESIDUAL lbs/day	COPPER µg/l	NICKEL µg/l	ZINC µg/l	ALUMINUM µg/l
1									
2									
3									
4									
5									
6									
7	2.64	22300	TNTC	0.00	0.00				
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20	10.92	19660	150,000	0.00	0.00				
21									
22									
23									
24									
25									
26									
27	7.05	10710	1,770,000	0.00	0.00				
28									
29									
30									
31									
AVG	6.87	17523.33	960000.00	0.00	0.00				
MIN	2.64	10710.00	150000.00	0.00	0.00				
MAX	10.92	22300.00	TNTC	0.00	0.00				

PESTICIDE/PCMHOLE EFFLUENT TOXICITY SAMPLING WAS NOT PERFORMED  
THIS MONTH AS AGAT STP WAS NOT PROCESSING WASTEWATER  
ON THE SCHEDULED SAMPLING DATE

35/100ml	200/100ml	7.50	0.094	2.9	8.2	58	120
57/100ml	400/100ml	12.3	0.154	4.8	13	95	200

AGAT TREATMENT PLANT WASTEWATER RESULTS  
FOR THE MONTH OF FEBRUARY 2002

EFFLUENT (CONTINUED)

DATE	COPPER lbs/day	NICKEL lbs/day	ZINC lbs/day	ALUMINUM lbs/day	4,4-DDE µg/l	4,4-DDD µg/l	CHLORDANE µg/l	DIELDRIN µg/l
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								
AVG								
MIN								
MAX								

PESTICIDE/PCWHOLE EFFLUENT TOXICITY SAMPLING WAS NOT PERFORMED  
THIS MONTH AS AGAT STP WAS NOT PROCESSING WASTEWATER  
ON THE SCHEDULED SAMPLING DATE

0.037	0.103	0.724	1.52
0.06	0.189	1.19	2.5



AGAT TREATMENT PLANT WASTEWATER RESULTS  
FOR THE MONTH OF FEBRUARY 2002

EFFLUENT (CONTINUED)

DATE	OTHER HEAVY METALS µg/l	PESTICIDES µg/l	WHOLE EFFLU- ENT TOXICITY TuC	OIL & GREASE mg/l
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				
AVG				
MIN				
MAX				

13.20
13.20
13.20





NAME/TITLE	PRINCIPLE EXECUTIVE OFFICER	MEASUREMENT	0.133	0.133	lbs/day	9,400	9,400	9,400	µg/l	2	1/30	DATE
COPPER	PERMIT REQUIREMENT	0.037	0.060									MONTHLY
NICKEL	SAMPLE MEASUREMENT	0.000	0.000									MONTHLY
ZINC	PERMIT REQUIREMENT	0.103	0.169									MONTHLY
ALUMINUM	SAMPLE MEASUREMENT	0.652	0.652									MONTHLY
OTHER HEAVY METALS	PERMIT REQUIREMENT	0.724	1.190									MONTHLY
4,4-DDE	SAMPLE MEASUREMENT	5.813	5.813									MONTHLY
4,4-DDD	PERMIT REQUIREMENT	1.520	2.500									MONTHLY
CHLORDANE	SAMPLE MEASUREMENT											MONTHLY
DIELDRIN	PERMIT REQUIREMENT											MONTHLY
PESTICIDES	SAMPLE MEASUREMENT											MONTHLY
WHOLE EFFLUENT TOXICITY	PERMIT REQUIREMENT											MONTHLY
OIL & GREASE	SAMPLE MEASUREMENT											QUARTERLY
<p>CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED INFORMATION IS TRUE ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT SEE 18 USC §1001 AND 33 USC §1319 (Penalties under these statutes may include fines up to \$10,000 and or a maximum imprisonment of between 6 months and 5 years)</p>												
<p>SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT</p> <p>671 479-78 MAY 03 2002</p>												
<p>TELEPHONE</p> <p>DATE</p>												
<p>AREA CODE</p> <p>NUMBER</p> <p>YEAR</p> <p>MO</p> <p>DAY</p>												

5/2/02

TYPED OR PRINTED  
GIL A. SHINOHARA  
ACTING GENERAL MANAGER  
GWA

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SUSPENDED SOLIDS (mg/l and lbs/day) daily max (1 violation each) and monthly average  
BOD % removal less than 85%  
Suspended Solids % removal less than 85%  
ENTEROCOCCI daily max (4 violations) and monthly average  
FECAL COLIFORM daily max (4 violations) and monthly average  
COPPER (ug/l and lbs/day) daily max (1 violation each)  
ALUMINUM (ug/l and lbs/day) daily max (1 violation each)

AGAT TREATMENT PLANT WASTEWATER RESULTS  
FOR THE MONTH OF MARCH 2002

INFLUENT

DATE	pH	SUSP. SOLIDS mg/l	BOD mg/l	SETTL. SOLID m/l	SUSP. SOLIDS lbs/day	BOD lbs/day	FLOW mgd
1							1,500
2							1,000
3							1,000
4							1,000
5							1,000
6	7.36	22	54	22.0	183	450	1,000
7							1,000
8							1,000
9							1,000
10							1,500
11							1,000
12	7.28	52	35	52.0	434	292	1,000
13							1,000
14							1,700
15							1,500
16							1,000
17							1,000
18							1,000
19							1,600
20	7.18	112	35	n/s	1401	438	1,500
21							1,000
22							1,000
23							1,700
24							1,000
25							1,000
26							1,000
27	7.18	176	41	6.5	2495	581	1,600
28							1,700
29							1,200
30							1,500
31							1,500
AVG	7.25	91	41	26.8	1128	440	1,258
MIN	7.18	22	35	6.5	183	292	1,000
MAX	7.36	176	54	52.0	2495	581	1,700

EFFLUENT

DATE	pH	SUSP. SOLIDS mg/l	BOD mg/l	SETTL. SOLID m/l	SUSP. SOLIDS lbs/day	BOD lbs/day	SUSP. SOLIDS %removal	BOD %removal
1								
2								
3								
4								
5								
6	7.30	16	25	16.0	133	209	27%	54%
7								
8								
9								
10								
11								
12								
13	7.49	32	27	32.0	267	225	38%	23%
14								
15								
16								
17								
18								
19								
20	7.81	136	27	n/s	1701	338	-21%	23%
21								
22								
23								
24								
25								
26								
27	7.73	34	25	0.4	482	354	81%	39%
28								
29								
30								
31								
AVG	7.58	56	26	16.1	646	281	31%	35%
MIN	7.30	16	25	0.4	133	209	-21%	23%
MAX	7.81	136	27	32.0	1701	354	81%	54%

PERMIT REQUIREMENTS

monthly avg	6	30	30	375	375	85%	85%
daily max	9	45	45	563	563	85%	85%

VIOLATIONS

SUSPENDED SOLIDS (mg/l and lbs/day) daily max (1 violation each) and monthly average  
 BOD % removal less than 85%  
 Suspended Solids % removal less than 85%  
 ENTEROCOCCI daily max (4 violations) and monthly average  
 FECAL COLIFORM daily max (4 violations) and monthly average  
 COPPER (ug/l and lbs/day) daily max (1 violation each)  
 ALUMINUM (ug/l and lbs/day) daily max (1 violation each)

COMMENTS:

WASTEWATER TREATMENT PLANT WASTEWATER RESULTS  
FOR THE MONTH OF MARCH 2002

EFFLUENT (CONTINUED)

DATE	AMMONIA	ENTEROCOCCI CFU/100 ml	FECAL COLIFORM FC/100ml	CHLORINE RESIDUAL µg/l	CHLORINE RESIDUAL lbs/day	COPPER µg/l	NICKEL µg/l	ZINC µg/l	ALUMINUM µg/l
1									
2									
3									
4									
5									
6	7.28	16090	270,000	0.00	0.00				
7									
8									
9									
10									
11									
12									
13	8.37	96060	70,000	0.00	0.00				
14									
15									
16						9.4	NODI	46	410
17									
18									
19									
20	12.00	14230	TNTC	0.00	0.00				
21									
22									
23									
24									
25									
26									
27	12.60	68330	150,000	0.00	0.00				
28									
29									
30									
31									
AVG	10.06	> 15662	163333.00	0.00	0.00	9.40	NODI	46.00	410.00
MIN	7.28	6890.00	70000.00	0.00	0.00	9.40	NODI	46.00	410.00
MAX	12.60	> 24192	TNTC	0.00	0.00	9.40	NODI	46.00	410.00

35/100ml	200/100ml	7.50	0.094	2.9	8.2	58	120
57/100ml	400/100ml	12.3	0.154	4.8	13	95	200



AGAT TREATMENT PLANT WASTEWATER RESULTS  
FOR THE MONTH OF MARCH 2002

EFFLUENT (CONTINUED)

DATE	COPPER lbs/day	NICKEL lbs/day	ZINC lbs/day	ALUMINUM lbs/day	4,4-DDE µg/l	4,4-DDD µg/l	CHLORDANE µg/l	DIELDRIN µg/l
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14	0.1332732	NODI	0.652188	5.81298	NODI	NODI	NODI	NODI
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								
AVG	0.13		0.65	5.81				
MIN	0.13		0.65	5.81				
MAX	0.13		0.65	5.81				

0.037	0.103	0.724	1.52
0.06	0.169	1.19	2.5

AGAT TREATMENT PLANT WASTEWATER RESULTS  
FOR THE MONTH OF MARCH 2002

EFFLUENT (CONTINUED)

DATE	OTHER HEAVY METALS µg/l	PESTICIDES µg/l	WHOLE EFFLU- ENT TOXICITY TuC	OIL & GREASE mg/l
1				
2				
3				
4				
5				
6				
7				
8				4.3
9				
10				
11				
12				
13				
14	NODI	NODI	31.75	
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				
AVG			31.75	4.30
MIN			31.75	4.30
MAX			31.75	4.30



FACILITY NAME/ADDRESS (Include facility Name/Location if Different)

NAME: Guam Waterworks Authority  
ADDRESS: P.O. Box 3010  
AGANA, GUAM 96932

FACILITY: Baza Gardens Sewage Treatment Plant  
LOCATION: Talofofo, Guam

NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES)  
DISCHARGE MONITORING REPORT (DMR)

Form Approved.  
OMB No. 2040-0004  
Approval expires 9-30-85

(2-16) GU0020035  
PERMIT NUMBER

(17-19) 001  
DISCHARGE NUMBER

MONITORING PERIOD


YEAR	MO	DAY	YEAR	MO	DAY
2002	1	1	2002	1	31

FROM TO

(20-21) (22-23) (24-25) (26-27) (28-29) (30-31)

NOTE: Read instructions before completing this form.

PARAMETER (32-37)	SAMPLE MEASUREMENT PERMIT REQUIREMENT	QUANTITY OR LOADING (54-61)			QUANTITY OR CONCENTRATION (54-61)			NO. EX. (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
		(3 Card only) AVERAGE (46-53)	MAXIMUM (54-61)	UNITS	(4 Card Only) MINIMUM (38-45)	AVERAGE (46-53)	MAXIMUM (54-61)			
FLOW		0.457	0.645	mgd						
INFLUENT BOD		415	597	lbs/day	82	119	168		31/31	HOURLY
EFFLUENT BOD		144	214	lbs/day	24	41	55	5	4/31	COMPOSITE
INFLUENT SUSPENDED SOLIDS		150	225	lbs/day		30	45		1/7	COMPOSITE
EFFLUENT SUSPENDED SOLIDS		335	512	lbs/day	62	97	144		4/31	COMPOSITE
EFFLUENT SETTLABLE SOLIDS		154	262	lbs/day	20	43	66	6	4/31	COMPOSITE
		150	200			30	45		1/7	COMPOSITE
E coli BACTERIA					0	0.0	0.0		4/31	DISCRETE
ENTEROCOCCI					73,000	> 271667	TNTC	5	4/31	DISCRETE
						126	406		1/7	DISCRETE
EFFLUENT pH					3130	22663	45690	5	4/31	DISCRETE
									1/7	DISCRETE
CHLORINE RESIDUAL		0.00	0.00	lbs/day	7.3	7.5	7.6		4/31	DISCRETE
		0.031	0.06		7.0		9.0		1/7	DISCRETE
Orthophosphate (PO <sub>4</sub> -P)		157.4	318.6	lbs/day	0.00	0.00	0.00		4/31	WHEN DISCHARGING
			0.50			6.1	12			COMPOSITE
					0.02	0.04	0.06	4		COMPOSITE
							0.10		1/7	COMPOSITE

MEASUREMENT		1150.22	1679.72	lbs/day	0.177	0.332	0.496	mg/l	4	17	COMPOSITE
Nitrate - Nitrogen (NO <sub>3</sub> - N)	PERMIT REQUIREMENT										COMPOSITE
	SAMPLE MEASUREMENT		2.50				0.50				COMPOSITE
	PERMIT REQUIREMENT	54325	75665	lbs/day	28095	54325	75665	mg/l	4		COMPOSITE
	SAMPLE MEASUREMENT										COMPOSITE
Dissolved Oxygen	PERMIT REQUIREMENT				9	12	17	mg/l		17	DISCRETE
	SAMPLE MEASUREMENT										DISCRETE
	PERMIT REQUIREMENT				26.60	43.4	70.5	ntu	4		DISCRETE
	SAMPLE MEASUREMENT										DISCRETE
Temp	PERMIT REQUIREMENT				18.00	21.0	23.0	°C		17	DISCRETE
	SAMPLE MEASUREMENT										DISCRETE
	PERMIT REQUIREMENT			lbs/day				mg/l		Annually	DISCRETE
	SAMPLE MEASUREMENT									Annually	DISCRETE
EFFLUENT OIL & GREASE	PERMIT REQUIREMENT							ug/L		Annually	COMPOSITE
	SAMPLE MEASUREMENT									Annually	COMPOSITE
	PERMIT REQUIREMENT			lbs/day				mg/l		Annually	COMPOSITE
	SAMPLE MEASUREMENT									Annually	COMPOSITE
Heavy Metals (mg/L or ug/L)	PERMIT REQUIREMENT									Annually	COMPOSITE
	SAMPLE MEASUREMENT									Annually	COMPOSITE
	PERMIT REQUIREMENT									Annually	COMPOSITE
	SAMPLE MEASUREMENT									Annually	COMPOSITE
Hardness (mg/L CaCO <sub>3</sub> )	PERMIT REQUIREMENT									Annually	COMPOSITE
	SAMPLE MEASUREMENT									Annually	COMPOSITE
	PERMIT REQUIREMENT									Annually	COMPOSITE
	SAMPLE MEASUREMENT									Annually	COMPOSITE
Pesticides (mg/L or ug/L)	PERMIT REQUIREMENT									Annually	COMPOSITE
	SAMPLE MEASUREMENT									Annually	COMPOSITE
	PERMIT REQUIREMENT									Annually	COMPOSITE
	SAMPLE MEASUREMENT									Annually	COMPOSITE
Whole Effluent Toxicity (Tu <sub>c</sub> )	PERMIT REQUIREMENT									Annually	COMPOSITE
	SAMPLE MEASUREMENT									Annually	COMPOSITE
	PERMIT REQUIREMENT									Annually	COMPOSITE
	SAMPLE MEASUREMENT									Annually	COMPOSITE
NAME/TITLE PRINCIPLE EXECUTIVE OFFICER		I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED INFORMATION IS TRUE ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT SEE: 18 USC §1001 AND 33 USC §1319 (Penalties under these statutes may include fines up to \$10,000 and or a maximum imprisonment of between 6 months and 5 years)									
GIL A. SHINOHARA ACTING GENERAL MANAGER GWA		6.5  SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT									
TYPED OR PRINTED		671 479-7844 MAY 13 2002 TELEPHONE DATE									
COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)		ENETEROCICI DAILY MAX (4 VIOLATIONS) AND MONTHLY AVERAGE FECAL COLIFORM DAILY MAX (4 VIOLATIONS) AND MONTHLY AVERAGE ORTHOPHOSPHATE (lbs/day) daily max (4 violations) NITRATE-NITROGEN (lbs/day) daily max (4 violations) TURBIDITY daily max (4 violations)									

SUSPENDED SOLIDS (mg/l) DAILY MAX (2 VIOLATIONS) AND MONTHLY AVERAGE  
 BOD (mg/l) DAILY MAX (2 VIOLATIONS) AND MONTHLY AVERAGE  
 SUSPENDED SOLIDS (lbs/day) DAILY MAX (1 VIOLATION) AND MONTHLY AVERAGE  
 BOD (lbs/day) MONTHLY AVERAGE  
 SUSPENDED SOLIDS % REDUCTION LESS THAN 85%  
 BOD % REDUCTION LESS THAN 85%

5/1/02

INFLUENT								EFFLUENT									
DATE	pH	SUSP. SOLIDS mg/l	BOD mg/l	SETTL. SOLID ml/l	SUSP. SOLIDS lbs/day	BOD lbs/day	FLOW mgd	DATE	pH	SUSP. SOLIDS mg/l	BOD mg/l	SETTL. SOLID ml/l	SUSP. SOLIDS lbs/day	BOD lbs/day	SUSP. SOLIDS %removal	BOD %removal	
1							0.358	1									
2	7.81	112	136	10.0	334	406	0.358	2	7.32	48	55	0.0	143	164	57%	60%	
3							0.504	3									
4							0.455	4									
5							0.595	5									
6							0.425	6									
7							0.426	7									
8							0.498	8									
9	7.60	62	82	10.0	246	326	0.476	9	7.62	66	54	0.0	262	214	-6%	34%	
10							0.577	10									
11							0.585	11									
12							0.535	12									
13							0.439	13									
14							0.458	14									
15							0.440	15									
16	7.64	68	90	11.0	250	330	0.440	16	7.33	38	24	0.0	139	88	44%	73%	
17							0.423	17									
18							0.475	18									
19							0.645	19									
20							0.410	20									
21							0.420	21									
22							0.426	22									
23	7.74	144	168	12.0	512	597	0.426	23	7.58	20	31	0.0	71	110	86%	82%	
24							0.433	24									
25							0.408	25									
26							0.455	26									
27							0.432	27									
28							0.383	28									
29							0.410	29									
30							0.426	30									
31							0.437	31									
AVG	7.70	97	119	10.8	335	415	0.457	AVG	7.46	43	41	0.0	154	144	45%	62%	
MIN	7.60	62	82	10.0	246	326	0.358	MIN	7.32	20	24	0.0	71	88	-6%	34%	
MAX	7.81	144	168	12.0	512	597	0.645	MAX	7.62	66	55	0.0	262	214	86%	82%	
								PERMIT REQUIREMENTS									
								month avg								150	85%
								daily max								200	225

Violations

SUSPENDED SOLIDS (mg/l) DAILY MAX (2 VIOLATIONS) AND MONTHLY AVERAGE

BOD (mg/l) DAILY MAX (2 VIOLATIONS) AND MONTHLY AVERAGE

SUSPENDED SOLIDS (lbs/day) DAILY MAX (1 VIOLATION) AND MONTHLY AVERAGE

BOD (lbs/day) MONTHLY AVERAGE

SUSPENDED SOLIDS % REDUCTION LESS THAN 85%

BOD % REDUCTION LESS THAN 85%

ENETEROCOCI DAILY MAX (4 VIOLATIONS) AND MONTHLY AVERAGE

FECAL COLIFORM DAILY MAX (4 VIOLATIONS) AND MONTHLY AVERAGE

ORTHOPHOSPHATE (lbs/day) daily max (4 violations)

NITRATE-NITROGEN (lbs/day) daily max (4 violations)

TURBIDITY daily max (4 violations)

BAZA CENS TREATMENT PLANT WASTEWATER RESULTS  
FOR THE MONTH OF JANUARY 2002

EFFLUENT (CONTINUED)

DATE	Enterococci MPN	FECAL COLIFORM CU/100ml	CHLORINE RESIDUAL µg/l	CHLORINE RESIDUAL lbs/day	ORTHO- PHOSPHATE mg/l	ORTHO- PHOSPHATE lbs/day	NITRATE- NITROGEN mg/l	NITRATE- NITROGEN lbs/day	TOTAL NITROGEN mg/l	TOTAL NITROGEN lbs/day	DISSOLVED OXYGEN mg/l	DISSOLVED OXYGEN lbs/day	TURBIDITY NTU	TEMP °C
1														
2	45690	73,000	0.00	0.00	0.062	209.86	0.496	1679.72	20.70	70101	3.20	9.55	70.5	23.0
3														
4														
5														
6														
7														
8														
9	10530	TNTC	0.00	0.00	0.020	54.30	0.177	480.54	16.00	43438	N/S	N/S	47.9	18.0
10														
11														
12														
13														
14														
15														
16	3130	301000	0.00	0.00	0.017	46.82	0.353	972.30	10.20	28095	4.60	16.88	28.6	21.0
17														
18														
19														
20														
21														
22														
23	31300	441000	0.00	0.00	0.064	318.59	0.303	1508.32	15.20	75665	2.60	9.24	26.6	22.0
24														
25														
26														
27														
28														
29														
30														
31														
AVG	22663	> 271667	0.00	0.00	0.041	157.42	0.332	1160.22	15.53	54325	3.47	11.89	43.40	21.00
MIN	3130	73000	0.00	0.00	0.017	46.82	0.177	480.54	10.20	28095	2.60	9.24	26.60	18.00
MAX	45690	TNTC	0.00	0.00	0.064	318.59	0.496	1679.72	20.70	75665	4.60	16.88	70.50	23.00

128/100ml	6.1	0.031	0.5	0.500	2.5	1 NTU
406/100ml	12	0.06	0.100			



P. TEE NAME/ADDRESS (Include facility Name/Location if Different)

NAME: Guam Waterworks Authority  
ADDRESS: P.O. Box 3010  
AGANA, GUAM 96932

FACILITY: Baza Gardens Sewage Treatment Plant  
LOCATION: Talofofo, Guam

NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES)  
DISCHARGE MONITORING REPORT (DMR)


Form Approved.  
OMB No. 2040-0004  
Approval expires 9-30-85

(2-16)		(17-19)	
GU0020095		001	
PERMIT NUMBER		DISCHARGE NUMBER	

MONITORING PERIOD					
FROM		TO		DISCHARGE NUMBER	
YEAR	MO	DAY	YEAR	MO	DAY
2002	2	1	2002	2	28

NOTE: Read Instructions before completing this form.

PARAMETER (32-37)	SAMPLE MEASUREMENT PERMIT REQUIREMENT	(3 Card only) (46-53)		QUANTITY OR LOADING (54-61)		QUANTITY OR CONCENTRATION (38-45)		QUANTITY OR CONCENTRATION (54-61)		NO. EX. (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
		AVERAGE	MEASUREMENT	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
FLOW		0.427		0.535	mgd						31/31	HOURLY
INFLUENT BOD		503		879	lbs/day	96	131	197	mg/l		4/31	COMPOSITE
EFFLUENT BOD		114		174	lbs/day	14	29	39	mg/l		4/31	COMPOSITE
INFLUENT SUSPENDED SOLIDS		150		225	lbs/day	34	80	132	mg/l		1/7	COMPOSITE
EFFLUENT SUSPENDED SOLIDS		116		143	lbs/day	28	32	36	mg/l		4/31	COMPOSITE
EFFLUENT SETTLABLE SOLIDS		150		200	lbs/day	0	0.0	0.0	ml/l	2	1/7	DISCRETE
E coli BACTERIA						20,000	> 12216	> 24192	cfu/ 100ml	5	4/31	DISCRETE
ENTEROCOCCI						1270	9175	22090	cfu/ 100ml	5	4/31	DISCRETE
EFFLUENT pH						7.3	7.5	7.7			1/7	DISCRETE
CHLORINE RESIDUAL		0.00		0.00	lbs/day	7.0		9.0	µg/l		4/31	DISCRETE
Orthophosphate (PO <sub>4</sub> -P)		0.031		0.06	lbs/day	0.00	0.00	0.00			1/7	DISCRETE
		1076.4		3614.1	lbs/day	0.05	0.18	0.49	mg/l	6		WHEN DISCHARGING
				0.50				0.10			1/7	COMPOSITE

SAMPLE	MEASUREMENT	1396.61	1912.38	lbs/day	0.148	0.386	0.650	mg/l	6	COMPOSITE
Nitrate - Nitrogen (NO <sub>3</sub> - N)	PERMIT REQUIREMENT									COMPOSITE
	SAMPLE		2.50				0.50		1/7	COMPOSITE
Total Kjeldahl Nitrogen	PERMIT REQUIREMENT	45373	72282	lbs/day	16106	45373	72282	mg/l		COMPOSITE
	SAMPLE				14	23	33	mg/l	1/7	COMPOSITE
Dissolved Oxygen	PERMIT REQUIREMENT									DISCRETE
	SAMPLE								1/7	DISCRETE
Turbidity	MEASUREMENT				20.50	28.3	32.7	ntu	4	DISCRETE
	PERMIT REQUIREMENT						1.0		1/7	DISCRETE
	SAMPLE				22.30	26.1	28.0	*C		DISCRETE
Temp	PERMIT REQUIREMENT									DISCRETE
	SAMPLE								1/7	DISCRETE
EFFLUENT OIL & GREASE	MEASUREMENT			lbs/day				mg/l	Annually	DISCRETE
	PERMIT REQUIREMENT								Annually	DISCRETE
	SAMPLE							ug/L	Annually	COMPOSITE
Heavy Metals (mg/L or ug/L)	PERMIT REQUIREMENT								Annually	COMPOSITE
	SAMPLE							mg/l	Annually	COMPOSITE
Hardness (mg/L CaCO <sub>3</sub> )	PERMIT REQUIREMENT								Annually	COMPOSITE
	SAMPLE								Annually	COMPOSITE
Pesticides (mg/L or ug/L)	MEASUREMENT								Annually	COMPOSITE
	PERMIT REQUIREMENT								Annually	COMPOSITE
	SAMPLE								Annually	COMPOSITE
Whole Effluent Toxicity (Tu <sub>c</sub> )	MEASUREMENT								Annually	COMPOSITE
	PERMIT REQUIREMENT								Annually	COMPOSITE
	SAMPLE								Annually	COMPOSITE
	PERMIT REQUIREMENT				6.5		8.5		Annually	COMPOSITE
NAME/TITLE PRINCIPLE EXECUTIVE OFFICER	I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED INFORMATION IS TRUE ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT SEE: 18 USC §1001 AND 33 USC §1319 (Penalties under these statutes may include fines up to \$10,000 and or a maximum imprisonment of between 6 months and 5 years) (Reference all attachments here)									
GIL A. SHINOHARA										
ACTING GENERAL MANAGER										
GWA	TELEPHONE: 479-7844 DATE: MAY 11 2009									
TYPED OR PRINTED	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT: 671 AREA CODE: 479-7844 NUMBER: 11 YEAR: MAY 11 2009 DAY: 11									

ORTHOPHOSPHATE (mg/l) daily max (2 violations)  
 ORTHOPHOSPHATE (lbs/day) daily max (4 violations)  
 NITRATE-NITROGEN (mg/l) daily max (2 violations)  
 NITRATE-NITROGEN (lbs/day) daily max (4 violations)

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)  
 Violations  
 Suspended Solids % removal less than 85%  
 BOD % removal less than 85%  
 Turbidity daily max exceeded (4 violations; not shown)  
 Suspended solids (mg/l) monthly average exceeded  
 ENTEROCOCCI DAILY MAX (4 violations) and monthly average  
 FECAL COLIFORM DAILY MAX (4 violations) and monthly average

5/2/09  
 19

BAZA CENS TREATMENT PLANT WASTEWATER RESULTS  
FOR THE MONTH OF FEBRUARY 2002

INFLUENT

DATE	pH	SUSP. SOLIDS mg/l	BOD mg/l	SETTL. SOLID m/l	SUSP. SOLIDS lbs/day	BOD lbs/day	FLOW mgd
1							0.460
2							0.455
3							0.429
4							0.428
5							0.406
6	7.82	132	119	11	456	411	0.414
7							0.465
8							0.457
9							0.437
10							0.421
11							0.437
12							0.433
13	7.67	34	197	N/S	152	879	0.535
14							0.484
15							0.408
16							0.455
17							0.426
18							0.424
19							0.398
20	7.71	94	96	11.0	277	283	0.363
21							0.405
22							0.403
23							0.393
24							0.431
25							0.416
26							0.410
27	7.81	58	110	10.0	231	438	0.477
28							0.282
29							
30							
31							
AVG	7.75	80	131	10.7	279	503	0.427
MIN	7.67	34	96	10.0	152	283	0.282
MAX	7.82	132	197	11.0	456	879	0.535

EFFLUENT

DATE	pH	SUSP. SOLIDS mg/l	BOD mg/l	SETTL. SOLID m/l	SUSP. SOLIDS lbs/day	BOD lbs/day	SUSP. SOLIDS %removal	BOD %removal
1								
2								
3								
4								
5								
6	7.71	30	24	0	104	83	77%	80%
7								
8								
9								
10								
11								
12								
13	7.57	32	39	n/s	143	174	6%	80%
14								
15								
16								
17								
18								
19								
20	7.30	36	14	0.0	106	42	62%	85%
21								
22								
23								
24								
25								
26								
27	7.43	28	39	0.0	111	155	52%	65%
28								
29								
30								
31								
AVG	7.50	32	29	0.0	116	114	49%	77%
MIN	7.30	28	14	0.0	104	42	6%	65%
MAX	7.71	36	39	0.0	143	174	77%	85%

PERMIT  
REQUIREMENTS

month avg	6.5	30	30	150	150	85%
daily max	8.5	40	45	200	225	

Violations  
Suspended Solids % removal less than 85%  
BOD % removal less than 85%  
Turbidity daily max exceeded (4 violations; not shown)  
Suspended solids (mg/l) monthly average exceeded  
ENTEROCOCCI DAILY MAX (4 violations) and monthly average  
FECAL COLIFORM DAILY MAX (4 violations) and monthly average

ORTHOPHOSPHATE (mg/l) daily max (2 violations)  
ORTHOPHOSPHATE (lbs/day) daily max (4 violations)  
NITRATE-NITROGEN (mg/l) daily max (2 violations)  
NITRATE-NITROGEN (lbs/day) daily max (4 violations)

5/2/02



EFFLUENT (CONTINUED)

EFFLUENT (CONTINUED)														
Enterococci														
DATE	MPN	FECAL COLIFORM CU/100ml	CHLORINE RESIDUAL µg/l	CHLORINE RESIDUAL lbs/day	ORTHO- PHOSPHATE mg/l	ORTHO- PHOSPHATE lbs/day	NITRATE- NITROGEN mg/l	NITRATE- NITROGEN lbs/day	TOTAL NITROGEN mg/l	TOTAL NITROGEN lbs/day	DISSOLVED OXYGEN mg/l	DISSOLVED OXYGEN lbs/day	TURBIDITY NTU	TEMP °C
1														
2														
3														
4														
5														
6	22090	N/S	0.00	0.00	0.106	363.23	0.148	507.16	4.70	16106	4.50	15.54	32.7	28.0
7														
8														
9														
10														
11														
12														
13	1270	TNTC	0.00	0.00	0.493	3614.09	0.223	1634.77	9.86	72282	7.40	33.02	31.5	22.3
14														
15														
16														
17														
18														
19														
20	11330	20000	0.00	0.00	0.048	113.14	0.650	1532.12	15.50	36535	4.60	13.54	20.5	N/S
21														
22														
23														
24														
25														
26														
27	2010	110,000	0.00	0.00	0.059	215.33	0.524	1912.38	15.50	56569	7.90	31.43	28.5	28.0
28														
29														
30														
31														
AVG	9175	> 12216	0.00	0.00	0.177	1076.45	0.386	1396.61	11.39	45372.75	6.10	23.38	28.30	26.10
MIN	1270	20000	0.00	0.00	0.048	113.14	0.148	507.16	4.70	16105.61	4.50	13.54	20.50	22.30
MAX	22090	> 24192	0.00	0.00	0.493	3614.09	0.650	1912.38	15.50	72281.81	7.90	33.02	32.70	28.00
		126/100ml	6.1	0.031										
		406/100ml	12	0.06	0.100									
ENTEROCOCCI DAILY MAX (4 sites)														

ENTEROCOCCI DAILY MAX (4 violations) and monthly average  
 FECAL COLIFORM DAILY MAX (4 violations) and monthly average  
 ORTHOPHOSPHATE (mg/l) daily max (2 violations)  
 ORTHOPHOSPHATE (lbs/day) daily max (4 violations)  
 NITRATE-NITROGEN (mg/l) daily max (2 violations)  
 NITRATE-NITROGEN (lbs/day) daily max (4 violations)  
 TURBIDITY DAILY MAX EXCEEDED (4 violations)

1 NTU

Facility Name/Address (include Name/Location if Different)

NAME: Guam Waterworks Authority  
ADDRESS: P.O. Box 3010  
AGANA, GUAM 96932

FACILITY: Baza Gardens Sewage Treatment Plant  
LOCATION: Talofofo, Guam

NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES)  
DISCHARGE MONITORING REPORT (DMR)

(2-16)  
GU0020095  
PERMIT NUMBER

(17-19)  
001  
DISCHARGE NUMBER


MONITORING PERIOD  
FROM YEAR MO DAY TO YEAR MO DAY  
2002 3 1 2002 3 31  
(20-21) (22-23) (24-25) (26-27) (28-29) (30-31)

Form Approved.  
OMB No. 2040-0004  
Approval expires 9-30-85

NOTE: Read Instructions before completing this form.

PARAMETER (32-37)		(3 Card only) (46-53)			QUANTITY OR LOADING (54-61)		(4 Card Only) (38-45)			QUANTITY OR CONCENTRATION (54-61)		UNITS	NO. EX. (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM								
FLOW	SAMPLE MEASUREMENT PERMIT	0.392	0.485	mgd							mgd			31/31	HOURLY
	SAMPLE MEASUREMENT REQUIREMENT														
INFLUENT BOD	SAMPLE MEASUREMENT PERMIT	388	802	lbs/day			53	121	241		mg/l			4/31	COMPOSITE
	SAMPLE MEASUREMENT REQUIREMENT														
EFFLUENT BOD	SAMPLE MEASUREMENT PERMIT	115	200	lbs/day			18	36	60		mg/l			4/31	COMPOSITE
	SAMPLE MEASUREMENT REQUIREMENT														
INFLUENT SUSPENDED SOLIDS	SAMPLE MEASUREMENT PERMIT	522	652	lbs/day			126	165	196		mg/l			4/31	COMPOSITE
	SAMPLE MEASUREMENT REQUIREMENT														
EFFLUENT SUSPENDED SOLIDS	SAMPLE MEASUREMENT PERMIT	109	150	lbs/day			26	35	50		mg/l			4/31	COMPOSITE
	SAMPLE MEASUREMENT REQUIREMENT														
EFFLUENT SETTLEABLE SOLIDS	SAMPLE MEASUREMENT PERMIT	150	200	lbs/day			0	0.0	0.0		ml/l			1/7	COMPOSITE
	SAMPLE MEASUREMENT REQUIREMENT														
E coli BACTERIA	SAMPLE MEASUREMENT PERMIT						30,000	335,000	1,170,000		cfu/ml		5	4/31	DISCRETE
	SAMPLE MEASUREMENT REQUIREMENT														
ENTEROCOCI	SAMPLE MEASUREMENT PERMIT						12010	30378	57170		cfu/100ml			1/7	DISCRETE
	SAMPLE MEASUREMENT REQUIREMENT														
EFFLUENT pH	SAMPLE MEASUREMENT PERMIT						7.5	7.6	7.8					4/31	DISCRETE
	SAMPLE MEASUREMENT REQUIREMENT														
CHLORINE RESIDUAL	SAMPLE MEASUREMENT PERMIT	0.00	0.00	lbs/day			0.00	0.00	9.0					4/31	DISCRETE
	SAMPLE MEASUREMENT REQUIREMENT														
Orthophosphate (PO <sub>4</sub> -P)	SAMPLE MEASUREMENT PERMIT	0.031	0.06	lbs/day			0.00	6.1	12		µg/l			4/31	WHEN DISCHARGING
	SAMPLE MEASUREMENT REQUIREMENT														
	SAMPLE MEASUREMENT PERMIT	167.9	361.2	lbs/day			0.02	0.05	0.08		mg/l		7		COMPOSITE
	SAMPLE MEASUREMENT REQUIREMENT														
	SAMPLE MEASUREMENT PERMIT		0.50						0.10				1/7		COMPOSITE
	SAMPLE MEASUREMENT REQUIREMENT														

NOTE: Read instructions before completing this form.

MEASUREMENT		1659.47	2849.26	lbs/day	0.426	0.565	0.709	mg/l	4	COMPOSITE
Total Kjeldahl Nitrogen	PERMIT REQUIREMENT		2.50				0.50		1/7	COMPOSITE
	SAMPLE MEASUREMENT	55282	116378	lbs/day	24195	55282	116378	mg/l		COMPOSITE
Dissolved Oxygen	PERMIT REQUIREMENT								1/7	COMPOSITE
	SAMPLE MEASUREMENT				13	14	17	mg/l		COMPOSITE
Turbidity	PERMIT REQUIREMENT								1/7	DISCRETE
	SAMPLE MEASUREMENT				27.30	33.3	43.0	ntu		DISCRETE
Temp	PERMIT REQUIREMENT								1/7	DISCRETE
	SAMPLE MEASUREMENT				27.00	27.8	28.3	*C		DISCRETE
EFFLUENT OIL & GREASE	PERMIT REQUIREMENT								1/7	DISCRETE
	SAMPLE MEASUREMENT			lbs/day				mg/l	Annually	DISCRETE
Heavy Metals (mg/L or ug/L)	PERMIT REQUIREMENT								Annually	DISCRETE
	SAMPLE MEASUREMENT			ug/L				ug/L	Annually	COMPOSITE
Hardness (mg/L CaCO <sub>3</sub> )	PERMIT REQUIREMENT								Annually	COMPOSITE
	SAMPLE MEASUREMENT			lbs/day				mg/l	Annually	COMPOSITE
Pesticides (mg/L or ug/L)	PERMIT REQUIREMENT								Annually	COMPOSITE
	SAMPLE MEASUREMENT								Annually	COMPOSITE
Whole Effluent Toxicity (Tu <sub>c</sub> )	PERMIT REQUIREMENT								Annually	COMPOSITE
	SAMPLE MEASUREMENT								Annually	COMPOSITE
NAME/TITLE PRINCIPLE EXECUTIVE OFFICER		CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED INFORMATION IS TRUE ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT SEE: 18 USC §1001 AND 33 USC §1319 (Penalties under these statutes may include fines up to \$10,000 and or a maximum imprisonment of between 6 months and 5 years)								
GIL A. SHINOHARA ACTING GENERAL MANAGER GWA		6.5  SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT								
TYPED OR PRINTED		TELEPHONE MAY 03 2002 DATE 479-7844 NUMBER 671 AREA CODE YEAR MO DAY								

Nitrate-nitrogen (mg/l) daily max exceeded (4 violations)

5/2/02

Violations  
 Suspended Solids % removal less than 85%  
 BOD % removal less than 85%  
 Turbidity daily max exceeded (4 violations)  
 Suspended Solids (mg/l) daily max (1 violation) and monthly average exceeded  
 BOD (mg/l) daily max (1 violation) and monthly average exceeded  
 Fecal Coliform daily max exceeded (4 violations) and monthly average  
 Orthophosphate (mg/l) daily max (4 violations)  
 Orthophosphate (lbs/day) daily max (3 violations)



INFLUENT

DATE	pH	SUSP. SOLIDS mg/l	BOD mg/l	SETTL. SOLID ml/l	SUSP. SOLIDS lbs/day	BOD lbs/day	FLOW mgd
1							0.353
2							0.370
3							0.407
4							0.408
5							0.366
6	7.87	192	77	11	586	235	0.366
7							0.365
8							0.370
9							0.372
10							0.402
11							0.429
12							0.396
13	7.83	126	53	11.0	413	174	0.393
14							0.454
15							0.430
16							0.372
17							0.402
18							0.390
19	7.87	196	241				0.370
20				10.0	652	802	0.399
21							0.350
22							0.421
23							0.450
24							0.400
25							0.443
26							0.311
27	7.79	146	114	9.0	438	342	0.360
28							0.353
29							0.348
30							0.407
31							0.485
AVG	7.84	165	121	10.3	522	388	0.392
MIN	7.79	126	53	9.0	413	174	0.311
MAX	7.87	196	241	11.0	652	802	0.485

EFFLUENT

DATE	pH	SUSP. SOLIDS mg/l	BOD mg/l	SETTL. SOLID ml/l	SUSP. SOLIDS lbs/day	BOD lbs/day	SUSP. SOLIDS %removal	BOD %removal
1								
2								
3								
4								
5								
6	7.47	26	33	0	79	101	86%	57%
7								
8								
9								
10								
11								
12								
13	7.45	26	18	0.0	85	59	79%	66%
14								
15								
16								
17								
18								
19								
20	7.59	36	60	0.0	120	200	82%	75%
21								
22								
23								
24								
25								
26								
27	7.82	50	33	0.0	150	99	66%	71%
28								
29								
30								
31								
AVG	7.58	35	36	0.0	109	115	78%	67%
MIN	7.45	26	18	0.0	79	59	66%	57%
MAX	7.82	50	60	0.0	150	200	86%	75%

PERMIT REQUIREMENTS

month avg	6.5	30	30	150	150	85%
daily max	8.5	40	45	200	225	

Nitrate-nitrogen (mg/l) daily max exceeded (4 violations)

- Violations
- Suspended Solids % removal less than 85%
  - BOD % removal less than 85%
  - Turbidity daily max exceeded (4 violations)
  - Suspended Solids (mg/l) daily max (1 violation) and monthly average exceeded
  - BOD (mg/l) daily max (1 violation) and monthly average exceeded
  - Fecal Coliform daily max exceeded (4 violations) and monthly average
  - Orthophosphate (mg/l) daily max (4 violations)
  - Orthophosphate (lbs/day) daily max (3 violations)

EFFLUENT (CONTINUED)

	0.100	0.5	0.500	2.5	1 NTU
0.100					
0.5					
0.500					
2.5					
1 NTU					

PERMITTEE NAME/ADDRESS (Include facility Name/Location if Different)

NAME: Guam Waterworks Authority  
ADDRESS: P.O. Box 3010  
AGANA, GUAM 96932

FACILITY: Northern District Sewage Treatment Plant  
LOCATION: Dededo, Guam

NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES)  
DISCHARGE MONITORING REPORT (DMR)

Form Approved  
OMB No. 2040-0004  
Approval expires 9-30-85

(2-16)	(17-19)
GU0020141	001
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD			
YEAR	MO	DAY	TO
2002	1	1	31
(20-21)	(22-23)	(24-25)	(26-27)

NOTE: Read instructions before completing this form.

PARAMETER (32-37)	SAMPLE MEASUREMENT PERMIT REQUIREMENT	(3 Card only) (46-53)		QUANTITY OR LOADING (54-61)		(4 Card only) (38-45)		QUANTITY OR CONCENTRATION (54-61)		UNITS	NO. EX. (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
		AVERAGE	5.3	MAXIMUM	5.6	MINIMUM	102	AVERAGE	136				
FLOW										mgd		31/31	HOURLY
INFLUENT BOD										mg/l		4/31	COMPOSITE
EFFLUENT BOD										mg/l	2	4/31	COMPOSITE
INFLUENT SUSPENDED SOLIDS										mg/l		1/7	COMPOSITE
EFFLUENT SUSPENDED SOLIDS										mg/l		4/31	COMPOSITE
EFFLUENT SETTLABLE SOLIDS										mg/l		1/7	COMPOSITE
EFFLUENT OIL & GREASE										mg/l		4/31	DISCRETE
EFFLUENT pH										mg/l		0/31	DISCRETE
										mg/l		1/30	DISCRETE
										mg/l		4/31	DISCRETE
										mg/l		1/7	DISCRETE

CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT SEE: 18 USC §1001 AND 33 USC §1319 (Penalties under these statutes may include fines up to \$10,000 and/or a maximum imprisonment of between 6 months and 5 years)

(Signature)

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE	DATE
479-7 MAY 03 2002	
671	NUMBER
AREA CODE	YEAR
	MO
	DAY

TYPED OR PRINTED  
NAME/TITLE PRINCIPLE EXECUTIVE OFFICER  
GIL A. SHINOHARA  
ACTING GENERAL MANAGER  
GWA

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

BOD (mg/l AND lbs/day) MONTHLY AVERAGE

Explanation of violations attached at end of DMR's

NORTH DISTRICT TREATMENT PLANT WASTEWATER RESULTS  
FOR THE MONTH OF JANUARY 2002

INFLUENT

DATE	pH	SUSP. SOLIDS mg/l	BOD mg/l	SETTLE. SOLID m/l	SUSP. SOLIDS lbs/day	BOD lbs/day	FLOW mgd
1							5.10
2	7.02	114	124	7.8	5229	5688	5.50
3							5.50
4							5.40
5							5.40
6							5.50
7							5.50
8							5.10
9	6.97	32	122	3.2	1361	5189	5.10
10							5.30
11							5.30
12							4.60
13							4.70
14							5.30
15							5.30
16	7.08	102	197	4.1	4424	8543	5.20
17							5.40
18							4.70
19							5.30
20							5.40
21							5.20
22							5.30
23	7.10	42	102	8.5	1927	4679	5.50
24							5.50
25							5.60
26							5.40
27							5.50
28							5.30
29							5.30
30							5.40
31							5.40
AVG	7.04	73	136	5.9	3235	6025	5.29
MIN	6.97	32	102	3.2	1361	4679	4.60
MAX	7.10	114	197	8.5	5229	8543	5.60

EFFLUENT

DATE	pH	SUSP. SOLIDS mg/l	BOD mg/l	SETTLE. SOLID m/l	SUSP. SOLIDS lbs/day	BOD lbs/day	SUSP. SOLIDS %removal	BOD %removal	OIL & GREASE mg/l	OIL & GREASE lbs/day
1										
2	6.97	38	139	0.0	1743	6376	67%	-12%		
3										
4										
5										
6										
7										
8										
9	7.08	48	48	0.3	2042	2042	-50%	61%		
10										
11										
12										
13										
14										
15										
16	7.07	58	120	0.0	2515	5204	43%	39%		
17										
18										
19										
20										
21										
22										
23	7.1	36	136	0.5	1651	6238	14%	-33%		
24										
25										
26										
27										
28										
29										
30									29.8	1317
31										
AVG	7.06	45	111	0.2	1988	4965	19%	14%	29.8	1317
MIN	6.97	36	48	0.0	1651	2042	-50%	-33%	29.8	1317
MAX	7.10	58	139	0.5	2515	6376	67%	61%	29.8	1317

PERMIT REQUIREMENTS

6	7	50	85	1	2504	4256
	9	100	170	2	5008	8512

VIOLATIONS

BOD (mg/l AND lbs/day) MONTHLY AVERAGE



PLANT NAME/ADDRESS (Include facility Name/Location if Different)

NAME: Guam Waterworks Authority  
ADDRESS: P.O. Box 3010  
AGANA, GUAM 96932

FACILITY: Northern District Sewage Treatment Plant  
LOCATION: Dededo, Guam

NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES)  
DISCHARGE MONITORING REPORT (DMR)

Form Approved  
OMB No. 2040-0004  
Approval expires 9-30-85

(2-16)		(17-19)	
GU0020141		001	
PERMIT NUMBER		DISCHARGE NUMBER	

MONITORING PERIOD			
YEAR	MO	DAY	TO
2002	2	1	28

NOTE: Read instructions before completing this form.

PARAMETER (32-37)	SAMPLE MEASUREMENT PERMIT REQUIREMENT	(3 Card only) (46-53)		QUANTITY OR LOADING (54-61)		(4 Card only) (38-45)			QUANTITY OR CONCENTRATION (54-61)		UNITS	NO. EX. (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
		AVERAGE	MAXIMUM	MAXIMUM	MINIMUM	AVERAGE	MAXIMUM	MINIMUM	AVERAGE	MAXIMUM				
FLOW		5.4	5.7								mgd		31/31	HOURLY
INFLUENT BOD		6748	7824			141				152	177		4/31	COMPOSITE
EFFLUENT BOD		9712	14036			144				218	306	6	4/31	COMPOSITE
INFLUENT SUSPENDED SOLIDS		4256	8512							85	170		1/7	COMPOSITE
EFFLUENT SUSPENDED SOLIDS		3596	7856			23				81	180		4/31	COMPOSITE
EFFLUENT SETTLABLE SOLIDS		2052	3211			24				46	70		4/31	COMPOSITE
EFFLUENT OIL & GREASE		2504	5008							50	100		1/7	COMPOSITE
EFFLUENT pH						0.01				0.1	0.3		4/31	DISCRETE
										1.0	2.0		1/7	DISCRETE
										N/S	N/S		0/31	DISCRETE
										7.0	7.1		1/30	DISCRETE
										7.0	9.0		4/31	DISCRETE
													1/7	DISCRETE
CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED INFORMATION IS TRUE ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT SEE 18 USC §1001 AND 33 USC §1319 (Penalties under these statutes may include fines up to \$10,000 and or a maximum imprisonment of between 6 months and 5 years)														
TYPED OR PRINTED														
GIL A. SHINOHARA														
ACTING GENERAL MANAGER														
GWA														
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT														
671														
479-7844														
MAY 13 2002														
TELEPHONE														
DATE														
AREA CODE														
YEAR														
MO														
DAY														

COMMITTEE AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

5/2/02

Explanation of violations attached at end of DMR's

NORTH DISTRICT TREATMENT PLANT WASTEWATER RESULTS  
FOR THE MONTH OF FEBRUARY 2002

INFLUENT

DATE	pH	SUSP. SOLIDS mg/l	BOD mg/l	SETTLE. SOLID m/l	SUSP. SOLIDS lbs/day	BOD lbs/day	FLOW mgd
1							5.70
2							5.50
3							5.40
4							5.60
5							5.20
6	7.11	48	141	9.3	2202	6468	5.50
7							5.30
8							5.40
9							5.30
10							5.60
11							5.40
12							5.30
13	7.24	23	148	8.6	1017	6542	5.30
14							5.20
15							5.40
16							5.30
17							5.40
18							5.50
19							4.90
20	7.17	74	142	9.9	3209	6158	5.20
21							5.50
22							5.50
23							5.50
24							5.50
25							5.40
26							5.30
27	7.19	180	177	14.0	7956	7824	5.30
28							5.40
29							
30							
31							
AVG	7.18	81	152	10.5	3596	6748	5.39
MIN	7.11	23	141	8.6	1017	6158	4.90
MAX	7.24	180	177	14.0	7956	7824	5.70

VIOLATIONS

BOD (mg/l AND lbs/day) DAILY MAX (2 VIOLATIONS EACH) AND MONTHLY AVERAGE

PERMIT  
REQUIREMENTS

6	7	50	85	1	2504	4256
	9	100	170	2	5008	8512

EFFLUENT

DATE	pH	SUSP. SOLIDS mg/l	BOD mg/l	SETTLE. SOLID m/l	SUSP. SOLIDS lbs/day	BOD lbs/day	SUSP. SOLIDS %removal	BOD %removal	OIL & GREASE mg/l	OIL & GREASE lbs/day
1										
2										
3										
4										
5										
6	7.09	70	306	0.3	3211	14036	-46%	-117%		
7										
8										
9										
10										
11										
12										
13	7.13	40	168	0.1	1768	7426	-74%	-14%		
14										
15										
16										
17										
18										
19										
20	7.03	50	144	0.1	2168	6245	32%	-1%		
21										
22										
23										
24										
25										
26										
27	7	24	252	0.0	1061	11139	87%	-42%		
28										
29										
30										
31										
AVG	7.06	46	218	0.1	2052	9712	0%	-44%		
MIN	7.00	24	144	0.0	1061	6245	-74%	-117%		
MAX	7.13	70	306	0.3	3211	14036	87%	-1%		

PL  
EE NAME/ADDRESS (Include  
facility Name/Location if Different)

NAME: Guam Waterworks Authority  
ADDRESS: P.O. Box 3010  
AGANA, GUAM 96932

FACILITY: Northern District Sewage Treatment Plant  
LOCATION: Dededo, Guam

NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES)  
DISCHARGE MONITORING REPORT (DMR)

Form Approved,  
OMB No. 2040-0004  
Approval expires 9-30-85

(2-16)		(17-19)	
GU0020141		001	
PERMIT NUMBER		DISCHARGE NUMBER	

MONITORING PERIOD			
YEAR	MO	DAY	TO
2002	3	1	
2002	3	31	

NOTE: Read instructions before completing this form.

PARAMETER (32-37)	SAMPLE MEASUREMENT PERMIT REQUIREMENT	(3 Card only) (46-53) AVERAGE	QUANTITY OR LOADING (54-61)		UNITS	QUANTITY OR CONCENTRATION (62-69)			NO. EX. (82-83)	FREQUENCY OF ANALYSIS (64-66)	SAMPLE TYPE (69-70)
			MAXIMUM	MINIMUM		AVERAGE	MAXIMUM	UNITS			
FLOW		5.3	5.9		mgd					31/31	HOURLY
INFLUENT BOD		4876	6594	80	lbs/day	106	134			4/31	COMPOSITE
EFFLUENT BOD		5579	7676	98	lbs/day	122	156		2	4/31	COMPOSITE
INFLUENT SUSPENDED SOLIDS		4256	8512	46	lbs/day	85	170			1/7	COMPOSITE
EFFLUENT SUSPENDED SOLIDS		4267	7072	46	lbs/day	96	160			4/31	COMPOSITE
EFFLUENT SETTLABLE SOLIDS		2748	4504	46	lbs/day	61	100		2	4/31	COMPOSITE
EFFLUENT OIL & GREASE		2504	5008	0.01	m/l	0.2	0.3			1/7	DISCRETE
EFFLUENT pH		N/S	N/S	N/S	lbs/day	1.0	2.0			4/31	DISCRETE
						N/S	N/S			0/31	DISCRETE
						7.0	7.1			1/30	DISCRETE
						7.0	9.0			4/31	DISCRETE
										1/7	DISCRETE
NAME/TITLE PRINCIPLE EXECUTIVE OFFICER											
GIL A. SHINOHARA ACTING GENERAL MANAGER GWA											
TYPED OR PRINTED											
COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference to any violations)											
SUSPENDED SOLIDS (mg/l and lbs/day) MONTHLY AVERAGE BOD (mg/l and lbs/day) MONTHLY AVERAGE											
Explanation of violations attached at end of DMR's											

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED  
AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED  
ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR  
OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED INFORMATION  
IS TRUE ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIG-  
NIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING  
THE POSSIBILITY OF FINE AND IMPRISONMENT SEE, 18 USC §1001 AND  
33 USC §1319 (Penalties under these statutes may include fines up to \$10,000  
and or a maximum imprisonment of between 6 months and 5 years)

SIGNATURE OF PRINCIPLE EXECUTIVE  
OFFICER OR AUTHORIZED AGENT

671

479-7844

DATE

5/2/02

NORTHERN DISTRICT TREATMENT PLANT WASTEWATER RESULTS  
FOR THE MONTH OF MARCH 2002

INFLUENT

DATE	pH	SUSP. SOLIDS mg/l	BOD mg/l	SETTLE. SOLID ml/l	SUSP. SOLIDS lbs/day	BOD lbs/day	FLOW mgd
1							5.40
2							5.50
3							5.40
4							5.40
5							5.20
6	7.26	60	108	8.2	2702	4864	5.40
7							5.20
8							5.30
9							5.40
10							5.30
11							5.50
12							5.00
13	7.15	116	80	8.5	5031	3448	5.20
14							5.20
15							5.20
16							5.40
17							5.40
18							5.30
19							5.00
20	7.09	46	134	7.7	2263	6594	5.90
21							5.30
22							4.90
23							5.40
24							5.20
25							5.20
26							5.30
27	7.22	160	104	7.5	7072	4597	5.30
28							5.50
29							5.50
30							5.40
31							5.50
AVG	7.18	96	106	8.0	4267	4876	5.33
MIN	7.09	46	80	7.5	2263	3448	4.90
MAX	7.26	160	134	8.5	7072	6594	5.90

EFFLUENT

DATE	pH	SUSP. SOLIDS mg/l	BOD mg/l	SETTLE. SOLID ml/l	SUSP. SOLIDS lbs/day	BOD lbs/day	SUSP. SOLIDS %removal	BOD %removal	OIL & GREASE mg/l	OIL & GREASE lbs/day
1										
2										
3										
4										
5										
6	7.12	100	121	0.3	4504	5449	-57%	-12%		
7										
8										
9										
10										
11										
12										
13	7.04	46	112	0.0	1995	4857	60%	-41%		
14										
15										
16										
17										
18										
19										
20	6.98	50	156	0.0	2460	7676	-9%	-16%		
21										
22										
23										
24										
25										
26										
27	6.98	46	98	0.3	2033	4332	71%	6%	54.6	2368
28										
29										
30										
31										
AVG	7.03	61	122	0.2	2748	5579	14%	-16%	54.6	2368
MIN	6.98	46	98	0.0	1995	4332	-57%	-41%	54.6	2368
MAX	7.12	100	156	0.3	4504	7676	71%	6%	54.6	2368

PERMIT REQUIREMENTS

6	7	50	85	1	2504	4256
	9	100	170	2	5008	8512

VIOLATIONS  
SUSPENDED SOLIDS (mg/l AND lbs/day) MONTHLY AVERAGE  
BOD (mg/l AND lbs/day) MONTHLY AVERAGE



PERMITTEE NAME/ADDRESS (Include facility Name/Location if Different)

NAME: Guam Waterworks Authority  
ADDRESS: P.O. Box 3010  
AGANA, GUAM 96932

FACILITY: Umatac Sewage Treatment Plant  
LOCATION: Umatac, Guam

NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES)  
DISCHARGE MONITORING REPORT (DMR)

Form Approved.  
OMB No. 2040-0004  
Approval expires 9-30-85


(2-16) GU0020273 PERMIT NUMBER  
(17-19) 001 DISCHARGE NUMBER

MONITORING PERIOD  
FROM YEAR 2002 MO 1 DAY 1 TO YEAR 2002 MO 1 DAY 31  
(20-21) (22-23) (24-25) (26-27) (28-29) (30-31)

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card only) (46-53)		QUANTITY OR LOADING (54-61)		(4 Card Only) (38-45)		QUANTITY OR CONCENTRATION (46-53)		UNITS	NO. EX. (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
		AVERAGE	MAXIMUM	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM					
FLOW	SAMPLE MEASUREMENT PERMIT REQUIREMENT												
INFLUENT BOD	SAMPLE MEASUREMENT PERMIT REQUIREMENT	51	99							mgd		30/31	
	SAMPLE MEASUREMENT PERMIT REQUIREMENT											31/31	CONTINUOUS
EFFLUENT BOD	SAMPLE MEASUREMENT PERMIT REQUIREMENT	12	19							mg/l	1	1/7	COMPOSITE
	SAMPLE MEASUREMENT PERMIT REQUIREMENT	98											COMPOSITE
INFLUENT SUSPENDED SOLIDS	SAMPLE MEASUREMENT PERMIT REQUIREMENT	22	44							mg/l		1/7	COMPOSITE
	SAMPLE MEASUREMENT PERMIT REQUIREMENT												COMPOSITE
EFFLUENT SUSPENDED SOLIDS	SAMPLE MEASUREMENT PERMIT REQUIREMENT	6	14							mg/l	1		COMPOSITE
	SAMPLE MEASUREMENT PERMIT REQUIREMENT	98											COMPOSITE
FECAL COLIFORM	SAMPLE MEASUREMENT PERMIT REQUIREMENT									mg/l		1/7	COMPOSITE
	SAMPLE MEASUREMENT PERMIT REQUIREMENT										2		DISCRETE
Enterococci	SAMPLE MEASUREMENT PERMIT REQUIREMENT									cfu/100ml		1/7	DISCRETE
	SAMPLE MEASUREMENT PERMIT REQUIREMENT												DISCRETE
TOTAL CHLORINE RESIDUAL	SAMPLE MEASUREMENT PERMIT REQUIREMENT									cfu/100ml		1/7	DISCRETE
	SAMPLE MEASUREMENT PERMIT REQUIREMENT												DISCRETE
EFFLUENT pH	SAMPLE MEASUREMENT PERMIT REQUIREMENT	0.020	0.039							ug/L		1/7	DISCRETE
	SAMPLE MEASUREMENT PERMIT REQUIREMENT												DISCRETE
Temperature °C	SAMPLE MEASUREMENT PERMIT REQUIREMENT											1/7	DISCRETE
	SAMPLE MEASUREMENT PERMIT REQUIREMENT												DISCRETE
Orthophosphate (PO <sub>4</sub> -P)	SAMPLE MEASUREMENT PERMIT REQUIREMENT									°C		1/7	DISCRETE
	SAMPLE MEASUREMENT PERMIT REQUIREMENT	0.5	0.6										DISCRETE
	SAMPLE MEASUREMENT PERMIT REQUIREMENT									mg/l	7	1/7	COMPOSITE
												1/7	COMPOSITE

NOTE: Read instructions before completing this form.

Nitrate	en (NO <sub>3</sub> - N)	SAMPLE MEASUREMENT PERMIT	0.48	0.54	lbs/day	1.20	2	mg/l	4	COMPOSITE	
Total Kjeldahl Nitrogen		SAMPLE MEASUREMENT PERMIT	6	1.60	lbs/day	12	20	mg/l	1/7	COMPOSITE	
Ammonia Nitrogen (mg/L NH <sub>3</sub> +NH <sub>4</sub> -N)		SAMPLE MEASUREMENT PERMIT	5	11	lbs/day	9	17	mg/l	1/7	COMPOSITE	
Dissolved Oxygen		SAMPLE MEASUREMENT PERMIT			lbs/day	6	7	mg/l	1/7	COMPOSITE	
Turbidity		SAMPLE MEASUREMENT PERMIT			lbs/day	3.90	8.3	ntu	1/7	DISCRETE	
EFFLUENT OIL & GREASE		SAMPLE MEASUREMENT PERMIT			lbs/day			mg/l	1/7	DISCRETE	
Heavy Metals (mg/L or ug/L)		SAMPLE MEASUREMENT PERMIT			ug/L			ug/L	Annually	DISCRETE	
Hardness (mg/L CaCO <sub>3</sub> )		SAMPLE MEASUREMENT PERMIT			lbs/day			mg/l	Annually	COMPOSITE	
Pesticides (mg/L or ug/L)		SAMPLE MEASUREMENT PERMIT			lbs/day			mg/l	Annually	COMPOSITE	
Whole Effluent Toxicity (Tu <sub>2</sub> )		SAMPLE MEASUREMENT PERMIT							Annually	COMPOSITE	
NAME/TITLE PRINCIPLE EXECUTIVE OFFICER		SAMPLE MEASUREMENT PERMIT							Annually	COMPOSITE	
GIL A. SHINOHARA ACTING GENERAL MANAGER GWA		I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED INFORMATION IS TRUE ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT SEE, 18 USC §1001 AND 33 USC §1316 (Penalties under these statutes may include fines up to \$10,000 and or a maximum imprisonment of between 6 months and 5 years)		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		TELEPHONE		DATE			
						479-7676		MAY 03 2002			
COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)		AREA CODE		NUMBER		YEAR		MO		DAY	
SUSPENDED SOLIDS (% REMOVAL) LESS THAN 85% BOD (% REMOVAL) LESS THAN 85% FECAL COLIFORMS DAILY MAX (2 VIOLATIONS) AND MONTHLY AVERAGE Orthophosphate (mg/l) daily max exceeded (3 violations) Nitrate-Nitrogen (mg/l) daily max exceeded (1 violation) Orthophosphate (lbs/day) daily max exceeded (4 violations) Nitrate-Nitrogen (lbs/day) daily max exceeded (4 violations) Turbidity daily max exceeded (3 violations)		671		479-7676		2002					



UMATAC TREATMENT PLANT WASTEWATER RESULTS  
FOR THE MONTH OF JANUARY 2002

## INFLUENT

DATE	pH	SUSP. SOLIDS mg/l	BOD mg/l	SETTL. SOLID ml/l	SUSP. SOLIDS lbs/day	BOD lbs/day	FLOW mgd
1							0.389
2	7.13	0	29	2.9	0	86	0.356
3							0.443
4							0.334
5							0.389
6							0.334
7							0.334
8	6.82	38	57	2.4	192	288	0.389
9							0.605
10							0.277
11							0.334
12							0.334
13							0.377
14							0.277
15							0.443
16	7.07	4	99	3.1	12	309	0.374
17							0.389
18							0.334
19							0.334
20							0.277
21							0.277
22	6.97	44	17	3.8	124	48	0.277
23							0.337
24							0.277
25							0.334
26							0.389
27							0.334
28							0.277
29							0.222
30							0.334
31							0.277
AVG	7.00	22	50.5	3.1	82.0	183	0.34
MIN	6.82	0	17	2.4	0.0	48	0.22
MAX	7.13	44	99	3.8	191.7	309	0.61

## PERMIT REQUIREMENTS

MAX

monthly avg  
weekly max

30 40 45

98 130

98 150

85 85

126/100ml  
406/100ml6.1  
12

## EFFLUENT

DATE	pH	SUSP. SOLIDS mg/l	BOD mg/l	SETTL. SOLID ml/l	SUSP. SOLIDS lbs/day	BOD lbs/day	SUSP. SOLIDS %removal	BOD %removal	FECAL COLIFORM CFU/100ml	Enterococci CFU/100ml	Total Chlorine Residual (µg/l)
1											
2	7.31	0	11	0.0							
3											
4											
5											
6											
7											
8											
9	7.05	14	19	0.1	71	96	63%	67%	2300.00	2390	0.00
10											
11											
12											
13											
14											
15											
16											
17	7.34	4	14	0.1	12	44	0%	85%	500.00	410	0.00
18											
19											
20											
21											
22											
23	7.42	4	2	0.2	11	6	91%	88%	64.00	200	0.00
24											
25											
26											
27											
28											
29											
30											
31											
AVG	7.28	6	12	0.1	24	44	39%	76%	741	4570	0.00
MIN	7.05	0	2	0.0	0	6	0%	62%	64	4570	0.00
MAX	7.42	14	19	0.2	71	96	91%	88%	2300	4570	0.00

**VIOLATIONS**  
SUSPENDED SOLIDS (% REMOVAL) LESS THAN 85%  
BOD (% REMOVAL) LESS THAN 85%  
FECAL COLIFORMS DAILY MAX (2 VIOLATIONS) AND MONTHLY AVERAGE  
Orthophosphate (mg/l) daily max exceeded (3 violations)  
Nitrate-Nitrogen (mg/l) daily max exceeded (1 violation)  
Orthophosphate (lbs/day) daily max exceeded (4 violations)  
Nitrate-Nitrogen (lbs/day) daily max exceeded (4 violations)  
Turbidity daily max exceeded (3 violations)

UMATAC TREATMENT PLANT WASTEWATER RESULTS  
FOR THE MONTH OF JANUARY 2002

EFFLUENT (CONTINUED)

DATE	Ortho- Phosphate (PO <sub>4</sub> -P)	Nitrate Nitrogen (NO <sub>3</sub> -N)	Total Kjeldahl Nitrogen (mg/L TKN)	Ammonia Nitrogen (mg/L)	Ortho- Phosphate lbs/day	Nitrate Nitrogen lbs/day	Total Kjeldahl Nitrogen lbs/day	Ammonia Nitrogen lbs/day	DISSOLVED OXYGEN mg/L	Turbidity NTU	Temp. °C
1											
2	0.579	0.487	10.600	10.600	1.719	1.446	31.472	31.472	N/S	N/S	N/S
3											
4											
5											
6											
7											
8											
9	0.466	0.463	4.470	3.340	2.351	2.336	22.554	16.853	7.2	16.3	21.0
10											
11											
12											
13											
14											
15											
16	0.412	0.542	3.790	2.960	1.285	1.691	11.822	9.233	6.6	3.9	21.0
17											
18											
19											
20											
21											
22											
23	0.509	0.428	5.12	3.85	1.431	1.203	14.390	10.821	6.0	4.8	26.0
24											
25											
26											
27											
28											
29											
30											
31											
AVG	0.49	0.48	6.00	5.19	1.697	1.669	20.059	17.094	6.60	8.33	22.33
MIN	0.41	0.43	3.79	2.96	1.285	1.203	11.822	9.233	6.00	3.90	21.00
MAX	0.58	0.54	10.60	10.60	2.351	2.336	31.472	31.472	7.20	16.30	25.00

0.1	0.5	0.33	1.6	1
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PERMITTEE NAME/ADDRESS (include facility Name/Location if Different)

NAME: Guam Waterworks Authority  
ADDRESS: P.O. Box 3010  
AGANA, GUAM 96932

FACILITY: Umatac Sewage Treatment Plant  
LOCATION: Umatac, Guam

NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES)  
DISCHARGE MONITORING REPORT (DMR)

Form Approved,  
OMB No. 2040-0004  
Approval expires 9-30-85

(2-16)

GU0020273  
PERMIT NUMBER

(17-19)

001  
DISCHARGE NUMBER

MONITORING PERIOD

FROM	YEAR	MO	DAY	TO	YEAR	MO	DAY
	2002	2	1		2002	2	28

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card only) (46-53)		QUANTITY OR LOADING (54-61)		UNITS	(4 Card Only) (38-45)		QUANTITY OR CONCENTRATION (46-53)		UNITS	NO. EX. (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
		AVERAGE	MAXIMUM	MAXIMUM	MINIMUM		AVERAGE	MAXIMUM						
FLOW	SAMPLE MEASUREMENT PERMIT REQUIREMENT					MGD	0.22		0.40	1.50	mgd		30/31	
	SAMPLE MEASUREMENT PERMIT REQUIREMENT													31/31
INFLUENT BOD	SAMPLE MEASUREMENT PERMIT REQUIREMENT	80	98			lbs/day	163		593	987	mg/l			
	SAMPLE MEASUREMENT PERMIT REQUIREMENT													1/7
BOD	SAMPLE MEASUREMENT PERMIT REQUIREMENT	30	34			lbs/day	73		86	98	mg/l	1		
	SAMPLE MEASUREMENT PERMIT REQUIREMENT	98							30					
INFLUENT SUSPENDED SOLIDS	SAMPLE MEASUREMENT PERMIT REQUIREMENT	59	96			lbs/day	104		482	1201	mg/l		1/7	COMPOSITE
	SAMPLE MEASUREMENT PERMIT REQUIREMENT													
EFFLUENT SUSPENDED SOLIDS	SAMPLE MEASUREMENT PERMIT REQUIREMENT	22	24			lbs/day	58		63	67	mg/l	1		COMPOSITE
	SAMPLE MEASUREMENT PERMIT REQUIREMENT	98							30					
FECAL COLIFORM	SAMPLE MEASUREMENT PERMIT REQUIREMENT						4060.00		5405.0	6750.0	cfu/100ml	2		COMPOSITE
	SAMPLE MEASUREMENT PERMIT REQUIREMENT							126		406				1/7
Enterococci	SAMPLE MEASUREMENT PERMIT REQUIREMENT						4570.00		4570.0	4570.0	cfu/100ml			DISCRETE
	SAMPLE MEASUREMENT PERMIT REQUIREMENT								100					1/7
TOTAL CHLORINE RESIDUAL	SAMPLE MEASUREMENT PERMIT REQUIREMENT					ug/L	0.00		0.0	0.0	ug/L			DISCRETE
	SAMPLE MEASUREMENT PERMIT REQUIREMENT	0.020	0.039						6.1			12		
EFFLUENT pH	SAMPLE MEASUREMENT PERMIT REQUIREMENT						7.2		7.3	7.5				DISCRETE
	SAMPLE MEASUREMENT PERMIT REQUIREMENT						6.5			8.5				1/7
Temperature °C	SAMPLE MEASUREMENT PERMIT REQUIREMENT						23.80		23.8	23.8	°C			DISCRETE
	SAMPLE MEASUREMENT PERMIT REQUIREMENT													1/7
Orthophosphate (PO <sub>4</sub> -P)	SAMPLE MEASUREMENT PERMIT REQUIREMENT	0.6	0.6			lbs/day	1.84		1.84	1.84	mg/l	2		DISCRETE
	SAMPLE MEASUREMENT PERMIT REQUIREMENT		0.33											1/7
										0.10				COMPOSITE

Parameter	Sample Measurement Permit	Requirement	0.08	0.08	lbs/day	0.24	0	0.24	mg/l	Telephone	Area Code	Signature of Principal Executive Officer or Authorized Agent	Number	Year	MO	DAY	
Nitrate Nitrogen ( $\text{NO}_3^- \cdot \text{N}$ )	Sample Measurement Permit	Requirement	0.08	0.08	lbs/day	0.24	0	0.24	mg/l								
Total Kjeldahl Nitrogen	Sample Measurement Permit	Requirement	3	1.60	lbs/day	10	10	0.50	mg/l								
Ammonia Nitrogen ( $\text{mg/L NH}_3 + \text{NH}_4^+ \cdot \text{N}$ )	Sample Measurement Permit	Requirement	1	1	lbs/day	4	4	10	mg/l								
Dissolved Oxygen	Sample Measurement Permit	Requirement			lbs/day	2	4	5	mg/l								
Turbidity	Sample Measurement Permit	Requirement			lbs/day	4.20	17.3	30.3	ntu								
Effluent Oil & Grease	Sample Measurement Permit	Requirement			lbs/day			1.0	mg/l								
Heavy Metals ( $\text{mg/L or ug/L}$ )	Sample Measurement Permit	Requirement			ug/L				ug/L								
Hardness ( $\text{mg/L CaCO}_3$ )	Sample Measurement Permit	Requirement			lbs/day				mg/l								
Pesticides ( $\text{mg/L or ug/L}$ )	Sample Measurement Permit	Requirement															
Whole Effluent Toxicity ( $\text{T}_{10}$ )	Sample Measurement Permit	Requirement															
NAME/TITLE PRINCIPLE EXECUTIVE OFFICER	<p>I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED INFORMATION IS TRUE ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to \$10,000 and or a maximum imprisonment of between 6 months and 5 years)</p>																
GIL A. SHINOHARA ACTING GENERAL MANAGER GWA	<p>8/5/12</p>																
TYPED OR PRINTED	<p>8/5/12</p>																
COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)	<p>SUSPENDED SOLIDS (% REMOVAL) LESS THAN 85% BOD (% REMOVAL) LESS THAN 85% Turbidity exceeded (2 violations) Orthophosphate (mg/l and lbs/day) daily max exceeded (1 violation each) Fecal Coliform Daily max (2 violations) and Monthly Average</p>																

UMATAC TREATMENT PLANT WASTEWATER RESULTS  
FOR THE MONTH OF FEBRUARY 2002

## INFLUENT

DATE	pH	SUSP. SOLIDS mg/l	BOD mg/l	SETTL. SOLID ml/l	SUSP. SOLIDS lbs/day	BOD lbs/day	FLOW mgd
1							0.334
2							0.277
3							0.389
4							0.334
5							0.277
6	7.04	36	98	4.4	104	284	0.347
7							0.277
8							0.334
9							0.389
10							0.277
11							0.334
12							0.277
13	7.02	60	58	9.9	169	163	0.337
14							0.389
15							0.277
16							0.334
17							0.389
18							0.277
19							0.334
20	7.55	96	72	9.6	1201	901	1.500
21							0.334
22							0.277
23							0.222
24							0.334
25							0.334
26							0.227
27	6.95	42	91	6.0	455	987	1.300
28							1.300
29							0.389
30							
31							
AVG	7.14	59	79.75	7.6	482.3	583	0.40
MIN	6.95	36	58	4.4	104.2	163	0.22
MAX	7.55	96	98	9.9	1201.0	987	1.50

## EFFLUENT

DATE	pH	SUSP. SOLIDS mg/l	BOD mg/l	SETTL. SOLID ml/l	SUSP. SOLIDS lbs/day	BOD lbs/day	BOD %removal	FECAL COLIFORM CFU/100ml	Enterococci CFU/100ml	Total Chlorine Residual (µg/l)
1										
2										
3										
4										
5										
6	7.45	20	34	0.1	58	98	65%	6750.00	TNTC	0.00
7										
8										
9										
10										
11										
12										
13	7.23	24	26	0.1	67	73	55%	4060.00	100	0.00
14										
15										
16										
17										
18										
19										
20	NOT DISCHARGING INTO TOGUAN RIVER									
21										
22										
23										
24										
25										
26										
27	NOT DISCHARGING INTO TOGUAN RIVER									
28										
29										
30										
31										
AVG	7.34	22	30	0.1	63	86	60%	5405	4570	0.00
MIN	7.23	20	26	0.1	58	73	55%	4060	4570	0.00
MAX	7.45	24	34	0.1	67	98	65%	6750	4570	0.00

## PERMIT REQUIREMENTS

MAX	monthly avg	6.50	30	30	98	85	126/100ml	6.1
	weekly max	8.50	40	45	150		406/100ml	12

## VIOLATIONS

SUSPENDED SOLIDS (% REMOVAL) LESS THAN 85%  
BOD (% REMOVAL) LESS THAN 85%  
Turbidity exceeded (2 violations)  
Orthophosphate (mg/l and lbs/day) daily max exceeded (1 violation each)  
Fecal Coliform Daily max (2 violations) and Monthly Average



UMATAC TREATMENT PLANT WASTEWATER RESULTS  
FOR THE MONTH OF FEBRUARY 2002

EFFLUENT (CONTINUED)

DATE	Ortho- Phosphate (PO <sub>4</sub> -P)	Nitrate Nitrogen (NO <sub>3</sub> -N)	Total Kjeldahl Nitrogen (mg/L TKN)	Ammonia Nitrogen (mg/L)	Ortho- Phosphate lbs/day	Nitrate Nitrogen lbs/day	Total Kjeldahl Nitrogen lbs/day	Ammonia Nitrogen lbs/day	DISSOLVED OXYGEN mg/L	Turbidity NTU	Temp. °C
1											
2											
3											
4											
5											
6	0.637	0.084	3.330	1.380	1.843	0.243	9.637	3.994	4.6	4.2	23.8
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
24											
25											
26											
27											
28											
29											
30											
31											
AVG	0.64	0.08	3.33	1.38	1.843	0.243	9.637	3.994	3.50	17.25	23.80
MIN	0.64	0.08	3.33	1.38	1.843	0.243	9.637	3.994	2.40	4.20	23.80
MAX	0.64	0.08	3.33	1.38	1.843	0.243	9.637	3.994	4.60	30.30	23.80

0.1	0.5	0.33	1.6	1
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PERMITTEE NAME/ADDRESS (Include facility Name/Location if Different)

NAME: Guam Waterworks Authority  
ADDRESS: P.O. Box 3010  
AGANA, GUAM 96932

FACILITY: Umatac Sewage Treatment Plant  
LOCATION: Umatac, Guam

NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES)  
DISCHARGE MONITORING REPORT (DMR)

Form Approved.  
OMB No. 2040-0004  
Approval expires 9-30-85

(2-16)		(17-19)	
GU0020273	001	DISCHARGE NUMBER	
PERMIT NUMBER			

MONITORING PERIOD			
FROM	YEAR	MO	DAY
2002	3	1	1
TO	YEAR	MO	DAY
2002	3	31	31

NOTE: Read Instructions before completing this form.

PARAMETER (32-37)	SAMPLE MEASUREMENT PERMIT REQUIREMENT	(3 Card Only) (46-53) AVERAGE		QUANTITY OR LOADING (54-61) MAXIMUM		QUANTITY OR CONCENTRATION (46-53) AVERAGE		QUANTITY OR CONCENTRATION (54-61) MAXIMUM		UNITS	NO. EX. (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
		(46-53) AVERAGE	(54-61) MAXIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	(46-53) AVERAGE	(54-61) MAXIMUM				
FLOW	SAMPLE MEASUREMENT PERMIT REQUIREMENT							0.22	0.39	mgd		30/31	CONTINUOUS
INFLUENT BOD	SAMPLE MEASUREMENT PERMIT REQUIREMENT	71	116			180	268	106		mg/l		1/7	COMPOSITE
BOD	SAMPLE MEASUREMENT PERMIT REQUIREMENT	15	27			36	62	14		mg/l	1	1/7	COMPOSITE
INFLUENT SUSPENDED SOLIDS	SAMPLE MEASUREMENT PERMIT REQUIREMENT	82	126			216	351	108		mg/l		1/7	COMPOSITE
EFFLUENT SUSPENDED SOLIDS	SAMPLE MEASUREMENT PERMIT REQUIREMENT	32	70			89	195	21		mg/l	3	1/7	COMPOSITE
FECAL COLIFORM	SAMPLE MEASUREMENT PERMIT REQUIREMENT					400.0	800.0	100.00		cfu/100ml	2	1/7	DISCRETE
Enterococci	SAMPLE MEASUREMENT PERMIT REQUIREMENT					126	406	820.00		cfu/100ml		1/7	DISCRETE
TOTAL CHLORINE RESIDUAL	SAMPLE MEASUREMENT PERMIT REQUIREMENT					23156.7	62940.0					1/7	DISCRETE
EFFLUENT pH	SAMPLE MEASUREMENT PERMIT REQUIREMENT	0.020	0.039			0.0	0.0	0.00		ug/L		1/7	DISCRETE
Temperature °C	SAMPLE MEASUREMENT PERMIT REQUIREMENT					7.4	7.6	7.2				1/7	DISCRETE
Orthophosphate (PO <sub>4</sub> -P)	SAMPLE MEASUREMENT PERMIT REQUIREMENT	0.2	0.3			24.2	25.7	23.00		°C		1/7	DISCRETE
	SAMPLE MEASUREMENT PERMIT REQUIREMENT					0.45	0.86	0.11		mg/l	4	1/7	COMPOSITE
							0.10					1/7	COMPOSITE

SAMPLE MEASUREMENT PERMIT	0.33	0.62	lbs/day	0.07	1	1.43	mg/l	4	COMPOSITE
Nitrate - Nitrogen ( $\text{NO}_3 \cdot \text{N}$ )									COMPOSITE
Total Kjeldahl Nitrogen	5	160	lbs/day	10	14	0.50	mg/l		COMPOSITE
Ammonia Nitrogen ( $\text{mg/L NH}_3\text{-NH}_4\text{-N}$ )	4	7	lbs/day	5	11	21	mg/l		COMPOSITE
Dissolved Oxygen			lbs/day	1	2	19	mg/l		COMPOSITE
Turbidity			lbs/day	15.40	20.5	30.3	ntu	3	DISCRETE
EFFLUENT OIL & GREASE			lbs/day			1.0	mg/l		DISCRETE
Heavy Metals ( $\text{mg/L or ug/L}$ )			ug/L						DISCRETE
Hardness ( $\text{mg/L CaCO}_3$ )			lbs/day						DISCRETE
Pesticides ( $\text{mg/L or ug/L}$ )			lbs/day						DISCRETE
Whole Effluent Toxicity ( $\text{Tu}_d$ )									DISCRETE
NAME/TITLE PRINCIPLE EXECUTIVE OFFICER	GIL A. SHINOHARA ACTING GENERAL MANAGER GWA			6.5			8.5		
<p>I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED INFORMATION IS TRUE ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT SEE 18 USC §1001 AND 33 USC §1319 (Penalties under these statutes may include fines up to \$10,000 and or a maximum imprisonment of between 6 months and 5 years)</p>									
TYPED OR PRINTED				SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT			TELEPHONE		
COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)				671			479-7576		
Suspended solids ( $\text{mg/l}$ ) daily max (1 violation) Suspended solids ( $\text{lbs/day}$ ) monthly average Suspended Solids % removal below 85% BOD % removal less than 85% Fecal Coliform daily max exceeded (1 violation) and monthly average Orthophosphate ( $\text{mg/l}$ ) daily max exceeded (2 violations) Nitrate-Nitrogen ( $\text{mg/l}$ ) daily max exceeded (2 violations) Orthophosphate ( $\text{lbs/day}$ ) daily max exceeded (2 violations)				Nitrate-Nitrogen ( $\text{lbs/day}$ ) daily max exceeded (2 violations) Turbidity daily max exceeded (3 violations)			AREA CODE YEAR MO DAY		

UMATAC TREATMENT PLANT WASTEWATER RESULTS  
FOR THE MONTH OF MARCH 2002

INFLUENT

DATE	pH	SUSP. SOLIDS mg/l	BOD mg/l	SETTL. SOLID ml/l	SUSP. SOLIDS lbs/day	BOD lbs/day	FLOW mgd
1							0.389
2							0.277
3							0.334
4							0.334
5							0.277
6	7.20	126	38	3.1	351	106	0.334
7							0.277
8							0.277
9							0.334
10							0.277
11							0.389
12							0.277
13	7.13	38	68	4.0	108	165	0.342
14							0.222
15							0.277
16							0.334
17							0.277
18							0.334
19							0.222
20	7.98	82	116	N/S	189	268	0.277
21							0.277
22							0.334
23							0.277
24							0.222
25							0.277
26							0.277
27							0.334
28							0.277
29							0.334
30							0.277
31							0.222
AVG	7.44	82	70.65667	3.6	215.3	180	0.30
MIN	7.13	38	38	3.1	108.4	106	0.22
MAX	7.98	126	116	4.0	351.0	268	0.39

OPERATORS DID NOT COLLECT A FULL 24 COMPOSITE SAMPLE

EFFLUENT

DATE	pH	SUSP. SOLIDS mg/l	BOD mg/l	SETTL. SOLID ml/l	SUSP. SOLIDS lbs/day	BOD lbs/day	SUSP. SOLIDS %removal	BOD %removal	FECAL COLIFORM CFU/100ml	Enterococci CFU/100ml	Total Chlorine Residual (ug/l)
1											
2											
3											
4											
5											
6	7.49	70	12	0.0	195	33	44%	68%	800	5710	0.00
7											
8											
9											
10											
11											
12											
13	7.67	18	5	0.0	51	14	53%	92%	<100	820	0.00
14											
15											
16											
17											
18											
19											
20	7.23	9	27	0	21	62	89%	77%	300	62940	0.00
21											
22											
23											
24											
25											
26											
27											
28											
29											
30											
31											
AVG	7.43	32	15	0.0	89	36	62%	79%	400	23157	0.00
MIN	7.23	9	5	0.0	21	14	44%	68%	100	820	0.00
MAX	7.67	70	27	0.0	195	62	89%	92%	800	62940	0.00

OPERATORS DID NOT COLLECT A FULL 24 COMPOSITE SAMPLE

PERMIT REQUIREMENTS

MAX	6.50	30	30	85	85	126/100ml	6.1
monthly avg	8.50	40	45	85	85	406/100ml	12
weekly max							

VIOLATIONS

Suspended solids (mg/l) daily max (1 violation)  
Suspended solids (lbs/day) monthly average  
Suspended Solids % removal below 85%  
BOD % removal less than 85%  
Fecal Coliform daily max exceeded (1 violation) and monthly average  
Orthophosphate (mg/l) daily max exceeded (2 violations)  
Nitrate-Nitrogen (mg/l) daily max exceeded (2 violations)  
Orthophosphate (lbs/day) daily max exceeded (2 violations)  
Nitrate-Nitrogen (lbs/day) daily max exceeded (2 violations)  
Turbidity daily max exceeded (3 violations)

UMATAC TREATMENT PLANT WASTEWATER RESULTS  
FOR THE MONTH OF MARCH 2002

EFFLUENT (CONTINUED)

DATE	Ortho- Phosphate (PO <sub>4</sub> -P)	Nitrate Nitrogen (NO <sub>3</sub> -N)	Total Kjeldahl Nitrogen (mg/L TKN)	Ammonia Nitrogen (mg/L)	Ortho- Phosphate lbs/day	Nitrate Nitrogen lbs/day	Total Kjeldahl Nitrogen lbs/day	Ammonia Nitrogen lbs/day	DISSOLVED OXYGEN mg/L	Turbidity NTU	Temp. °C
1											
2											
3											
4											
5											
6	0.040	0.352	3.420	1.710	0.111	0.981	9.527	4.763	1.1	15.8	23.0
7											
8											
9											
10											
11											
12											
13	0.302	0.026	7.220	6.760	0.861	0.074	20.593	19.281	2.4	30.3	23.8
14											
15											
16											
17											
18											
19											
20	0.165	0.620	5.520	3.530	0.381	1.432	12.752	8.155	3.9	15.4	25.7
21											
22											
23											
24											
25											
26											
27											
28											
29											
30											
31											
AVG	0.17	0.33	5.39	4.00	0.451	0.829	14.291	10.733	2.47	20.50	24.17
MIN	0.04	0.03	3.42	1.71	0.111	0.074	9.527	4.763	1.10	15.40	23.00
MAX	0.30	0.62	7.22	6.76	0.861	1.432	20.593	19.281	3.90	30.30	25.70

0.1	0.5	0.33	1.6	1
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**AGAT STP**  
**FOR**  
**HEAVY METALS, PESTICIDES,**  
**AND**  
**WHOLE EFFLUENT TOXICITY RESULTS**

**ATTACHMENT B**

## ATTACHMENT B.1

### AGAT METALS AND PESTICIDES JANUARY 2001



**MONTGOMERY WATSON LABORATORIES**

a Division of Montgomery Watson Americas, Inc.

555 East Walnut Street

Pasadena, California 91101

Tel: 626 568 6400 Fax: 626 568 6324

1 800 566 LABS (1 800 566 5227)

**Laboratory  
Data Report  
#90980**Guam Water Authority  
Carmen Sian-Denton  
Government of Guam  
P.O. Box 3010  
Agana, GU 96910Samples Received  
01/22/02

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
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**AGAT STP (2201220025)      Sampled on 01/14/02 15:00**

01/31/02	12:41	163070	( EPA/ML 200.8 )	Aluminum, Total, ICAP/MS	230	ug/l	25	1
01/31/02	12:41	163075	( EPA/ML 200.8 )	Copper, Total, ICAP/MS	11	ug/l	2.0	1
01/31/02	12:41	163074	( EPA/ML 200.8 )	Nickel, Total, ICAP/MS	5.1	ug/l	5.0	1
01/31/02	12:41	163076	( EPA/ML 200.8 )	Zinc, Total, ICAP/MS	35	ug/l	5.0	1

**Pesticides/PCBs**

01/31/02	02/27/02 00:00	164972	( ML/EPA 608 )	PCB 1016 Aroclor	NA	ug/l	0.50	1
01/31/02	02/27/02 00:00	164972	( ML/EPA 608 )	PCB 1221 Aroclor	NA	ug/l	0.50	1
01/31/02	02/27/02 00:00	164972	( ML/EPA 608 )	PCB 1232 Aroclor	NA	ug/l	0.50	1
01/31/02	02/27/02 00:00	164972	( ML/EPA 608 )	PCB 1242 Aroclor	NA	ug/l	0.50	1
01/31/02	02/27/02 00:00	164972	( ML/EPA 608 )	PCB 1248 Aroclor	NA	ug/l	0.50	1
01/31/02	02/27/02 00:00	164972	( ML/EPA 608 )	PCB 1254 Aroclor	NA	ug/l	0.50	1
01/31/02	02/27/02 00:00	164972	( ML/EPA 608 )	PCB 1260 Aroclor	NA	ug/l	0.50	1
01/31/02	02/27/02 00:00	164972	( ML/EPA 608 )	Alpha-BHC	NA	ug/l	0.020	1
01/31/02	02/27/02 00:00	164972	( ML/EPA 608 )	Aldrin	NA	ug/l	0.020	1
01/31/02	02/27/02 00:00	164972	( ML/EPA 608 )	Beta-BHC	NA	ug/l	0.020	1
01/31/02	02/27/02 00:00	164972	( ML/EPA 608 )	Chlordane	NA	ug/l	0.20	1
01/31/02	02/27/02 00:00	164972	( ML/EPA 608 )	Delta-BHC	NA	ug/l	0.020	1
01/31/02	02/27/02 00:00	164972	( ML/EPA 608 )	p,p' DDD	NA	ug/l	0.020	1
01/31/02	02/27/02 00:00	164972	( ML/EPA 608 )	p,p' DDE	NA	ug/l	0.020	1
01/31/02	02/27/02 00:00	164972	( ML/EPA 608 )	p,p' DDT	NA	ug/l	0.020	1
01/31/02	02/27/02 00:00	164972	( ML/EPA 608 )	Dieldrin	NA	ug/l	0.020	1
01/31/02	02/27/02 00:00	164972	( ML/EPA 608 )	Endrin Aldehyde	NA	ug/l	0.020	1
01/31/02	02/27/02 00:00	164972	( ML/EPA 608 )	Endrin Ketone	NA	ug/l	0.50	1
01/31/02	02/27/02 00:00	164972	( ML/EPA 608 )	Endrin	NA	ug/l	0.010	1
01/31/02	02/27/02 00:00	164972	( ML/EPA 608 )	Endosulfan I (alpha)	NA	ug/l	0.020	1
01/31/02	02/27/02 00:00	164972	( ML/EPA 608 )	Endosulfan II (beta)	NA	ug/l	0.020	1
01/31/02	02/27/02 00:00	164972	( ML/EPA 608 )	Endosulfan sulfate	NA	ug/l	0.020	1
01/31/02	02/27/02 00:00	164972	( ML/EPA 608 )	Gamma-BHC	NA	ug/l	0.020	1
01/31/02	02/27/02 00:00	164972	( ML/EPA 608 )	Heptachlor	NA	ug/l	0.010	1
01/31/02	02/27/02 00:00	164972	( ML/EPA 608 )	Heptachlor Epoxide	NA	ug/l	0.010	1

ATTACHMENT B.2

AGAT METALS AND PESTICIDES  
MARCH 2002

**MONTGOMERY WATSON LABORATORIES**

a Division of Montgomery Watson Americas, Inc.

555 East Walnut Street

Pasadena, California 91101

Tel: 626 566 6400 Fax: 626 566 6324

1 800 566 LABS (1 800 566 5227)

**Laboratory  
Data Report  
#93139**

Guam Water Authority  
Carmen Sian-Denton  
Government of Guam  
P.O. Box 3010  
Agana, GU 96910

Samples Received  
03/14/02

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
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**AGAT STP (2203140159)      Sampled on 03/11/02 15:00**

03/27/02 14:16	167368	( EPA/ML 200.8 )	Aluminum, Total, ICAP/MS	410	ug/l	25	1
04/03/02 15:00	167938	( EPA/ML 200.8 )	Copper, Total, ICAP/MS	9.4	ug/l	2.0	1
04/03/02 15:00	167936	( EPA/ML 200.8 )	Nickel, Total, ICAP/MS	ND	ug/l	5.0	1
04/03/02 15:00	167940	( EPA/ML 200.8 )	Zinc, Total, ICAP/MS	46	ug/l	5.0	1

**Pesticides/PCBs**

03/18/02	03/27/02 00:00	167219	( ML/EPA 608 )	PCB 1016 Aroclor	ND	ug/l	0.50	1
03/18/02	03/27/02 00:00	167219	( ML/EPA 608 )	PCB 1221 Aroclor	ND	ug/l	0.50	1
03/18/02	03/27/02 00:00	167219	( ML/EPA 608 )	PCB 1232 Aroclor	ND	ug/l	0.50	1
03/18/02	03/27/02 00:00	167219	( ML/EPA 608 )	PCB 1242 Aroclor	ND	ug/l	0.50	1
03/18/02	03/27/02 00:00	167219	( ML/EPA 608 )	PCB 1248 Aroclor	ND	ug/l	0.50	1
03/18/02	03/27/02 00:00	167219	( ML/EPA 608 )	PCB 1254 Aroclor	ND	ug/l	0.50	1
03/18/02	03/27/02 00:00	167219	( ML/EPA 608 )	PCB 1260 Aroclor	ND	ug/l	0.50	1
03/18/02	03/27/02 00:00	167219	( ML/EPA 608 )	Alpha-BHC	ND	ug/l	0.020	1
03/18/02	03/27/02 00:00	167219	( ML/EPA 608 )	Aldrin	ND	ug/l	0.020	1
03/18/02	03/27/02 00:00	167219	( ML/EPA 608 )	Beta-BHC	ND	ug/l	0.020	1
03/18/02	03/27/02 00:00	167219	( ML/EPA 608 )	Chlordane	ND	ug/l	0.20	1
03/18/02	03/27/02 00:00	167219	( ML/EPA 608 )	Delta-BHC	ND	ug/l	0.020	1
03/18/02	03/27/02 00:00	167219	( ML/EPA 608 )	p,p' DDD	ND	ug/l	0.020	1
03/18/02	03/27/02 00:00	167219	( ML/EPA 608 )	p,p' DDE	ND	ug/l	0.020	1
03/18/02	03/27/02 00:00	167219	( ML/EPA 608 )	p,p' DDT	ND	ug/l	0.020	1
03/18/02	03/27/02 00:00	167219	( ML/EPA 608 )	Dieldrin	ND	ug/l	0.020	1
03/18/02	03/27/02 00:00	167219	( ML/EPA 608 )	Endrin Aldehyde	ND	ug/l	0.020	1
03/18/02	03/27/02 00:00	167219	( ML/EPA 608 )	Endrin	ND	ug/l	0.010	1
03/18/02	03/27/02 00:00	167219	( ML/EPA 608 )	Endosulfan I (alpha)	ND	ug/l	0.020	1
03/18/02	03/27/02 00:00	167219	( ML/EPA 608 )	Endosulfan II (beta)	ND	ug/l	0.020	1
03/18/02	03/27/02 00:00	167219	( ML/EPA 608 )	Endosulfan sulfate	ND	ug/l	0.020	1
03/18/02	03/27/02 00:00	167219	( ML/EPA 608 )	Gamma-BHC	ND	ug/l	0.020	1
03/18/02	03/27/02 00:00	167219	( ML/EPA 608 )	Heptachlor	ND	ug/l	0.010	1
03/18/02	03/27/02 00:00	167219	( ML/EPA 608 )	Heptachlor Epoxide	ND	ug/l	0.010	1
03/18/02	03/27/02 00:00	167219	( ML/EPA 608 )	Methoxychlor	ND	ug/l	0.20	1

ATTACHMENT B.3

AGAT STP

WHOLE EFFLUENT TOXICITY RESULTS

JANUARY 2002



GWA 91498

TOXICITY TESTING • OCEANOGRAPHIC RESEARCH

January 29, 2002

Ms. Martha Frost  
Montgomery Watson Labs.  
555 East Walnut Street  
Pasadena, CA 91101

Dear Ms. Frost:

We are pleased to present the enclosed bioassay report. The test was conducted under guidelines prescribed in *Short-Term Methods for Measuring the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms*, EPA/R-95/136. Results were as follows:

CLIENT:	Guam Water Authority
SAMPLE I.D.:	AGAT-STP
DATE RECEIVED:	17 Jan - 02
ABC LAB. NO.:	MON0120.125

**CHRONIC SEA URCHIN FERTILIZATION BIOASSAY**


NOEC = 3.15 %

TU<sub>c</sub> = 31.75

IC<sub>25</sub> = >3.15 %

IC<sub>50</sub> = >3.15 %

Yours very truly,

  
Thomas (Tim) Mikel  
Laboratory Director

ATTACHMENT B.4

AGAT STP

WHOLE EFFLUENT TOXICITY RESULTS

MARCH 2002



3/26 EYF

GWA  
93667

TOXICITY TESTING • OCEANOGRAPHIC RESEARCH

March 21, 2002

Ms. Martha Frost  
Montgomery Watson Labs.  
555 East Walnut Street  
Pasadena, CA 91101

Dear Ms. Frost:


We are pleased to present the enclosed bioassay report. The test was conducted under guidelines prescribed in *Short-Term Methods for Measuring the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms, EPA/R-95/136*. Results were as follows:

CLIENT:	Guam Water Authority
SAMPLE I.D.:	AGAT-STP
DATE RECEIVED:	14 Mar - 02
ABC LAB. NO.:	MON0320.833

**CHRONIC SEA URCHIN FERTILIZATION BIOASSAY**

NOEC =	3.15 %
TUc =	31.75
IC25 =	>3.15 %
IC50 =	>3.15 %

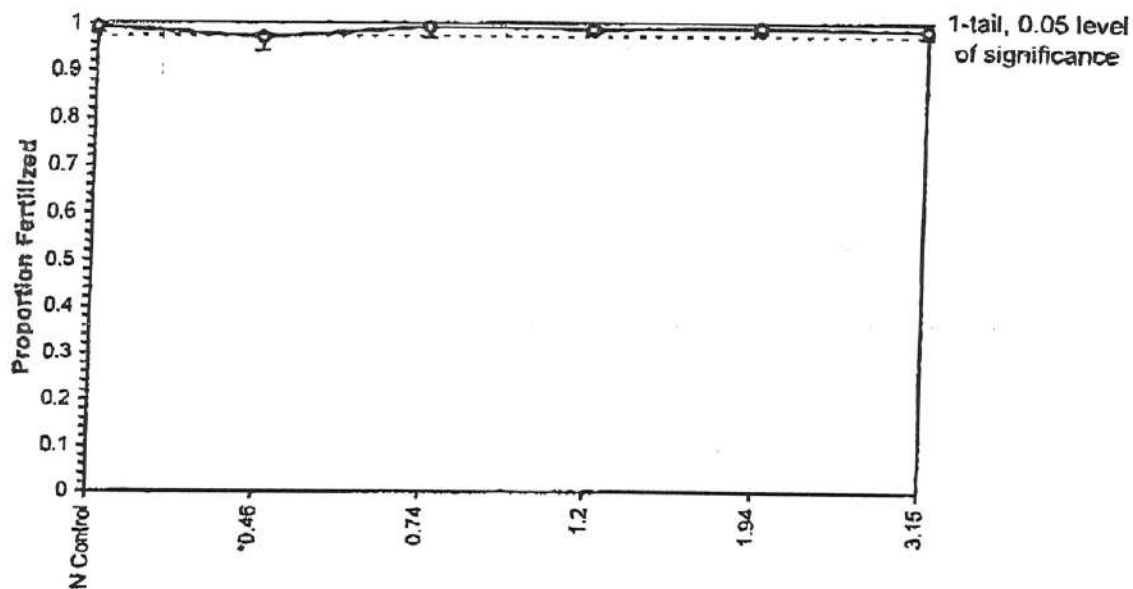
Yours very truly,

  
Thomas (Tim) Mikel  
Laboratory Director

## perm Cell Fertilization Test-Proportion Fertilized

Start Date: 03/19/2002	Test ID: MON0320833	Sample ID: CA0000000
End Date: 03/19/2002	Lab ID: CAABC	Sample Type: EFF1-POTW
Sample Date: 03/14/2002	Protocol: CHAP 92-Chapman	Test Species: SP-Strongylocentrotus purpuratus
Comments: AGAT-STP		

## Dose-Response Plot



## perm Cell Fertilization Test-Proportion Fertilized

Start Date: 03/19/2002	Test ID: MON0320833	Sample ID: CA0000000
End Date: 03/19/2002	Lab ID: CAABC	Sample Type: EFF1-POTW
Sample Date: 03/14/2002	Protocol: CHAP 92-Chapman	Test Species: SP-Strongylocentrotus purpuratus
Comments: AGAT-STP		

## Auxiliary Data Summary

Conc-%	Parameter	Mean	Min	Max	SD	CV%	N
N Control	Temp C	12.80	12.80	12.80	0.00	0.00	2
0.46		12.80	12.80	12.80	0.00	0.00	2
0.74		12.80	12.80	12.80	0.00	0.00	2
1.2		12.50	12.50	12.50	0.00	0.00	2
1.94		12.50	12.50	12.50	0.00	0.00	2
3.15		12.30	12.30	12.30	0.00	0.00	2
N Control	pH	7.70	7.70	7.70	0.00	0.00	2
0.46		7.70	7.70	7.70	0.00	0.00	2
0.74		7.70	7.70	7.70	0.00	0.00	2
1.2		7.70	7.70	7.70	0.00	0.00	2
1.94		7.70	7.70	7.70	0.00	0.00	2
3.15		7.70	7.70	7.70	0.00	0.00	2
N Control	DO mg/L	7.70	7.70	7.70	0.00	0.00	2
0.46		7.60	7.60	7.60	0.00	0.00	2
0.74		7.50	7.50	7.50	0.00	0.00	2
1.2		7.50	7.50	7.50	0.00	0.00	2
1.94		7.50	7.50	7.50	0.00	0.00	2
3.15		7.60	7.60	7.60	0.00	0.00	2
N Control	Salinity ppt	33.00	33.00	33.00	0.00	0.00	2
0.46		33.00	33.00	33.00	0.00	0.00	2
0.74		33.00	33.00	33.00	0.00	0.00	2
1.2		33.00	33.00	33.00	0.00	0.00	2
1.94		33.00	33.00	33.00	0.00	0.00	2
3.15		33.00	33.00	33.00	0.00	0.00	2

## ATTACHMENT B.5

### AGAT METALS AND PESTICIDES DECEMBER 2001

Note: results were listed as pending in 1<sup>st</sup> quarter 2001 DMR due to unavailability of results from contracted laboratory

**MONTGOMERY WATSON LABORATORIES**

a Division of Montgomery Watson Americas, Inc.

555 East Walnut Street

Pasadena, California 91101

Tel: 626 568 6400 Fax: 626 568 6324

1 800 566 LABS (1 800 566 5227)

**Laboratory  
Data Report  
#89778**Guam Water Authority  
Carmen Sian-Denton  
Government of Guam  
P.O. Box 3010  
Agana, GU 96910Samples Received  
12/19/01**AGAT (2112190266)****Sampled on 12/17/01 15:00**

01/04/02 15:18	160876	( EPA/ML 200.8 ) Silver, Total, ICAP/MS	ND	ug/l	0.50	1
01/29/02 17:17	160884	( EPA/ML 200.8 ) Aluminum, Total, ICAP/MS	270	ug/l	25	1
01/04/02 15:18	160873	( EPA/ML 200.8 ) Arsenic, Total, ICAP/MS	ND	ug/l	1.0	1
01/04/02 15:18	160878	( EPA/ML 200.8 ) Cadmium, Total, ICAP/MS	ND	ug/l	0.50	1
01/04/02 15:18	160886	( EPA/ML 200.8 ) Chromium, Total, ICAP/MS	2.1	ug/l	1.0	1
12/19/01 16:00	159912	( ML/SW 7196 ) Hexavalent chromium (Cr VI)	ND	mg/l	0.005	1
01/04/02 15:18	160870	( EPA/ML 200.8 ) Copper, Total, ICAP/MS	8.8	ug/l	2.0	1
12/31/01 13:30	160440	( EPA/ML 245.1 ) Mercury	ND	ug/l	0.20	1
01/29/02 17:17	160869	( EPA/ML 200.8 ) Nickel, Total, ICAP/MS	ND	ug/l	5.0	1
01/04/02 15:18	160883	( EPA/ML 200.8 ) Lead, Total, ICAP/MS	0.79	ug/l	0.50	1
01/04/02 15:18	160872	( EPA/ML 200.8 ) Zinc, Total, ICAP/MS	28	ug/l	5.0	1

**BNA Extractable**

12/20/01	01/08/02 00:00	161489	( ML/EPA625/8270 ) 1,2,4-Trichlorobenzene	ND	ug/l	5.0	1
12/20/01	01/08/02 00:00	161489	( ML/EPA625/8270 ) o-Dichlorobenzene (1,2-DCB)	ND	ug/l	5.0	1
12/20/01	01/08/02 00:00	161489	( ML/EPA625/8270 ) 1,2-Diphenylhydrazine	ND	ug/l	10	1
12/20/01	01/08/02 00:00	161489	( ML/EPA625/8270 ) m-Dichlorobenzene (1,3-DCB)	ND	ug/l	5.0	1
12/20/01	01/08/02 00:00	161489	( ML/EPA625/8270 ) p-Dichlorobenzene (1,4-DCB)	ND	ug/l	5.0	1
12/20/01	01/08/02 00:00	161489	( ML/EPA625/8270 ) 2,4,5-Trichlorophenol	ND	ug/l	5.0	1
12/20/01	01/08/02 00:00	161489	( ML/EPA625/8270 ) 2,4,6-Trichlorophenol	ND	ug/l	5.0	1
12/20/01	01/08/02 00:00	161489	( ML/EPA625/8270 ) 2,4-Dichlorophenol	ND	ug/l	5.0	1
12/20/01	01/08/02 00:00	161489	( ML/EPA625/8270 ) 2,4-Dimethylphenol	ND	ug/l	5.0	1
12/20/01	01/08/02 00:00	161489	( ML/EPA625/8270 ) 2,4-Dinitrophenol	ND	ug/l	50	1
2/20/01	01/08/02 00:00	161489	( ML/EPA625/8270 ) 2,4-Dinitrotoluene	ND	ug/l	5.0	1
2/20/01	01/08/02 00:00	161489	( ML/EPA625/8270 ) 2,6-Dinitrotoluene	ND	ug/l	5.0	1
2/20/01	01/08/02 00:00	161489	( ML/EPA625/8270 ) 2-Chloronaphthalene	ND	ug/l	5.0	1
2/20/01	01/08/02 00:00	161489	( ML/EPA625/8270 ) 2-Chlorophenol	ND	ug/l	5.0	1
2/20/01	01/08/02 00:00	161489	( ML/EPA625/8270 ) 2-Methylnaphthalene	ND	ug/l	5.0	1
2/20/01	01/08/02 00:00	161489	( ML/EPA625/8270 ) 2-Methylphenol	ND	ug/l	5.0	1
2/20/01	01/08/02 00:00	161489	( ML/EPA625/8270 ) 2-Nitroaniline	ND	ug/l	10	1
2/20/01	01/08/02 00:00	161489	( ML/EPA625/8270 ) 2-Nitrophenol	ND	ug/l	5.0	1

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(continued)

12/20/01	01/08/02 00:00	161489	( ML/EPA625/8270)	3,3'-Dichlorobenzidine	ND	ug/l	50	1
12/20/01	01/08/02 00:00	161489	( ML/EPA625/8270)	3-Nitroaniline	ND	ug/l	20	1
12/20/01	01/08/02 00:00	161489	( ML/EPA625/8270)	4,6-Dinitro-o-cresol	ND	ug/l	50	1
12/20/01	01/08/02 00:00	161489	( ML/EPA635/8270)	4-Bromophenylphenylether	ND	ug/l	5.0	1
12/20/01	01/08/02 00:00	161489	( ML/EPA625/8270)	4-Chloroaniline	ND	ug/l	5.0	1
12/20/01	01/08/02 00:00	161489	( ML/EPA625/8270)	4-Chlorophenylphenylether	ND	ug/l	5.0	1
12/20/01	01/08/02 00:00	161489	( ML/EPA625/8270)	4-Methylphenol	ND	ug/l	5.0	1
12/20/01	01/08/02 00:00	161489	( ML/EPA625/8270)	4-Nitroaniline	ND	ug/l	20	1
12/20/01	01/08/02 00:00	161489	( ML/EPA625/8270)	4-Nitrophenol	ND	ug/l	10	1
12/20/01	01/08/02 00:00	161489	( ML/EPA625/8270)	Acenaphthene	ND	ug/l	5.0	1
12/20/01	01/08/02 00:00	161489	( ML/EPA625/8270)	Acenaphthylene	ND	ug/l	5.0	1
12/20/01	01/08/02 00:00	161489	( ML/EPA625/8270)	Aniline	ND	ug/l	5.0	1
12/20/01	01/08/02 00:00	161489	( ML/EPA625/8270)	Anthracene	ND	ug/l	5.0	1
12/20/01	01/08/02 00:00	161489	( ML/EPA625/8270)	Benzo(a)anthracene	ND	ug/l	5.0	1
12/20/01	01/08/02 00:00	161489	( ML/EPA625/8270)	Benzo(a)pyrene	ND	ug/l	5.0	1
12/20/01	01/08/02 00:00	161489	( ML/EPA625/8270)	Benzo(b)fluoranthene	ND	ug/l	5.0	1
12/20/01	01/08/02 00:00	161489	( ML/EPA625/8270)	Benzo(g,h,i)perylene	ND	ug/l	10	1
12/20/01	01/08/02 00:00	161489	( ML/EPA625/8270)	Benzo(k)fluoranthene	ND	ug/l	5.0	1
12/20/01	01/08/02 00:00	161489	( ML/EPA625/8270)	bis(2-Chloroethyl)ether	ND	ug/l	10	1
12/20/01	01/08/02 00:00	161489	( ML/EPA625/8270)	bis(2-Chloroethoxy)methane	ND	ug/l	10	1
12/20/01	01/08/02 00:00	161489	( ML/EPA625/8270)	bis(2-Chloroisopropyl)ether	ND	ug/l	10	1
12/20/01	01/08/02 00:00	161489	( ML/EPA625/8270)	Di(2-Ethylhexyl)phthalate	5.2	ug/l	4.0	1
12/20/01	01/08/02 00:00	161489	( ML/EPA625/8270)	Butylbenzylphthalate	ND	ug/l	5.0	1
12/20/01	01/08/02 00:00	161489	( ML/EPA625/8270)	Benazidine	ND	ug/l	50	1
12/20/01	01/08/02 00:00	161489	( ML/EPA625/8270)	Benzoic Acid	ND	ug/l	50	1
12/20/01	01/08/02 00:00	161489	( ML/EPA625/8270)	Benzyl Alcohol	ND	ug/l	5.0	1
12/20/01	01/08/02 00:00	161489	( ML/EPA625/8270)	Chrysene	ND	ug/l	5.0	1
12/20/01	01/08/02 00:00	161489	( ML/EPA625/8270)	Dibenzo(a,h)anthracene	ND	ug/l	10	1
12/20/01	01/08/02 00:00	161489	( ML/EPA625/8270)	Dibenzofuran	ND	ug/l	5.0	1
12/20/01	01/08/02 00:00	161489	( ML/EPA625/8270)	Diethylphthalate	ND	ug/l	5.0	1
12/20/01	01/08/02 00:00	161489	( ML/EPA625/8270)	Dimethylphthalate	ND	ug/l	5.0	1
12/20/01	01/08/02 00:00	161489	( ML/EPA625/8270)	Di-n-butylphthalate	ND	ug/l	10	1
12/20/01	01/08/02 00:00	161489	( ML/EPA625/8270)	Di-n-octylphthalate	ND	ug/l	10	1
12/20/01	01/08/02 00:00	161489	( ML/EPA625/8270)	Fluoranthene	ND	ug/l	5.0	1
12/20/01	01/08/02 00:00	161489	( ML/EPA625/8270)	Fluorene	ND	ug/l	5.0	1
12/20/01	01/08/02 00:00	161489	( ML/EPA625/8270)	Hexachlorobenzene	ND	ug/l	5.0	1



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(continued)**

12/20/01	01/08/02 00:00	161489	( ML/EPA625/8270)	Hexachlorobutadiene	ND	ug/l	10	1
12/20/01	01/08/02 00:00	161489	( ML/EPA625/8270)	Hexachlorocyclopentadiene	ND	ug/l	10	1
12/20/01	01/08/02 00:00	161489	( ML/EPA625/8270)	Hexachloroethane	ND	ug/l	5.0	1
12/20/01	01/08/02 00:00	161489	( ML/EPA625/8270)	Indeno(1,2,3-c,d)pyrene	ND	ug/l	10	1
12/20/01	01/08/02 00:00	161489	( ML/EPA625/8270)	Isophorone	ND	ug/l	5.0	1
12/20/01	01/08/02 00:00	161489	( ML/EPA625/8270)	Naphthalene	ND	ug/l	5.0	1
12/20/01	01/08/02 00:00	161489	( ML/EPA625/8270)	Nitrobenzene	ND	ug/l	5.0	1
12/20/01	01/08/02 00:00	161489	( ML/EPA625/8270)	N-Nitrosodimethylamine	ND	ug/l	5.0	1
12/20/01	01/08/02 00:00	161489	( ML/EPA625/8270)	N-Nitrosodi-N-propylamine	ND	ug/l	5.0	1
12/20/01	01/08/02 00:00	161489	( ML/EPA625/8270)	N-Nitrosodiphenylamine	ND	ug/l	5.0	1
12/20/01	01/08/02 00:00	161489	( ML/EPA625/8270)	p-Chloro-m-cresol	ND	ug/l	5.0	1
12/20/01	01/08/02 00:00	161489	( ML/EPA625/8270)	Pentachlorophenol	ND	ug/l	20	1
12/20/01	01/08/02 00:00	161489	( ML/EPA625/8270)	Phenanthrene	ND	ug/l	5.0	1
12/20/01	01/08/02 00:00	161489	( ML/EPA625/8270)	Phenol	ND	ug/l	5.0	1
12/20/01	01/08/02 00:00	161489	( ML/EPA625/8270)	Pyrene	ND	ug/l	5.0	1
			( Surrogate )	2,4,6-Tribromophenol	97	% Rec		
			( Surrogate )	2-Fluorobiphenyl	79	% Rec		
			( Surrogate )	2-Fluorophenol	75	% Rec		
			( Surrogate )	Nitrobenzene-d5	82	% Rec		
			( Surrogate )	Phenol-d5	83	% Rec		
			( Surrogate )	Terphenyl-d14	45	% Rec		

**Pesticides/PCBs**

12/19/01	12/22/01 00:00	160385	( ML/EPA 608 )	PCB 1016 Aroclor	ND	ug/l	0.50	1
12/19/01	12/22/01 00:00	160385	( ML/EPA 608 )	PCB 1221 Aroclor	ND	ug/l	0.50	1
12/19/01	12/22/01 00:00	160385	( ML/EPA 608 )	PCB 1232 Aroclor	ND	ug/l	0.50	1
12/19/01	12/22/01 00:00	160385	( ML/EPA 608 )	PCB 1242 Aroclor	ND	ug/l	0.50	1
12/19/01	12/22/01 00:00	160385	( ML/EPA 608 )	PCB 1248 Aroclor	ND	ug/l	0.50	1
12/19/01	12/22/01 00:00	160385	( ML/EPA 608 )	PCB 1254 Aroclor	ND	ug/l	0.50	1
12/19/01	12/22/01 00:00	160385	( ML/EPA 608 )	PCB 1260 Aroclor	ND	ug/l	0.50	1
12/19/01	12/22/01 00:00	160385	( ML/EPA 608 )	Alpha-BHC	ND	ug/l	0.020	1
12/19/01	12/22/01 00:00	160385	( ML/EPA 608 )	Aldrin	ND	ug/l	0.020	1
12/19/01	12/22/01 00:00	160385	( ML/EPA 608 )	Beta-BHC	ND	ug/l	0.020	1
12/19/01	12/22/01 00:00	160385	( ML/EPA 608 )	Chlordane	0.26	ug/l	0.20	1
12/19/01	12/22/01 00:00	160385	( ML/EPA 608 )	Delta-BHC	ND	ug/l	0.020	1
12/19/01	12/22/01 00:00	160385	( ML/EPA 608 )	p,p' DDD	ND	ug/l	0.020	1

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12/19/01	12/22/01 00:00	160385	( ML/EPA 608 )	p,p' DDE	ND	ug/l	0.020	1
12/19/01	12/22/01 00:00	160385	( ML/EPA 608 )	p,p' DDT	ND	ug/l	0.020	1
12/19/01	12/22/01 00:00	160385	( ML/EPA 608 )	Dieldrin	0.03	ug/l	0.020	1
12/19/01	12/22/01 00:00	160385	( ML/EPA 608 )	Endrin Aldehyde	ND	ug/l	0.020	1
12/19/01	12/22/01 00:00	160385	( ML/EPA 608 )	Endrin	ND	ug/l	0.010	1
12/19/01	12/22/01 00:00	160385	( ML/EPA 608 )	Endosulfan I (alpha)	ND	ug/l	0.020	1
12/19/01	12/22/01 00:00	160385	( ML/EPA 608 )	Endosulfan II (beta)	ND	ug/l	0.020	1
12/19/01	12/22/01 00:00	160385	( ML/EPA 608 )	Endosulfan sulfate	ND	ug/l	0.020	1
12/19/01	12/22/01 00:00	160385	( ML/EPA 608 )	Gamma-BHC	ND	ug/l	0.020	1
12/19/01	12/22/01 00:00	160385	( ML/EPA 608 )	Heptachlor	ND	ug/l	0.010	1
12/19/01	12/22/01 00:00	160385	( ML/EPA 608 )	Heptachlor Epoxide	ND	ug/l	0.010	1
12/19/01	12/22/01 00:00	160385	( ML/EPA 608 )	Methoxychlor	ND	ug/l	0.20	1
12/19/01	12/22/01 00:00	160385	( ML/EPA 608 )	Mirex	ND	ug/l	0.050	1
12/19/01	12/22/01 00:00	160385	( ML/EPA 608 )	Toxaphene	ND	ug/l	0.50	1
			( Surrogate )	Dibutyl Chlorendate	44	% Rec		
			( Surrogate )	Tetrachlorometaxylene	92	% Rec		

**AGAT (DISS) (2112190268)      Sampled on 12/17/01 15:00**

01/04/02 15:21	160876	( EPA/ML 200.8 )	Silver, Total, ICAP/MS	ND	ug/l	0.50	1
01/07/02 00:00	160854	( EPA/ML 200.9 )	Arsenic, Total, GF	ND	mg/l	0.002	1
01/04/02 15:21	160878	( EPA/ML 200.8 )	Cadmium, Total, ICAP/MS	ND	ug/l	0.50	1
01/04/02 15:21	160886	( EPA/ML 200.8 )	Chromium, Total, ICAP/MS	4.3	ug/l	1.0	1
12/31/01 13:30	160440	( EPA/ML 245.1 )	Mercury	ND	ug/l	0.20	1
01/04/02 15:21	160883	( EPA/ML 200.8 )	Lead, Total, ICAP/MS	1.3	ug/l	0.50	1

**ATTACHMENT C**  
**RECEIVING WATER QUALITY**  
**REPORT**

**2nd QUARTER 2002**

ATTACHMENT C.1

RECEIVING WATER QUALITY  
SUMMARY

## GUAM WATERWORKS AUTHORITY

### RECEIVING WATER QUALITY SUMMARY 2<sup>nd</sup> QUARTER 2002

#### AGANA

##### Shoreline Stations

- Station A: 0.5 km W of the treatment plant access road. Surface sample.  
Station B: On the treatment plant access bridge at the second culvert. Surface sample.  
Station C: 0.5 km E of treatment plant at the mouth of the Agana Boat basin on the Paseo De Susanna side half way to the channel marker. Surface sample.

These stations are sampled once per month for fecal coliform bacteria. Samples were collected, stored in a cooler and analyzed immediately upon return to the laboratory. Analysis was done using the membrane filter method. Visual observations were made on the sampling time, tide condition, weather, odor, presence of floating materials, and water clarity/turbidity.

The results of the monthly samplings are given in attachment C.2. Also given are the observed environmental conditions, although rainfall for the previous 2 days and previous 5 days was unavailable.

In general, only one date had excessive coliform counts, although the presence of coliform bacteria was widespread enough to be of concern (Sites A, B and C on 2/6/02).

#### AGANA

##### Offshore Stations

- Station D: Outfall effluent boil. Surface, mid (13m) and bottom (25m) depths  
Station E: 100m S of D. Surface, mid (13m) and bottom (25m) depths  
Station F: 1000m E of D. Surface, mid (13m) and bottom (25m) depths

Rough marine conditions throughout the quarter prevented sampling of offshore stations.

## AGAT

### Shoreline Stations

Station A: N 13E 24' 16.9"

E 144E 39' 40.0"

East Side of Tipalao Bay, at Rizal Beach

Station B: N 13E 25' 1.3"

E 144E 40' 51.6"

Tipalao Bay, directly shoreward of the diffuser, 0.5 m of water

Station C: N 13E 25' 5.5"

E 144E 38' 47.3"

1000 m SE of diffuser near the shoreline.

These stations are sampled weekly for enterococcal bacteria, as well as nitrate-nitrogen, ammonia, and total phosphorus concentrations. As with the other receiving water samples, samples were collected, stored in a cooler and run immediately upon return to the laboratory. Enterococcal identification and quantification was done using the MPN method adapted for the Idexx Quantitray system.

The results of the monthly samplings are given in Table 6. Also given are the observed environmental conditions, including odor, floating materials, and water turbidity. There were no violations for this quarter at Tipalao Bay, although the designated control site (TS-1) had elevated enterococci counts on 2/6/02. While total phosphate limits are not defined by GWQS, it is interesting to note that TS-1 also had higher levels of this parameter than the two Tipalao Bay sites.

### Offshore Stations

Offshore stations were monitored by U.S. Navy personnel in an agreement between GWA and the U.S. Navy. Collection and preservation procedures are given in Attachment B.

Only one date demonstrated excessive suspended solids (i.e., > 20 mg/l) at site TB2 in February 2002. The sample was collected at the surface, and samples from the same site at deeper depths had low concentrations of solids. Thus, it is not clear if the source of the solids was due to effluent or from other possible factors (e.g., seaweed, runoff, etc.).



## **BAZA GARDENS**

### River Stations

- Station A: N 13E 22' 5.9 "  
E 144E 45' 10.5"  
200 ft upstream of exfiltration trench discharge at station C.
- Station B: N 13E 22' 6.6"  
E 144E 45' 10.8"  
100 ft upstream of station C.
- Station C: N 13E 22' 8.5"  
E 144E 45' 12.5"  
Mid-point between end of exfiltration trench and exfiltration trench outfall
- Station D: N 13E 22' 5.8"  
E 144E 45' 10.4"  
100 ft downstream of station C.
- Station E: N 13E 22' 6.8"  
E 144E 45' 11.8"  
200 ft downstream of station C.

These stations are measured monthly for flow rate, dissolved oxygen, pH, temperature, and turbidity. In addition, enterococci, total phosphate, orthophosphate, total nitrogen and nitrate-nitrogen are collected by GWA for analysis by the Water Energy Research Institute (WERI) at the University of Guam. Temperature and dissolved oxygen are measured directly in the field using a Yellow Springs Instrument Co. 85 oxygen, conductivity, salinity and temperature meter. Fecal coliform, pH, turbidity and suspended solids are measured immediately upon return to the laboratory, and completed within five hours of collection. All samples are preserved in chilled cooler at approximately 4 °C during transport. The pH meter was calibrated with 7.00 and 10.02 buffers. Turbidity was measured with a Hach 2100P-turbidity meter that was checked using turbidity standards each month. Methods and references for analysis used by WERI are presented in Attachment D.

There were several violations in water quality standards this quarter. The results of water quality testing for this quarter are given in attachment C.4.

Orthophosphate were relatively low (i.e., less than 0.05 mg/l) throughout most of the quarter. However, nitrate-nitrogen levels have remained elevated in lower river sites, with several violations occurring in the middle part of the quarter (e.g., 3/4/02). This section of the river appears to receive a heavy load of detergent-based phosphates, as evidenced by the consistently musty odor in the lower sites of the stream. Evidence of feral pig activity is apparent in the upstream sites, and could explain the persistence of eneterococci in control samples.

As has historically been the case, turbidity and dissolved oxygen levels were consistently violated throughout the lower river sites, although pH was within normal ranges.

#### Baza Shoreline Stations

Station F: N 13° 22' 2.5"  
E 144° 46' 11.2"  
100 ft to the north side of the Togcha River, Surface sample.

Station G: N 13° 22' 1.3"  
E 144° 46' 11.8"  
100 ft out from the Togcha River, Surface sample.

Station F: N 13° 22' 0.4"  
E 144° 46' 11.9"  
100 ft to the south side of the Togcha River, Surface sample.

These stations are measured monthly for many of the same parameters as the river samples. Processing, preservation, and analysis is identical to the instream monitoring. Visual observations of the weather, floating materials, odor, and turbidity were performed at all sites. The results of the water quality monitoring for this quarter are given in attachment C.4. There was only one high bacterial count this quarter (Site G on 2/19/02). Turbidity levels occasionally did not meet the requirements for M-2 waters, although no samples were higher than 2 NTU.

#### NORTHERN DISTRICT

##### Shoreline Stations

Station A: 0.4 km NE of C. (this is as far north as one can get prior to having to circumvent an emerging reef). Surface sample.  
Station B NCS beach. Surface sample.

These stations are sampled once per month for fecal coliform bacteria. Samples were collected, stored in a cooler and run immediately upon return to the laboratory. Analysis of coliform bacteria was performed using the membrane filtration method. Visual observations were made on the sampling time, tide condition, weather, odor, presence of floating materials, and water clarity/turbidity.

The results of the monthly samplings are given attachment C.5. Also given are the observed environmental conditions including rainfall for the previous 2 days and previous 5 days. Only one incidence of extremely high coliform counts was observed (Sites A and B on 2/6/02).

#### Offshore Stations

- Station C: Outfall effluent boil. Surface, mid (8m) and bottom (16m) depths  
Station D: 100m S of C and 10m S of the elbow in the diffuser pipe. Surface, mid (8m) and bottom (16m) depths  
Station E: 1000m N of C. Surface, mid (8m) and bottom (16m) depths

Rough marine conditions throughout the quarter prevented sampling of offshore stations.

#### UMATAC-MERIZO

##### Shoreline Stations

- TR1: N 13° 17' 8.7"  
E 144° 39' 55.5"  
100 feet upstream of Serial Discharge No. 001.
- TR2: N 13° 17' 8.5"  
E 144° 39' 57.5"  
120 feet downstream of Serial Discharge No. 001.
- TB3: N 13° 17' 6.5"  
E 144° 39' 44.4"  
Midway between shoreline and reef margin (reef flat)

These stations are sampled weekly for enterococci, pH, orthophosphate, nitrate-nitrogen, dissolved oxygen, turbidity, and temperature. Only orthophosphate, and nitrate-nitrogen are analyzed by WERI. Samples were collected, stored in a cooler and run immediately upon return to the laboratory.

Excessive turbidity and low DO characterized TR2 for much of the quarter while TR1 appeared to meet most criteria set forth by GWQS. High enterococci counts were also present in both river sites, suggesting a certain degree of overflow in the upper wetland cell, perhaps at the rear margin opposite of the upper pond.

Several sampling dates were missed due to scheduling errors. These errors have been corrected and the GWA wastewater laboratory is working to insure that future missed dates are prevented through the formation of a monthly checklist.

## ATTACHMENT C.2

### AGANA RECEIVING WATER DATA

AGANA SEWAGE TREATMENT PLANT  
RECEIVING WATER QUALITY MONITORING

2nd QUARTER 2002

**TABLE 1. SHORELINE RECEIVING WATER RESULTS**

DATE	TIME/TIDE/SURF OBSERVATIONS	CFU/100 ml			PREVIOUS RAINFALL (in)	
		A	B	C	2 days	5 days
1/24/02	10:30 a.m. Sunny skies, rough surf, high tide. No floating material, no odor, clear water for all sites.	1	2	1	0.18	0.31
2/6/02	8:45 a.m. Clear skies, rough surf, high tide. All sites clear water, no floating material, no odor.	TNTC	TNTC	TNTC	0.21	0.78
3/25/02	8:15 a.m. Clear blue skies, rough surf, high tide. All sites had clear water, no floating material, no odor.	21	10	6	0.87	1.1

TABLE 2. OFFSHORE RECEIVING WATERS

STATION	FLOATING MATERIALS, ODOR, COLOR	FECAL COLIFORM FC/100 ML	TEMP. °C	DISSOLVED OXYGEN mg/L, %	pH	SALINITY ppt	TURBIDIT NTU	SUSPENDED SOLIDS mg/L
D surface mid bottom								
E surface mid bottom								
F surface mid bottom								
<b>Comments</b> Offshore receiving waters were not sampled this quarter due to hazardous surf and sea conditions on the scheduled sampling dates.								

## ATTACHMENT C.3.1

### AGAT / TIPALAO RECEIVING WATER DATA SHORELINES



GUAM WATERWORKS AUTHORITY

TIPALAO BAY, NAVAL STATION, GUAM

RECEIVING WATER MONITORING

2nd Quarter 2002

Shoreline Receiving Water Results

DATE	VISUAL OBSERVATIONS	STATION	ENTEROCOCCI MPN	NO <sub>3</sub> -N mg-N/l	Total PO <sub>4</sub> mg-P/l	NH <sub>3</sub> -N mg-N/l
1/15/02	8:43 a.m. Clear skies, mild surf (1'-3'), high tide. All sites had no odor, no floating material, no sheen, clear water.	TS-1	<100	0.009	0.313	0.002
		TS-1	<100	0.001	0.044	N/A
		TS-3	<100	0.024	0.008	N/A
2/26/02	8:12 a.m. Clear skies with light breeze. Mild surf (1' - 2'). High tide. All sites no floating material, no odor, no sheen, clear water.	TS-1	300	0.06	0.392	0.001
		TS-2	< 100	0.006	0.037	N/A
		TS-3	< 100	0.012	0.04	N/A
3/28/02	10:15 a.m. Cloudy with scattered showers. Mild surf (1' - 3'). High tide. All sites no floating material, clear water, no sheen, no odor.	TS-1	< 100	0.093	0.144	0.003
		TS-2	< 100	0.012	0.039	N/A
		TS-3	< 100	0.011	0.017	N/A

Certified:



Carmen Sian-Denton  
Laboratory Services Administrator

N/A : Sample not analyzed by WERI

## ATTACHMENT C.3.2

AGAT / TIPALAO RECEIVING WATER DATA

OFFSHORE RESULTS

January 24, 2002 Sampling

Pursuant to NPDES permit GU0110019 paragraph D.2:

- a) A description of climatic and receiving water characteristics at the time of sampling (e.g., weather observations, floating debris, discoloration, time of sampling, tide, etc.).

Weather was partly cloudy. Seas moderate with 6 foot swells, and samples were taken between 1115 -1315 hrs. High tide on January 24 was +2.3 feet at 1457; therefore tides were incoming.

- b) A description of the sample collection and preservation procedures used in the receiving water monitoring program.

At each of the three sampling locations (TB1, TB2, TB3), the weighted acrylic water sampler was dropped on a nylon line to each of the pre-marked depths. Once it had reached the proper depth, a stainless steel messenger was sent down the line to trigger the closing of the water sampler. The sample was then brought back up to the boat and dispensed into the proper bottles with the appropriate preservative and then placed into a cooler with blue ice. (See table 1 for analysis, bottles and preservatives.)

Table 1. Sampling Protocol Information

Monitoring Analysis	Monitoring Frequency	Bottle Type	Preservative
Enterococci	Monthly	100 ml Plastic	Sodium Thiosulfate/4°C
Metals (Cu, Al, Ni, Zn)	Monthly	250 ml Plastic	HNO <sub>3</sub> / 4°C
Oil and Grease	Monthly	None	None – Visual Observation

- c) A description of the specific method used for laboratory analysis.

Table 2. Analytical Method for Offshore Analyses.

Parameter	Analytical Method
Aluminum	6010A
Copper	6010A
Nickel	6010A
Zinc	6010A
Bacteria	SM-9230 B
Ammonia-Nitrogen	SM-4500-NH <sub>3</sub> -F

- d) An in-depth discussion of the results of the effluent and receiving water monitoring programs with regard to compliance with this permit. All tabulations and computations shall be explained.

There were no detections of any parameter.

Please note that although ammonia is a quarterly parameter, it was analyzed monthly this quarter and therefore all results are enclosed.

Facility Name / Location (if different)

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
RECEIVING WATER DISCHARGE MONITORING REPORT (DMR)

NAME  
ADDRESS  
Commanding Officer  
U.S. Navy Public Works Center, Guam  
PSC 455, Box 195  
FPO AP 96540-2937

GU 0110019	
PERMIT NUMBER	

TBI	
DISCHARGE NUMBER	

FACILITY  
LOCATION  
Apra Harbor Wastewater Treatment Plant  
Guam

MONITORING PERIOD					
YEAR	MO	DAY	YEAR	MO	DAY
02	01	01	02	01	31

PARAMETERS	SAMPLE MEASUREMENTS PERMIT REQUIREMENTS	QUANTITY OR LOADING			SAMPLE TYPE			FREQUENCY OF ANALYSIS	SAMPLE TYPE	
		AVERAGE	MAXIMUM	UNITS	SURFACE	MID-DEPTH	BOTTOM			
Enterococci	SAMPLE MEASUREMENTS				<1	<1	<1	CFU/10	1/30	GRAB
	PERMIT REQUIREMENTS									
Copper (Cu)	SAMPLE MEASUREMENTS				ND	ND	ND	MG/L	1/30	GRAB
	PERMIT REQUIREMENTS									
Aluminum (Al)	SAMPLE MEASUREMENTS				ND	ND	ND	MG/L	1/30	GRAB
	PERMIT REQUIREMENTS									
Nickel (Ni)	SAMPLE MEASUREMENTS				ND	ND	ND	MG/L	1/30	GRAB
	PERMIT REQUIREMENTS									
Zinc (Zn)	SAMPLE MEASUREMENTS				ND	ND	ND	MG/L	1/30	GRAB
	PERMIT REQUIREMENTS									
Oil and Grease	SAMPLE MEASUREMENTS				No Sheen			VISUA OBS.	1/30	GRAB
	PERMIT REQUIREMENTS									
NAME/TITLE PRINCIPAL EXECUTIVE OFFICER		I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER THE DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.								
RALPH BURPEE LABORATORY MANAGER		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT								
TYPED OR PRINTED		671 339-3157 02 04 28								

Facility Name / Location (if different)

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
RECEIVING WATER DISCHARGE MONITORING REPORT (DMR)

NAME  
ADDRESS  
Commanding Officer  
U.S. Navy Public Works Center, Guam  
PSC 455, Box 195  
FPO AP 96540-2937

FACILITY  
LOCATION  
Apra Harbor Wastewater Treatment Plant  
Guam

GU 0110019	
PERMIT NUMBER	

TBI	
DISCHARGE NUMBER	

MONITORING PERIOD					
YEAR	MO	DAY	YEAR	MO	DAY
02	01	01	02	01	31

PARAMETERS	SAMPLE MEASUREMENTS PERMIT REQUIREMENTS	QUANTITY OR LOADING			SAMPLE TYPE			UNITS	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	SURFACE	MID-DEPTH	BOTTOM			
ORTHOPHOSPHATE									1/90	GRAB
NITRATE-NITROGEN									1/90	GRAB
AMMONIA					<0.045	<0.045	<0.045	MG/L	1/90	GRAB
TURBIDITY								NTU	1/90	GRAB
TOTAL SUSPENDED SOLIDS								MG/L	1/90	GRAB
MAGNESIUM								MG/L	1/90	GRAB
LEAD								MG/L	1/90	GRAB
NAME/TITLE PRINCIPAL EXECUTIVE OFFICER										
RALPH BURPEE LABORATORY MANAGER										
I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER THE DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS TO THE BEST OF MY KNOWLEDGE AND BELIEF, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.										
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT										
TELEPHONE										
DATE										
671 339-3157 02 04 28										
AREA NUMBER YEAR MO DAY										

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)



Facility Name / Location (if different)

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
RECEIVING WATER DISCHARGE MONITORING REPORT (DMR)

NAME: Commanding Officer  
ADDRESS: U.S. Navy Public Works Center, Guam  
PSC 455, Box 195  
FPO AP 96540-2937

GU 0110019  
PERMIT NUMBER

TB2  
DISCHARGE NUMBER

FACILITY: Apra Harbor Wastewater Treatment Plant  
LOCATION: Guam

MONITORING PERIOD					
YEAR	MO	DAY	YEAR	MO	DAY
02	01	01	02	01	31

PARAMETERS	SAMPLE MEASUREMENTS PERMIT REQUIREMENTS	QUANTITY OR LOADING			SAMPLE TYPE			UNITS	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	SURFACE	MID-DEPTH	BOTTOM			
Enterococci	SAMPLE MEASUREMENTS				<1	<1	<1	CFU/10	1/30	GRAB
	PERMIT REQUIREMENTS									
	SAMPLE MEASUREMENTS				ND	ND	ND	MG/L	1/30	GRAB
Copper (Cu)	PERMIT REQUIREMENTS									
	SAMPLE MEASUREMENTS				ND	ND	ND	MG/L	1/30	GRAB
	PERMIT REQUIREMENTS									
Aluminum (Al)	SAMPLE MEASUREMENTS				ND	ND	ND	MG/L	1/30	GRAB
	PERMIT REQUIREMENTS									
	SAMPLE MEASUREMENTS				ND	ND	ND	MG/L	1/30	GRAB
Nickel (Ni)	PERMIT REQUIREMENTS									
	SAMPLE MEASUREMENTS				ND	ND	ND	MG/L	1/30	GRAB
	PERMIT REQUIREMENTS									
Zinc (Zn)	SAMPLE MEASUREMENTS				ND	ND	ND	MG/L	1/30	GRAB
	PERMIT REQUIREMENTS									
	SAMPLE MEASUREMENTS				No Sheen			VISUA OBS.	1/30	GRAB
Oil and Grease	PERMIT REQUIREMENTS									
	SAMPLE MEASUREMENTS									
	PERMIT REQUIREMENTS									

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER THE DIRECTION OR SUPERVISION IN CONFORMANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHERED AND EVALUATED THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS TO THE BEST OF MY KNOWLEDGE AND BELIEF TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE

DATE

671

339-3157

02

04

28

AREA

NUMBER

YEAR

MO

DAY

1. EXAMINE THE NAME/ADDRESS (include Facility Name / Location if different)

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
RECEIVING WATER DISCHARGE MONITORING REPORT (DMR)

NAME Commanding Officer  
ADDRESS U.S. Navy Public Works Center, Guam  
PSC 455, Box 195  
FPO AP 96540-2937

GU 0110019	
PERMIT NUMBER	

TB2	
DISCHARGE NUMBER	

FACILITY Apra Harbor Wastewater Treatment Plant  
LOCATION Guam

MONITORING PERIOD					
YEAR	MO	DAY	YEAR	MO	DAY
02	01	01	02	01	31

PARAMETERS	SAMPLE MEASUREMENTS PERMIT REQUIREMENTS	QUANTITY OR LOADING			SAMPLE TYPE			UNITS	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	SURFACE	MID-DEPTH	BOTTOM			
ORTHOPHOSPHATE									1/90	GRAB
NITRATE-NITROGEN									1/90	GRAB
AMMONIA									1/90	GRAB
TURBIDITY									1/90	GRAB
TOTAL SUSPENDED SOLIDS									1/90	GRAB
MAGNESIUM									1/90	GRAB
LEAD									1/90	GRAB
NAME/TITLE PRINCIPAL EXECUTIVE OFFICER										
RALPH BURPEE LABORATORY MANAGER										
I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER THE DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.										
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT										
671 339-3157 02 04 28										
AREA NUMBER YEAR MO DAY										

Facility Name / Location (include address if different)

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
RECEIVING WATER DISCHARGE MONITORING REPORT (DMR)

NAME: Commanding Officer  
ADDRESS: U.S. Navy Public Works Center, Guam  
PSC 455, Box 195  
FPO AP 96540-2937  
FACILITY: Apra Harbor Wastewater Treatment Plant  
LOCATION: Guam

GU 0110019
PERMIT NUMBER

TB3
DISCHARGE NUMBER

MONITORING PERIOD					
YEAR	MO	DAY	YEAR	MO	DAY
02	01	01	02	01	31

PARAMETERS	SAMPLE MEASUREMENTS PERMIT REQUIREMENTS	QUANTITY OR LOADING		UNITS	SAMPLE TYPE			UNITS	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM		SURFACE	MID-DEPTH	BOTTOM			
Enterococci	SAMPLE MEASUREMENTS				<1	<1	<1	CFU/10	1/30	GRAB
	PERMIT REQUIREMENTS									
	SAMPLE MEASUREMENTS				ND	ND	ND	MG/L	1/30	GRAB
Copper (Cu)	PERMIT REQUIREMENTS									
	SAMPLE MEASUREMENTS				ND	ND	ND	MG/L	1/30	GRAB
	PERMIT REQUIREMENTS									
Aluminum (Al)	SAMPLE MEASUREMENTS				ND	ND	ND	MG/L	1/30	GRAB
	PERMIT REQUIREMENTS									
	SAMPLE MEASUREMENTS				ND	ND	ND	MG/L	1/30	GRAB
Nickel (Ni)	PERMIT REQUIREMENTS									
	SAMPLE MEASUREMENTS				ND	ND	ND	MG/L	1/30	GRAB
	PERMIT REQUIREMENTS									
Zinc (Zn)	SAMPLE MEASUREMENTS				ND	ND	ND	MG/L	1/30	GRAB
	PERMIT REQUIREMENTS									
	SAMPLE MEASUREMENTS				ND	ND	ND	MG/L	1/30	GRAB
Oil and Grease	PERMIT REQUIREMENTS									
	SAMPLE MEASUREMENTS				No Sheen			VISUA OBS.	1/30	GRAB
	PERMIT REQUIREMENTS									
NAME/TITLE PRINCIPAL EXECUTIVE OFFICER										
Ralph Burpee LABORATORY MANAGER										
I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER THE DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY KNOWLEDGE OF THE PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.										
COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)										
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT										
671 339-3157 02 04 28										
AREA NUMBER YEAR MO DAY										

Facility Name / Location (include if different)

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
RECEIVING WATER DISCHARGE MONITORING REPORT (DMR)

NAME: Commanding Officer  
ADDRESS: U.S. Navy Public Works Center, Guam  
PSC 455, Box 195  
FPO AP 96540-2937

GU 0110019	
PERMIT NUMBER	

TB3	
DISCHARGE NUMBER	

FACILITY: Apra Harbor Wastewater Treatment Plant  
LOCATION: Guam

MONITORING PERIOD					
YEAR	MO	DAY	YEAR	MO	DAY
02	01	01	02	01	31

PARAMETERS	SAMPLE MEASUREMENTS PERMIT REQUIREMENTS	QUANTITY OR LOADING			SAMPLE TYPE			FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	SURFACE	MID-DEPTH	BOTTOM		
ORTHOPHOSPHATE									
NITRATE-NITROGEN									
AMMONIA									
TURBIDITY									
TOTAL SUSPENDED SOLIDS									
MAGNESIUM									
LEAD									
NAME/TITLE PRINCIPAL EXECUTIVE OFFICER									
I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER THE DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.									
Ralph Burpee LABORATORY MANAGER									
TYPED OR PRINTED									
COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)									
SIGNATURE OF PRINCIPAL/EXECUTIVE OFFICER OR AUTHORIZED AGENT									
671 339-3157 02 04 28									
AREA NUMBER YEAR MO DAY									

February 7, 2002 Sampling

Pursuant to NPDES permit GU0110019 paragraph D.2:

- a) A description of climatic and receiving water characteristics at the time of sampling (e.g., weather observations, floating debris, discoloration, time of sampling, tide, etc.).

Weather was mostly sunny. Seas mostly calm with 5 foot swells, and samples were taken between 0930 -1110 hrs. Low tide on February 7 was +2.0 feet at 0948; therefore tides were at low tide.

- b) A description of the sample collection and preservation procedures used in the receiving water monitoring program.

At each of the three sampling locations (TB1, TB2, TB3), the weighted acrylic water sampler was dropped on a nylon line to each of the pre-marked depths. Once it had reached the proper depth, a stainless steel messenger was sent down the line to trigger the closing of the water sampler. The sample was then brought back up to the boat and dispensed into the proper bottles with the appropriate preservative and then placed into a cooler with blue ice. (See table 1 for analysis, bottles and preservatives.)

Table 1. Sampling Protocol Information

Monitoring Analysis	Monitoring Frequency	Bottle Type	Preservative
Enterococci	Monthly	100 ml Plastic	Sodium Thiosulfate/4°C
Metals (Cu, Al, Ni, Zn)	Monthly	250 ml Plastic	HNO3 / 4°C
Oil and Grease	Monthly	None	None – Visual Observation
Orthophosphate	Quarterly	1 Liter Plastic	4°C
Nitrate-Nitrogen	Quarterly	1 Liter Plastic	4°C
Ammonia	Quarterly	1 Liter Plastic	4°C
Turbidity	Quarterly	1 Liter Plastic	4°C
Total Suspended Solids	Quarterly	1 Liter Plastic	4°C
Other Metals (Mg, Pb, Ag, Fe, and Hg)	Quarterly	1 Liter Glass	HNO3 / 4°C
Cyanide	Quarterly	1 Liter Glass	NaOH / 4°C
* pH / Dissolved O2 / Temp.	Quarterly	None	None

\*Analyzed via continuous depth probe.



The CDP samples were conducted by lowering the continuous depth probe on it's own cable and taking a reading every two meters. The readings are stored in the analyzer module until they can be downloaded to a computer.

- c) A description of the specific method used for laboratory analysis.

Table 2. Analytical Method for Offshore Analyses.

Parameter	Analytical Method
Aluminum	6010A
Copper	6010A
Iron	6010A
Lead	6010A
Magnesium	6010A
Mercury	7470A
Nickel	6010A
Silver	6010A
Zinc	6010A
Orthophosphate	SM-19 4500-P-E
Enterococcus Bacteria	SM-9230 B
Ammonia-Nitrogen	SM-4500-NH <sub>3</sub> -F
Total Suspended Solids	SM 2540D
Nitrate	SM-19 4500-NO <sub>3</sub> -E
Turbidity	SM 2130 B
Cyanide	335.2

- d) An in-depth discussion of the results of the effluent and receiving water monitoring programs with regard to compliance with this permit. All tabulations and computations shall be explained.

There are no significant pollutants in these effluent samples. In cases where Guam Water Quality Standards for metals were exceeded, results at the sampling stations around the diffuser (TB1 and TB2) were similar to or less than those at the control station (TB3) indicating that these numbers represent ambient results.



# Continuous Depth Profile

## February 7, 2002

Sampling done by : Ralph Burpee, Julie Kiritsis

Location	Time HHMMSS	Depth meters	Temp °C	DO mg/l	pH Units
TB-1	95025	1.90	27.89	8.07	7.97
TB-1	95051	3.90	27.90	8.29	8.02
TB-1	95118	5.70	27.90	8.28	8.05
TB-1	95150	7.90	27.90	8.25	8.06
TB-1	95213	10.3	27.90	8.20	8.07
TB-1	95234	12.1	27.90	8.29	8.08
TB-1	95255	14.1	27.90	8.31	8.08
TB-1	95322	16.2	27.90	8.28	8.08
TB-1	95341	18.6	27.90	8.23	8.08
TB-1	95403	20.4	27.90	8.20	8.10
TB-1	95435	22.1	27.90	8.12	8.09
TB-1	95537	23.9	27.89	8.07	8.08
TB-1	95612	25.2	27.86	8.07	8.07
TB-1	95658	27.0	27.86	8.04	8.06
TB-1	95730	29.9	27.86	8.04	8.07
TB-1	95807	33.8	27.86	8.02	8.11
TB-2	100359	1.90	27.89	8.61	8.09
TB-2	100432	4.10	27.90	8.14	8.11
TB-2	100451	6.40	27.90	8.06	8.09
TB-2	100510	8.30	27.90	7.95	8.10
TB-2	100527	10.6	27.90	8.02	8.10
TB-2	100601	12.6	27.90	7.95	8.10
TB-2	100621	14.4	27.90	7.98	8.10
TB-2	100645	16.5	27.89	8.03	8.10
TB-2	100703	18.5	27.89	8.03	8.10
TB-2	100724	20.4	27.88	8.01	8.10
TB-2	100752	21.8	27.88	8.00	8.10
TB-2	100810	23.8	27.87	8.06	8.10
TB-2	100832	25.5	27.86	8.02	8.10
TB-2	100940	28.3	27.86	7.99	8.10

# Continuous Depth Profile

## February 7, 2002

TB-2	100953	30.3	27.86	8.02	8.10
TB-2	101010	31.7	27.86	7.98	8.10
TB-2	101107	34.0	27.86	7.98	8.10
TB-3	105255	2.20	27.98	8.62	8.10
TB-3	105313	3.90	27.95	8.49	8.11
TB-3	105338	5.90	27.90	8.44	8.12
TB-3	105359	7.90	27.90	8.36	8.12
TB-3	105420	9.80	27.90	8.31	8.12
TB-3	105437	11.6	27.90	8.26	8.11
TB-3	105501	13.8	27.91	8.19	8.11
TB-3	105520	15.8	27.87	8.15	8.12
TB-3	105538	17.6	27.86	8.11	8.12
TB-3	105557	19.8	27.87	8.13	8.11
TB-3	105616	22.0	27.87	8.09	8.11
TB-3	105638	24.2	27.87	8.04	8.12
TB-3	105654	26.3	27.87	8.04	8.11
TB-3	105726	28.0	27.86	8.02	8.11
TB-3	105744	30.3	27.86	8.02	8.12
TB-3	105801	32.9	27.87	7.97	8.11
TB-3	105818	34.6	27.87	7.99	8.11

Facility Name / Location (include if different)

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
RECEIVING WATER DISCHARGE MONITORING REPORT (DMR)

NAME  
ADDRESS  
Commanding Officer  
U.S. Navy Public Works Center, Guam  
PSC 455, Box 195  
FPO AP 96540-2937

FACILITY  
LOCATION  
Apra Harbor Wastewater Treatment Plant  
Guam

GU 0110019  
PERMIT NUMBER

TB1  
DISCHARGE NUMBER

MONITORING PERIOD					
YEAR	MO	DAY	YEAR	MO	DAY
02	02	01	02	02	28

PARAMETERS	SAMPLE MEASUREMENTS PERMIT REQUIREMENTS	QUANTITY OR LOADING			SAMPLE TYPE			UNITS	FREQUENCY OF ANALYSIS	SAMPLE TYPE	
		AVERAGE	MAXIMUM	UNITS	SURFACE	MID-DEPTH	BOTTOM				
Enterococci	SAMPLE MEASUREMENTS				3.1	1.0	<1	CFU/10	1/30	GRAB	
	PERMIT REQUIREMENTS										
	SAMPLE MEASUREMENTS				1.50	4.20	2.80	MG/L	1/30	GRAB	
Copper (Cu)	PERMIT REQUIREMENTS										
	SAMPLE MEASUREMENTS				ND	ND	ND	MG/L	1/30	GRAB	
	PERMIT REQUIREMENTS										
Aluminum (Al)	SAMPLE MEASUREMENTS				ND	ND	ND	MG/L	1/30	GRAB	
	PERMIT REQUIREMENTS										
	SAMPLE MEASUREMENTS				ND	ND	ND	MG/L	1/30	GRAB	
Nickel (Ni)	PERMIT REQUIREMENTS										
	SAMPLE MEASUREMENTS				ND	ND	ND	MG/L	1/30	GRAB	
	PERMIT REQUIREMENTS										
Zinc (Zn)	SAMPLE MEASUREMENTS				ND	ND	ND	MG/L	1/30	GRAB	
	PERMIT REQUIREMENTS										
	SAMPLE MEASUREMENTS				No Sheen			VISUA OBS.	1/30	GRAB	
Oil and Grease	PERMIT REQUIREMENTS										
	SAMPLE MEASUREMENTS										
	PERMIT REQUIREMENTS										
NAME/TITLE PRINCIPAL EXECUTIVE OFFICER		I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER THE DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED, BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.								SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	
RALPH BURPEE LABORATORY MANAGER										671 339-3157	
TYPED OR PRINTED										AREA NUMBER YEAR MO DAY	

Facility Name / Location (if different)

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
RECEIVING WATER DISCHARGE MONITORING REPORT (DMR)

NAME: Commanding Officer  
ADDRESS: U.S. Navy Public Works Center, Guam  
PSC 455, Box 195  
FPO AP 96540-2937

GU 0110019  
PERMIT NUMBER

TBI  
DISCHARGE NUMBER

FACILITY: Apra Harbor Wastewater Treatment Plant  
LOCATION: Guam

MONITORING PERIOD					
YEAR	MO	DAY	YEAR	MO	DAY
02	02	01	TO	02	28

PARAMETERS	SAMPLE MEASUREMENTS PERMIT REQUIREMENTS	QUANTITY OR LOADING			SAMPLE TYPE				FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	SURFACE	MID-DEPTH	BOTTOM	UNITS		
ORTHOPHOSPHATE	SAMPLE MEASUREMENTS				<0.004	<0.004	0.004	MG/L	1/90	GRAB
	PERMIT REQUIREMENTS									
	SAMPLE MEASUREMENTS				0.012	0.016	0.012	MG/L	1/90	GRAB
NITRATE-NITROGEN	PERMIT REQUIREMENTS									
	SAMPLE MEASUREMENTS				<0.045	<0.045	<0.045	MG/L	1/90	GRAB
	PERMIT REQUIREMENTS									
AMMONIA	SAMPLE MEASUREMENTS				0.19	0.28	0.25	NTU	1/90	GRAB
	PERMIT REQUIREMENTS									
	SAMPLE MEASUREMENTS				13.0	8.00	18.0	MG/L	1/90	GRAB
TOTAL SUSPENDED SOLIDS	PERMIT REQUIREMENTS									
	SAMPLE MEASUREMENTS				1,400	1,400	1,300	MG/L	1/90	GRAB
	PERMIT REQUIREMENTS									
MAGNESIUM	SAMPLE MEASUREMENTS				ND	ND	ND	MG/L	1/90	GRAB
	PERMIT REQUIREMENTS									
	SAMPLE MEASUREMENTS									
LEAD	PERMIT REQUIREMENTS									
	SAMPLE MEASUREMENTS									
	PERMIT REQUIREMENTS									

NAME/TITLE: RALPH BURPEE  
LABORATORY MANAGER

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: 671 339-3157  
DATE: 02 04 28

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

Facility Name / Location (if different)

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
RECEIVING WATER DISCHARGE MONITORING REPORT (DMR)

NAME  
ADDRESS  
FACILITY  
LOCATION

Commanding Officer  
U.S. Navy Public Works Center, Guam  
PSC 455, Box 195  
FPO AP 96540-2937  
Apra Harbor Wastewater Treatment Plant  
Guam

GU 0110019  
PERMIT NUMBER

TB1  
DISCHARGE NUMBER

MONITORING PERIOD  
FROM  
YEAR 02 MO 02 DAY 01 TO YEAR 02 MO 02 DAY 28

PARAMETERS		QUANTITY OR LOADING			SAMPLE TYPE			FREQUENCY OF ANALYSIS	SAMPLE TYPE			
		AVERAGE	MAXIMUM	UNITS	SURFACE	MID-DEPTH	BOTTOM			UNITS		
SILVER	SAMPLE MEASUREMENTS				ND	ND	ND	MG/L	1/90	GRAB		
	PERMIT REQUIREMENTS											
	SAMPLE MEASUREMENTS				ND	ND	ND	MG/L	1/90	GRAB		
IRON	PERMIT REQUIREMENTS											
	SAMPLE MEASUREMENTS				ND	ND	ND	MG/L	1/90	GRAB		
	PERMIT REQUIREMENTS											
MERCURY	SAMPLE MEASUREMENTS				ND	ND	ND	MG/L	1/90	GRAB		
	PERMIT REQUIREMENTS											
	SAMPLE MEASUREMENTS				ND	ND	ND	MG/L	1/90	GRAB		
CYANIDE	PERMIT REQUIREMENTS											
	SAMPLE MEASUREMENTS							units	1/90	CDP		
	PERMIT REQUIREMENTS											
TEMPERATURE, PH, DO	SAMPLE MEASUREMENTS				See Attached			MG/L	1/90	CDP		
	PERMIT REQUIREMENTS											
	SAMPLE MEASUREMENTS							deg C	1/90	CDP		
PERMIT REQUIREMENTS												
NAME/TITLE PRINCIPAL EXECUTIVE OFFICER		I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER THE DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED, BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.							TELEPHONE		DATE	
RALPH BURPEE LABORATORY MANAGER									671 339-3157		02 04 28	
TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT							AREA		NUMBER	

Facility Name / Location (include if different)

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

RECEIVING WATER DISCHARGE MONITORING REPORT (DMR)

NAME  
ADDRESS  
PSC 455, Box 195  
FPO AP 96540-2937  
Apra Harbor Wastewater Treatment Plant  
Guam

GU 0110019  
PERMIT NUMBER

TB2  
DISCHARGE NUMBER

MONITORING PERIOD  
FROM YEAR MO DAY TO YEAR MO DAY  
02 02 01 02 02 28

PARAMETERS	SAMPLE MEASUREMENTS PERMIT REQUIREMENTS	QUANTITY OR LOADING			SAMPLE TYPE				FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	SURFACE	MID-DEPTH	BOTTOM	UNITS		
Enterococci					<1	<1	1.0	CFU/10	1/30	GRAB
Copper (Cu)					2.10	2.10	2.10	MG/L	1/30	GRAB
Aluminum (Al)					ND	ND	ND	MG/L	1/30	GRAB
Nickel (Ni)					ND	ND	ND	MG/L	1/30	GRAB
Zinc (Zn)					ND	ND	ND	MG/L	1/30	GRAB
Oil and Grease					No Sheen			VISUA OBS.	1/30	GRAB
NAME/TITLE PRINCIPAL EXECUTIVE OFFICER										
Ralph Burpee LABORATORY MANAGER										
I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER THE DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.										
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT										
671 339-3157 02 04 28										
AREA NUMBER YEAR MO DAY										



Facility Name / Location (if different)

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
RECEIVING WATER DISCHARGE MONITORING REPORT (DMR)

NAME  
ADDRESS  
U.S. Navy Public Works Center, Guam  
PSC 455, Box 195  
FPO AP 96540-2937

FACILITY  
LOCATION  
Apra Harbor Wastewater Treatment Plant  
Guam

GU 0110019	
PERMIT NUMBER	

TB2	
DISCHARGE NUMBER	

MONITORING PERIOD					
YEAR	MO	DAY	YEAR	MO	DAY
02	02	01	02	02	28

PARAMETERS	SAMPLE MEASUREMENTS PERMIT REQUIREMENTS	QUANTITY OR LOADING			SAMPLE TYPE			UNITS	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	SURFACE	MID-DEPTH	BOTTOM			
ORTHOPHOSPHATE					0.004	0.013	0.012	MG/L	1/90	GRAB
NITRATE-NITROGEN					<0.010	0.016	0.021	MG/L	1/90	GRAB
AMMONIA					<0.045	<0.045	<0.045	MG/L	1/90	GRAB
TURBIDITY					0.27	0.25	0.20	NTU	1/90	GRAB
TOTAL SUSPENDED SOLIDS					26.0	<2.00	<2.00	MG/L	1/90	GRAB
MAGNESIUM					1,400	1,400	1,400	MG/L	1/90	GRAB
LEAD					ND	ND	ND	MG/L	1/90	GRAB
NAME/TITLE PRINCIPAL EXECUTIVE OFFICER										
Ralph Burpee LABORATORY MANAGER										
I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER THE DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, I BELIEVE AND COOPERATE THAT THE INFORMATION IS TO THE BEST OF MY KNOWLEDGE AND BELIEF TRUE, ACCURATE AND CORRECT. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.										
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT										
671 339-3157 02 04 28										
AREA NUMBER YEAR MO DAY										

Facility Name / Location (include if different)

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
RECEIVING WATER DISCHARGE MONITORING REPORT (DMR)

NAME Commanding Officer  
ADDRESS U.S. Navy Public Works Center, Guam  
PSC 455, Box 195  
FPO AP 96540-2937

GU 0110019	
PERMIT NUMBER	

TB2	
DISCHARGE NUMBER	

FACILITY Apra Harbor Wastewater Treatment Plant  
LOCATION Guam

MONITORING PERIOD					
YEAR	MO	DAY	YEAR	MO	DAY
02	02	01	02	02	28

PARAMETERS	SAMPLE MEASUREMENTS PERMIT REQUIREMENTS	QUANTITY OR LOADING			SAMPLE TYPE			UNITS	FREQUENCY OF ANALYSIS	SAMPLE TYPE				
		AVERAGE	MAXIMUM	UNITS	SURFACE	MID-DEPTH	BOTTOM							
SILVER	SAMPLE MEASUREMENTS				ND	ND	ND	MG/L	1/90	GRAB				
	PERMIT REQUIREMENTS													
	SAMPLE MEASUREMENTS				ND	ND	ND	MG/L	1/90	GRAB				
IRON	PERMIT REQUIREMENTS													
	SAMPLE MEASUREMENTS				ND	ND	ND	MG/L	1/90	GRAB				
	PERMIT REQUIREMENTS													
MERCURY	SAMPLE MEASUREMENTS				ND	ND	ND	MG/L	1/90	GRAB				
	PERMIT REQUIREMENTS													
	SAMPLE MEASUREMENTS													
CYANIDE	PERMIT REQUIREMENTS													
	SAMPLE MEASUREMENTS							units	1/90	CDP				
	PERMIT REQUIREMENTS													
TEMPERATURE, pH, DO	SAMPLE MEASUREMENTS				See Attached			MG/L	1/90	CDP				
	PERMIT REQUIREMENTS													
	SAMPLE MEASUREMENTS							deg C	1/90	CDP				
PERMIT REQUIREMENTS														
NAME/TITLE PRINCIPAL EXECUTIVE OFFICER														
RALPH BURPEE LABORATORY MANAGER														
COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)														
I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER THE DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED, BASED ON AN INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION. THE INFORMATION SUBMITTED IS TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.														
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT										671	339-3157	02	04	28
AREA										NUMBER	YEAR	MO	DAY	

Facility Name / Location (include  
if different)

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
RECEIVING WATER DISCHARGE MONITORING REPORT (DMR)

NAME Commanding Officer  
ADDRESS U.S. Navy Public Works Center, Guam  
PSC 455, Box 195  
FPO AP 96540-2937

GU 0110019  
PERMIT NUMBER

TB3  
DISCHARGE NUMBER

FACILITY Apra Harbor Wastewater Treatment Plant  
LOCATION Guam

MONITORING PERIOD  
FROM YEAR MO DAY TO YEAR MO DAY  
02 02 01 02 02 28

PARAMETERS	SAMPLE MEASUREMENTS PERMIT REQUIREMENTS	QUANTITY OR LOADING			SAMPLE TYPE			UNITS	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	SURFACE	MID-DEPTH	BOTTOM			
Enterococci					<1	<1	<1	CFU/10	1/30	GRAB
Copper (Cu)					2.70	2.50	2.40	MG/L	1/30	GRAB
Aluminum (Al)					ND	ND	ND	MG/L	1/30	GRAB
Nickel (Ni)					ND	ND	ND	MG/L	1/30	GRAB
Zinc (Zn)					ND	ND	ND	MG/L	1/30	GRAB
Oil and Grease					No Sheen			VISUA OBS.	1/30	GRAB
NAME/TITLE PRINCIPAL EXECUTIVE OFFICER										
I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER THE DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS TO THE BEST OF MY KNOWLEDGE AND BELIEF TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.										
Ralph Burpee LABORATORY MANAGER										
TYPED OR PRINTED										
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT										
671 339-3157 02 04 28										
AREA NUMBER YEAR MO DAY										

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

Facility Name / Location (if different)

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
RECEIVING WATER DISCHARGE MONITORING REPORT (DMR)

NAME  
Commanding Officer  
ADDRESS  
U.S. Navy Public Works Center, Guam  
PSC 453, Box 195  
FPO AP 96540-2937

FACILITY  
Apra Harbor Wastewater Treatment Plant  
LOCATION  
Guam

GU 0110019	
PERMIT NUMBER	

TB3	
DISCHARGE NUMBER	

MONITORING PERIOD					
YEAR	MO	DAY	YEAR	MO	DAY
02	02	01	TO	02	28

PARAMETERS	SAMPLE MEASUREMENTS PERMIT REQUIREMENTS	QUANTITY OR LOADING			SAMPLE TYPE			UNITS	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	SURFACE	MID-DEPTH	BOTTOM			
ORTHOPHOSPHATE	SAMPLE MEASUREMENTS				0.013	0.013	0.013	MG/L	1/90	GRAB
	PERMIT REQUIREMENTS									
	SAMPLE MEASUREMENTS				0.019	0.019	0.019	MG/L	1/90	GRAB
NITRATE-NITROGEN	PERMIT REQUIREMENTS									
	SAMPLE MEASUREMENTS				<0.045	<0.045	<0.045	MG/L	1/90	GRAB
	PERMIT REQUIREMENTS									
AMMONIA	SAMPLE MEASUREMENTS				0.27	0.18	0.28	NTU	1/90	GRAB
	PERMIT REQUIREMENTS									
	SAMPLE MEASUREMENTS				15.0	<2.00	<2.00	MG/L	1/90	GRAB
TOTAL SUSPENDED SOLIDS	PERMIT REQUIREMENTS									
	SAMPLE MEASUREMENTS				1,400	1,400	1,500	MG/L	1/90	GRAB
	PERMIT REQUIREMENTS									
MAGNESIUM	SAMPLE MEASUREMENTS				ND	ND	ND	MG/L	1/90	GRAB
	PERMIT REQUIREMENTS									
	SAMPLE MEASUREMENTS									
LEAD	PERMIT REQUIREMENTS									
	SAMPLE MEASUREMENTS									
	PERMIT REQUIREMENTS									

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER  
RALPH BURPEE  
LABORATORY MANAGER  
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER THE DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSONS OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

671 339-3157 02 04 28

AREA NUMBER YEAR MO DAY



Facility Name / Location (if different)

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
RECEIVING WATER DISCHARGE MONITORING REPORT (DMR)

NAME  
Commanding Officer  
U.S. Navy Public Works Center, Guam  
PSC 455, Box 195  
FPO AP 96540-2937

FACILITY  
Apra Harbor Wastewater Treatment Plant  
LOCATION  
Guam

GU 0110019	
PERMIT NUMBER	

TBS	
DISCHARGE NUMBER	

MONITORING PERIOD					
YEAR	MO	DAY	YEAR	MO	DAY
02	02	01	02	02	28

PARAMETERS	SAMPLE MEASUREMENTS PERMIT REQUIREMENTS	QUANTITY OR LOADING			SAMPLE TYPE			UNITS	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	SURFACE	MID-DEPTH	BOTTOM			
SILVER	SAMPLE MEASUREMENTS				ND	ND	ND	MG/L	1/90	GRAB
	PERMIT REQUIREMENTS									
	SAMPLE MEASUREMENTS				ND	ND	ND	MG/L	1/90	GRAB
IRON	PERMIT REQUIREMENTS									
	SAMPLE MEASUREMENTS				ND	ND	ND	MG/L	1/90	GRAB
	PERMIT REQUIREMENTS									
MERCURY	SAMPLE MEASUREMENTS				ND	ND	ND	MG/L	1/90	GRAB
	PERMIT REQUIREMENTS									
	SAMPLE MEASUREMENTS									
CYANIDE	PERMIT REQUIREMENTS							units	1/90	CDP
	SAMPLE MEASUREMENTS									
	PERMIT REQUIREMENTS									
TEMPERATURE, pH, DO	SAMPLE MEASUREMENTS				See Attached			MG/L	1/90	CDP
	PERMIT REQUIREMENTS									
	SAMPLE MEASUREMENTS							deg C	1/90	CDP
NAME/TITLE PRINCIPAL EXECUTIVE OFFICER		I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER THE DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY OBTAIN AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY KNOWLEDGE, THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR OBTAINING THE INFORMATION, THE INFORMATION SUBMITTED IS TO THE BEST OF MY KNOWLEDGE, BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.					TELEPHONE		DATE	
RALPH BURRUE LABORATORY MANAGER							671 339-3157		02 04 28	
TYPED OR PRINTED							AREA		NUMBER	
COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT					AREA		NUMBER	

March 25, 2001 Sampling

Pursuant to NPDES permit GU0110019 paragraph D.2:

- a) A description of climatic and receiving water characteristics at the time of sampling (e.g., weather observations, floating debris, discoloration, time of sampling, tide, etc.).

Weather was mostly sunny. Seas mostly calm with 4 foot swells, and samples were taken between 0840-0930 hrs. Low tide on March 25 was +1.5 feet at 1109; therefore tides were going out.

- b) A description of the sample collection and preservation procedures used in the receiving water monitoring program.

At each of the three sampling locations (TB1, TB2, TB3), the weighted acrylic water sampler was dropped on a nylon line to each of the pre-marked depths. Once it had reached the proper depth, a stainless steel messenger was sent down the line to trigger the closing of the water sampler. The sample was then brought back up to the boat and dispensed into the proper bottles with the appropriate preservative and then placed into a cooler with blue ice. (See table 1 for analysis, bottles and preservatives.)

Table 1. Sampling Protocol Information

Monitoring Analysis	Monitoring Frequency	Bottle Type	Preservative
Enterococci	Monthly	100 ml Plastic	Sodium Thiosulfate/4°C
Metals (Cu, Al, Ni, Zn)	Monthly	250 ml Plastic	HNO <sub>3</sub> / 4°C
Oil and Grease	Monthly	None	None – Visual Observation

- c) A description of the specific method used for laboratory analysis.

Table 2. Analytical Method for Offshore Analyses.

Parameter	Analytical Method
Aluminum	6010A
Copper	6010A
Nickel	6010A
Zinc	6010A
Enterococcus Bacteria	SM-9230 B
Ammonia-Nitrogen	SM-4500-NH <sub>3</sub> -F



- d) An in-depth discussion of the results of the effluent and receiving water monitoring programs with regard to compliance with this permit. All tabulations and computations shall be explained.

There are no significant pollutants in these effluent samples.

Please note that although ammonia is a quarterly parameter, it was analyzed monthly this quarter and therefore all results are enclosed.

Facility Name / Location if different

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

RECEIVING WATER DISCHARGE MONITORING REPORT (DMR)

NAME  
ADDRESS  
PSC 455, Box 195  
FPO AP 96540-2937

Commanding Officer  
U.S. Navy Public Works Center, Guam

Apna Harbor Wastewater Treatment Plant

Guam

GU 0110019
PERMIT NUMBER

TB1
DISCHARGE NUMBER

MONITORING PERIOD					
YEAR	MO	DAY	YEAR	MO	DAY
02	03	01	02	03	31

PARAMETERS	SAMPLE MEASUREMENTS PERMIT REQUIREMENTS	QUANTITY OR LOADING			SAMPLE TYPE			UNITS	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	SURFACE	MID-DEPTH	BOTTOM			
Enterococci					20	<1	<1	CFU/10	1/30	GRAB
Copper (Cu)					ND	0.05	ND	MG/L	1/30	GRAB
Aluminum (Al)					ND	ND	ND	MG/L	1/30	GRAB
Nickel (Ni)					ND	ND	ND	MG/L	1/30	GRAB
Zinc (Zn)					0.11	0.26	ND	MG/L	1/30	GRAB
Oil and Grease					No Sheen			VISUA OBS.	1/30	GRAB
NAME/TITLE PRINCIPAL EXECUTIVE OFFICER										
I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER THE DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.										
LABORATORY MANAGER										
TYPED OR PRINTED										
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT										
TELEPHONE										
DATE										
AREA NUMBER YEAR MO DAY										

Facility Name / Location (include if different)

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
RECEIVING WATER DISCHARGE MONITORING REPORT (DMR)

NAME: Commanding Officer  
ADDRESS: U.S. Navy Public works Center, Guam  
PSC 455, Box 195  
FPO AP 96540-2937  
FACILITY: Apra Harbor Wastewater Treatment Plant  
LOCATION: Guam

GU 0110019
PERMIT NUMBER

TBI
DISCHARGE NUMBER

MONITORING PERIOD					
YEAR	MO	DAY	YEAR	MO	DAY
02	03	01	02	03	31

PARAMETERS	SAMPLE MEASUREMENTS PERMIT REQUIREMENTS	QUANTITY OR LOADING			SAMPLE TYPE			FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	SURFACE	MID-DEPTH	BOTTOM		
ORTHOPHOSPHATE									
NITRATE-NITROGEN									
AMMONIA									
TURBIDITY									
TOTAL SUSPENDED SOLIDS									
MAGNESIUM									
LEAD									
NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER THE DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.								
RALPH BURPEE LABORATORY MANAGER									
TYPED OR PRINTED									
COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)									
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT									
TELEPHONE									
DATE									
AREA	NUMBER	YEAR	MO	DAY					

Facility Name / Location (if different)

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
RECEIVING WATER DISCHARGE MONITORING REPORT (DMR)

NAME  
ADDRESS  
Commanding Officer  
U.S. Navy Public Works Center, Guam  
PSC 455, Box 195  
FPO AP 96540-2937

GU 0110019
PERMIT NUMBER

TB2
DISCHARGE NUMBER

FACILITY  
LOCATION  
Apra Harbor Wastewater Treatment Plant  
Guam

MONITORING PERIOD					
YEAR	MO	DAY	YEAR	MO	DAY
02	03	01	02	03	31

PARAMETERS	SAMPLE MEASUREMENTS PERMIT REQUIREMENTS	QUANTITY OR LOADING			SAMPLE TYPE			FREQUENCY OF ANALYSIS	SAMPLE TYPE	
		AVERAGE	MAXIMUM	UNITS	SURFACE	MID-DEPTH	BOTTOM			
Enterococci	SAMPLE MEASUREMENTS				63	<1	<1	CFU/10	1/30	GRAB
	PERMIT REQUIREMENTS									
	SAMPLE MEASUREMENTS PERMIT REQUIREMENTS				0.04	ND	ND	MG/L	1/30	GRAB
Copper (Cu)	SAMPLE MEASUREMENTS									
	PERMIT REQUIREMENTS									
	SAMPLE MEASUREMENTS PERMIT REQUIREMENTS				ND	ND	ND	MG/L	1/30	GRAB
Aluminum (Al)	SAMPLE MEASUREMENTS									
	PERMIT REQUIREMENTS									
	SAMPLE MEASUREMENTS PERMIT REQUIREMENTS				ND	ND	ND	MG/L	1/30	GRAB
Nickel (Ni)	SAMPLE MEASUREMENTS									
	PERMIT REQUIREMENTS									
	SAMPLE MEASUREMENTS PERMIT REQUIREMENTS				0.12	0.18	ND	MG/L	1/30	GRAB
Zinc (Zn)	SAMPLE MEASUREMENTS									
	PERMIT REQUIREMENTS									
	SAMPLE MEASUREMENTS PERMIT REQUIREMENTS				No Sheen			VISUA OBS.	1/30	GRAB
Oil and Grease	SAMPLE MEASUREMENTS									
	PERMIT REQUIREMENTS									
	SAMPLE MEASUREMENTS PERMIT REQUIREMENTS									
NAME/TITLE PRINCIPAL EXECUTIVE OFFICER		I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER THE DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.								
RALPH BURPEE LABORATORY MANAGER										
TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT								
COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)		AREA NUMBER YEAR MO DAY								

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

RECEIVING WATER DISCHARGE MONITORING REPORT (DMR)

NAME  
Commanding Officer  
U.S. Navy Public Works Center, Guam  
PSC 455, Box 195  
FPO AP 96540-2937

ADDRESS

FACILITY  
Apra Harbor Wastewater Treatment Plant

LOCATION  
Guam

GU 0110019  
PERMIT NUMBER

TB2  
DISCHARGE NUMBER

MONITORING PERIOD					
YEAR	MO	DAY	YEAR	MO	DAY
02	03	01	02	03	31

FROM

TO

PARAMETERS	SAMPLE MEASUREMENTS PERMIT REQUIREMENTS	QUANTITY OR LOADING			SAMPLE TYPE			FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	SURFACE	MID-DEPTH	BOTTOM		
ORTHOPHOSPHATE	SAMPLE MEASUREMENTS								
	PERMIT REQUIREMENTS								
NITRATE-NITROGEN	SAMPLE MEASUREMENTS								
	PERMIT REQUIREMENTS								
AMMONIA	SAMPLE MEASUREMENTS								
	PERMIT REQUIREMENTS								
TURBIDITY	SAMPLE MEASUREMENTS								
	PERMIT REQUIREMENTS								
TOTAL SUSPENDED SOLIDS	SAMPLE MEASUREMENTS								
	PERMIT REQUIREMENTS								
MAGNESIUM	SAMPLE MEASUREMENTS								
	PERMIT REQUIREMENTS								
LEAD	SAMPLE MEASUREMENTS								
	PERMIT REQUIREMENTS								
NAME/TITLE PRINCIPAL EXECUTIVE OFFICER		I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER THE DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED, BASED ON MY INQUIRY OF THE PERSONS OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.							
NAME/TITLE PRINCIPAL EXECUTIVE OFFICER		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT							
RALPH BURPEE LABORATORY MANAGER		671 339-3157 02 04 28							
TYPED OR PRINTED		DATE							



RECEIVING WATER DISCHARGE MONITORING REPORT (DMR)

NAME  
ADDRESS  
Commanding Officer  
U.S. Navy Public Works Center, Guam  
PSC 455, Box 195  
FPO AP 96540-2937

FACILITY  
LOCATION  
Apra Harbor Wastewater Treatment Plant  
Guam

GU 0110019  
PERMIT NUMBER

TB3  
DISCHARGE NUMBER

MONITORING PERIOD					
YEAR	MO	DAY	YEAR	MO	DAY
02	03	01	02	03	31

PARAMETERS	SAMPLE MEASUREMENTS PERMIT REQUIREMENTS	QUANTITY OR LOADING			SAMPLE TYPE				FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	SURFACE	MID-DEPTH	BOTTOM	UNITS		
Enterococci					<1	<1	<1	CFU/10	1/30	GRAB
Copper (Cu)	SAMPLE MEASUREMENTS PERMIT REQUIREMENTS				0.03	0.04	0.04	MG/L	1/30	GRAB
Aluminum (Al)	SAMPLE MEASUREMENTS PERMIT REQUIREMENTS				ND	ND	ND	MG/L	1/30	GRAB
Nickel (Ni)	SAMPLE MEASUREMENTS PERMIT REQUIREMENTS				ND	ND	ND	MG/L	1/30	GRAB
Zinc (Zn)	SAMPLE MEASUREMENTS PERMIT REQUIREMENTS				0.15	ND	0.11	MG/L	1/30	GRAB
Oil and Grease	SAMPLE MEASUREMENTS PERMIT REQUIREMENTS				No Sheen			VISUA OBS.	1/30	GRAB
NAME/TITLE PRINCIPAL EXECUTIVE OFFICER										
<p>I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER THE DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.</p>										
<p>RALPH BURPEE LABORATORY MANAGER</p> <p>TYPED OR PRINTED</p>										
<p>SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT</p> <p>671 339-3157 02 04 28</p> <p>AREA NUMBER YEAR MO DAY</p>										



NAME  
ADDRESS  
FACILITY  
LOCATION

Commanding Officer  
U.S. Navy Public Works Center, Guam  
PSC 455, Box 195  
FPO AP 96540-2937  
Apra Harbor Wastewater Treatment Plant  
Guam

RECEIVING WATER DISCHARGE MONITORING REPORT (DMR)

GU 0110019  
PERMIT NUMBER

TB3  
DISCHARGE NUMBER

MONITORING PERIOD  
FROM YEAR MO DAY TO YEAR MO DAY  
02 03 01 02 03 31

PARAMETERS	SAMPLE MEASUREMENTS PERMIT REQUIREMENTS	QUANTITY OR LOADING			SAMPLE TYPE			FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	SURFACE	MID-DEPTH	BOTTOM		
ORTHOPHOSPHATE									
NITRATE-NITROGEN									
AMMONIA									
TURBIDITY									
TOTAL SUSPENDED SOLIDS									
MAGNESIUM									
LEAD									
NAME/TITLE PRINCIPAL EXECUTIVE OFFICER									
RALPH BURPEE LABORATORY MANAGER									
TYPED OR PRINTED									
COMPLAINT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)									
I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER THE DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.									
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT									
TELEPHONE									
DATE									
AREA NUMBER YEAR MO DAY									

## ATTACHMENT C.4

### BAZA STP (i.e., TOGCHA RIVER AND BAY) RECEIVING WATER RESULTS

GUAM WATERWORKS AUTHORITY

BAZA GARDENS STP

RECEIVING WATER QUALITY MONITORING

2nd QUARTER 2002

TABLE 1. RECEIVING WATER DATA

DATE	STATION	ENTEROCOCCI CFU/100 ml	pH	TOTAL PHOSPHATE mg/L	TOTAL NITROGEN mg/L	ORTHO- PHOSPHATE mg/L	NITRATE- NITROGEN mg/L	DISSOLVED OXYGEN (mg/l)	TURBIDITY NTU	TEMP °C	FLOW (ft <sup>3</sup> /s)
1/22/02	A	200	7.4	qns	qns	0.013	0.092	8.5	3.8	24.3	2.8
1/31/02	A	< 100	7.52	0.079	0.162	0.016	0.074	6.3	4.7	24.3	3.0
2/5/02	A	100	7.39	0.042	0.18	0.011	0.069	5.2	4.3	24.1	2.3
2/19/02	A	14830	7.41	0.04	0.283	0.018	0.049	5.3	6.5	25	2.4
3/4/02	A	200	7.47	0.034	0.283	0.031	0.039	7.6	4	25.2	2.3
3/11/02	A	310	7.38	0.045	0.182	0.034	0.023	5.9	3.5	25.4	7.2
1/22/02	B	520	7.37	0.023	0.246	0.003	0.09	9.5	3.3	24.3	3.6
1/31/02	B	100	7.53	0.021	0.159	0.009	0.053	5.3	3.7	23.1	2.4
2/5/05	B	310	7.3	0.011	0.2	0.007	0.052	4.3	4.2	24.2	2.4
2/19/02	B	630	7.32	0.526	0.696	0.116	0.054	6.0	5.3	24.8	2.3
3/4/02	B	< 100	7.43	0.165	0.696	0.035	0.033	5.4	5.3	25.1	1.4
3/11/02	B	< 100	7.35	0.025	0.033	0.139	0.023	4.9	3.2	24.8	2.0
1/22/02	C	3090	7.71	0.031	1.66	0.004	0.196	8.6	4.4	24.6	10.5
1/31/02	C	1100	7.89	0.096	2.04	0.017	0.106	4.0	8.1	24.2	10.5
2/5/05	C	2950	7.66	0.114	3.13	0.017	0.2	4.7	11.4	24.8	10.5
2/19/02	C	1080	7.99	0.135	3.16	0.035	0.117	4.9	11.9	25.3	10.5
3/4/02	C	4720	8.06	0.36	3.16	0.011	0.209	5.6	9.3	25.2	10.5
3/11/02	C	6950	7.74	0.069	4.49	0.008	0.155	4.5	5.2	24.4	10.5
1/22/02	D	1460	7.64	0.04	2.02	0.007	0.25	9.0	4.5	24.9	18.0
1/31/02	D	1630	8	0.012	0.218	0.013	0.103	4.5	8.7	23.9	9.0
2/5/02	D	980	7.81	2.41	1.41	0.019	0.192	3.6	9.4	24.8	18.0
2/19/02	D	17850	7.59	0.121	3.84	0.049	0.18	2.7	11.1	25.2	18.0
3/4/02	D	1870	7.89	0.026	3.84	0.006	0.208	4.3	8	25.2	18.0
3/11/02	D	4190	7.44	0.094	4.91	0.009	0.161	3.6	6.1	24.3	18.0
1/22/02	E	1850	7.56	0.033	1.68	0.003	0.233	6.9	5.1	24.5	7.5
1/31/02	E	310	8.04	0.071	2.22	0.013	0.021	4.8	8.4	24	3.0
2/5/02	E	1870	7.6	0.094	2.23	0.013	0.169	2.3	7.8	24.6	7.5
2/19/02	E	9850	7.51	0.083	3.24	0.031	0.222	4.9	9.3	23.8	5.0
3/4/02	E	4190	7.56	0.033	3.24	0.006	0.28	4.2	9.6	25.3	7.5
3/11/02	E	2400	7.36	0.121	6.32	0.01	0.11	3.2	4.7	24.8	15.0
1/22/02	F	< 100	8.01	0.015	0.209	0.004	0.031	6.5	0.7	26	
1/31/02	F	100	7.78	0.036	0.206	0.003	0.021	6.5	0.9	22.5	
2/5/02	F	< 100	8	0.026	0.201	0.001	0.026	7.1	3	26.4	
2/19/02	F	< 100	7.98	0.056	0.142	0.023	0.032	7.0	1.7	27	
3/4/02	F	< 100	8.08	0.014	0.142	0.001	0.043	8.1	2.2	27.2	
3/11/02	F	< 100	7.71	0.013	0.198	0.007	0.035	6.4	0.6	25.3	
1/22/02	G	< 100	8.09	0.043	0.114	0.029	0.008	9.9	0.4	26	
1/31/02	G	< 100	7.79	0.159	0.174	0.015	0.026	6.5	0.9	22.5	
2/5/02	G	< 100	8.05	0.027	0.111	0.001	0.001	7.8	1.2	26.5	
2/19/02	G	5120	8.02	0.03	0.134	0.001	0.014	8.3	1.7	27	
3/4/02	G	< 100	7.94	0.009	0.134	0.001	0.029	8.1	1.3	27.2	
3/11/02	G	< 100	7.79	0.107	0.179	0.189	0.006	6.8	0.4	25.7	
1/22/02	H	< 100	7.96	0.027	0.193	0.003	0.023	10.0	0.6	25.9	
1/31/02	H	< 100	7.79	0.032	0.16	0.028	0.027	6.4	0.8	22.5	
2/5/02	H	< 100	8.08	0.027	0.111	0.001	0.001	7.6	1.5	26	
2/19/02	H	< 100	8.04	0.028	0.09	0.001	0.006	8.3	1.7	27	
3/4/02	H	< 100	8.1	0.043	0.09	0.001	0.021	7.8	1	27.2	
3/11/02	H	< 100	7.68	0.023	0.627	0.018	0.006	6.8	0.7	25.7	

BAZA GARDENS STP

RECEIVING WATER QUALITY MONITORING

2nd QUARTER 2002

TABLE 2. RECEIVING WATER OBSERVATIONS

1/22/02 10:00 a.m. Clear skies, breezy, moderate surf (3'-5') high tide. Site A and B no odor, clear water, no floating material. C,D, and E all had bubbles, musty odor, and turbid water. Sites F,G, and H had no odor and clear water although F had seaweed floating.

1/31/02 8:00 a.m. Sunny skies, calm surf, high tide. No other observations were recorded.

2/5/02 10:08 a.m. Clear skies, rough surf (5-7'), high tide. Sites A through E had turbid water. Sites A and B had no odor. A and D had no floating material. B had detritus, C had bubbles, E had bubbles and detritus. F, G, and E all had clear water, no floating material and no odor.

2/19/02 9:34 a.m. Clear skies, strong breeze. Rough surf, high tide. Site A and B had detritus, turbid water and no odor. Sites C, D and E had musty odor, turbid water, and bubbles. F,G and H had detritus, clear water, and no odor.

3/5/02 10:03 a.m. Clear skies, strong breeze. Rough surf, high tide. Sites A and B had no odor and detritus present, material. although A had turbid water. Sites C and D had a musty odor, turbid water, and bubbles. E had clear water and a musty odor, but no floating material. Sites F,G, and H had no floating material, no odor, and clear water

3/12/02 8:58 a.m. Partly cloudy skies, rough surf, high tide. Site A,B no floating material, no odor, clear water. Sites C,D, and E all had bubbles and a musty odor; only E had clear water. Sites F,G, and H had no odor, no floating material and clear water.

NOTES: Sample collection, preservation procedures, and analytical methods are in accordance with Standard Methods for the Analysis of Water and Wastewater, 18th. pH, DO, and temperature are analyzed in the field using handheld in the field using handheld analyzers. Total phosphate, orthophosphate, total nitrogen, and nitrate-nitrogen are analyzed by WERI. Enterococci analyzed by using Enterolert 1:10 dilution. See attachment for methodology.

SAMPLING STATION COORDINATES

STATION	COORDINATES (°, ', ")
A	N 13° 22' 5.9" E 144° 45' 10.5"
B	N 13° 22' 6.6" E 144° 45' 10.8"
C	N 13° 22' 8.5" E 144° 45' 12.5"
D	N 13° 22' 5.8" E 144° 45' 10.4"
E	N 13° 22' 6.8" E 144° 45' 11.8"
F	N 13° 22' 2.5" E 144° 46' 11.2"
G	N 13° 22' 1.3" E 144° 46' 11.8"
H	N 13° 22' 0.4" E 144° 46' 11.9"

## ATTACHMENT C.5

### NORTHERN DISTRICT STP RECEIVING WATER RESULTS

# NORTHERN DISTRICT SEWAGE TREATMENT PLANT RECEIVING WATER QUALITY MONITORING

TABLE 1. SHORELINE RECEIVING WATER RESULTS

DATE	TIME/TIDE/SURF OBSERVATIONS	FC/100 ml		PREVIOUS RAINFALL (in)	
		A	B	2 days	5 days
1/24/02	9:00 a.m. Sunny skies, rough surf, high tide. No floating material, no odor, clear water for all sites.	2	0	0.18	0.31
2/6/02	9:30 a.m. Sunny skies, high tide, rough surf. All sites no floating material, clear water, no odor.	TNTC	TNTC	0.21	0.78
3/25/02	8:50 a.m. Clear sunny skies, rough surf, high tide. All sites clear water, no odor no floating material	0	0	0.87	1.1

TABLE 2. OFFSHORE RECEIVING WATERS

DATE	STATION	FLOATING MATERIALS ODOR COLOR	FECAL COLIFORM FC/100 ML	TEMP. °C	DISSOLVED OXYGEN %	pH	SALINITY ppt	TURBIDITY NTU	SUSPENDED SOLIDS mg/L
	D surface mid bottom								
	E surface mid bottom								
	F surface mid bottom								
<b>Comments</b> Offshore receiving waters were not sampled this quarter due to hazardous surf and sea conditions on the scheduled sampling dates.									



## ATTACHMENT C.6

### UMATAC-MERIZO RECEIVING WATER RESULTS

GUAM WATERWORKS AUTHORITY

UMATAC/MERIZO RECEIVING WATERS MONITORING

2nd QUARTER 2002

TABLE 1. RECEIVING WATER DATA

DATE	STATION	FLOW ft <sup>3</sup> /sec	ENTEROLERT CFU/100ml	NITRATE- NITROGEN mg/L	ORTHO- PHOSPHATE mg/L	pH units	TURBIDITY NTU	DISSOLVED OXYGEN mg/L	TEMP °C
1/15/02	TR1	0.0297	3320	0.022	0.064	7.73	35.70	6.8	23.9
1/22/02		0.0059	740	0.028	0.109	8.22	1.10	7.4	24.3
2/5/02		0.0099	610	0.007	0.013	8.05	1.00	6	24.9
2/12/02		0.0074	23330	0.010	0.042	8.00	1.50	4.7	23.9
2/19/02		0.0149	630	n/s	n/s	8.10	3.50	7.90	24
3/5/02		0.0099	1050	0.022	0.016	8.14	2.10	7.6	24.3
3/12/02		0.0149		0.011	0.027	8.05	1.20	9.5	24.7
3/19/02		0.0037	96060	0.093	0.326	7.74	0.90	8.4	24.8
3/26/02		0.0059		0.009	0.010	7.72	1.00	8.4	25.3
1/15/02	TR2	0.0297	8160	1.450	0.301	7.61	32.10	6.7	23
1/22/02		0.0149	410	0.601	0.194	7.98	1.00	6.6	24.5
2/5/02		0.0149	740	0.568	0.284	7.63	4.60	3.8	24.9
2/12/02		0.0149	11600	0.323	0.136	7.56	4.40	9.1	23.9
2/19/02		0.0149	1090	n/s	n/s	7.84	3.20	7.6	24
3/5/02		0.0149	960	0.097	0.010	8.22	3.40	6.4	24.7
3/12/02		0.0149	1090	0.1	0.099	7.82	2.20	9.4	25
3/19/02		0.0149	91390	0.025	0.523	7.56	1.30	6.6	24.9
3/26/02		0.0149	740	0.094	0.078	7.53	3.20	7.6	25.4
1/15/02	TB		1830	0.025	0.180	7.41	7.46		

# UMATAC-MERIZO RECEIVING WATERS MONITORING

TABLE 2. OBSERVATIONS

DATE	
1/15/02	8:08 a.m. Cloudy skies, mild surf, high tide. All sites detritus, no odor, turbid water.
1/22/02	8:00 a.m. Sunny clear skies, mild surf, high tide. All sites no floating material, no odor, clear water.
2/5/02	9:04 a.m. Partly cloudy skies, mild surf, high tide. All sites detritus, no odor, and clear water.
2/12/02	9:25 a.m. Cloudy, overcast skies with light showers, mild surf, high tide. TR1 had no floating material, no odor, and clear water. TR2 had slightly turbid water, light musty odor, and detritus
2/19/02	8:36 a.m. All sites no odor, clear water. TR1 had no floating material; TR2 had detritus.
3/5/02	9:00 a.m. Partly cloudy skies, mild surf, high tide. All sites no floating material, no odor, clear water.
3/12/02	8:00 a.m. Partly cloudy skies, moderate surf, high tide. All sites no odor, clear water, detritus floating in water
3/19/02	8:30 a.m. Breezy clear skies. Rough surf, high tide. All sites no odor, clear water, detritus present.
3/26/02	9:36 a.m. Partly cloudy skies, mild surf, high tide. TR1 had no floating material, no odor, clear water. TR2 had light musty odor, detritus, clear water.

NOTES: Sample collection, preservation procedures, and analytical methods are in accordance with Standard Methods for the Analysis of Water and Wastewater, 18th ed. pH, DO, and temperature are analyzed in the field using handheld analyzers. Total phosphate, orthophosphate, total nitrogen, and nitrate-nitrogen are analyzed by WERI. Enterococci analyzed using Enterolert 1:10. See attachment for methodology.

**ATTACHMENT D**

**ANALYTICAL METHODS**

Unless otherwise stated, the following methods pertain to samples collected by Guam Waterworks authority and submitted to the Water and Energy Research Institute for analysis.

#### **Methods used for collection and preservation:**

All nutrient samples are filtered into 50 ml collection tubes in the field and stored in a chilled cooler for transport to the laboratory for processing. Dissolved oxygen, temperature, flow rate, are measured in situ with handheld meters. Flow rate is determined by estimating the current velocity and multiplying that value by the cross-sectional area of the stream. Turbidity and pH samples are collected in 100 ml plastic bottles and stored in a chilled container (4°C) until analysis at the Agana GWA laboratory.

#### **Turbidity**

Turbidity is measured with a Hach 2100P Turbidimeter with Formazin Standardization. This method estimates the amount of light transmittance through an approximately 15 ml sample. The unit is calibrated prior to measurement using Gelex standards.

#### **Dissolved Oxygen and Temperature**

Dissolved Oxygen and temperature are measured with a handheld YSI Model 85 dissolved multi-parameter probe. Prior to obtaining readings, the altitude of the station is inputted to compensate for the lower solubility of oxygen at higher elevations.

#### **Nitrate-Nitrogen, Nitrate/Nitrite-Nitrogen, Nox**

Lachat Instruments QuickChem Method 31-107-04-1-A

Determination of Nitrate in Brackish Seawater by Flow Injection Analysis

This method covers the determination of nitrate/nitrite in brackish, seawater, or non-saline sample matrices.

This method is essentially the Cadmium reduction method as modified for Flow Injection Analysis.

## **Phosphate-Phosphorus, Ortho-Phosphate-Phosphorus, Reactive Phosphate-Phosphorus**

Lachat Instruments Quick Chem Method 31-115-01-3-A

### **Determination of Phosphorus by Flow Injection Colorimetry**

This method covers the determination of phosphate in brackish, seawater, or non-saline sample matrices.

The method is essentially the Molybdate-Ascorbate method as modified for Flow Injection Analysis.

## **Total Nitrogen and Total Phosphorus**

Total Nitrogen and Total Phosphorus are performed using the above method on an Alkaline Persulfate digest of the sample. The digest is performed in an autoclave at 121 °C. All nitrogen is converted to orthophosphate.

Ref: Lachat Method: Combined Total Phosphorus/Total Nitrogen Digestion.  
Persulfate Method 2.

Ref: Erina, J. et al. 1983. Simultaneous determination of total nitrogen and total phosphorus. Water Res. 17: 1721-1726.

## **Total Coliforms and *E. coli***

Total coliforms and *E. coli* are done by the Indexx Colilert™ method using the QuantiTray™ to give an MPN result. Cultures are performed on a ten times dilution as required for saline waters. Fresh water samples are performed on an undiluted or diluted water sample.

### ***Enterococci***

*Enterococci* are done by the Indexx ColilertJ and QuantiTrayJ to give an MPN result. Cultures are performed on a ten times dilution as required for saline waters. Freshwater samples are performed on undiluted or diluted water samples.

## **Sediment Analysis Methods**

Methods of analysis for metals, nutrients (including Total Kjeldahl Nitrogen) are given on the



Sediment Analysis Results page. These parameters were analyzed by Montgomery-Watson Laboratories for Guam Waterworks Authority.

Sediment size was analyzed according to:

ASTM C117, "Materials Finer than 75- $\mu$ m (No. 200) Sieve in Mineral Aggregates by Washing"

ASTM C136, "Sieve Analysis of Fine and Coarse Aggregates"



## GUAM WATERWORKS AUTHORITY

Aturidat Kinalamten Hånom Guåhan

Post Office Box 3010, Hagåtña, Guam 96932

Phone: (671) 479-7861/7886 Fax: (671) 649-0158

Mr. Michael Lee, CMD-5

Office of the Pacific Insular & Native American Projects

U.S. Environmental Protection Agency, Region IX

75 Hawthorne Street, San Francisco, CA 94105

RE: Raw Sewage overflows and Spills  
(Notification April 27, 2002)

Dear Sir:

We are now ready to report on the sewage overflows and spills that resulted directly or indirectly due to the earthquake that occurred in the early morning hours (2:16 a.m.) on April 27, 2002.

The following is the list of SPSs where sewage spills occurred:

Chaot SPS	- Approximately 5 and ½ hours - 76,999 gallons
Agana SPS	- Approximately 8 and ½ hours - 462,500 gallons
Harmon SPS	- Approximately 12 and ½ hours - 65,000 gallons
Astumbo #1 SPS	- Approximately 12 and ½ hours - 8,000 gallons
Astumbo #2 SPS	- Approximately 12 and ½ hours - 9,500 gallons
Santa Ana SPS	- Approximately 12 and ½ hours - 8,499 gallons

The estimated total of sewage spilled is approximately 630,498 gallons.

While most of the spills that occurred throughout our island were due mainly to the loss of island-wide power, the spill (partial bypass) that we encountered at the Agana STP was due to the inability to completely close the plant bypass sluice gate. As a measure to keep the sewer manholes along Marine Drive from continually coming off their seats, the decision was made to relieve some of the pressure in the sewer line by partially opening the bypass sluice gate at the Agana STP. However, as crews began to open the sluice gate, it became immediately apparent that the gate would not open properly. The decision was made to close the gate and for a while, everything seemed fine; there was sewage flow back into the plant once island power was restored. On Monday, plant operators noted that flows into the plant were below normal levels. By Tuesday, April 30<sup>th</sup>, 2002, flows had diminished to the point where effluent weir spillover had almost completely stopped. Maintenance and plant personnel restored flow back into the plant by Wednesday afternoon.

MAY 03 2002





## GUAM WATERWORKS AUTHORITY

Aturidat Kinalamten Hanom Guahan

Post Office Box 3010, Hagåtña, Guam 96932

Phone: (671) 479-7861/7886 Fax: (671) 649-0158

MAY 03 2002

Mr. Michael Lee, CMD-5  
Office of the Pacific Insular & Native American Projects  
U.S. Environmental Protection Agency, Region IX  
75 Hawthorne Street, San Francisco, Ca 94105

RE: Submission Deadline Extension Request  
1<sup>st</sup> Quarter Order On Consent Report

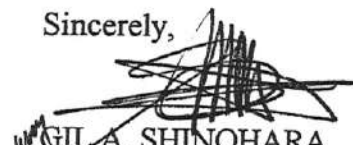
Dear Sir:

We regret to inform you that the 1<sup>st</sup> Quarter Order on Consent Report will not be ready for submission by the end of this month.

We are requesting that an extension be granted to ensure that the report submitted will properly and fully address the issues normally contained in the report. Your understanding in this matter will be greatly appreciated. We anticipate that we will be able to submit the report by May 10, 2002.

GWA remains diligent in its efforts to meet submission deadlines. If you should have any questions regarding this matter, please do not hesitate to call Mr. Mark Miller, Acting Wastewater Manager at (671) 479-7837.

Sincerely,

  
GIL A. SHINOHARA  
Acting General Manager

cc: GEPA, Administrator  
AGMA  
Wastewater  
Lab





**GUAM WATERWORKS AUTHORITY**  
**Government of Guam**  
Post Office Box 3010, Hagatna, Guam 96932  
Phone: (671) 479-7847 Fax: (671) 479-7879

MAY 03 2002

Mr. Michael Lee, CMD-5  
EPA Project Officer  
U.S. Environmental Protection Agency  
Region IX  
75 Hawthorne Street  
San Francisco, CA 94105

RE: C660010-24-8 Chaot/Agana/Marine Drive Relief Sewer Project.

Hafa Adai Mr. Lee:


We are requesting for a formal grant amendment to extend the project and budget period of the above reference project to September 30, 2002.

As you are aware, construction of the project has been completed and now in operation. However, due to the delayed approval of Operation Maintenance Manual the processing of payment was put on hold to conform with Grant condition No. 16 as well as processing of other documents pertaining to close out of the project.

Thank you for your continued assistance and support to our Wastewater Capital Improvement Projects.

Should you have any questions or require additional information, please call Mr. Nardo Navasca, Engineering Supervisor, CIP Sewer Section at (671) 479-7807

Senseramente,

  
c1 Gil A. Serrano  
Acting General Manager

Cc: GEPA



## GUAM WATERWORKS AUTHORITY

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Post Office Box 3010, Hagåtña, Guam 96932

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MAY 03 2002

Mr. Michael Lee, CMD-5

Office of the Pacific Insular & Native American Projects

U.S. Environmental Protection Agency, Region IX

75 Hawthorne Street, San Francisco, CA 94105

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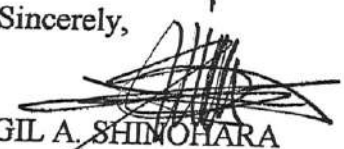
We have concluded that the years of settled debris and grit at the bottom of the diversion chamber had become the hindrance to the proper operation of the bypass sluice gate and the temporary stoppage to the bypass flows pass the partially opened gate. Over a period of a few days, the settled debris and grit cleared pass the partially opened gate causing the flows to go pass the gate and not into the plant.

Due to the way in which sewage slipped by the Agana STP bypass sluice gate, we are not able to approximate the amount of sewage that may have bypassed the plant and entered the ocean outfall.

Because most of our wastewater facilities either had emergency generators, or were promptly provided portable emergency generators and/or pumping trucks, most stations were up and running before the sewer lines overflowed. In addition, the no water to low water pressures in the island-wide water distribution system, helped to minimize the sewage quantities entering our collection system.

GWA remains diligent in its efforts to prevent sewage spills and overflows. If you should have any questions regarding this matter, please do not hesitate to call the Wastewater Division at (671)-479-7886.

Sincerely,

  
GIL A. SHINOHARA  
Acting General Manager

c7

cc: AGMO  
LAB  
GEPA  
Wastewater Division





## GUAM WATERWORKS AUTHORITY

Aturidat Kinalamten Hanon Guahan  
Government of Guam

P.O. Box 3010, Agana, Guam 96932  
Phone: (671) 479-7823 • Fax: (671) 479-7879

APR 26 2002

Michael Lee  
Environmental Engineer  
USEPA Region 9  
75 Hawthorne Street  
San Francisco, CA 94105

Dear Mr. Lee:

A warm Hafa Adai from Guam! Mr. Carlos Taitano, Assistant General Manager for Administration has informed me that future grant applications for GWA may be in jeopardy because of my decision to defer the QUALSERE survey. I hope that the information is incorrect.

For your information, Raf Mesa, Assistant Water Manager has been assigned to assist in forming a long-term recovery plan for GWA, including laying the much needed infrastructure for potential public-private partnerships or privatization of certain GWA functions. Additionally, Mr. Dan Santos, Assistant General Manager of Operations has resigned from the agency effective Friday, April 26, 2002. Ron Topasna, Pumping Station Operator I, is the point of contact for matters pertaining to the Ugum Water Treatment Plant.

Your continuing support for the Guam Waterworks Authority is appreciated. I am looking forward to the visit next month. Please call me at 479-7676 if you have any concerns regarding this letter.

Sincerely,

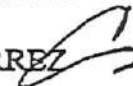
  
GIL A. SHINOHARA  
General Manager

OFFICE OF THE GOVERNOR  
GUAM

APR 11 2002

## MEMORANDUM

TO: HERBERT JOHNSTON JR.  
GENERAL MANAGER  
GUAM WATERWORKS AUTHORITY

FROM: GOVERNOR CARL T.C. GUTIERREZ 

SUBJECT: GWA OPERATIONS & RECOVERY PLAN

Thank you for meeting with me this morning concerning the continued crisis facing the Guam Waterworks Authority and its ability to sustain operations during this financial crisis. As you know, with the resignation of GWA Board Member Jesus Cruz, there is no quorum for the GWA Board to operate until a successor is named and confirmed by the Guam Legislature or until the return of GWA Board Member Paul Shintako to GWA Board service, who has been activated by the Guam Army National Guard. With no board to take official action, I have no choice but to resume full responsibilities of the GWA Board. However, Board Members may continue to work with you in moving forward. Official action will come from me.

You have requested for assistance in managing the day to day operations of GWA while you continue your efforts in forming a long-term recovery plan for GWA, including laying the much needed infrastructure for potential public-private partnerships or privatization of certain GWA functions with Mr. Rick Lacroix, who I have designated as my representative on these initiatives. Additionally, be advised that Mr. Dan Swavely has accepted my appointment to serve once again on the GWA Board and to assist on the development of the Strategic Planning Initiative.

I am approving this request and am hereby assigning my Chief of Staff, Gil A. Shinohara, to be Acting General Manager of the Guam Waterworks Authority until your submittal of the long-term recovery plan for my review and action.

Please do not hesitate to contact me for further assistance.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION IX  
75 Hawthorne Street  
San Francisco, CA 94105

April 26, 2002

Gil A. Shinohara  
Acting General Manager

Guam Waterworks Authority  
P.O. Box 3010  
Hagatna, Guam 96932

Re: NPDES 2<sup>nd</sup> Quarter Wastewater O&M Progress Report  
Extension Request

Dear Mr. Shinohara:

This is in regards to your faxed letter of April 26, 2002, requesting a one week extension for submittal of your NPDES 2<sup>nd</sup> Quarter Wastewater O&M Progress Report. Your extension request is approved.

I would also like to take this time to mention that GWA's Order on Consent Quarterly (January-March) Compliance Report is due no later than the end of this month. Mr. Danny Santos was designated as the Compliance Coordinator for the Order on Consent. As you may know there are a number of compliance milestones which GWA must address to maintain compliance with the Order on Consent's Financial Plan and Compliance Schedule. Should it be anticipated that GWA will not be able to comply with the timely submittal of the Quarterly Compliance Report GWA should provide notification to EPA and an explanation regarding delay and a firm date to submitting the compliance report.

I would also like to mention that given the recent management changes at GWA and your appointment as Acting General Manager for GWA, we feel it is important that we be able to meet with you and your staff while we are in Guam to discuss the Order on Consent, Ugu Water Treatment Plant technical assistance, Qualserve assessment/process, O&M technical assistance initiative and other matters. These are some of the cooperative efforts we have been working on prior to your appointment to GWA. We feel that the implementation of these efforts are critical to GWA's success and ability to develop and build the necessary institutional managerial, technical and financial capacities to ensure a self-sustaining and compliant utility and continued funding under our federal construction grant program.

We are currently working with GEPA on setting up our schedule while in Guam. We will all be in Guam the week of May 6-10th and look forward to meeting and working with you.

G. Shinohara, GWA ltr  
Page 2 of 2

If you have any questions, please contact me at 415-972-3769 or via e-mail at [lee.michael@epa.gov](mailto:lee.michael@epa.gov).

Sincerely,

Michael J. Lee  
Guam Water Program Lead  
Pacific Islands Office

cc: J. Salas, GEPA  
C. Lund, GEPA



## GUAM WATERWORKS AUTHORITY

Aturidat Kinalamten Hanon Guahan

Government of Guam

P.O. Box 3010, Agana, Guam 96932

Phone: (671) 479-7823 • Fax: (671) 479-7879

APR 26 2002

U.S. Environmental Protection Agency  
Attention: Drinking Water Utility Security Grant Program  
Room 2104A EPA East Building  
1201 Constitution Avenue, NW  
Washington, DC 20004

SUBJECT: Grant Application for the Northern Water System  
Vulnerability.

Attached is Guam Waterworks Authority's grant application for the development of a vulnerability Assessment of our water system under the Security Planning Grants for large drinking water utilities.

Should you have any questions, please contact Mr. Prudencio F. Aguon, Planner at (671)479-7605/7809.

  
GIL A. SHINOHARA  
Acting General Manager



## GUAM WATERWORKS AUTHORITY

Aturidat Kinalamten Hanon Guahan

Government of Guam

P.O. Box 3010, Agana, Guam 96932

Phone: (671) 479-7823 • Fax: (671) 479-7879

APR 26 2002

Ms. Corine Li  
Drinking Water Office (WTR-6)  
U.S. Environmental Protection Agency  
Region 9  
75 Hawthorne Street  
San Francisco, Ca. 94105

SUBJECT: Grant Application for the Northern Water System  
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Attached is Guam Waterworks Authority's grant application for the development of a vulnerability Assessment of our water system, under the Security Planning Grants for large drinking water utilities.

Should you have any questions, please call Mr. Prudencio F. Aguon, Planner at (671)479-7605/7809.



GIL A. SPINOHARA  
Acting General Manager



# APPLICATION FOR FEDERAL ASSISTANCE

OMB Approval No. 0348-C

		2. DATE SUBMITTED	Applicant Identifier
1. TYPE OF SUBMISSION:		3. DATE RECEIVED BY STATE	State Application Identifier
Application <input type="checkbox"/> Construction <input checked="" type="checkbox"/> Non-Construction		4. DATE RECEIVED BY FEDERAL AGENCY	Federal Identifier
Preapplication <input type="checkbox"/> Construction <input type="checkbox"/> Non-Construction			
5. APPLICANT INFORMATION			
Legal Name: <b>Guam Waterworks Authority</b>		Organizational Unit: <b>General Managers Office Planning Section</b>	
Address (give city, county, State, and zip code): <b>P.O. Box 3010 Hagatna, Guam 96910</b>		Name and telephone number of person to be contacted on matters involving this application (give area code): <b>Prudencio Aguon (671)479-7879 (fax) (671)4797605/7809 email: encho@hotmail.com</b>	
6. EMPLOYER IDENTIFICATION NUMBER (EIN): <div style="border: 1px solid black; padding: 2px; display: inline-block;">6 6 — 0 5 4 0 2 3 6</div>		7. TYPE OF APPLICANT: (enter appropriate letter in box) <span style="border: 1px solid black; padding: 2px; display: inline-block;">N</span>	
8. TYPE OF APPLICATION: <input type="checkbox"/> New <input type="checkbox"/> Continuation <input type="checkbox"/> Revision If Revision, enter appropriate letter(s) in box(es) <span style="border: 1px solid black; padding: 2px; display: inline-block;"> </span> <span style="border: 1px solid black; padding: 2px; display: inline-block;"> </span> A. Increase Award    B. Decrease Award    C. Increase Duration D. Decrease Duration    Other(specify): _____		A. State    H. Independent School Dist. B. County    I. State Controlled Institution of Higher Learning C. Municipal    J. Private University D. Township    K. Indian Tribe E. Interstate    L. Individual F. Intermunicipal    M. Profit Organization G. Special District    N. Other (Specify) <b>Territory</b>	
10. CATALOG OF FEDERAL DOMESTIC ASSISTANCE NUMBER: <div style="border: 1px solid black; padding: 2px; display: inline-block;"> </div> <div style="border: 1px solid black; padding: 2px; display: inline-block;"> </div> — <div style="border: 1px solid black; padding: 2px; display: inline-block;"> </div> <div style="border: 1px solid black; padding: 2px; display: inline-block;"> </div> <div style="border: 1px solid black; padding: 2px; display: inline-block;"> </div> <div style="border: 1px solid black; padding: 2px; display: inline-block;"> </div> TITLE: _____		9. NAME OF FEDERAL AGENCY: <b>U.S. Environmental Protection Agency</b>	
12. AREAS AFFECTED BY PROJECT (Cities, Counties, States, etc.): <b>Dededo, Yigo, Tamuning, Barrigada, central villages</b>		11. DESCRIPTIVE TITLE OF APPLICANT'S PROJECT: <b>Guam Northern Water System Vulnerability Assessment</b>	
13. PROPOSED PROJECT		14. CONGRESSIONAL DISTRICTS OF:	
Start Date	Ending Date	a. Applicant <b>Guam</b>	b. Project <b>Guam</b>
15. ESTIMATED FUNDING:		16. IS APPLICATION SUBJECT TO REVIEW BY STATE EXECUTIVE ORDER 12372 PROCESS?	
a. Federal	\$ <b>115,000</b> .00	<b>XXX YES. THIS PREAPPLICATION/APPLICATION WAS MADE AVAILABLE TO THE STATE EXECUTIVE ORDER 12372 PROCESS FOR REVIEW ON:</b>  DATE _____  b. No. <input type="checkbox"/> PROGRAM IS NOT COVERED BY E. O. 12372 <input type="checkbox"/> OR PROGRAM HAS NOT BEEN SELECTED BY STATE FOR REVIEW	
b. Applicant	\$ <b>0</b> .00		
c. State	\$ <b>0</b> .00		
d. Local	\$ <b>0</b> .00		
e. Other	\$ <b>0</b> .00		
f. Program Income	\$ <b>0</b> .00		
g. TOTAL	\$ <b>115,000</b> .00	17. IS THE APPLICANT DELINQUENT ON ANY FEDERAL DEBT? <input type="checkbox"/> Yes If "Yes," attach an explanation. <input checked="" type="checkbox"/> No	
18. TO THE BEST OF MY KNOWLEDGE AND BELIEF, ALL DATA IN THIS APPLICATION/PREAPPLICATION ARE TRUE AND CORRECT, THE DOCUMENT HAS BEEN DULY AUTHORIZED BY THE GOVERNING BODY OF THE APPLICANT AND THE APPLICANT WILL COMPLY WITH THE ATTACHED ASSURANCES IF THE ASSISTANCE IS AWARDED.			
a. Name of Authorized Representative <b>Li A. Shinohara</b>		b. Title <b>Acting, General Manager</b>	c. Telephone Number <b>(671) 479-7823</b>
d. Signature of Authorized Representative		e. Date Signed <b>APR 26 2002</b>	

# BUDGET INFORMATION - Non-Construction Programs

OMB Approval No. 0348-0044

## SECTION A - BUDGET SUMMARY

Grant Program Function or Activity (a)	Catalog of Federal Domestic Assistance Number (b)	Estimated Unobligated Funds		New or Revised Budget		
		Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)	Total (g)
1.		\$	\$	\$	\$	\$
2.						
3.						
4.						
5. Totals		\$	\$	\$	\$	\$

## SECTION B - BUDGET CATEGORIES

Object Class Categories	GRANT PROGRAM, FUNCTION OR ACTIVITY					Total (5)
	(1)	(2)	(3)	(4)		
a. Personnel	\$	\$	\$	\$		\$
b. Fringe Benefits						
c. Travel						
d. Equipment						
e. Supplies						
f. Contractual	\$115,000.00					\$115,000.00
g. Construction						
h. Other						
i. Total Direct Charges (sum of 6a-6h)	\$115,000.00					\$115,000.00
j. Indirect Charges						
k. TOTALS (sum of 6i and 6j)	\$115,000.00	\$	\$	\$	\$	\$115,000.00
7. Program Income	\$0	\$0	\$0	\$0	\$0	\$0

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Previous Edition Usable

Standard Form 424A (Rev. 7-97)  
Prescribed by OMB Circular A-102

SECTION C - NON-FEDERAL RESOURCES					
(a) Grant Program	(b) Applicant	(c) State	(d) Other Sources	(e) TOTALS	
8.	\$	\$	\$	\$	
9.					
10.					
11.					
12. TOTAL (sum of lines 8-11)	\$	\$	\$	\$	
SECTION D - FORECASTED CASH NEEDS					
	Total for 1st Year	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
	\$	\$	\$	\$	\$
13. Federal		\$	\$	\$	\$
14. Non-Federal					
15. TOTAL (sum of lines 13 and 14)	\$	\$	\$	\$	\$
SECTION E - BUDGET ESTIMATES OF FEDERAL FUNDS NEEDED FOR BALANCE OF THE PROJECT					
(a) Grant Program	FUTURE FUNDING PERIODS (Years)				(e) Fourth
	(b) First	(c) Second	(d) Third		
16.	\$	\$	\$	\$	\$
17.					
18.					
19.					
20. TOTAL (sum of lines 16-19)	\$	\$	\$	\$	\$
SECTION F - OTHER BUDGET INFORMATION					
21. Direct Charges:		22. Indirect Charges:			
23. Remarks:					

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## KEY CONTACTS

Authorized Representatives: Original awards and amendments will be sent to this individual for review and acceptance, unless otherwise indicated.

Name: Gil A. Shinohara  
Title: Acting, General Manager  
Complete Address: P.O. Box 3010  
Hagatna, Guam 96910  
Phone Number: (671) 479-7823 Fax: (671) 4797879  
E-Mail Address: \_\_\_\_\_

Payee: Individual authorized to accept payments.

Name: Zeny Levitch (Nace)  
Title: Controller (Accounting Manager)  
Complete Address: P.O. Box 3010  
Hagatna, Guam 96910  
Phone Number: (671) 647-7602 Fax: (671) 479-7879  
E-Mail Address: \_\_\_\_\_

Administrative Contact: Individual from Sponsored Programs Office to contact concerning administrative matters (i.e., indirect cost rate computation, rebudgeting requests, etc.)

Name: Prudencio Aguon  
Title: Planner  
Complete Address: P.O. Box 3010  
Hagatna, Guam 96910  
Phone Number: (671) 4797605/7809 Fax: (671) 479-7879  
E-Mail Address: encho@hotmail.com

Project Manager: Individual responsible for the technical completion of the proposed work.

Name: Same as Administrative Contact  
Title: \_\_\_\_\_  
Complete Address: \_\_\_\_\_  
Phone Number: \_\_\_\_\_ Fax: \_\_\_\_\_  
E-Mail Address: \_\_\_\_\_

EPA Project Control Number

United States Environmental Protection Agency  
Washington, DC 20460

**Certification Regarding  
Debarment, Suspension, and Other Responsibility Matters**

The prospective participant certifies to the best of its knowledge and belief that it and the principals:

- (a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
- (b) Have not within a three year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction: violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
- (c) Are not presently indicted for otherwise criminally or civilly charged by a government entity (Federal, State, or local) with commission of any of the offenses enumerated in paragraph (1) (b) of this certification; and
- (d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State, or local) terminated or cause or default.

I understand that a false statement on this certification may be ground for rejection of this proposal or termination of the award. In addition, under 18 USC Sec. 1001, a false statement may result in a fine of up to \$10,000 or imprisonment for up to 5 years, or both.

Gil A. Shinohara, Acting General Manager

Typed Name & Title of Authorized Representative

  
Signature of Authorized Representative Date



I am unable to certify to the above statements. My explanation is attached.



## CERTIFICATION REGARDING LOBBYING

### Certification for Contracts, Grants, Loans, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

Gil A. Shinohara, Acting General Manager

NAME & TITLE OF AUTHORIZED REPRESENTATIVE

  
SIGNATURE OF AUTHORIZED REPRESENTATIVE

April 26, 2002  
DATE

☐ I am unable to certify to the above statements. My explanation is attached.



**ASSURANCES - CONSTRUCTION PROGRAMS**

Public reporting burden for this collection of information is estimated to average 15 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0042), Washington, DC 20503.


**PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE OFFICE OF MANAGEMENT AND BUDGET. SEND IT TO THE ADDRESS PROVIDED BY THE SPONSORING AGENCY.**

**NOTE:** Certain of these assurances may not be applicable to your project or program. If you have questions, please contact the Awarding Agency. Further, certain Federal assistance awarding agencies may require applicants to certify to additional assurances. If such is the case, you will be notified.

As the duly authorized representative of the applicant, I certify that the applicant:

1. Has the legal authority to apply for Federal assistance, and the institutional, managerial and financial capability (including funds sufficient to pay the non-Federal share of project costs) to ensure proper planning, management and completion of the project described in this application.
2. Will give the awarding agency, the Comptroller General of the United States and, if appropriate, the State, through any authorized representative, access to and the right to examine all records, books, papers, or documents related to the assistance; and will establish a proper accounting system in accordance with generally accepted accounting standards or agency directives.
3. Will not dispose of, modify the use of, or change the terms of the real property title, or other interest in the site and facilities without permission and instructions from the awarding agency. Will record the Federal interest in the title of real property in accordance with awarding agency directives and will include a covenant in the title of real property acquired in whole or in part with Federal assistance funds to assure non-discrimination during the useful life of the project.
4. Will comply with the requirements of the assistance awarding agency with regard to the drafting, review and approval of construction plans and specifications.
5. Will provide and maintain competent and adequate engineering supervision at the construction site to ensure that the complete work conforms with the approved plans and specifications and will furnish progress reports and such other information as may be required by the assistance awarding agency or State.
6. Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.
7. Will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest, or personal gain.
8. Will comply with the Intergovernmental Personnel Act of 1970 (42 U.S.C. §§4728-4763) relating to prescribed standards for merit systems for programs funded under one of the 19 statutes or regulations specified in Appendix A of OPM's Standards for a Merit System of Personnel Administration (5 C.F.R. 900, Subpart F).
9. Will comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. §§4801 et seq.) which prohibits the use of lead-based paint in construction or rehabilitation of residence structures.
10. Will comply with all Federal statutes relating to non-discrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. §§1681 1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. §794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act of 1975, as amended (42 U.S.C. §§6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) §§523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. §§290 dd-3 and 290 ee 3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. §§3601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing; (i) any other nondiscrimination provisions in the specific statute(s) under which application for Federal assistance is being made; and, (j) the requirements of any other nondiscrimination statute(s) which may apply to the application.

9. Will comply, as applicable, with the provisions of the Davis-Bacon Act (40 U.S.C. §§276a to 276a-7), the Copeland Act (40 U.S.C. §276c and 18 U.S.C. §874), and the Contract Work Hours and Safety Standards Act (40 U.S.C. §§327-333), regarding labor standards for federally-assisted construction subagreements.
10. Will comply, if applicable, with flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (P.L. 93-234) which requires recipients in a special flood hazard area to participate in the program and to purchase flood insurance if the total cost of insurable construction and acquisition is \$10,000 or more.
11. Will comply with environmental standards which may be prescribed pursuant to the following: (a) institution of environmental quality control measures under the National Environmental Policy Act of 1969 (P.L. 91-190) and Executive Order (EO) 11514; (b) notification of violating facilities pursuant to EO 11738; (c) protection of wetlands pursuant to EO 11990; (d) evaluation of flood hazards in floodplains in accordance with EO 11988; (e) assurance of project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972 (16 U.S.C. §§1451 et seq.); (f) conformity of Federal actions to State (Clean Air) Implementation Plans under Section 176(c) of the Clean Air Act of 1955, as amended (42 U.S.C. §§7401 et seq.); (g) protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended (P.L. 93-523); and, (h) protection of endangered species under the Endangered Species Act of 1973, as amended (P.L. 93-205).
12. Will comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. §§1271 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.
13. Will assist the awarding agency in assuring compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. §470), EO 11593 (identification and protection of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. §§469a-1 et seq.).
14. Will comply with P.L. 93-348 regarding the protection of human subjects involved in research, development, and related activities supported by this award of assistance.
15. Will comply with the Laboratory Animal Welfare Act of 1966 (P.L. 89-544, as amended, 7 U.S.C. §§2131 et seq.) pertaining to the care, handling, and treatment of warm blooded animals held for research, teaching, or other activities supported by this award of assistance.
16. Will comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. §§4801 et seq.) which prohibits the use of lead-based paint in construction or rehabilitation of residence structures.
17. Will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act Amendments of 1996 and OMB Circular No. A-133, "Audits of States, Local Governments, and Non-Profit Organizations."
18. Will comply with all applicable requirements of all other Federal laws, executive orders, regulations, and policies governing this program.

SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL  Gil A. Shinohara		TITLE Acting, General Manager	
APPLICANT ORGANIZATION Guam Waterworks Authority		DATE SUBMITTED April 26, 2002	

## **Narrative Statement (work plan)**

1. **Work Areas** - Funds obtained from this grant will be utilized in the development of Guam Water Authority's (GWA) Vulnerability Assessment (VA) for the Northern Water System. And if funds are sufficient, GWA will also include VA's of the two other Public Water Systems under our jurisdiction- the Southern and the Central water systems. Although all three water systems are normally operated separately, they are interconnected and water can be moved from one to the other if necessary.

2. **Technical Point of Contact**

Prudencio F. Aguon  
P.O. Box 3010  
Hagatna, Guam 96910  
(671) 479-7605/7809  
(671) 479-7879(fax)

Jude Calvo  
P.O. Box 3010  
Hagatna, Guam 96910  
(671) 479-7810/7809  
(671) 479-7879(fax)

2. In the event that additional funding may be required to complete the vulnerability assessment over the allotted \$115,000.00, GWA will contribute the difference.

3. **Description of Guam Waterworks Authority Northern Water System:**

Guam Waterworks Authority (GWA) is publicly owned, serves Guam's civilian population and is identified with a public service system identification number GU-0000006. GWA's northern water system serves approximately 131,791 people which is supported by the 2000 U.S. Census (please see attachment). The northern system is comprised of the following villages:

Agana Heights District  
Chalan Pago-Ordot District  
Hagatna District  
Mangilao District  
Sinajana District  
Tamuning District  
Yona District

Barrigada District  
Dededo District  
Hagatna District  
Mongmong Toto Maite District  
Talofofo District  
Yigo District  
Tumon District (Tourists)

Guam Waterworks Authority (GWA) operates a total 110 producing deep wells in the northern aquifer producing 30 million gallons per day (mgd) total including wholesale and retail; additional 14 wells have been converted from production to observation wells recently. According to GWA records the northern system currently has 37,184 service connections located within or being served by the northern system. Guam's average household is approximately 3.8, taken directly from the 2000 U.S. Census.

In further support of the statement that GWA serves 100,000 or more people, it is important that the tourism industry is taken into account. According to Government surveys, an average of 1,000,000 tourist come to our island every year with most staying approximately 3 to 4 days. Guam's hotel room inventory is approximately 5,000 with an

average occupancy rate of 70 percent if we strike the month of the September 2001. Taken altogether it is plausible to assume that in any given day Guam is home to approximately 3,500 tourist which all reside in the Tumon district.

GWA's Southern and Central water system are both also publicly owned and serve 16,912 and 6,102 population respectively. They are identified with public water system identification number GU0000001 for the central and GU0000001 for the south. The southern water system utilizes surface water and is treated at a water treatment plant. It produces approximately 2 mgd through which it is distributed through 1,449 services connections. GWA's Central water system is supplied by the purchase of water from the U.S. Navy averaging 7MGD. There are 3,118 service connections in the central. The central and northern water system is comprised of the following villages:

<b>Central</b>	<b>Southern</b>
Santa Rita	Umatac
Piti	Inarajan
Asan	Merizo

### **Project Description**

Guam Waterworks Authority is issuing a Request for Proposal for a consulting firm to complete the project. One critical criteria for selection will be for the firm to demonstrate qualifications to complete the project, including proof of training in performing Vulnerability Assessments. GWA is requiring training either provided by Sandia National Labs, or companies trained by Sandia and licenses by them. And provide adequate evidence of its experience as it relates to the work involved. All procurement activity will conform to applicable federal regulations. To prevent any confusion in regards to the contract the selected firm will perform the vulnerability assessment as outlined by U.S.EPA's Request for Application (RFA). The scope of work will contain the following language:

1. Determination of water system objectives by:
  - Identifying the important mission/functions of the system to be assessed
  - Identifying the undesirable consequences that could affect the missions/functions
  - Determine the assets that need to be protected to minimize the impacts of the undesirable events/consequences
  - Determine the malevolent acts that could reasonably cause these events/consequences
2. Prioritization of adverse events/consequences affecting the water system and the surrounding community including:
  - Loss of critical function and/or major service disruption
  - Intentional attack on public safety via water Utility assets, contamination of the water supply, and chemical releases or chemical theft.
3. Definition of how the malevolent acts might be conducted, such as:



- Physical damage
  - Chemical, biological, and radiological contamination
  - Cyber attacks on the Supervisory Control and Data Acquisition (SCADA) or other process control systems,
  - Interdependency disruption (e.g. electrical, transportation, etc)
4. Assessment of the likelihood (qualitative probability) of such malevolent acts from defined threat sources (e.g. terrorist, insider, determined vandal, casual vandal, etc.)
  5. Systematic site characterization of the water system to include the collection of performance data on:
    - Important facilities, processes, and assets,
    - Physical protection system features of deterrence, detection, delay and response,
    - Cyber protection system features,
    - Security policies and procedures and compliance with it.
  6. The approach to the V/A is "performance-based," meaning that it evaluates the risk to the water system based on the effectiveness of the security system against the specific malevolent acts determined in the initial step.
  7. The V/A determines the most critical assets (targets) in a water system, details their interrelationships within other assets in the system, identifies the consequences of malevolent acts that could be directed against them, and evaluates the effectiveness of both existing and proposed protection systems.
  8. The V/A identifies the most critical system's vulnerabilities and provides a prioritized plan for security upgrades, modifications of operational procedures, and/or policy changes to mitigate identified risks to critical assets. The V/A also provides a basis for comparing the cost of protection against the risks posed.

The overall goal of the V/A is to develop recommendations that lead to a cost-effective, balanced security protection system with regards to the malevolent acts identified.

Furthermore, the contract will contain language explicitly stating that from the time of the award the firm will complete the V/A within six months, or by the end of calendar year 2002, whichever is later. Costs for the contract will perform to U.S.EPA guidelines for maximum daily rate of \$498.32 excluding overhead.

#### **Detailed Itemized Budget**

Personnel- GWA is not requesting reimbursement of time spent by GWA staff.

Fringe Benefits- GWA is not requesting reimbursement of fringe benefits on staff.

Travel- GWA is not requesting reimbursement for any costs GWA may incur due to travel related to this project.

Equipment- GWA is not anticipating purchasing any equipment as part of this project.

Supplies- GWA is not anticipating purchasing any supplies as part of this project.

Contractual

Consulting services to develop a Vulnerability Assessment	\$115,000.00
--------------------------------------------------------------	--------------

Total Contractual	\$115,000.00
-------------------	--------------

Other – GWA does not anticipate requesting reimbursement on any other costs.

Indirect Charges- GWA is not requesting reimbursement for any project charges.

**Total Project Costs- \$115,000**





# DIPAT LAMENTON KUM ETSIO DEPARTMENT OF COMMERCE

GOBETNON GUAHAN  
GOVERNMENT OF GUAM

Carl T. C. Gettieres  
Magallan  
Governor  
Madelaine Z. Bordallo  
Tikerte Gubetnadore  
Lt. Governor

Tel: (671) 475-0321/2  
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Suma 102, Chalan M  
102 M Street  
Tiyam, Guahan  
Tiyam, Guam 96913

www.admin.gov.gu/commerce

Fax: (671) 477-9031  
Fax:

Label D.S.A. L  
Direktor  
Direktor  
Edward L. Cr  
Sigundo Direkt  
Deputy Direkt

## Facsimile

To: *June Calvo*

Fax: *479-7879*

Phone:

Re:

From: *Janett J. Proff, Statistics*

Pages: *02*

Date: *04-10-02*

CC:

☐ Urgent ☒ Per Your Request ☐ Please Comment ☐ Please Reply ☐ For Review ☐ For Your Information

Message:

*Mr. Calvo:*

*As per your request Population count for Guam  
broken down by Districts. Should you need more  
info, please feel free to visit our office.*

*Janett*

## U.S. Census Bureau

**UNITED STATES DEPARTMENT OF  
COMMERCE  
NEWS**  
WASHINGTON, DC 20230

**ECONOMICS  
AND  
STATISTICS  
ADMINISTRATION**
**BUREAU OF THE  
CENSUS**

FOR IMMEDIATE RELEASE  
TUESDAY, JULY 3, 2001

Public Information Office  
301-457-3691/301-457-3620 (fax)  
301-457-1037 (TDD)  
e-mail: 2000usa@census.gov

CB01-CN.174

Idabelle B. Hovland  
301-457-8443

Julia Buckley-Ess  
301-457-4033

**Census Bureau Releases Census 2000 Population  
Counts for Guam**

The U.S. Census Bureau today released the official Census 2000 population count of 154,805 for Guam.

As part of Census 2000, the Census Bureau worked with the Guam government to collect detailed population and housing data. The count was provided to Guam Gov. Carl T.C. Gutierrez.

Guam's population increased by 21,653 over the previous census in 1990. This represented a 16 percent increase in 10 years.

The Census Bureau will provide more detailed data for Guam in a demographic profile scheduled for release later this year and in a separate summary file and printed report, scheduled for release in February 2002 and November 2002, respectively.

The following table shows the final census counts for small geographic areas in Guam:

**2000 Final Population Totals**

AREA	POPULATION		Change From Preceding Census	
	2000	1990	Number	Percent
Guam	154,805	133,152	21,653	16%
Agana Heights District	3,940	3,646	294	8%

Agat District	5,656	4,960	696	14%
Asan District	2,090	2,070	20	1%
Barrigada District	8,652	8,846	-194	-2%
Chalan Pago-Ordot District	5,923	4,451	1,472	33%
Dededo District	42,980	31,728	11,252	35%
Hagatña district	1,100	1,139	-39	-3%
Inarajan District	3,052	2,469	583	24%
Mangilao District	13,313	10,483	2,830	27%
Merizo County	2,163	1,742	421	24%
Mongmong-Toto-Maite District	5,845	5,845	0	0%
Piti District	1,666	1,827	-161	-9%
Santa Rita District	7,500	11,857	-4,357	-37%
Sinajana District	2,853	2,658	195	7%
Talofofo District	3,215	2,310	905	39%
Tamuning District	18,012	16,673	1,339	8%
Umatac District	887	897	-10	-1%
Yigo District	19,474	14,213	5,261	37%
Yona District	6,484	5,338	1,146	21%

\* Hagatña district is the current name for the Agana District in the 1990 data.

-X-

Source: U.S. Census Bureau  
Public Information Office  
(301) 457-3030

Last Revised: July 03, 2001 at 11:07:36 AM

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Guam

Department of Commerce

**2000 Final Population Totals**

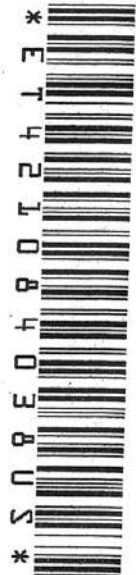
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Yigo District	19,474	14,213	5,261	37%
Yona District	6,484	5,338	1,146	21%

\* Hagatña district is the current name for the Agana District in the 1990 data.



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ORIGIN (POSTAL USE ONLY)

PQ ZIP Code 48132	Day of Delivery <input type="checkbox"/> Next <input type="checkbox"/> Second	Flat Rate Envelope <input type="checkbox"/>
Date In Mo. Day Year 02 26 02	<input type="checkbox"/> 12 Noon <input type="checkbox"/> 3 PM	Postage \$ 10.15
Time In Mo. Day Year 10 26 PM	Military <input type="checkbox"/> 2nd Day <input type="checkbox"/> 3rd Day	Return Receipt Fee
Weight lbs. oz. 1 3	Int'l Alpha Country Code	COD Fee
No Delivery <input type="checkbox"/> Weekend <input type="checkbox"/> Holiday	Acceptance Clerk Initials [Signature]	Insurance Fee
	Total Postage & Fees \$ 10.15	

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Guam Airports  
Authority  
PO Box 3010  
Hagåtña, GU 96932

ZIP+4

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USENVIROCONTROL Pollution  
Agency (46114)  
Attn: Mr. [unclear]  
Room 2104A CPA EAST BLD  
1201 Constitution AVE NW  
Washington D.C.

SEE REVERSE SIDE FOR  
SERVICE GUARANTEE AND  
INSURANCE COVERAGE LIMITS

☐ WAIVER OF SIGNATURE (Domestic Only) Additional merchandise insurance is void if waiver of signature is requested. (With delivery to be made without obtaining signature of addressee or addressee's employee's signature constitutes valid proof of delivery.)

NO DELIVERY ☐ Weekend ☐ Holiday

Customer Signature

Customer Copy  
Label 11-B August 2000

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\*\*\*\* U.S. POSTAL SERVICE \*\*\*\*  
HAGATNA STATION 96932  
130500 48.00  
GUS # 11  
04-26-02 16:26:53

CUSTOMER RECEIPT

109 POST VAL IMP	16.25
TOTAL	16.25
CASH T	16.25
CHANGE	.00

\*\*\* THANK YOU \*\*\*

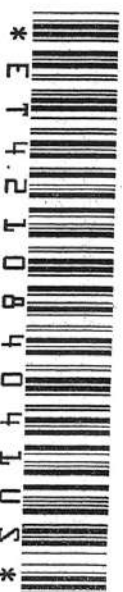




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POST OFFICE TO ADDRESSEE



\* E T 4 2 1 0 8 4 0 4 J U S \*

SEE REVERSE SIDE FOR  
SERVICE GUARANTEE AND  
INSURANCE COVERAGE LIMITS

PO ZIP Code 96132	Day of Delivery <input type="checkbox"/> Next <input type="checkbox"/> Second	Flat Rate Envelope <input type="checkbox"/>
Date in Mo. 12 Day 16 Year 2002	<input type="checkbox"/> 12 Noon <input type="checkbox"/> 3 PM	Postage \$ 16.00
Time in <input type="checkbox"/> AM <input type="checkbox"/> PM	Military <input type="checkbox"/> 2nd Day <input type="checkbox"/> 3rd Day	Return Receipt Fee
Weight lbs. 4 ozs.	Int'l Alpha Country Code	COD Fee
<input type="checkbox"/> No Delivery <input type="checkbox"/> Weekend <input type="checkbox"/> Holiday	Acceptance Clerk Initials [Signature]	Insurance Fee

☐ WAIVER OF SIGNATURE (Domestic Only) Additional merchandise insurance is void if waiver of signature is requested. I wish delivery to be made without obtaining signature of addressee or addressee's employee's signature (certificates valid proof of delivery).

☐ NO DELIVERY ☐ Weekend ☐ Holiday

Customer Signature

CUSTOMER USE ONLY

METHOD OF PAYMENT

Express Mail Corporate Acct. No.

Federal Agency Acct. No. or  
Postal Service Acct. No.

FROM: (PLEASE PRINT)

PHONE 071, 479-7823

TO: (PLEASE PRINT)

PHONE 415 972-3560

GUAM WATERWORKS Authority  
P.O. Box 2010  
Hagatna, Guam 96932

CORRIVE LT  
District Water Office (WRK)  
US EPA Region 9  
75 Hawthorne Street  
San Francisco, CA

ZIP + 4  
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FOR PICKUP OR TRACKING CALL 1-800-222-1811

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\*\*\*\* U.S. POSTAL SERVICE \*\*\*\*  
HAGATNA STATION 96932  
130500 48.00  
GUS # 11  
04-26-02 16:29:11

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CUSTOMER RECEIPT

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109 POST VAL IMP	16.25
TOTAL	16.25
CASH T	16.25
CHANGE	.00

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\*\*\* THANK YOU \*\*\*

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## GUAM WATERWORKS AUTHORITY

Aturidat Kinalamten Hanon Guahan

Government of Guam

P.O. Box 3010, Agana, Guam 96932

Phone: (671) 479-7823 • Fax: (671) 479-7879

APR 26 2002

Ms. Corine Li  
Drinking Water Office (WTR-6)  
U.S. Environmental Protection Agency  
Region 9  
75 Hawthorne Street  
San Francisco, Ca. 94105

SUBJECT: Grant Application for the Northern Water System  
Vulnerability Assessment.

Attached is Guam Waterworks Authority's grant application for the development of a vulnerability Assessment of our water system, under the Security Planning Grants for large drinking water utilities.

Should you have any questions, please call Mr. Prudencio F. Aguon, Planner at (671)479-7605/7809.



GIL A. SHINOHARA  
Acting General Manager



## GUAM WATERWORKS AUTHORITY

Aturidåt Kinalamten Hånom Guåhan

Post Office Box 3010, Hagåtña, Guam 96932

Phone: (671) 479-7861/7886 Fax: (671) 649-0158

APR 26 2002

Mr. Michael Lee, CMD-5

Office of the Pacific Insular & Native American Projects

U.S. Environmental Protection Agency, Region IX

75 Hawthorne Street, San Francisco, Ca 94105

RE: Sewage Overflow - Old Chaot Sewer Pump Station (SPS)  
(Notification 4/22/02)

Hafa Adai Mike!

This is the final report concerning the Old Chaot Pump Station that was reported overflowing on Monday, April 22, 2001 at approximately 4:30 p.m. Station operators discovered that pumps #1 & #2 had tripped. Both pumps were place back on line at approximately 6:30 p.m. that very same day. A short while later, the station failed again. Operators decided it would be best to man and operate the New Chaot SPS until maintenance crews could correct the problem being experienced at the Old Chaot SPS.

The maintenance crew discovered debris in the pump #2 check valve. This caused sewage to flow back through the half-closed valve reversing motor rotation. The MCC had tripped out the motor to prevent motor burn out. Due to the configuration of the pump operation sequencing and the standby pump being secured for a leaking seal, both the lag and standby pumps failed to come on. Crews have repaired both deficiencies and have returned pumping operations back to the Old Chaot SPS. We estimate the sewage spilled at 63,000 gallons.

GWA is presently following up with the contractor for the New Chaot SPS regarding the completion of the work needed to operate the station in the automatic mode. We will keep you office posted. GWA remains committed to preventing sewage overflows. Should you have any questions regarding this matter, please do not hesitate to call Mr. Mark Miller, Wastewater Systems Manager at (671) 479-7886/7861.



Sinseramente

GIL A. SHINOHARA

Acting General Manager

cc: Administrator, GEPA  
GWA AGMA  
Wastewater  
Lab



## GUAM WATERWORKS AUTHORITY

Aturidât Kinalamten Hânôm Guåhan

Post Office Box 3010, Hagåtña, Guam 96932

Phone: (671) 479-7861/7886 Fax: (671) 649-0158

APR 26 2002

Mr. Michael Lee, CMD-5

Office of the Pacific Insular & Native American Projects

U.S. Environmental Protection Agency, Region IX

75 Hawthorne Street, San Francisco, Ca 94105

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GIL A. SHINOHARA

Acting General Manager

cc: Administrator, GEPA  
GWA AGMA  
Wastewater  
Lab



## GUAM WATERWORKS AUTHORITY

Aturidat Kinalamten Hånom Guåhan

Post Office Box 3010, Hagåtña, Guam 96932

Phone: (671) 479-7861/7886 Fax: (671) 649-0158

APR 26 2002

Mr. Michael Lee, CMD-5

Office of the Pacific Insular & Native American Projects

U.S. Environmental Protection Agency, Region IX

75 Hawthorne Street, San Francisco, CA 94105

RE: Submission Deadline Extension Request –  
NPDES 2<sup>nd</sup> Quarter Wastewater O&M Progress Report

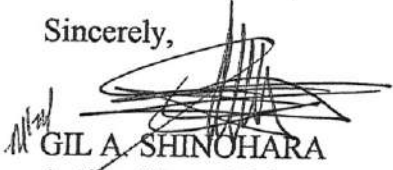
Dear Sir:

We regret to inform you that due to the recent departure (resignation) of GWA Assistant General Manager for Operations, Mr. Danny Santos the NPDES report will not be ready for submission by the 28<sup>th</sup> of this month.

We are requesting that a one-week extension be granted to ensure that the report submitted will properly and fully address the issues normally contained in the report. Your understanding in this matter will be greatly appreciated.

GWA remains diligent in its efforts to meet submission deadlines. If you should have any questions regarding this matter, please do not hesitate to call Mr. Mark Miller, Acting Wastewater Systems Manager at (671)-479-7886.

Sincerely,

  
GIL A. SHINOHARA  
Acting General Manager



cc: GEPA, Administrator  
AGMA  
Wastewater  
Lab





## **GUAM WATERWORKS AUTHORITY**

**Government of Guam**

**Post Office Box 3010, Hagatna, Guam 96932**

**Phone: (671) 479-7847 Fax: (671) 479-7879**

APR 23 2002

TO: Mr. Michael Lee, CMD-5  
EPA Project Officer  
U.S. Environmental Protection Agency  
Region IX  
75 Hawthorne Street  
San Francisco, CA 94105

FROM: GIL A SHINOHARA  
C.T. Acting General Manager

RE: C660010-24-8 Chaot/Agana/Marine Drive Relief Sewer Project.

Hafa Adai Mr. Lee:

We are hereby requesting for a formal grant amendment to extend the project and budget period of the above reference project to September 30, 2002.

As you are aware, construction of the project has been completed and now in operation. However, due to delayed approval of Operation Maintenance Manual processing of payment was put on hold to conform with Grant condition No. 16 as well as processing of other documents pertaining to close out of the project.

Thank you for your continued assistance and support to our Wastewater Capital Improvement Projects.

Should you have any questions or require additional information, please call Mr. Nardo Navasca, Engineering Supervisor, CIP Sewer Section at (671) 479-7807

Cc: GEPA



## GUAM WATERWORKS AUTHORITY

Aturidat Kinalamten Hanon Guahan

Government of Guam

P.O. Box 3010, Agana, Guam 96932

Phone: (671) 479-7823 • Fax: (671) 479-7879

APR 23 2002

TO: Mr. Michael Lee, CMD-5  
Office of the Pacific Insular & Native American Projects  
U.S. Environmental Protection Agency, Region IX  
75 Hawthorne Street, San Francisco, CA 94105

RE: Raw Sewage Spill  
(Notification April 12, 2002)

Hafa Adai Mr. Lee:

This is the final report regarding the sewage spill that occurred along Marine Drive in the village of Adelup.

Although, initially reported to our Wastewater Division on Friday, April 12, 2002, crews were not able to locate the sewage leak until Tuesday, April 16, 2002. The difficulty in locating the leak was due to the intermittent flow of sewage occurring in the pipe (pipe is the force main from the nearby sewer pump station). The final utility (Navy PWC) clearance Wednesday, April 17, 2002, was attained the morning of April 17, 2002. Crews completed the repairs on the cement-asbestos-type 12-inch line by 8:00 p.m. that same evening.

During the repairs, sewage spills were kept to a minimum by pumping out the wet pit in the nearby sewer pump station thereby preventing sewage flow through the damaged sewer line. Based on pump run indicator readings; physical line damage, the approximate length of time the damage line may have existed, we estimate the spillage to be approximately 10,760 gallons.



Guam Waterworks Authority remains diligent in its efforts to prevent sewage spills and overflows. Should you have any questions regarding this matter, please do not hesitate to call Mr. Mark Miller Wastewater Manager at (671)479-7886/7861.



GILA A. SHINOHARA  
Acting General Manager

Cc: AGMO  
LAB  
GEPA  
Wastewater Division



## **GUAM WATERWORKS AUTHORITY**

**Aturidåt Kinalamten Hånom Guåhan**

**Post Office Box 3010, Hagåtña, Guam 96932**

**Phone: (671) 479-7861/7886 Fax: (671) 649-0158**

APR 11 2002

**Mr. Michael Lee, CMD-5**

**Office of the Pacific Insular & Native American Projects**

**U.S. Environmental Protection Agency, Region IX**

**75 Hawthorne Street, San Francisco, Ca 94105**

RE:           Agat STP Sewage By-pass  
              (Notification April 03, 2002)

This is a follow-up letter of the recent by-pass at the Agat STP that was reported on April 3, 2002 at approximately 3:30 p.m. Wastewater management was not immediately made aware of the situation that caused the violation until Mr. Domingo Cabusao, GEPA discovered the by-pass and reported the matter to our attention.

The bypass occurred when, after losing the last operating pump in the STP, maintenance personnel inserted a submersible pump into the wet pit and due to the lack of the number of hoses necessary to reach the clarifier, inserted the discharge hose into the effluent channel of the nearby New Agat SPS.

Two ABS pumps are presently installed and operating in order to temporarily replace the original pumps, which are currently under repair; the ABS pumps are now configured to pump sewage from the wet pit into the clarifier.

From our interview with the maintenance and operations crews involved, their immediate concern was to quickly restore pumping operations at the STP to prevent overflows into resident homes and several sewer manholes. Management has reminded those involved the importance of informing GWA management as soon as problems of this nature occur.

We estimate the total bypassed sewage amount to be approximately 750,000 gallons.

Please do not hesitate to call the Wastewater Division at (671) 479-7885 if you should have any questions regarding this matter.

Sincerely,

  
HERBERT J. JOHNSTON, JR.  
General Manager

cc:   AGMO  
      Wastewater  
      Laboratory