

Government of Guam

Post Office Box 3010, Agana, Guam 96932 Phone: (671) 479-7813 Fax: (671) 479-7879

JUL 0 3 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.

Acting General Manager

Cc: GEPA Lab

Wastewater



Aturidåt Kinalamten Hånom Guåhan Post Office Box 3010, Hagåtña, Guam 96932

Phone: (671) 479-7823/7808 Fax: (671) 479-7879

FAX TRANSMITTAL COVER SHEET

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GUAM WATERWORKS AUTHORITY

Aturidat Kinalamten Hanom Guahan Post Office Box 3016, Hagdrift, Guam 96932 Phone: (671) 479-7823/7808 Fax: (671) 479-7879

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Aturidåt Kinalamten Hånom Guåhan Post Office Box 3010, Hagåtña, Guam 96932

Phone: (671) 479-7823/7808 Fax: (671) 479-7879

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GUAM WATERWORKS AUTHORITY

Aturidát Kinalamten Hánom Guában Post Office Box 3010, Hagatila, Gnam 96932

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Aturidåt Kinalamten Hånom Guåhan Post Office Box 3010, Hagåtña, Guam 96932

Phone: (671) 479-7823/7808 Fax: (671) 479-7879

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GUAM WATERWORKS AUTHORITY

Aturidat Kinalamten Hånom Guåhan Post Office Box 3019, Hagatin, Guam 96932 Phone: (671) 479-7823/7808 Fax: (671) 479-7879

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FM: Forward Mailbox Doc. WS: Waiting Send



Government of Guam
Post Office Box 3010, Agana, Guam 96932
Phone: (671) 479-7813 Fax: (671) 479-7879

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.

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

Cc: AGMA

Laboratory

GEPA

Wastewater

M.GILA. SHINOHAR



Government of Guam Post Office Box 3010, Agana, Guam 96932 Phone: (671) 479-7813 Fax: (671) 479-7879

JULY 7 & DUIL

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.

GILA. SHINOHARA

Acting General Manager

Cc: AGMA

Laboratory

GEPA

Wastewater



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JUN 28 2002

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Aturidåt Kinalamten Hånom Guåhan Post Office Box 3010, Hagåtña, Guam 96932

Phone: (671) 479-7823/7808 Fax: (671) 479-7879

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FAX TRANSMITTAL COVER SHEET
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(2) Raw Sewage spill (Notification June
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To: Mike Lee
Company: USEPA Title:
Fax No.: (415) 947-3560 Location:
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GUAM WATERWORKS AUTHORITY

Aturidåt Kinalamten Hånom Guåhan Post Office Box 3018, Hagataa, Guam 96932 Phone: (671) 479-7823/7808 Fax: (671) 479-7879

FA	X TRANSMITTAL COVER SHEET
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FO: Forced Output WT: Waiting Transfer FM: Forward Malibox Doc. WS: Waiting Send



Government of Guam

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 2 1 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:

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

Senserament

GIL A. SHINOHARA, Actin

General Manager

Enclosure

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



Government of Guam

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 2 0 2002

ATTN:

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

RE:

cc:

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,

Acting General Manager

Jesus T. Salas, Administrator, GEPA

EPA Funding Information

FS - 97911902 - 0 Page 2

	THIS ACTION	FORMER AWARD	FUNDS
AMENDED TOTAL			EPA Amount This Action
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Assistance Program (CFDA)	Statutory Authority	Regulatory Authority	
66.468 - Safe Drinking Water State Revolving Fund	Safe Drinking Water Act Section 1452	40 CFR PART 31	1
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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.



Aturidåt Kinalamten Hånom Guåhan Post Office Box 3010, Hagåtña, Guam 96932 Phone: (671) 479-7861/7886 Fax: (671) 649-0158

JUN 2 0 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 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 were 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 amounted 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.



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
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U.S. Environmental Protection Agency
Region IX - 75 Hawthorne Street
San Francisco, CA 94105

JUN 2 0 2002

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b. Hagatna Main SPS

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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



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: 6-26-02	Transmittal Time:
From:	
Title:	
Subject & Message:	
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by power lose.	
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Company: (1.SEPA	Title: Location:
Fax No.: (4/5) 947 - 3560	Location
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This document was confirmed.

(reduced sample and details below)

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GUAM WATERWORKS AUTHORITY

Aturidat Kinalamten Hanom Guahan Post Office Box 3010, Hagatin, Guam 96932 Phone: (671) 479-7823/7808 Fax: (671) 479-7879

FAX TRANSMITTAL COVER SHEET

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1	683	914159473560	6-20-02; 4:04PM	3'27"	3/ 3	B EC		CP 4800

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RE: Resend

MP: Multi-Poll

RM: Receive to Memory

HP: Host Print HR: Host Receive PD: Polled by Remote

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DR: Document Removed FO: Forced Output

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MB: Receive to Mailbox PI: Power Interruption TM: Terminated by user

FO: Forced Output WT: Walting Transfer FM: Forward Mailbox Doc. WS: Walting Send



Aturidåt Kinalamten Hånom Guåhan Post Office Box 3010, Hagåtña, Guam 96932

Phone: (671) 479-7823/7808 Fax: (671) 479-7879

FAX TRANSMITTAL COVER SHEET

From: S/ A Shirohan	t.
Title: Hoping GM	Division:
Subject & Message:	
48	
, ,	
To: Jesus Salus	Title: Administrator
Company: GEPA	lassian
Fax No.: 477-9402	Location:
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Number of pages - this page inclusive:	3
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Trai mission Report

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6-20-02;10:22PM 6716490158 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 Aturidåt Kinalamten Hånom Guåhan

Post Office Box 3018, Hagataa, Guam 96932 Phone: (671) 479-7823/7808 Fax: (671) 479-7879

From: (si) A shire	Division:	:
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RE: Resend

MP: Multi-Poll

RM: Receive to Memory

HP: Host Print

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PD: Polled by Remote

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MB: Receive to Mailbox PI: Power Interruption

TM: Terminated by user WT: Waiting Transfer FM: Forward Mailbox Doc. WS: Waiting Send



Aturidåt Kinalamten Hånom Guåhan Post Office Box 3010, Hagåtña, Guam 06022

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: Athris GM Division:
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To:
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6-20-02;10:23PM 6716490158

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GUAM WATERWORKS AUTHORITY

Aturidat Kinalamten Hanom Guahan Post Office Box 3010, fragitifa, Guam 96932 Phone: (671) 479-7823/7808 Fax: (671) 479-7879

FAX TRANSMITTAL COVER SHEET

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PD: Polled by Remote PG: Polling a Remote DR: Document Removed

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

FO: Forced Output FM: Forward Mailbox Doc. WS: Waiting Send



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

on) Page 202]

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.

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

Sinseremente,

GIL A. SHINOHARA Acting General Manager

Cc: **AGMA**

GEPA

LAB

Wastewater



Aturidåt Kinalamten Hånom Guåhan Post Office Box 3010, Hagåtña, Guam 96932

Phone: (671) 479-7823/7808 Fax: (671) 479-7879

FAX TRANSMITTAL COVER SHEET

TAX TIVANSIVII	TIAL COVER SHEET
Transmittal Date: 4.7.02 From: GIA Shir	Transmittal Time: 9-95 Un
Title: Acting GM	Division:
oubject a Message.	
Rei Row sew	uge over flow CAstumb
#1 sewer pumps	Mail lalaling
7.0.000	111012 - 6/3/02
To: Mike Lee	Title:
Company: VSEPA	Location:
Fax No.: C415) 947 - 356	D
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Date/Time Local ID Local Name

6- 7-02; 9:42AM 6716490158

Local Name G.W.A GENERALMANAGER Company Logo G.W.A GENERAL MANAGER OFFICE.

is document was confirmed.

(reduced sample and details below)

Document Size Letter-S



GUAM WATERWORKS AUTHORITY

Aturidat Kinalamten Hanom Guahan Post Office Box 3010, Hagatin, Guam 96932 Phone: (671) 479-7879 Fax: (671) 479-7879

FAX TRANSMITTAL COVER SHEET 67.02 Transmittal Time: Shirohur Title: Acting Division: Subject & Message: Run sewage over flow (Astronto 1 sewer pump station Wofification e-mail To: Mike Lee USERA Company:__ Location: Fax No .: C415) 947 - 3560 Number of pages - this page inclusive:

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Total Pages Scanned : 3 Total Pages Confirmed : 3

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1	181	914159473560	6- 7-02; 9:38AM	3'18"	3/ 3	EC		CP 4800

tes :

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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

MB: Receive to Mailbox Pi: Power Interruption

TM: Terminated by user WT: Waiting Transfer

FM: Forward Mailbox Doc. WS: Waiting Send

Trar imission Report

Date/Time Local ID Local Name

6- 7-02; 9:50AM 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, Hagatia, Guam 96932 Phone: (671) 479-7823/7808 Fax: (671) 479-7879

From: Gr A Shinot	hara	Transmittal Time:	9:45 an
Title: Athing Gm Subject & Message:	Divisi	on:	
Pary Sewage one	erflm.	(Astumbo =	#1 Sewe
To: Jesus Salas	т	tle:	
Company: CEPA Fax No.: 477-9402		Location:	
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MP: Multi-Poll

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DR: Document Removed FO: Forced Output

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TM: Terminated by user WT: Waiting Transfer

FM: Forward Mailbox Doc. WS: Waiting Send



Government of Guam

Post Office Box 3010, Agana, Guam 96932 Phone: (671) 479-7823 Fax: (671) 479-7879

MAY 2 2 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 were 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,

GIL A. SHINOHARA Acting General Manager

Cc: GEPA

Lab

Wastewater



Government of Guam

Post Office Box 3010, Agana, Guam 96932 Phone: (671) 479-7823 Fax: (671) 479-7879

MAY 2 2 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)

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Sincerely,

GIL A. SHINOHARA Acting General Manager

Cc: GEPA

Lab

Wastewater

5.22.02 letter. Stamped as per



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: 5.2202 From: Sil A. Shinohara	Transmittal Time:	4:45 PM
Title: Acting GM	Division:	<u> </u>
Subject & Message:		
Re: Raw Sewuge Mmy 20, 2002)	overflows CNO	ti fica from
To: Michael Lee	Title:	
To: Michael Lee Company: USEPA Fax No.: (415) 947-3560	Location:	
Number of pages - this page inclusive:	3	
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Tra 3mission Report

Date/Time Local ID Local Name

5-22-02; 4:48PM 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

Aturidāt Kinalamten Hānom Guāhan Post Office Box 3010, Hagātla, Guam 96932 Phone: (671) 479-7823/7808 Fax: (671) 479-7879

FAX TRANSMITTAL COVER SHEET

Transmittal Date: 5.2212	Transmittal Time:	4:451
From: Gil A. Shinohara		-
Title: Acting GM	Division:	
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May 20, 2002)	overflows (No	tification
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MP: Multi-Poll RM: Receive to Memory

HP: Host Print HR: Host Receive PD: Polled by Remote

PG: Polling a Remote
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FO: Forced Output

MB: Receive to Mailbox PI: Power Interruption TM: Terminated by user

FO: Forced Output WT: Walting Transfer FM: Forward Mailbox Doc. WS: Walting Send



Aturidåt Kinalamten Hånom Guåhan Post Office Box 3010, Hagåtña, Guam 96932 Phone: (671) 479-7823/7808

Fax: (671) 479-7879

	TAL COVER SHEET
Transmittal Date: 5.22.02 From: 6. A. Shinoha,	
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GUAM WATERWORKS AUTHORITY

Aturidat Kinalamten Hanom Guahan Post Office Box 3016, Hagitin, Gram 96932 Phone: (671) 479-7823/7808 Fax: (671) 479-7879

FAX TRANSMITTA	L COVER SHEET	
Transmittal Date: 5-22-02	Transmittal Time:	4:45 PM
From: Gil A. Shinohara	•	-
	Vision;	
Subject & Message:		
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May 20, 20021		
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PG: Polling a Remote

DR: Document Removed

MB: Receive to Mailbox

PI: Power Interruption TM: Terminated by user

FO: Forced Output WT: Waiting Transfer FM: Forward Mailbox Doc. WS: Waiting Send

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Company Logo G. W. A GENERAL MANAGER OFFICE.

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



GUAM WATERWORKS AUTHORITY Aturidåt Kinalamten Hånom Guåhan Post Office Box 3010, Hagatha, Guam 96932 Phone: (671) 479-7823/7808 Fax: (671) 479-7879

From: G7 A. Shu	Transmittal Time:	4:45 pm
Tilla: Acting Gm	Division:	
Subject & Message:		
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RE: Resend

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HP: Host Print HR: Host Receive PD: Polled by Remote

PG: Polling a Remote DR: Document Removed FO: Forced Output

MB: Receive to Mailbox PI: Power Interruption TM: Terminated by user WT: Walting Transfer

FM: Forward Mailbox Doc. WS: Waiting Send



Aturidat Kinalamten Hanon Guahan Government of Guam P.O. Box 3010, Agana, Guam 96932 Phone: (671) 479-7823 • Fax: (671) 479-7879

MAY 1 7 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



Aturidat Kinalamten Hanon Guahan Government of Guam

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

MAY 1 7 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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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





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

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

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
- 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

AGMO, LAB, GEPA Wastewater Operations



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

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

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

Chaot SPS (old)

- Station was out for 5 hours
- Back on line at 9:50a.m.
- 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.

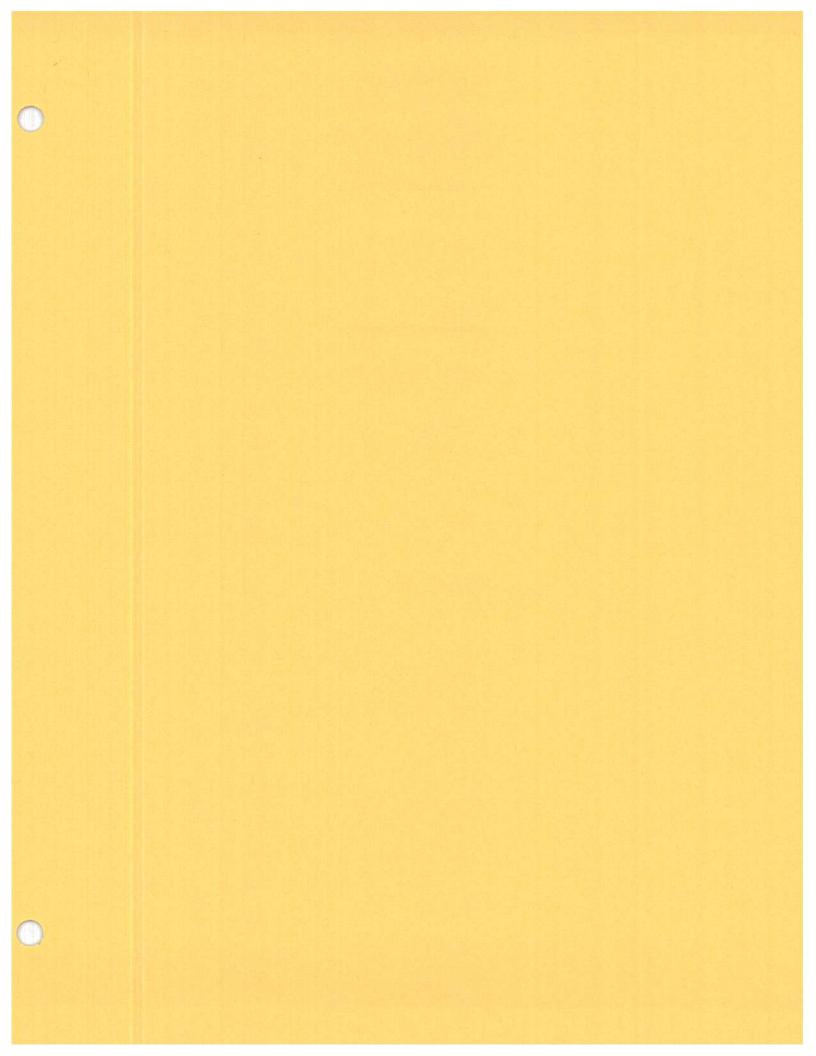
GWA remains diligent in its efforts to prevent sewage spills and overflows. If you should have any questions regarding this matter, please do not hesitate to call the Wastewater Operations at (671) 479-7886.

Sincerely,

GIL A. SHINOHARA

General Manager, Acting

cc: AGMO, LAB, GEPA Wastewater Operations





Aturidåt Kinalamten Hånom Guåhan Post Office Box 3010, Hagåtña, Guam 96932 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 1 0 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:

- Status of activities at each plant
- 2. Administrative Order Compliance Status Reports for applicable plants
- Monthly Discharge Monitoring Reports (DMRs) for applicable plants (Attachment A)
- Heavy Metals, Pesticides, Other Heavy Metals and Whole Effluent Toxicity Results for the Agat STP (Attachment B)
- 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.

1

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.

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.

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. <u>Improvements</u>

- 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.

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

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

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facility N Ocation if Differents

BOD (mg/l) DAILY MAX (1 VIOLATION) AND MONTHLY AVERAGE

SETTLEABLE SOLIDS (min) MONTHLY AVERAGE BOD (ibs/day) MONTHLY AVERAGE

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MO

YEAR

Explaination of violations attached at end of DMR's

FOR THE MONTH OF JANUARY 2002

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PERMIT REQUIRMENTS

VIOLATIONS

8011 16022

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

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| And or a maximum imprisonment of between 6 months and 5 years)
| COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here) UNITS lbs/day MGD lbs/day lbs/day lbs/day lbs/day QUANTITY OR LOADING YEAR | MO (54-61) MAXIMUM (20-21) (22-23) (2-16) GU0020087 PERMIT NUMBER 12.0 8772 12016 9226 16022 10.4 3928 4246 3426 2002 FROM (3 Card only) (46-53) AVERAGE 6858 8209 3665 3220 8009 8011 3426 9.0 SAMPLE MEASUREMENT PERMIT REQUIREMENT MEASUREMENT
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SETTLEABLE SOLIDS (mL/L) daily max (3 violations) and monthly average

Explaination of violations attached at end of DMR's

K RESULTS
JARY 2002
JF FEBRUAR
MONTH
"THE

OIL & GREASE Ibs/day				3426.44	3426 3426 3426
OIL & GREASE mg/l				43.8	43.8
BOD %removal	-18%	%4	-55%	%6-	-18% -55% 7%
SUSP. SOLIDS %removal	26%	13%	4%	-24%	12% -24% 56%
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SUSP. SOLIDS Ibs/day	1569	3279	3788	4246	3220 1569 4246
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PERMIT REQUIRMENTS

VIOLATIONS

120

8011 16022

6008 12016

160 monthly avg daily max MAX 12

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

2002 DAY CONTINUOUS (02-69)COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE DISCRETE DISCRETE DISCRETE DISCRETE DISCRETE DISCRETE HOURLY DATE co \subset NOTE: Read instructions before completing this form. MAY YEAR OF ANALYSIS FREQUENCY Approval expires 9-30-85 (64-68) 30/31 4/31 15/31 15/31 15/31 1/30 15/31 4/31 117 111 111 1/31 111 Form Approved. OMB No. 2040-0004 NUMBER 479-7844 TELEPHONE NO. EX. (62-63) pbw II/Bm mg/l Mg/I mg/l mg/l M/I 671 CODE AREA SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT QUANTITY OR CONCENTRATION (54-61) MAXIMUM 160 138 131 120 3.8 2.0 48.6 6.9 9.0 82 94 001 DISCHARGE NUMBER YEAR MG DAY 2002 3 31 1.0 48.6 80 80 09 3.2 6.9 9 59 72 (17-19) MONITORING PERIOD (38-45) MINIMUM (4 Card Only) 7.0 48 48.6 59 2.5 8.9 AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED 33 USC \$1319 (Penalties under these statutes may include fines up to \$10,000 42 .46 CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED INFORMATION NIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT SEE, 18 USC \$1001 AND IS TRUE ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIG-2 TYPED OR PRINTED

| And or a maximum imprisonment of between 6 months and 5 years]
| COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here) YEAR MO DAY 2002 3 1 (20-21) (22-23) (24-25) UNITS lbs/day lbs/day lbs/day lbs/day lbs/day MGD QUANTITY OR LOADING (54-61) MAXIMUM (2-16) GU0020087 PERMIT NUMBER 16022 12016 12.0 10.2 9199 5731 6679 4005 9691 FROM AVERAGE (3 Card only) (46-53) 8011 6452 6498 4146 5114 8009 4005 REQUIREMENT REQUIREMENT MEASUREMENT MEASUREMENT REQUIREMENT SAMPLE MEASUREMENT MEASUREMENT MEASUREMENT REQUIREMENT REQUIREMENT MEASUREMENT MEASUREMENT REQUIREMENT REQUIREMENT MEASUREMENT REQUIREMENT NAME/TITLE PRINCIPLE EXECUTIVE OFFICER SAMPLE PERMIT FACILITY: Agana Sewage Treatment Plant ACTING GENERAL MANAGER, GIL A. SHINOHARA NAME: Guam Waterworks Authority ADDRESS: P.O. Box 3010 EFFLUENT SUSPENDED SOLIDS EFFLUENT SETTLEABLE SOLIDS SUSPENDED SOLIDS EFFLUENT OIL & GREASE LOCATION: Agana, Guam PARAMETER EFFLUENT BOD EFFLUENT pH INFLUENT BOD INFLUENT (32-37) FLOW

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

ME/ADDRESS (Include :ation if Different)

PERMITTE facility Na

Explaination of violations attached at end of DMR's

SETTLEABLE SOLIDS (mL/L) daily max (4 violations) and monthly average

SUSPENDED SOLIDS (mg/L) monthly average

VIOLATIONS

BOD (mg/L) monthly average

ACANA TREATMENT PLANT WASTEWATER RESULTS
1E MONTH OF MARCH 2002

L	DATE pH	-	-	2	3	4	2	6 7.14	7	80	6	10	11	12	13 7.09	45	2 9	17	18	19	20 7.24	21	22	23	24	+	26 7.08	27	28	29	30	31	AVG 7.14	-	H
SUSP.	SOLIDS	mg/n						42						4	42						89					+	82						59		H
_		l/gm						83							20						138						48						80	48	400
SETTL	SOLID	l/lm						4.0							4.7						7.7						3.9						5.08	3.90	-
SUSP.	SOLIDS	lbs/day						3093							2984						4775						5731						4146	2984	-
	BOD	Ibs/day						6112							3553						9691						3355						6452	3355	1000
	FLOW	pgw	8.83	9.67	8.80	9.33	8.78	8.83	9.33	8.78	8.51	8.56	8.80	8.98	8.52	9.04	8 66	9 13	9.32	8.42	8.42	10.24	6.07	8.78	9.25	9.88	8.38	8.60	8.66	8.80	9.00	9.07	8.94	8.38	
EFFLUENT	DATE		,	2	3	4	5	9	7	8	6	10	11	12	13	14	13	47	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AVG	Z	
	H							6.91							6.83						6.86						6.92						6.88	6.83	,
SUSP.	SOLIDS	l/bm						54							94						46						94						72	46	,
	BOD	l/gm						91							84						131						59						91	59	2
SETTL.	SOLID	I/Im						3.8							2.8						2.5						3.8						3.2	2.5	2:4
SUSP.	SOLIDS	lbs/day						3977							6299						3230						6570						5114	3230	2000
	800	Ibs/day						6701							5969						9199						4123						6498	4123	
SUSP	SOLIDS	%removal						-29%							-124%						32%						-15%						-34%	-124%	20.00
	800	%remova						-10%							%89-		-		-	-	2%						-23%						-24%	-68%	200
Oil &	GREASE	ma/l																								48.6							48.6	48.6	2171
8 110	GREASE	lbs/day	6																							4004.601							4004	4004.6	

PERMIT REQUIRMENTS

120 monthly avg daily max MAX 12

90

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

SAMPLE CONTINUOUS COMPOSITE COMPOSITE COMPOSITE (02-69) COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE DISCRETE DISCRETE DISCRETE DISCRETE DISCRETE DISCRETE DISCRETE DISCRETE DISCRETE MONTHLY DISCRETE HOURLY NOTE: Read instructions before completing this form. FREQUENCY OF ANALYSIS (64-68) Approval expires 9-30-85 30/30 4/30 4/30 4/30 4/30 4/30 4/30 Form Approved. OMB No. 2040-0004 4/30 11 117 117 3/31 2/31 11 2/31 117 117 117 NO. EX. (62-63) 2 CFU/100ml CFU/100ml UNITS UNITS pbu Mg/I I/6m mg/I l/gm mI/I mg/l lug/ QUANTITY OR CONCENTRATION MAXIMUM > 24192 TNTC 140 130 12.3 400 3.0 2.0 7.4 9.0 0.01 59 45 84 7 8.9 57 (30-31) 31 DISCHARGE NUMBER (46-53) AVERAGE > 26500 > 38641 0.00 200 7.5 65 1.0 20 1.7 53 33 36 30 35 6.3 7.3 8 -(28-29) (17-19)9 NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR) YEAR 2002 (26-27) MONITORING PERIOD (4 Card Only) (38-45) > 24192 MINIMUM 0.35 0.01 740 6.0 47 9 9 7.2 2 UNITS lbs/day lbs/day lbs/day lbs/day mgd DAY (22-23) (24-25) QUANTITY OR LOADING MO (54-61) MAXIMUM (2-16) GU002022 PERMIT NUMBER 2.04 1752 1429 1259 1628 1.50 751 984 YEAR 2002 (20-21) FROM (46-53) AVERAGE 1.29 (3 Card only) 750 492 876 540 462 814 REQUIREMENT SAMPLE MEASUREMENT PERMIT REQUIREMENT
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SAMPLE S	PE	MEASUREMENT PERMIT	0.092	0.092	lbs/day	11,000	44 000					
0.043 Disiday 5.100 5.100 5.100 5.100 0.169 Disiday 35.000 35.	出	EQUIREMENT	0.037	0000			00001	11.000	l/Bri	8	1/30	
0.043 Disiday 5.100 5.100 5.100 5.100 0.1892 Disiday 35.000 35.000 35.000 35.000 35.000 1.190 Disiday 290 290 290 290 2.500 2.500 120.000 0.00 0.00 0.00 2.500 2.500 0.00 0.00 0.00 0.00 2.500 0.00 0.00 0.00 0.00 0.00 2.500 0.00 0.00 0.00 0.00 0.00 3.175 31.75 31.75 31.75 31.75 31.75 3.175 Disiday average EAND CONFLETE NET AND AND BASE PRINT DISIDAY OF LAW THAT THANK PERSONALI V EXAMINED DISIDAY OF LAW THAT THANK PERSONALI PROPERTY OF		AMPLE		0.060		of the second	2.900	4.800	W-2-19			
1,190 1,20		RMIT	0.043	0.043	lbs/day	5.100	5.100	5 100			TO SECTION SHEETING	MONTHLY
1.190 2.419 Ibsiday 250.00 35.000 35	SAI	MPLE	0.103	0.169			0000		l l	Section 1	1/30	100 Park 1880
1,190		ASUREMENT	0.292	0000			0.700	13.000	Fig. 6	200		MONTHLY
2.419 Ibsiday 290 58.000 200.00 2.500 2.500 120.00 200.00 2.500 2.500 200.00 2.000 0.000 0.000 0.000 2.000 0.000 0.000 0.000 2.000 0.000 0.000 0.000 2.000 0.000 0.000 0.000 2.000 0.000 0.000 0.000 2.000 0.000 0.000 0.000 2.000 0.000 0.000 0.000 2.000 0.000 0.000 0.000 2.000 0.000 0.000 0.000 2.000 0.000 0.000 0.000 2.000 0.000 0.000 0.000 2.000 0.000 0.000 0.000 2.000 0.000 2.00	PE	RMIT		0.432	lbs/day	35.000	35.000	35.000	l/Bri		1/30	
2.419 Ibsiday 290		MPLE	0.724	1.190			58.000	95.000				
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120,000 200,	1	QUIREMENT	1.520	2.500				067	/6n	3	1/30	
0.00 0.00		ASUREMENT				State of the long the	120.000	200.000	91(370)			MONTHLY
0.00 0.00	PE	QUIREMENT				100			l/6m		1/30	
0.00 0.00	300	MPLE				The second second			or µg/l			VINTINOM
11.30 0.00 0.00 0.00 0.00 0.00 0.00 0.00		RMIT			140	0.00	0.00	0.00	l/gri		1/30	
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31.75 11.30 11		RMIT				0.00	0.00	0.00	l/on		4730	
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ALUMINUM (ug/L) monthly average	SUSPENDED SOLIDS DAILY MAX EXC BOD (Ibs/day) DAILY MAX (2 VIOLATIO SUSPENDED SOLIDS % REDUCTION BOD % REDUCTION LESS THAN 85% BOD (mg/l) MONTHLY AVERAGE	XCEEDED (1 VIOL IONS) AND MONT) N LESS THAN 85%	ATION) HLY AVERAGE		ENTEROCOCC FECAL COLIFC COPPER (ug/L)	Cl daily max (4 viola DRM daily max (4 v) daily max and mo I/L) monthly averan	stions) and monthly aver iolations) and monthly a inthly average	100	0/2/s D	٥, ا		-
AILY MAX (1 VIOLATION) AND MONTHLY AVERAGE	ENDED SOLIDS (Ibs/day) DAIL)	Y MAX (1 VIOLATIC	ON) AND MONTHLY AV		COPPER (Ibs/d	lay) daily max	e e					

AT WASTEWATER RESULTS
JANUARY 2002 AGATTREATMENT FOR THE MONTH

215

INFLUENT

BOD	ibs/day 300	751	186	732	492
SUSP. SOLIDS	250	234	103	1259	462
SETTL. SOLID	0.4	3.0	3.0	9.0	1.7
BOD	24	45	18	43	188
SOLIDS mg/l	20	41	10	74	30
된	7.43	7.22	7.24	7.26	7.28
DATE	- 2 8 4	6 6 7 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	14 14 13 14 13	2282228	31 33 33 34 AVG
FLOW	1.00	1.00 1.00 2.00 2.00 1.50 1.50	1.60 1.00 1.24 2.00 1.00 1.00	1.40 1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.50 1.293 1.000 2.040
BOD lbs/day	626	984	589	800	750 589 984
SOLIDS Ibs/day	425	100	207	1429	540 100 1429
SOLID	5.0	5.2	8.9	8.5	6.1
BOD mg/l	09	59	22	47	53 47 59
mg/l	7	ø	20	84	36
PH 7.25		7.10	7.22	7.33	7.23 7.10 7.33
2 4	w 4 m 0	~ 8 6 D T C2	10 10 10 10 10 10 10 10 10 10 10 10 10 1	22 23 24 25 26 26 27 28	30 31 MAX

%removal BOD

%removal SUSP.

52%

41%

24%

-133%

%89

%09

%6

12%

PERMIT REQUIRMENTS

VIOLATIONS
SUSPENDED SOLIDS DAILY MAX EXCEEDED (1 VIOLATION)
BOD (Ibsday) 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 (Ibs/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 30 30 9 6 monthly avg daily max

38% 9% 68%

-8% -133% 50%

%58

85%

375

375

COPPER (ug/L) daily max and monthly average ALUMINUM (ug/L) monthly average COPPER (ths/day) daily max ALUMINUM (bs/day) monthly average

T TREATMENT PLANT WASTEWATER RESULTS FOR THE MONTH OF NOVEMBER 2001

EFFLUENT (CONTINUED)

CHLORINE CHLORINE A RESIDUAL RESIDUAL COPPER NICKEL ZINC Hg/l lbs/day Hg/l Hg/l Hard		0.00 0.00						001 000							0.01						5.1 5.1 35	0.00								000	
FECAL COLIFORM FC/100ml		31,000						TNTC							22,000						CLNT	2								> 26500	00004
ENTEROCOCCI CFU/100 ml		5/480						72150							740						> 24192									> 38641	740.00
AMMONIA	0 0	0.31						3.53							6.37						N/S									6.27	2 67
DATE		4 6	4	9	9	7	80	6	10	11	12	13	14	15	16	17	20,0	20	21	22	23	24	25	26	27	28	29	30	31	AVG	NIN

0.094 2.9 8.2 58 0.154 4.8 13 . 95				
0.094 2.9 8.2 0.154 4.8 13		28		CS .
0.094 2.9 0.154 4.8		8.2	42	2
0.094		2.9	48	2.5
	1000	0.034	0 154	
	200/100ml	400/100	400/100ff	
200/100ml 400/100ml	35/100ml	57/100ml	111001110	

AGAT TREATMENT PLANT WASTEWATER RESULTS FOR THE MONTH OF DECEMBER 2001

EFFLUENT (CONTINUED)

DIELDRIN µg/li		
CHLORDANE µg/l	les or PCB's	
4.4-DDD µg/l	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)	
4,4-DDE	sample was not anal because samples we past the allowable holdin (see attachment B.1)	
ALUMINUM Ibs/day	2.4186	2 2 2
ZING	0.2919	0.29
NICKEL Ibs/day	0.042534	0.04
lbs/day	0.09174	0.09
11 10 9 8 8 7 7 12 13 2 13 2 13 2 13 2 13 2 13 2 13	14 16 17 17 18 18 18 20 22 23 23 24 25 26 26 27 27 28 29 30 30 30 30 30 30 30 30 30 30 30 30 30	AVG MIN MAX

1.52	
0.724	
0.103 0.169	

AGAT TREATMENT PLANT WASTEWATER RESULTS FOR THE MONTH OF DECEMBER 2001

EFFLUENT (CONTINUED)

	l/bn	resilicines	ENT TOXICITY	OIL & GREASE
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19				
20				
21				
22	Sample was not another	three d		
23	for nesticidos os Do	pazkin	31.75	
24	because samples work	593	(see attachment B.3)	
25	received from the comment	910		
26	the allowable holding time	ourier past		11.3
27		ann a		
28				
29				
30				
31				
AVG				
MIN				
MAX				

SAMPLE TYPE (69-70) CONTINUOUS COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE DISCRETE MONTHLY HOURLY NOTE: Read instructions before completing this form. Form Approved. OMB No. 2040-0004 Approval expires 9-30-85 FREQUENCY OF ANALYSIS (64-68) 30/30 4/30 4/30 4/30 4/30 4/30 3/31 117 2/31 4/30 117 111 117 4/30 111 2/31 117 117 NO. EX. (62-63) 2 CFU/100ml CFU/100ml UNITS pbm mg/l UNITS l/gm II/Bm l/gm III I/6m **1/6**11 QUANTITY OR CONCENTRATION (54-61) MAXIMUM TNTC 22,300 94.0 130 128 140 0.00 0.01 94 2.0 400 10.9 86 94 7.3 9.0 57 DAY (30-31) 001 DISCHARGE NUMBER AVERAGE 960,000 17,523 64.0 1.0 200 95 20 65 0.00 99 64 24 35 6.9 7.2 MO 2 (28-29) NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) DISCHARGE MONITORING REPORT (DMR) YEAR 2001 (26-27) (4 Card Only) (38-45) MINIMUM 150,000 150,000 17 38 0.00 9 6.0 34 34 7.2 2 lbs/day lbs/day UNITS lbs/day (22-23) (24-25) lbs/day mgd DAY QUANTITY OR LOADING MO (54-61) MAXIMUM GU002022 GU0020222 PERMIT NUMBER 1.50 1249 1.50 1752 917 1176 1628 926 YEAR 2001 FROM (46-53) AVERAGE 1028 1.20 (3 Card only) 876 658 722 814 701 SAMPLE REQUIREMENT
SAMPLE
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PERMIT REQUIREMENT SAMPLE MEASUREMENT PERMIT MEASUREMENT MEASUREMENT MEASUREMENT MEASUREMENT MEASUREMENT PERMIT REQUIREMENT REQUIREMENT REQUIREMENT REQUIREMENT REQUIREMENT MEASUREMENT REQUIREMENT PERMITTEE for JADDRESS (Include facility Name/Location if Different) PERMIT PERMIT PERMIT PERMIT NAME: Guam Waterworks Authority AGANA, GUAM 96932 OCATION: Rt 2. Agat, Guam ADDRESS: P.O. Box 3010 INFLUENT SUSPENDED SOLIDS EFFLUENT SUSPENDED SOLIDS EFFLUENT SETTLEABLE SOLIDS CHLORINE RESIDUAL FECAL COLIFORM BACTERIA PARAMETER (32-37) ENTEROCCOCI EFFLUENT BOD INFLUENT BOD EFFLUENT pH AMMONIA FLOW

0.103	0.000 0.000 0.000 Hg/l 1/30 1/30 1/30 1/30 1/30 1/30 1/30 1/30
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0.00 0.00 0.00 Hg/l 1/30 0.00 0.00 0.00 Hg/l 1/30 0.00 0.00 0.00 Hg/l 1/30 0.00 0.00 1.97 1/30 0.00 0.00 1.97 1/30 0.00 0.00 1.97 1/30 0.00 0.00 1.97 1/30 0.00 0.00 1.97 1/30	13.0 13.0 13.20 13.20 13.20 13.20 13.20 14.30
0.00 0.00 0.00 нg/l 1/30 1/30 0.00 нg/l 1/30 1/30 1/30 1/30 1/30 1/30 1/30 1/30	13.0 13.0
0.00 0.00 μg/l 1/30 1/30 1/30 1/30 1/30 1/30 1/30 1/30	13.0 13.0 13.0 13.20
9.00 0.00 1.9/1 1/30 9.00 0.00 1.9/1 1/30 1/30 1/30 1/30 1/30 1/30 1/30	13.20 13.20 13.20 14.3
3.20 13.20 н.g/l 1/30 1/30 г.b. 1/3	13.20
3.20 13.20 mg/l 1/30 TuC 1/90 TuC 1/90 TuC 1/90	THE SUBMITTED INFORMATION INCLUDING MANY RET. IS USE 31001 SIGNATURE OF PRINCIPAL EXECUTIVE AREA IN UNMBERIAL IN 1900 AND THE WAY WAYNER THAT THERE ARE SIG. **ALSE INFORMATION INCLUDING MANY RET. IS USE 31001 AND OFFICER OR AUTHORIZED AND AND AND AND AND AND AND AND AND AN
3.20 13.20 mg/l 1/30 ED TELEPHONE	13.20 13.20 mg/l 1/30 mg/l
ED TELEPHONE	WAY SET HIS USE TO STORY OF THE THERE ARE SIGNATURE OF PRINCIPAL FOR MITHORY SEE. IS USE STORY AND OFFICER OR AUTHORIZED AND SIGNATURE OF PRINCIPAL FARES IN STORY OF STORY AND STORY OF STORY O
	Ment SEE. 18 USC \$1001 AND SIGNATURE OF PRINCIPAL EXECUTIVE AREA NUMBERIAL YEARS OFFICER OR AUTHORIZED ACEUTIVE

TO THE TANK WILLER

AGAT TREATMENT T WASTEWATER RESULTS FOR THE MONTH OF FEBRUARY 2002

BOD %removal	27%		16%	21%	31%
SUSP. SOLIDS %removal	55%		-24%	%68-	-19%
BOD	917	3/02)	838	412	722
SUSP. SOLIDS Ibs/day	429	Agat STP not processing wastewater (2/13/02)	1176	369	658
SETTL. SOLID mill	N/S	essing wa	94.0	34.0	64.0
BOD mg/l	94	not proc		88	38
SUSP. SOLIDS mg/l	44	Agat STP	94	34	57
Ŧ.	7.19		7.16	7.33	7.23
DATE 1	2 4 20 20 70 20 20 20 20 20 20 20 20 20 20 20 20 20	12 2 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	22 22 23 23 23	26 27 28 29 30	AVG MIN
FLOW mgd 1.000	1.000 1.000 1.100 1.000 1.000 1.500 1.000	1.500 1.500 1.500 1.500 1.500	1.500 1.500 1.500 1.500 1.500 1.000	1.000 1.000 1.300 1.000	1.000
BOD lbs/day	1249	3/02)	1001	835	1028 835 1249
SUSP. SOLIDS Ibs/day	956	tewater (2/1	951	195	701 195 956
SETTL. SOLID ml/l	N/S	Agat STP not processing wastewater (2/13/02)	76.0	18.0	47.0 18.0 76.0
BOD mg/l	128	P not proc	08	77	95 77 128
SOLIDS mg/l	88	AgatST	92	18	64 98
Hd	7.25		7.39	6.99	7.21 6.99 7.39
DATE 2	4 4 9 8 4 6 6 7 4	3425	24 23 24 25 24 25 24 25 25 25 25 25 25 25 25 25 25 25 25 25	25 27 28 30 31	AVG

PERMIT REQUIRMENTS

monthly avg daily max

39 30 မ တ

85%

85%

375

375 563

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%

VIOLATIONS

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)

W		ED		ППП	ППП
ALUMINUM µg/l		T PERFORM			
ZINC µg/l		PESTICIDE/PC/WHOLE EFFLUENT TOXICITY SAMPLING WAS NOT PERFORMED ON THE SCHEDULED SAMPLING OF A TENTOR THE SCHEDULED SAMPL			
NICKEL µg/l		LE EFFLUENT TOXICI I STP WAS NOT PRO SAMPI ING DATE			
COPPER µg/l		PESTICIDE/PCAWHOLE EFFLUENT TOXI THIS MONTH AS AGAT STP WAS NOT P ON THE SCHEDULED SAMPI ING DATE			
CHLORINE RESIDUAL Ibs/day	0.00		0.00	0.00	0.00
CHLORINE RESIDUAL µg/l	0.00	Mater (2/13/02)	0.00	0000	0.00
FECAL COLIFORM FC/100ml	TNTC	processing wastewater (2/13/02)	150,000	1,770,000	960000.00 150000.00 TNTC
ENTEROCOCCI CFU/100 ml	22300	Agat STP not	19560	10710	17523.33 10710.00 223300.00
AMMONIA mg/L	2.64		10.92	7.05	6.87 2.64 10.92
DATE 2	9 2 8 3 6 6 7	11 12 17 17 17 17 17 17 17 17 17 17 17 17 17	20 21 22 23 24	25 26 27 29 30 30	MAX

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

AGAT TREATMENT PLANT WASTEWATER RESULTS FOR THE MONTH OF FEBRUARY 2002

Lbs/day	NICKEL Ibs/day	ZINC Ibs/day	ALUMINUM	4,4-DDE	4,4-DDD	CHLORDANE	DIFLORIN
				ИВн	l/βή	1/6п	l/g _H
PESTICIDE/PC/WHC	PESTICIDE/PC/WHOLE EFFLUENT TOXICITY SAMPLING WAS NOT PERFORMED.	TY SAMPLING WAS	NOT PERFORMED				
ON THE SCHEDULED SAMPLING DATE	ON THE SCHEDULED SAMPLING DATE	CESSING WASTEW	ATER				
			Control of the second s			-	

1.52

1.19

0.103

0.037

AGAT TREATMENT PLANT WASTEWATER RESULTS FOR THE MONTH OF FEBRUARY 2002

DES ENT	Tuc													E EFFLUENT TOXIOITY	SAMPLING WAS NOT PERFORMED THIS	MAS NOT -	WASTEWATER ON THE SOLITE IN TH	E SCHEDULED												13.2				43.50	13.20	13.20	13.20
OTHER HEAVY METALS Hg/l													Drown	PES IICIDE/PC/WHO	SAMPLING WAS NOT	MONTH AS AGAT ST	WASTEWATER ON T	SAMPI INC DATE	I WOOM																		
DATE	-	2	3	4	2	9	7	8	6	10	11	12	13	14	40	0	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AVG	MIN	MAX		

CONTINUOUS SAMPLE TYPE (69-70) COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE DISCRETE HOURLY DISCRETE DISCRETE DISCRETE DISCRETE DISCRETE DISCRETE DISCRETE DISCRETE DISCRETE MONTHLY NOTE: Read instructions before completing this form. Approval expires 9-30-85 OF ANALYSIS FREQUENCY (64-68) 30/30 Form Approved. OMB No. 2040-0004 4/30 4/30 4/30 111 4/30 117 4/30 417 3/31 117 2/31 111 2/31 4/30 4/30 117 417 NO. EX. (62-63) 2 UNITS CFU/100ml CFU/100ml mgd l/gm I/Gm mg/l l/g™ UNITS E I/gm l/6ri QUANTITY OR CONCENTRATION (46-53) (54-61) MAXIMUM > 24192 140 TNTC 130 32.0 400 176 136 2.0 12.6 54 27 9.0 0.00 0.01 57 7.8 (30-31) DAY (46-53) AVERAGE DISCHARGE NUMBER 163,333 > 15662 1.0 70 200 26 65 16.1 91 55 35 10.1 0.00 7.6 WO (17-19)(28-29) 001 NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) DISCHARGE MONITORING REPORT (DMR) YEAR 2001 (26-27) TORING PERIOD (38-45) MINIMUM (4 Card Only) 70,000 35 25 0.37 22 16 0.00 7.3 6.0 2 UNITS lbs/day lbs/day lbs/day lbs/day DAY pbu (20-21) (22-23) (24-25) QUANTITY OR LOADING MO (2-16) GU0020222 PERMIT NUMBER (54-61) MAXIMUM 1.70 1.50 1752 2495 1628 581 1701 354 YEAR FROM (3 Card only) (46-53) AVERAGE 1.26 1128 876 440 281 814 646 MEASUREMENT PERMIT REQUIREMENT MEASUREMENT REQUIREMENT MEASUREMENT MEASUREMENT MEASUREMENT MEASUREMENT PERMIT REQUIREMENT SAMPLE MEASUREMENT PERMIT REQUIREMENT SAMPLE MEASUREMENT PERMIT MEASUREMENT PERMIT REQUIREMENT REQUIREMENT REQUIREMENT SAMPLE MEASUREMENT PERMIT REQUIREMENT REQUIREMENT MEASUREMENT PERMIT REQUIREMENT SAMPLE REQUIREMENT SAMPLE PERMITTEE N, ADDRESS (Include facility Name/Location if Different) PERMIT NAME: Guam Waterworks Authority ADDRESS: P.O. Box 3010 AGANA, GUAM 96932 OCATION: Rt 2. Agat, Guam INFLUENT SUSPENDED SOLIDS EFFLUENT SUSPENDED SOLIDS EFFLUENT SETTLEABLE SOLIDS CHLORINE RESIDUAL FECAL COLIFORM BACTERIA PARAMETER ENTEROCCOCI INFLUENT
BOD EFFLUENT BOD (32-37)FLOW EFFLUENT AMMONIA Hd

SAMPLE NICKEL MEASUREMENT PERMIT REQUIREMENT SAMPLE MEASUREMENT PERMIT REQUIREMENT REQUIREMENT REQUIREMENT PERMIT REQUIREMENT PERMIT REQUIREMENT PERMIT REQUIREMENT SAMPLE MEASUREMENT SAMPLE MEASUREMENT SAMPLE MEASUREMENT SAMPLE MEASUREMENT SAMPLE MEASUREMENT REQUIREMENT PERMIT REQUIREMENT PERMIT REQUIREMENT PERMIT REQUIREMENT PERMIT REQUIREMENT REQUIREMENT REQUIREMENT REQUIREMENT REQUIREMENT REQUIREMENT PERMIT REQUIREMENT PERMIT REQUIREMENT REQUIREMENT PERMIT REQUIREMENT	0.000 0.060 0.000 0.060 0.052 0.652 0.724 1.190 1.520 2.500	lbs/day 46.000 lbs/day 46.000 0.00	2.900 NODI 8.200 46.000 58.000 120.000	4.800 NODI 13.000 46.000 95.000 410	I/gu l/gu mg/l ro	1/30 1/30 1/30 1/30	1/30 MONTHLY MONTHLY MONTHLY MONTHLY MONTHLY MONTHLY MONTHLY
	0.000 0.169 0.662 5.813 5.813		8.200 46.000 58.000 120.000	13.000 46.000 95.000 410 200.000	l/gu l/gu rgm rgm		
	0.169 0.652 1.190 5.813 2.500		8.200 46,000 58,000 120,000	13.000 46.000 95.000 410 200.000	l'gu Pgu Pgu Pgu		
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	5.813		46,000 58,000 120,000 0.00	46.000 95.000 410 200.000	Ingri		
	2.500		58.000 410 120.000 0.00	95,000	I/Bit Jo Jo		
	2.500		120,000	200.000	l/git ro ro		
		00.00	120.000	200.000	l'gm ro		
		0000	0.00	200.000	mg/l or ug/l	113	
		00.00	00.00		mg/l or ug/l	118	
		00.0	0.00		or IIg/I	13	
		0.00	0.00			113	
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		00.0	000				TI COLL
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DEDMIT					N 438	A STATE OF THE STA	MONTHLY
REGUIREMENT		0.00	0.00	0.00	l/gri	1/30	
DIELDRIN							VIHLINOM
		0.00	0.00	0.00	l/gu	1/30	
SAMPLE						September 198	
PESTICIDES MEASUREMENT							MONTHLY
					1/6rt	1/30	
TOXICITY MEASUREMENT						The second second	Y IHTNOM
PERMIT		31.75	31.75	24.75	,		
REQUIREMENT				01:10	200	1/90	
OIL & GREASE MEASUREMENT		The second secon					QUARTERLY
PERMIT		4.30	4.30	4.30	l/gm	1/30	_
NAME/TITLE PRINCIPLE EXECUTIVE OFFICER LICERT	CERTIFY INDEED DEAM TO DE					The Market State of the Control of t	
T	AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION INSELIEVE THE SUBMITTED PRICODAY AND OBTAINING THE INFORMATION INSELIEVE THE SUBMITTED PRICODAY AND SUBMITTED PRICODAY AND ADDRESS OF THE SUBMITTED PRICADAY AND ADDRESS OF THE SUBMITTED PRICODAY AND ADDRESS OF THE SUBMITTED PRICODAY AND ADDRESS OF THE SUBMITTED PRICODAY AND ADDRESS OF THE SUBMITTED PRICADAY AND ADDRESS OF THE SUBMITT	I HAVIE PERSONALLY EXAMINED ATTON SUBMITTED HEREIN AND BASED ALS MMEDIATELY RESPONSIBLE FOR	*	- <u>W</u>	TELEPHONE	ONE	MONTHLY
ACTING GENERAL MANAGER NIFICAL GWA	IS TRUE ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNINGANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT SEE 4 100 100 100 100 100 100 100 100 100 1	AT THERE ARE SIG.		K	- 128	VVM	
TYPED OR PRINTED	33 USC \$1319 (Penalties under these statutes may include fines up to \$10,000	lude fines up to \$10,000	. South Title Control of the Control				200

SOCREMED 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)

THE CHIMACHO T WASTEWATER RESULTS ARCH 2002 AGAT TREATMENT FOR THE MONTH

BOD %remova	54%	23%	23%	39%	35% 23% 54%
SUSP. SOLIDS %removal	27%	38%	-21%	81%	31% -21% 81%
BOD Ibs/day	209	225	338	354	281 209 354
SUSP. SOLIDS lbs/day	133	267	1701	482	646 133 1701
SETTL. SOLID ml/I	16.0	32.0	n/s	0.4	16.1 0.4 32.0
BOD mg/l	25	27	22	25	26 25 27
SUSP. SOLIDS mg/l	16	32	136	34	55 16 136
Æ	7.30	7.49	7.81	7.73	7.58
DATE 1	0 4 9 8 4 7 9 6 1	122 13 13 13 13 13 13 13 13 13 13 13 13 13	18 21 22 22 23 24	25 26 27 28 30 30	MIN
FLOW mgd 1.500 1.000 1.000	1,000 1,500 1,000 1,000 1,500 1,000	1.000 1.000 1.500 1.000 1.000	1.600 1.500 1.500 1.000 1.000 1.700 1.000	1,000 1,600 1,200 1,500 1,500 1,500	1.268 1.000 1.700
BOD	450	292	438	581	292 581
SOLIDS SOLIDS Ibs/day	183	434	1401	2495	1128 183 2495
SETTL. SOLID mM	22.0	52.0	n/s	£.	26.8 6.5 52.0
BOD mg/l	54	35	32	14	35
SUSP. SOLIDS mg/l	22	92	112	176	91 176
На	7.36	7.28	7.18	7.18	7.18
DATE 2 3 3 4	11008760	118	22 23 23 24 26 26 26	27 28 30 31 31	MAX

%removal BOD

PERMIT REQUIRMENTS

30 8 45 96 monthly avg daily max

COMMENTS:

85%

85%

375 563

375 563

SUSPENDED SOLIDS (mg/l and lbs/day) daily max (1 violation each) and monthly average Supply the movel less than 85% Supply the movel less than 85% Supply for the movel 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)

VIOLATIONS

TTREATMENT PLANT WASTEWATER RESULTS

EFFLUENT (CONTINUED)

ALUMINUM µg/l		410			410.00 410.00 410.00
ZINC		46			46.00 46.00 46.00
NICKEL µ9/I		NODI			IQON IQON
СОРРЕЯ		9.4			9.40
CHLORINE RESIDUAL Ibs/day	0.00	0.00	0.00	0.00	0.00
CHLORINE RESIDUAL µg/l	0.00	0.00	0000	0.00	0.00
FECAL COLIFORM FC/100ml	270,000	70,000	TN1C	150,000	163333.00 70000.00 TNTC
ENTEROCOCCI CFU/100 ml	16090	03096	14230	68930	> 15662 6890.00 > 24192
AMMONIA	7.28	8.37	12.00	12.60	10.06 7.28 12.60
DATE 1	4 20 00 10 00 00 00 00 00 00 00 00 00 00 00	14 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	18 20 21 22 23 23	25 26 27 28 29 30	AVG MIN MAX

120 58 8.2 2.9 0.094 7.50 200/100ml 400/100ml 35/100ml 57/100ml

AGAT TREATMENT PLANT WASTEWATER RESULTS FOR THE MONTH OF MARCH 2002

EFFLUENT (CONTINUED)

DIELDRIN µg/l	IGON	
CHLORDANE µg/l	IGON	
4,4-DDD	IGON	
4,4.DDE μg/l	IQON	
ALUMINUM Ibs/day	5.81298	5.84
ZINC Ibs/day	0.652188	0.65 0.65 0.65
NICKEL Ibs/day	NODI	
COPPER	0.1332732	0.13 0.13 0.13
3 2 2 2 5 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	6 8 8 9 9 11 11 12 12 13 13 13 13 13 13 14 15 15 15 15 15 15 15 15 15 15 15 15 15	AVG

1.52 0.724 0.103 0.037

AGAT TREATMENT PLANT WASTEWATER RESULTS FOR THE MONTH OF MARCH 2002

EFFLUENT (CONTINUED)
OTHER HEAVY

DATE	METALS	PESTICIDES	WHOLE EFFLU.	
		resticipes	ENT TOXICITY	OIL & GREASE
	пдп	l/gri	TuC	
-				
7				
8				
4				
2				
9				
7				
8				
6				
10				
11				
12				
13				
14	NODI	IOON	24 75	
15			2000	
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23				
24				
25				
26				
27				
28				
29				
30				
31				
AVG			16.70	
N			31.75	4.30
MAX			31.75	4
1			31.75	4

WHEN CONTINUOUS COMPOSITE DISCRETE DISCRETE DISCRETE DISCRETE DISCRETE DISCRETE DISCRETE DISCRETE HOURLY NOTE: Read instructions before completing this form. FREQUENCY OF ANALYSIS (64-68) Form Approved. OMB No. 2040-0004 Approval expires 9-30-85 31/31 4/31 4/31 117 4/31 4/31 111 4/31 1/1 117 4/31 4/31 4/31 117 111 4/31 111 NO. EX. (62-63) UNITS pbm cfu/ 100ml cfu/ 100ml I/gm mg/l mg/l mg/l m/ hg/l l/gm QUANTITY OR CONCENTRATION (46-53) (54-61)
AVERAGE MAXIMUM TNTC 45690 168 144 0.0 90.0 55 45 406 9.0 0.00 0.10 99 45 7.6 12 (28-29) (30-31) 001 DISCHARGE NUMBER YEAR | MO | DAY (46-53) AVERAGE > 271667 22663 119 126 0.00 4 30 0.0 7.5 0.04 97 5 30 6.1 NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR) 2002 MONITORING PERIOD (4 Card Only) (38-45) MINIMUM 73,000 3130 0.00 0.02 82 24 62 20 7.3 7.0 2 QUANTITY OR LOADING (- (54-61) MAXIMUM UNITS lbs/day lbs/day lbs/day (20-21) (22-23) (24-25) lbs/day lbs/day mgd lbs/day YEAR MO (2-16) GU0020095 PERMIT NUMBER 0.645 200 318.6 214 225 512 262 597 0.00 90'0 0.50 FROM (3 Card only) (46-53) AVERAGE 0.457 150 415 144 335 157.4 0.031 150 0.00 154 PERMIT REQUIREMENT SAMPLE MEASUREMENT PERMIT MEASUREMENT
PERMIT
REQUIREMENT
SAMPLE
MEASUREMENT
PERMIT MEASUREMENT REQUIREMENT MEASUREMENT REQUIREMENT PERMIT REQUIREMENT PERMIT REQUIREMENT MEASUREMENT MEASUREMENT REQUIREMENT PERMIT REQUIREMENT MEASUREMENT REQUIREMENT MEASUREMENT MEASUREMENT REQUIREMENT FACILITY: Baza Gardens Sewage Treatment Plant LOCATION: Talofofo, Guam SAMPLE F TEE NAME/ADDRESS (Include facility Name/Location if Different) NAME: Guam Waterworks Authority ADDRESS: P.O. Box 3010 AGANA, GUAM 96932 Orthophosphate (PO4-P) INFLUENT SUSPENDED SOLIDS EFFLUENT SUSPENDED SOLIDS EFFLUENT SETTLEABLE SOLIDS CHLORINE RESIDUAL PARAMETER (32-37) ENTEROCOCI EFFLUENT BOD INFLUENT BOD E coli BACTERIA EFFLUENT FLOW Hd

	MEASUREMENT PERMIT	1160.22	1679.72	lbs/day	0.177	0.332	9 406				L	
REQUIREMENT SAMPLE			2.50	- Kaffel			0.495	l/gm	4		COMPOSITE	TE
MEASUREMENT PERMIT		54325	75665	lbs/day	28095	54325	0.50	l/gm	4	117	COMPOSITE	31 1
SAMPLE										711	COMPOSITE	<u>.</u>
PERMIT REQUIREMENT		1			6	12	17	l/6w			DISCRETE	
SAMPLE MEASUREMENT PERMIT					26.60	43.4	2.05			117	DISCRETE	
REQUIREMENT							1.0	킡	4	417	DISCRETE	
MEASUREMENT PERMIT REQUIREMENT				Park S	18.00	21.0	23.0	ပ္			DISCRETE	
SAMPLE MEASUREMENT PERMIT PERMIT				lbs/day			141	l/6m		1/7 Annually	DISCRETE	
SAMPLE MEASUREMENT PERMIT				ng/L				ng/L		Annually	DISCRETE	E .
SAMPLE MEASUREMENT PERMIT			=	lbs/day				l/6m		Annually	COMPOSITE	in m
SAMPLE MEASUREMENT PERMIT	1-11									Annually	COMPOSITE	
SAMPLE MEASUREMENT PERMIT REQUIREMENT	The state of								A A	Annually	COMPOSITE	
NAME/TITLE PRINCIPLE EXECUTIVE OFFICER GIL A. SHINOHARA		G.5 I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILLAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED OBTAINING THE NINGORAL SIMMEDIATELY RESPONSIBLE FOR	Y OF LAW THAT I HAVE E INFORMATION SUBMI INDIVIDUALS IMMEDIAT	PERSONALLY E	6.5 EXAMINED AND BASED		8.5	F	TELEPHONE	Annually	COMPOSITE	
ACTING GENERAL MANAGER GWA		IS TRUE ACCURATE AND COMPLETE. I MA 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 Floanishe involve the	OMPLETE, I AM AWARE SUBMITTING FALSE INFI IND IMPRISONMENT SE	BMITTED INFOR THAT THERE A ORMATION INC.		The second secon	4	179	479-7844	-	6000	
VIOLATIONS (Refe	l e	COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)	ment of between 6 month	nclude fines up. hs and 5 years)		SIGNATURE OF PRINCIPAL EXECUTIVE AREA OFFICER OR AUTHORIZED AGENT CODE	IPAL EXECUTIVE A	REA	NUMBER	YEAR	MO	DAY

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

ENETEROCCI DAILY MAX (4 VIOLATIONS) AND MONTHLY AVERAGE FECAL COLIFORM DAILY MAX (4 VIOLATIONS) AND MONTHLY AVERAGE ORTHOPHOSPHATE (Ibs/day) daily max (4 violations) NITRATE-NITROGEN (Ibs/day) dailymax (4 violations) TURBIDITY daily max (4 violations)



...... CANNACHU, GWA LABORATORY

%removal BOD

%09

34%

73%

85%

NS TREATMENT PLANT WASTEWATER RESULTS BAZA G

	%						
SUSP.	%removal	21%		%9-	44%	%98	45%
S	lbs/day	164		214	88	110	88 44
SUSP.	lbs/day	143		262	139	7.4	154
SETTL. SOLID	mI/I	0.0		0.0	0.0	0.0	0.0
BOD	l/gm	55		54	24	34	41
SUSP. SOLIDS	mg/l	48		99	38	20	43
Hd		7.32		7.62	7.33	7.58	7.46
DATE	-	32	4 5 9 1	20 0 E	2 2 2 4 5 9 7 8 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	20 21 23 24 24 25 26 27	28 29 30 31 AVG MIN
FLOW	0.358	0.504	0.455 0.595 0.425 0.426	0.498 0.476 0.577 0.585	0.439 0.439 0.440 0.423 0.475 0.645	0.410 0.420 0.426 0.432 0.433 0.432 0.432	0.383 0.410 0.426 0.437 0.358 0.645
BOD lbs/day	406	POF		326	330	597	415 326 597
SUSP. SOLIDS Ibs/day	334			246	250	512	335 246 512
SETTL. SOLID ml//	10.0			10.0	11.0	12.0	10.0
BOD mg/l	136			82	06	168	119 82 168
SOLIDS mg/I	112			62	89	144	97 62 144
H.	7.81			7.60	7.64	7.74	7.70 7.60 7.81
DATE 1	7 6	4	8 7 6 0	11 10 9	71 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	28 27 28 27 27 27 27 27 27 27 27 27 27 27 27 27	31 AVG MIN MAX

PERMIT REQUIRMENTS

30 8 8 8.5 month avg daily max

62% 34% 82%

85%

85%

150

150

ENETEROCCI DAILY MAX (4 VIOLATIONS) AND MONTHLY AVERAGE FECAL COLIFORM DAILY MAX (4 VIOLATIONS) AND MONTHLY AVERAGE ORTHOPHOSPHATE (Ibs/day) daily max (4 violations) NITRATE-NITROGEN (Ibs/day) dailymax (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 (Ibs/day) DAILY MAX (1 VIOLATION) AND MONTHLY AVERAGE BOD (Ibs/day) MONTHLY AVERAGE SUSPENDED SOLIDS % REDUCTION LESS THAN 85% BOD % REDUCTION LESS THAN 85%

Violations

BAZA C NS TREATMENT PLANT WASTEWATER RESULTS FOR THE MONTH OF JANUARY 2002

DISSOLVED OXYGEN TURBIDITY Ibs/day NTU			N/S 47.9	16.88 28.6	9.24 26.6		9.24 26.60
DISSOLVED DISSOLVED OXYORN OXYORN DISSOLVED			N/S	4.60	2.60 9		2.60
TOTAL DIS NITROGEN 03 Ibs/day	70101		43438	28095	75665		28095
TOTAL NITROGEN mg/l	20.70		16.00	10.20	15.20	15.53	10.20
NITRATE- NITROGEN Ibs/day	1679.72		480.54	972.30	1508.32	1160.22	480.54
NITRATE. NITROGEN mg/l	0.496		0.177	0.353	0.303	0.332	0.177
ORTHO- PHOSPHATE Ibs/day	209.96		54.30	46.82	318.59	157.42	246.82
ORTHO. PHOSPHATE mg/l	0.062		0.020	0.017	0.064	0.041	0.054
CHLORINE RESIDUAL Ibs/day	0.00		0.00	0.00	0.00	0.00	0.00
CHLORINE RESIDUAL µg/l	0.00	1	0.00	0.00	0.00	0.00	0.00
FECAL COLIFORM CU/100ml	73,000		TNTC	301000	441000	> 271667	TNTC
Enterococci MPN	45690		10530	3130	31300	22663	45690

	IIIN
	2.5
	0.500
	0.5
	0.100
0.034	90.0
6.1	12.
126/100ml	406/100ml

WHEN DISCHARGING SAMPLE TYPE (69-70) CONTINUOUS COMPOSITE DISCRETE DISCRETE DISCRETE DISCRETE DISCRETE DISCRETE DISCRETE **JISCRETE** HOURLY NOTE: Read instructions before completing this form. FREQUENCY OF ANALYSIS (64-68) Form Approved. OMB No. 2040-0004 Approval expires 9-30-85 31/31 4/31 4/31 4/31 4/31 4/31 4/31 4/31 117 4/31 111 4/31 111 411 117 117 117 NO. EX. (62-63) 9 UNITS cfu/ 100ml cfu/ 100ml mgd I/gm l/gm l/gm l/gm Ē hg/ I/gm QUANTITY OR CONCENTRATION (46-53) (54-61)
AVERAGE MAXIMUM > 24192 22090 0.49 0.10 406 0.00 197 132 0.0 9.0 33 45 38 45 7.7 12 YEAR MO DAY 2002 2 28 (26-27) (28-29) (30-31) 001 DISCHARGE NUMBER > 12216 9175 0.0 0.0 126 0.18 131 53 30 80 30 7.5 6.1 32 NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) DISCHARGE MONITORING REPORT (DMR) MONITORING PERIOD (4 Card Only) (38-45) MINIMUM 20,000 1270 0.05 7.0 0.00 7.3 98 4 34 28 2 lbs/day lbs/day UNITS lbs/day lbs/day YEAR MO DAY 2002 2 1 (20-21) (22-23) (24-25) DAY lbs/day lbs/day QUANTITY OR LOADING mgd (2-16) GU0020095 PERMIT NUMBER (54-61) MAXIMUM 3614.1 0.535 0.00 90.0 879 174 225 143 200 0.50 456 FROM (3 Card only) (46-53) AVERAGE 0.427 0.031 1076.4 150 503 114 279 116 150 0.00 PERMIT
REQUIREMENT
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PERMIT REQUIREMENT PERMIT SAMPLE MEASUREMENT PERMIT REQUIREMENT MEASUREMENT REQUIREMENT MEASUREMENT REQUIREMENT MEASUREMENT MEASUREMENT REQUIREMENT REQUIREMENT FACILITY: Baza Gardens Sewage Treatment Plant LOCATION: Talofofo, Guam PERMIT PERMIT P. TEE NAME/ADDRESS (Include facility Name/Location if Different) NAME: Guam Waterworks Authority
ADDRESS: P.O. Box 3010
AGANA, GUAM 96932 Orthophosphate (PO4-P) EFFLUENT SETTLEABLE SOLIDS INFLUENT SUSPENDED SOLIDS EFFLUENT SUSPENDED SOLIDS CHLORINE RESIDUAL PARAMETER (32-37) EFFLUENT BOD E coli BACTERIA ENTEROCOCI INFLUENT EFFLUENT FLOW Hd

mg/l 6 COMPOSITE	117		111	mg/n DISCRETE	1/7 DISCRETE	ntu 4 DISCRETE	1/7 DISCRETE	°C DISCRETE	li e	117. DISCRETE	mg/l Annually DISCRETE	Annually DISCRETE		Allindally	Annually COMPOSITE	may vilenand	Allinally	Annually COMPOSITE	Annually COMPOSITE	Annually COMPOSITE	100	Annually COMPOSITE	Annually COMPOSITE	1 1		671 479-7844	AREA NIIMBER NEAD 2 200	CODE		20/1/2 8
0.386 0.650	0.50		23			28.3 32.7	1.0	26.1 28.0															8.5	\			SIGNATURE OF PRINCIPAL EXECUTIVE	OFFICER OR AUTHORIZED AGENT		
lbs/day 0.148	lbs/day 16106		41			70.50		22.30		Ihefelox	Instrudy		ug/L			ibs/day							R PENALTY OF LAW THAT I HAVE BEDESONALLY COMME	N SUBMITTED HEREIN AND BASED IMEDIATELY RESPONSIBLE FOR	INFORMATION I BELIEVE THE SUBMITTED INFORMATION ATE AND COMPLETE, I AM AWARE THAT THERE ARE ELC	LESE INFORMATION INCLUDING	s may include fines up to \$10,000	16 months and 5 years)	ORTHOPHOSPHATE (mg/l) daily max (2 violations) ORTHOPHOSPHATE (lbs/dayl) daily max (4 violations)	NITRATE-NITROGEN (mg/l) daily max (2 violations) NITRATE-NITROGEN (bs/day) daily max (4 violations)
1396.61 1912.38	45373 72282																						I CERTIFY UNDER PENALTY OF LAW THAT	AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDVIDUALS IMMEDIATELY RESPONSIBLE FOR	OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED INFORMATION IS TRUE ACCURATE AND COMPLETE, I AM AWARE THAT THERE ADE SIG	NIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT SEE, 18 USC 511011 AND	33 USC \$1319 (Penalties under these statutes may include fines up to \$10,000	e all attachments here)	ORTH	
SAMPLE MEASUREMENT PERMIT REGUIREMENT	SAMPLE MEASUREMENT	REQUIREMENT	SAMPLE MEASUREMENT	PERMIT REQUIREMENT	SAMPLE MEASUREMENT	PERMIT	SAMPLE	MEASUREMENT	REQUIREMENT	SAMPLE	PERMIT	SAMPLE	MEASUREMENT	REQUIREMENT	SAMPLE	MEASUREMENT	REQUIREMENT	SAMPLE	PERMIT	SAMPLE	MEASUREMENT	PERMIT	(ECUTIVE OFFICER	*****	DAKA	MANAGER	INTED	ANY VIOLATIONS (Referenc	n 85% ions; nat shawn)	age exceeded ions) and monthly average
'itrate - Nitrogen (NO ₃ - N)	Total Kjedahl Nitrogen		Dissolved Oxygen			Turbidity		Temp		EFFLUENT	OIL & GREASE		Heavy Metals (mg/L or ug/L)	15.	1	(mg/L CaCO ₃)	7	Pesticides (ma/L or ua/L)			Whole Effluent Toxicity	(Tu _c)	NAME/TITLE PRINCIPLE EXECUTIVE OFFICER	ACALOMICS A 110	DNIES CALL	ACTING GENERAL MANAGER GWA	TYPED OR PRI	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 from! monthly assessed	ENTEROCOCI DALLY MAX (4 violations) and monthly average FECAL COLIFORM DALLY MAX (4 violations) and monthly average

BAZA C FOR TH

NS TREATMENT PLANT WASTEWATER RESULTS ATH OF FEBRUARY 2002

800	Veremoval						80%						7000	0/00	I				I	850/	200						%59	200					- 17%	1040	
SUSP. SOLIDS	zermovar					70000	17%						700	900						62%	2						52%	200					49%	100	
BOD	Instrady					00	83						474							42							155						114		
SUSP. SOLIDS	instinay	T				,0,	104						142	2						106							111						116	707	
SETTL. SOLID						•	0						- uoju	2						0.0							0.0						0.0	000	
BOD						,,,	47						30	8						14							39						29	**	77
SUSP. SOLIDS			-			30	8						22							36							28				***		32	30	-
H						774							7.57							7.30							7.43						7.50	7 20	100
DATE	-	2	3	4	2	9		. 60	6	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		AVG	MIN	
FLOW	0.460	0.455	0.429	0.428	0.406	0.414	0.465	0.457	0.437	0.421	0.437	0.433	0.535	0.484	0.408	0.455	0.426	0.424	0.398	0.353	0.405	0.403	0.393	0.431	0.416	0.410	0.477	0.282					0.427	11 7X7	707.0
BOD lbs/day						411		200000000000000000000000000000000000000					879							283							438					001	503	783	200
SUSP. SOLIDS Ibs/day						456				The second			152							277							231					020	27.2	701	
SETTL. SOLID ml//						11							N/S							11.0							10.0				-	404	10.0	2.5	
BOD mg/l						119							197							96	1					077	OLL					434	20	200	
SUSP. SOLIDS mg/l						132							34							94						02	00					80	34	-	
Hd					000	7.82			1	1		100	1.67					1	720	1.71	1		1		1	7.84	0.1					7.75	7.67		
DATE		3 6	0 4	-	0	9	1	00	200	0		77	2	4 7	0,40	710	10	700	200	07	200	22	24	25	36	27	28	200	30	24	-	AVG	N		

PERMIT REQUIRMENTS

85%

150

150

30

8 9

month avg daily max

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

FECAL COLIFORM DAILY MAX (4 violations) and monthly average

Suspended solids (mg/l) monthly average exceeded ENTEROCOCCI DAILY MAX (4 violations) and monthly average

BOD % removal less than 85% Turbidity daily max exceeded (4 violations; not shown) Suspended Solids % removal less than 85%

Violations

TEMP °C 28.0 22.3 NIS 28.0 TURBIDITY NTU 32.7 31.5 20.5 28.5 DISSOLVED OXYGEN Ibs/day 15.54 33.02 13.54 31.43 DISSOLVED mg/l 4.50 7.40 4.60 7.90 TOTAL NITROGEN Ibs/day 11,39 45372.75 4.70 16105.61 15.50 72281.81 16106 72282 36535 56569 TOTAL I/6m 4.70 986 15.50 15.50 NITRATE. 507.16 1634.77 lbs/day 1532.12 1396.61 507.16 1912.38 1912,38 NITRATE. 0.148 mg/l 0.223 0.650 0.524 0.386 0.148 0.650 ORTHO. PHOSPHATE Ibs/day 363.23 3614.09 1076.45 113.14 3614.09 113,14 215.33 ORTHO. PHOSPHATE 0.106 I/gm 0.493 0.048 0.059 0.048 CHLORINE lbs/day 0.00 0.00 0.00 0.00 0.00 CHLORINE RESIDUAL µg/l 0.00 0.00 0.00 0.00 0.00 FECAL COLIFORM CU/100ml 110,000 S/N TNTC 20000 > 12216 20000 > 24192 Enterococci 22090 MPN 11330 1270 2010 9175 1270 22090 DATE MIN

EFFLUENT (CONTINUED)

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

1 NTU

26.10 22.30 28.00

28.30 20.50 32.70

23.38 13.54 33.02

6.10 7.90

2.5

0.500

0.5

0.100

0.031

12

126/100ml 406/100ml

SAMPLE TYPE (69-70) CONTINUOUS COMPOSITE COMPOSITE COMPOSITE WHEN DISCHARGING COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE HOURLY DISCRETE DISCRETE DISCRETE DISCRETE COMPOSITE DISCRETE DISCRETE DISCRETE NOTE: Read instructions before completing this form. DISCRETE Form Approved. OMB No. 2040-0004 Approval expires 9-30-85 FREQUENCY OF ANALYSIS (64-68) 31/31 4/31 4/31 4/31 111 4/31 4/31 111 117 4/31 4/31 111 4/31 111 111 4/31 NO. EX. (62-63) 3 UNITS pbu l/gm l/gm mg/l Mg/I cfu/ 100ml m// oful al hg/I ₩ J QUANTITY OR CONCENTRATION (54-61) MAXIMUM 1,170,000 241 196 45 8 57170 45 406 8 2 0.00 9.0 0.08 7.8 0.10 12 MONITORING PERIOD

DAY

1 TO 2002 3 31

74-25) (26-27) (28-29) (30-31) DISCHARGE NUMBER (46-53) AVERAGE 335,000 121 30 165 30378 36 30 3 126 33 (17-19) 0.00 0.05 7.6 6.1 001 NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR) (4 Card Only) (38-45) MINIMOM 30,000 12010 53 126 9 26 7.0 7.5 0.00 0.02 YEAR MO DAY 2002 3 1 (20-21) (22-23) (24-25) (54-61) MAXIMUM UNITS lbs/day lbs/day lbs/day lbs/day QUANTITY OR LOADING Bom lbs/day lbs/day (2-16) GU0020095 PERMIT NUMBER 0.485 802 200 225 652 200 150 361.2 0.00 90.0 0.50 FROM (3 Card only) (46-53) AVERAGE 0.392 388 115 150 150 522 109 0.031 167.9 0.00 PERMIT
REGUIREMENT
SAMPLE
MEASUREMENT
PERMIT MEASUREMENT REQUIREMENT MEASUREMENT REQUIREMENT SAMPLE SAMPLE MEASUREMENT PERMIT REQUIREMENT SAMPLE
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PERMIT MEASUREMENT PERMIT REQUIREMENT PERMIT REQUIREMENT MEASUREMENT REQUIREMENT MEASUREMENT REQUIREMENT REQUIREMENT MEASUREMENT FACILITY: Baza Gardens Sewage Treatment Plant PERMIT SAMPLE PERMIT fac....y Name/Location if Different) NAME: Guam Waterworks Authority
ADDRESS: P.O. Box 3010
AGANA, GUAM 96932 LOCATION: Talofofo, Guam INFLUENT SUSPENDED SOLIDS EFFLUENT SUSPENDED SOLIDS EFFLUENT SETTLEABLE SOLIDS Orthophosphate (PO4-P) PARAMETER (32-37) CHLORINE RESIDUAL EFFLUENT BOD INFLUENT BOD ENTEROCOCI FLOW E coli BACTERIA EFFLUENT 표

COMPOSITE

#

	PERMIT	1659.47	2849.26	lbs/day	0.40				ŀ		
Total Kindahi Miss	REQUIREMENT		WALKER IN	Á	0.426	0.565	0.709	l/6w	4		COMPOSITE
uation Nitrogen	MEASUREMENT PERMIT REQUIREMENT	55282	116378	lbs/day	24195	55282	116378	l/gm		117	COMPOSITE
Dissolved Oxygen	SAMPLE MEASUREMENT PERMIT			986	13	4	;			1/1	COMPOSITE
	REQUIREMENT			SE IPI			/	V _g m			DISCRETE
Turbidity	MEASUREMENT PERMIT REQUIREMENT				27.30	33.3	43.0	ntu		111	DISCRETE
Тетр	MEASUREMENT PERMIT				27.00	27.8	1.0	٥		<i>111</i>	DISCRETE
EFFLUENT OIL & GREASE	SAMPLE MEASUREMENT PERMIT			lbs/day							DISCRETE
Heavy Metais (mg/L or ug/L)	SAMPLE MEASUREMENT PERMIT			ug/L				light light	Ann	199	DISCRETE
Hardness (mg/L CaCO ₃)	SAMPLE MEASUREMENT PERMIT		<u> </u>	lbs/day				STATE OF THE PARTY	Ann		COMPOSITE
Pesticides (mg/L or ug/L)	SAMPLE MEASUREMENT PERMIT							M 144	Ann	报答的	COMPOSITE
Whole Effluent Toxicity SAMPLE Whole Effluent Toxicity MEASUREMENT (Tu _c) PERMIT REQUIREMENT NAME/ITILE PRINCIPLE EXECUTIVE DESIGNATIONS REQUIREMENT REQU	REQUIREMENT SAMPLE MEASUREMENT PERMIT REQUIREMENT			THE STATE OF THE S					Annı	Annually co Annually co Annually co	COMPOSITE
	Name of the last	OERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY WALLIAMS.	AW THAT I HAVE PE	RSONALLY E	D.D EXAMINED		8.5		Annually		COMPOSITE
GIL A. SHINOHARA ACTING GENERAL MANAGER GWA	RA NVAGER	OBTAINING THE INFORMATION LALS IMMEDIATELY RESPONSIBLE FOR IS TRUE ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTIOS FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT SET A 1100 AND INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT SET A 1100 AND IMPRISONMENT SET AT 1100 AND IMPRISONMENT	DUALS IMMEDIATEL SELIEVE THE SUBMI ETE. I AM AWARE TI TTING FALSE INFOR	LY RESPONSI	IBLE FOR MATION RE SIG.		1	TELE]	TELEPHONE		SUL SUL
TYPED OR PRINT PLANATION OF ANY	COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)	33 USC \$1319 (Penalities under these statutes may include fines up to \$10,000 and or a maximum imprisonment of between 6 months and 5 years) et all attachments here.	se statutes may incl f between 6 months	ude fines up t and 5 years)		SIGNATURE OF PRINCIPAL EXECUTIVE	PAL EXECUTIVE AR	AREA	479-7844 NUMBER	YEAR	2
Suspended Solids % removal less than 85% BOD % removal less than 85%	%5					מווחשיים ניים ניים ניים ניים ניים ניים ניים	_]	CODE	\dashv		DAY
Turbidity daily max exceeded (4 violations)				Nitrat	Nitrate-nitrogen (mg/l) daily max exceeded (4 violations)	aily max exceeded	4 violations	(1 1		

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

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 (bs/day) daily max (3 violations)

BAZA GA TREATMENT PLANT WASTEWATER RESULTS FOR THE MOUNTH OF MARCH 2002

BOD %removal	%19	%99	75%	71%	67%
SUSP. SOLIDS %removal	86%	79%	82%	%99	%99 %8/
BOD Ibs/day	101	29	200	66	115
SUSP. SOLIDS Ibs/day	79	85	120	150	109
SETTL. SOLID ml/l	0	0.0	0.0	0.0	0.0
BOD mg/l	33	99	09	33	36
SUSP. SOLIDS mg/l	26	26	36	909	35
푭	7.47	7.45	7.59	7.82	7.58
DATE 1	200700000000000000000000000000000000000	5 1 2 2 2 2 3 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	23 23 23 23 23 23 23 23 23 23 23 23 23 2	24 26 27 28 29 30 31	AVG
FLOW mgd 0.353	0.370 0.407 0.366 0.366 0.370 0.372	0.429 0.396 0.454 0.454 0.372 0.402	0.390 0.370 0.399 0.350 0.421	0.443 0.341 0.353 0.348 0.407 0.485	0.392 0.311 0.485
BOD Ibs/day	235	174	802	342	388 174 802
SUSP. SOLIDS Ibs/day	586	413	652	438	522 413 652
SETTL. SOLID ml/l	2	11.0	10.0	0.0	10.3
BOD mg/l	77	53	241	114	121 53 241
SOCIDS mg/l	192	126	196	146	165 126 196
Hd	7.87	7.83	7.87	7.79	7.79
DATE 1	7 4 5 9 7 8 6 2 4 7	25 4 4 5 5 7 8 5 4 1 3 2 5	22 23 24 25 25	97.8607	MAX

PERMIT REQUIRMENTS

39 99 month avg daily max

85%

85%

150

150 200

Suspended Solids % removal less than 85% BOD % removal less than 85%

Turbidity daily max exceeded (4 violations)
Suspended Solids (mg/l) daily mex (1 violation) and monithly average exceeded

BOD (mg/l) daily max (1 violation) and monthly average exceeded

Fecal Colifrom daily max exceeded (4 violations) and monthly average Orthophosphate (mg/l) daily max (4 violations)
Orthophosphate (ibs/day) daily max (3 violations

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

DENS TREATMENT PLANT WASTEWATER RESULTS
ONTH OF MARCH 2002

BAZA

TEMP	28.0	N/S	27.0	28.3	27.77 27.00 28.30
TURBIDITY	32.7	27.3	43.0	30.1	33.28 27.30 43.00
DISSOLVED OXYGEN Ibs/day	13.74	13.11	16.64	14.41	14.47
DISSOLVED OXYGEN mg/l	4.50	4.00	5.00	4.80	4.58 4.00 5.00
TOTAL NITROGEN Ibs/day	28031.09	24194,52	116378.11	52523.94	55281.91 24194.52 116378.11
TOTAL NITROGEN mg/l	14.30	16.70	17.40	18.40	16.70 14.30 18.40
NITRATE- NITROGEN Ibs/day	1389.79	837.39	2849.26	1561.45	1659.47 837.39 2849.26
NITRATE. NITROGEN mg/l	0,709	0.578	0.426	0.547	0.565 0.426 0.709
ORTHO. PHOSPHATE Ibs/day	158.78	28.98	361.17	122.75	167.92 28.98 361.17
ORTHO. PHOSPHATE mg/l	0.081	0.020	0.054	0.043	0.050
CHLORINE RESIDUAL Ibs/day	0.00	0.00	0.00	0.00	0.00
CHLORINE RESIDUAL µg/l	00.00	0.00	00.00	0.00	0.00
FECAL COLIFORM CU/100ml	1,170,000	70000	70000	30,000	335000 30000 1170000
DATE Enterococci DATE MPN 1 2 3 4	23820	28510	57170	12010	30378 12010 57170
DATE 1	7908102	12 12 13 13 14 13 15 14 13 15 15 15 15 15 15 15 15 15 15 15 15 15	25 22 22 23 23 23 23 23 23 23 23 23 23 23	26 27 28 29 29 30 31	MAX

1 NTU

2.5

0.500

0.5

0.100

0.031

6.1

126/100ml 406/100ml

PE EE NAME/ADDRESS (Include	Je	MATIONA							1.12			
racility Name/Location if Different)		NA HONAL P	NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) DISCHARGE MONITORING REPORT (DMR)	RGE ELIMINA ORING REP	ATION SYSTEM (NI ORT (DMR)	OES						
NAME: Guam Waterworks Authority ADDRESS: P.O. Box 3010 AGANA, GUAM 96932			(2-16) GU0020141 PERMIT NUMBER		DISC	(17-19) 001 DISCHARGE NUMBER			Corm Approved. OMB No. 2040-0004 Approval expires 9-30-85	3. 0004 es 9-30-85		
FACILITY: Northern District Sewage Treatment Plant LOCATION: Dededo, Guam	Treatment Plant	FROM	YEAR MO 2002 1 (20-21) (22-23)	MONIT DAY 1 (24-25)	MONITORING PERIOD AY TO 2002 25) (26.27)	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1						
PARAMETER (32-37)		(3 Card only) (46-53)	QUANTITY OR LOADING (54-61)		(4 Card Only)	QUANTITY OR C	QUANTITY OR CONCENTRATION	ead instruc	efore	completing this for	E.	
FLOW	SAMPLE MEASUREMENT	AVERAGE 5.3	MAXIMUM 5.6	STIND	MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	EX. OF	OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)	
	PERMIT REQUIREMENT SAMPLE		6.0	2,0				pāw		31/31	HOURLY	
BOD	MEASUREMENT PERMIT REQUIREMENT	6025	8543	lbs/day	102	136	197	l/gm		4/31	COMPOSITE	
EFFLUENT BOD	SAMPLE MEASUREMENT PERMIT	4965	6376	lbs/day	48	111	139	l/gm	2	4/31	COMPOSITE	
INFLUENT SUSPENDED SOLIDS	SAMPLE MEASUREMENT PERMIT	3235	8512 5229	lbs/day	32	85	170	1/6 m			COMPOSITE	
EFFLUENT SUSPENDED SOLIDS	SAMPLE MEASUREMENT PERMIT	1988	2515	lbs/day	36	45	89	Ngm		40.48	COMPOSITE	
EFFLUENT SETTLEABLE SOLIDS	SAMPLE MEASUREMENT PERMIT	2504	5008		0	50	100	Nim			COMPOSITE	
EFFLUENT OIL & GREASE	SAMPLE MEASUREMENT PERMIT	S/N	N/S	lbs/day	N/S	1.0 N/S	2.0 N/S	l/gm			DISCRETE	
EFFLUENT pH	SAMPLE MEASUREMENT PERMIT REQUIREMENT				7.0	7.1	7.1	Principal Control			DISCRETE	
MARIETY					7.0		0.6		1 <u>1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 </u>		DISCRETE	
GIL A. SHINOHARA		I CERTIFY UNDER PERALITY OF LAW THAT HAVE PERSONALLY EXAMINED AND AM FAMILAR WITH THE INFORMATION SUBMITTED HERRIN AND BASE ON MY MICHARY OF THOSE BUDNIOUALS INMEDIATELY RESPONSIBLE FOR OFF AMMINICATE INSCIDENT AND ASS.	THEY UNDER PENALTY OF LAW THAT HAVE PERSONALLY EXAMINED AM FAMILIAR WITH THE INFORMATION SUBMITTED HERRIN AND BASED THY MOURPY OF THOSE MONITOLIALS MINEDIATELY RESPONSIBLE FOR MANNO THE INFORMATION THE INFORMATION THE	PERSONALL MITTED HEREI	Y EXAMINED N AND BASED NSIBLE FOR		2	T 3	TELEPHONE		DATE	
ACTING GENERAL MANAGER GV/A	AGER	IS TRUE ACCUBATE AND COMPLETE I AN AWARE THAT THERE ARE SIGNIFIED WEDMATTON TRELEGY. THE SUBMITTED WEDMATTON THE PROBLEMENT OF SUBMITTING FALSE WEDMATTON MICLUDING THE POSSILLY OF FINE AND IMPRISONMENT SEE. 18 USC \$1001 AND AN IREC 43300.	COMPLETE, I AM AWAR COMPLETE, I AM AWAR R SUBMITTING FALSE IN E AND IMPRISONMENT S	BMITTED INFO E THAT THER FORMATION II EE. 18 USC \$11	E ARE SIG. NCLUDING		A,	671	V V V V V V V V V V V V V V V V V V V	\C	ann	
TYPED OR PRINTED ON OUR BANK AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)	VIOLATIONS (Refer	and or a maximum limptisonment of between 8 months and 5 years) rence all attachments here)	inder these statutes may onment of between 6 mor here)	include fines of sand 5 year	up to \$10,000	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	100	AREA	NUMBER	YEAR	MO DAY	
BOD (mg/l AND lbs/day) MONTHLY AVERAGE	AGE	1.7									-	

0/2/5

Explanation of violations attached at end of DMR's

NORTH STRICT TREATMENT PLANT WASTEWATER RESULTS
FOR THE AUNTH OF JANUARY 2002

OIL & GREASE Ibs/day								I						1317			1317	1317
OIL & GREASE mg/l														29.8			29.8	29.8
BOD %removal	-12%		61%			39%				-33%							14%	-33%
SUSP. SOLIDS %removal	%19		%09-			43%				14%							19%	-50%
BOD Ibs/day	6376		2042			5204				6238							4965	2042
SUSP. SOLIDS Ibs/day	1743		2042			6167				1651							1988	1657
SETTLE. SOLID ml/l	0.0		0.3			0.0	T			9.0	1						0.2	0.0
BOD	139		48	I	100	120				136	Ī							130
SUSP. SOLIDS mg/l	38		48		9	00	I			36							600	285
Hd	6.97		7.08		707	10.1				7.1							60.7	7.10
DATE	- 25	4 12 0	7 8 6 Ot	13	15	17	19	20	22	23	25	26	27	29	30		AVG	MAX
FLOW	5.10 5.50 5.50	5.40 5.50	5.50 5.10 5.30	5.30 4.60 4.70	5.30	5.40	5.30	5.40	5.20	5.50	5.60	5,40	5.50	5.30	5.40	90	4 60	5.60
BOD Ibs/day	5688		5189		8543					4679						2002	4679	8543
SOLIDS SOLIDS Ibs/day	5229		1361		4424					1927						293E	1361	5229
SOLID	7.8		3.2		4.1					2.5						200	3.2	8.5
BOD	124		122		197					102						136	102	197
SOLIDS	114		32		102					75						73	32	114
H.	7.02		6.97		7.08					01.7						7.04	6.97	7.10
DATE	285	1007	8 6 0 7	13 13	16 15	18	19	20	22	24	25	27	28	29	31	AVG	MIN	MAX

PERMIT REQUIREMENTS

2504

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

VIOLATIONS

PE GE NAME/ADDRESS (Include facility Name/Location if Different)	ap.	NATIONAL P	NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) DISCHARGE MONITORING REPORT (DMR)	SE ELIMINA	ATION SYSTEM (N	pDES					
NAME: Guam Waterworks Authority ADDRESS: P.O. Box 3010 AGANA, GUAM 96932			(2-16) GU0020141 PERMIT NUMBER		DISC	(17-19) 001 DISCHARGE NUMBER			Form Approved. OMB No. 2040-0 Approval expire:	Form Approved. OMB No. 2040-0004 Approval expires 9-30-85	
FACILITY: Northern District Sewage Treatment Plant LOCATION: Dededo, Guam	Treatment Plant	FROM	YEAR MO 2002 2 (20-21) (22-23)	MONITO DAY 1 (24-25)	MONITORING PERIOD AY TO 2002 25) (26-27)	MO DAY 2 28 (28-29) (30-31)	Š	i de constant de c			3
(32-37)		(3 Card only) (46-53)	QUANTITY OR LOADING (54-61)		(4 Card Only)	QUANTITY OR	QUANTITY OR CONCENTRATION		NO NO	ATION NO EDECITED THIS FORM.	
FLOW	SAMPLE MEASUREMENT	AVERAGE 5.4	MAXIMUM	UNITS	MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	EX. (62-63)	OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
	PERMIT REQUIREMENT		6.0	pôw	新世界教育			pge		31/31	HOURLY
INFLUENT BOD	MEASUREMENT PERMIT	6748	7824	lbs/day	141	152	177	mg/I		4/31	CONTINUOUS
EFFLUENT BOD	SAMPLE MEASUREMENT PERMIT	9712	14036	lbs/day	144	218	900				COMPOSITE
	REQUIREMENT SAMPLE MEASUREMENT	4256	8512	(1)		85	170	l/gm	9	4/31	COMPOSITE
Sano	PERMIT REQUIREMENT	3596	7956	lbs/day	23	81	180	l/gm		4/31	COMPOSITE
EFFLUENT SUSPENDED SOLIDS	SAMPLE MEASUREMENT PERMIT RECHIPEMENT	2052		lbs/day	24	46	70	l/g iii		4/31	COMPOSITE
EFFLUENT SETTLEABLE SOLIDS	SAMPLE MEASUREMENT PERMIT	2004	2008		0.01	50	100	1		47	COMPOSITE
EFFLUENT OIL & GREASE	REGUIREMENT SAMPLE MEASUREMENT PERMIT	N/S	NIS	lbs/day	SIN	1,0 M/S	2:0		4	4131	DISCRETE
	REQUIREMENT SAMPLE MEASUREMENT			distant.		200	NIS	l/6m	11 10 11 10 10 10 10 10 10 10 10 10 10 10 10 10 1	0/31	DISCRETE
	PERMIT REQUIREMENT			*	7.0	7.1	1.7			4/31	DISCRETE
							9.0			417	DISCRETE
NAME/TITLE PRINCIPLE EXECUTIVE OFFICER	TIVE OFFICER	I CERTIFY UNDER PENAL	CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED	PERSONALLY	Y EXAMINED	•		Maria			
GIL A. SHINOHARA		ON MY INQUIRY OF THOS OBTAINING THE INFORM IS THE ACCURATE AND	AND AM FAMILIARY WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRTY OF THOSE INDOMIDIALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION BELIEVE THE SUBMITTED INFORMATION IS TDIE ACCURATE.	TTED HEREIN ELY RESPON MITTED INFO	N AND BASED ISIBLE FOR			=	TELEPHONE		DATE
ACTING GENERAL MANAGER GWA TYPED OR DEMITTER	AGER	NIFICANT PENALTIES FO THE POSSIBILITY OF FINE 33 USC \$1319 (Penalties	WIFCANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINE AND IMPROSOMMENT SEE: 19 USC \$1019 AND 33 USC \$1319 (Penalties under these shallows may include may	THAT THERE ORMATION IN E. 18 USC \$10	E ARE SIG. VCLUDING 201 AND	To the second	A	129	479-7844	MAV	3 2007
COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference VIOLATIONS	Y VIOLATIONS (Refe	and or a maximum imprise rence all attachments	a maximum imprisonment of between 6 months and 5 years) all attachments here)	hs and 5 years	3)	SIGNATURE OF PRINCIPAL EXECUTIV OFFICER OR AUTHORIZED AGENT	ш	AREA	NUMBER	R YEAR	MO DAY
BOD (mg/i AND Ibs/day) DAILY MAX (2 VIOLATIONS EACH) AND MONTHLY AVERAGE	(IOLATIONS EACH)	AND MONTHLY AVER		35/1/2	2	22					

NORT) ISTRICT TREATMENT PLANT WASTEWATER RESULTS FOR THE WONTH OF FEBRUARY 2002

URDANIMO, L. DAM. RICHT

	7,107.00	lbs/day															-												-					10/AIG#	-
	OIL & GREASE	l/gm																																#DIV/0!	_
	BOD	%removal						-117%						7777	-14%						10%	0/1-						-42%	2/11					-44%	-117%
	SUSP.	Zeremoval					1000	-46%						4407	-1470						7068	25/0						87%					700	0.%	-74%
	ВОО	ins/day					44000	14035						7490	1450						6245	200						11139					0449	21.76	6245
	SUSP. SOLIDS	instruay.					2544	2511						4750	00/1						2168							1061					2000	7007	1001
	SETTLE. SOLID						. 0	0.0						,	-						0.1							0.0						- 0	0:0
	BOD	in in					306	0000						168							144							252					248	444	144
	SUSP. SOLIDS					1	20							40							90							24					46	25	47
	Ħ						7.09	200						7.13							7.03							7					7.06	2007	20.1
	DATE	,	2	2	P	4	9	1		0	10	1	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	59	30	31	AVG	MIN	
	FLOW	5.70	5.50	5.40	5.60	5.20	5.50	5.30	5.40	5.30	5.60	5.40	5.30	5.30	5.20	5.40	5.30	5.40	5.50	4.90	5.20	5.50	5.50	5.50	5.50	5.40	5.30	5.30	5.40				5.39	4.90	
	BOD lbs/day						6468							6542							6158							1824					6748	6158	
SIICD	SOLIDS Ibs/day						2202						Section and the second	1017							3209						1010	908/					3596	1017	2000
SETTIF	SOLID						9.3							9.6						00	8.8						440	0.4					10.5	8.6	440
	BOD mg/l						141							148						440	741						477						152	141	177
SUSP.	SOLIDS						48							23				T		7.4							180	8	T				81	23	180
2002	표						7.11							1.24						7 17							7.19						7.18	1.11	7.24
	DATE	2	4 6	> <	,	0	9	-	0	50	2 7	- 5	7	2 5	4 4	2 4	17	48	40	20	24	22	23	24	25	26	27	28	29	30	31		AVG	MIN	MAX

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

VIOLATIONS

4256 8512

2504

85 170

100

monthly avg daily max

PERMIT REQUIREMENTS

Pt. EE NAME/ADDRESS (Include facility Name/Location if Different)	ep	NATIONAL	NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES)	RGE ELIMIN	ATION SYSTEM IN	PDECI						
NAME: Guam Waterworks Authority ADDRESS: P.O. Box 3010 AGANA, GUAM 96932			DISCHARGE MONITORING REPORT (DMR) (2-16) GU0220141 PERMIT NUMBER	ORING REP	PORT (DMR)	(17-19) 001 DISCHARGE NUMBER			Form Approved. OMB No. 2040-0 Approval expire:	Form Approved. OMB No. 2040-0004 Approval expires 9-30-85		
FACILITY: Northern District Sewage Treatment Plant LOCATION: Dededo, Guam	Treatment Plant	FROM	YEAR MO 2002 3 (20-21) (22-23)	MONIT DAY 1	MONITORING PERIOD AY TO 2002 250 250 250 250 250 250 250	MO 8			2			
PARAMETER (32-37)		(3 Card only) (46-53)	QUANTITY OR LOADING	Г	(4 Card Only)	(28-29) (30-31) QUANTITY OR	QUANTITY OR CONCENTED TOWN	Read Instru	ctions befor	NOTE: Read instructions before completing this form.	form.	
FLOW	SAMPLE MEASUREMENT	AVERAGE 5.3	MAXIMUM	UNITS	(38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX. (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)	
	REQUIREMENT		6.0	pāw				pgw		31/31	HOURLY	-
INFLUENT BOD	MEASUREMENT PERMIT	4876	6594	lbs/day	80	106	134	mo/l		4034	CONTINUOUS	
EFFLUENT BOD	SAMPLE MEASUREMENT PERMIT	5579	7676	Ibs/day	86	600				100	COMPOSITE	
INFLUENT	REQUIREMENT SAMPLE MEASTIDE	4256	8512	30436		85	156	l/gm	2	4/31	COMPOSITE	
SUSPENDED SOLIDS	PERMIT REQUIREMENT	4267	7072	lbs/day	46	96	160	Ngm		4/34	COMPOSITE	
EFFLUENT SUSPENDED SOLIDS	SAMPLE MEASUREMENT PERMIT	2748	4504	lbs/day	46	61	100				COMPOSITE	
EFFLUENT SETTLEABLE SOLIDS	SAMPLE MEASUREMENT	2504	5008			- 50	100)B	7	4/31	COMPOSITE	
- H	REQUIREMENT:				0.01	1.0	0.3	IJ I		4/31	DISCRETE	
ž	MEASUREMENT PERMIT REQUIREMENT	N/S	N/S	lbs/day	N/S	N/S	SIN	Ngm		1/7	DISCRETE	
EFFLUENT pH	SAMPLE MEASUREMENT PERMIT				7.0	7.0	7.1			1/30	DISCRETE	
					7,0		9.0		200	177	DISCRETE	
NAME/TITLE PRINCIPLE EXECUTIVE DEFICED	IVE OFFICED											
	N N N N N N N N N N N N N N N N N N N	AND AM FAMILIAR WITH	CENTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY MACHINE OF	PERSONALLY	Y EXAMINED N AND BASED							
GIL A. SHINOHARA ACTING GENERAL MANAGER		OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED INFORMATION IS TRUE ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE END OF	SE INDIVIDUALS IMMEDIA; ATION I BELIEVE THE SUR COMPLETE, I AM AWARE	TELY RESPON BMITTED INFO	ISIBLE FOR IRMATION	X	A	1	TELEPHONE	+	DATE	
GWA	i	NIFICAN PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING 31 HE POSSIBILITY OF FINE AND IMPRISONMENT SEE, 18 USC \$1001 AND	R SUBMITTING FALSE INF E AND IMPRISONMENT SE	FORMATION IN	VCLUDING	*	The second	671	479-7844			
COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference	VIOLATIONS (Refer	The state of the s	Inder these statutes may burnent of between 6 mon here)	Include fines u ths and 5 years	up to \$10,000	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		AREA	NUMBER	AAA VEAR	2002 MOD DAY	
SUSPENDED SOLIDS (mg/l AND Ibd/day) MONTHLY AVERAGE BOD (mg/l AND Ibs/day) MONTHLY AVERAGE) MONTHLY AVERAC		\ \frac{1}{2}				7	CODE	1			
			5						2000			

NORTHER, J. STRICT TREATMENT PLANT WASTEWATER RESULTS FOR THE MONTH OF MARCH 2002

OIL &	lbs/day																								0000	7300							2368	2368	2004
GREASE																									0.14	54.0			-				54.6	54.6	
BOD	%removal					TOTAL SECTION	-12%							-41%							.16%						700	07.0					-16%	-41%	
SOI IDS	%removal						-67%							%09							%6-						1074	11%					14%	-67°/	
COR	lbs/day						5449							4857							9292							4332					5579	4339	
SUSP.	ibs/day						4504							1995							2460							2033					2748	1005	
SETTLE.	ml/l						0.3							0.0							0.0							0.3					0.2	0	
COR	MoM						121						000000000000000000000000000000000000000	112					,		156							88					122	00	
SUSP.	ma/l						100							46							20							46					61	AG	
7	i						7.12							7.04		The state of the state of					6.98							6.98					7.03	00 0	
DATE	1	-	2	6	4	2	9	7	8	6	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AVG	MINI	
WO II	mad	5.40	5.50	5.40	5.40	5.20	5.40	5.20	5.30	5.40	5.30	5.50	5.00	5.20	5.20	5.20	5.40	5.40	5.30	5.00	5.90	5.30	4.90	5.40	5.20	5.20	5.30	5.30	5.50	5.50	5.40	5.50	5.33	200	
000	lbs/day						4864							3448							6594	S. C.						4597					4876	2440	1000
SUSP.	lbs/day	,					2702							5031						A CONTRACTOR OF THE PARTY OF TH	2263							7072					4267	2262	
SOLID	ME						8.2							8.5		100000000000000000000000000000000000000			The second second		7.7							7.5					8.0	7.5	
900	Ngm						108							80							134							104					106	200	
SOLIDS	Mg/l						09							116							46							160					96	30	-
H	i						7.26							7.15							7.09							7.22	1000				7.18	1	
DATE	!	-	2	3	4	5	9	7	8	6	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AVG	2	

PERMIT REQUIREMENTS

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

2504

			SAMPLE TYPE (69-70)	CONTINUOUS	COMPOSITE	COMPOSITE	COMPOSITE	COMPOSITE	DISCRETE	DISCRETE	DISCRETE	DISCRETE	DISCRETE	COMPOSITE
	ed. 0-0004 ires 9-30-8 5	ting this form.	FREQUENCY OF ANALYSIS (64-68)	34/31	4/7	417		117	0 711	α πι	0 7/1	0 - 21)	10 TIT	417
	Form Approved. OMB No. 2040-0004 Approval expires 9-30-85	NOTE: Read instructions before completing this form.	NO. EX. (62-63)			-		-	2				1	7
		ad instruction	UNITS	p p p	mg/	l/gm	V6w	Vôu	cfu/100ml	cfu/100ml	ng/L		ပ္ ြ	No.
	Ш	NOTE: Re	146-53 (54-61) VVERAGE MAXIMUM 0.34 0.64	9006	000	96	192	71	406	4570.0	0.0	7.4	2.35	0.10
	(17-19) 001 DISCHARGE NUMBER	(28-29) (30-31)	(46-53) AVERAGE 0.34	183		30	70	30	126	100	6.1	22.3	1.70	
NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES)		MONITORING PERIOD YEAR TO 2002 (26-27) (4 Card Only)	(38-45) MINIMUM 0.22	48	9	0	6	64.00	4570.00	0.00	7.1	6.5	1.29	
OLLUTION DISCHARGE ELIMINATION SYST		- DAY	UNITS	lbs/day	lbs/day	lbs/day	lbs/day			ug/L			lbs/day	
IONAL POLLUTION I	(2-16) GU0020273 PERMIT NUMBER	0 2 0	MAXIMUM	66	19	44	14				0.039		9.0	0,33
NAT	40-2	FROM (3 Card only) (46-53)	AVERAGE	51	12	98	9	86			0.020		0.5	
a p		nt Plant	SAMPLE MEASUREMENT PERMIT RECUIREMENT	SAMPLE MEASUREMENT PERMIT REQUIREMENT	SAMPLE MEASUREMENT PERMIT	SAMPLE MEASUREMENT PERMIT	NEQUIREMENT SAMPLE MEASUREMENT PERMIT	REGUIREMENT SAMPLE MEASUREMENT PERMIT	SAMPLE MEASUREMENT PERMIT	SAMPLE MEASUREMENT PERMIT	SAMPLE MEASUREMENT PERMIT	SAMPLE MEASUREMENT PERMIT	SAME SAME MEASUREMENT PERMIT REQUIREMENT	
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 PARAMETER (32-37)	FLOW	INFLUENT BOD	EFFLUENT BOD	INFLUENT SUSPENDED SOLIDS	EFFLUENT SUSPENDED SOLIDS	FECAL COLIFORM	Enterococci	TOTAL CHLORINE RESIDUAL	EFFLUENT PH	Temperature °C	Orthophosphate (PO4-P)	

0	4 COMPOSITE		COMPOSITE 17 COMPOSITE	DISCRETE DISCRETE	3 DISCRETE 117 DISCRETE	Annually DISCRETE Annually DISCRETE		Annually composite Annually composite		0.70	TELEPHONE Annually COMPOSITE DATE	478-7674 D 3 2002	NUMBER YEAR MO DAY
	l/6m	mg/I	l/gm	mg/l	ntn	l/gm	ng/L	l/gm	Property	18590		671	AREA
	2.34	31	31	7	16.3					8.6		1	SIGNATURE OF PRINCIPAL EXECUTIVE AF
	2	20		30	8.3					745	V		SIGNATURE
	1,20	6	9	3.90						6,5	ND BASED BLE FOR ATTON	UDING	Dografa
	lbs/day	lbs/day	lbs/day		lbs/day	7/6n	lbs/day			AVE PERSONALLY EXAMINED	UBMITTED HEREIN AND BAS EDIATELY RESPONSIBLE FOR SUBMITTED INFORMATION ARE THAT THERE ADE SIG	FORMATION INCL EE. 18 USC \$1001 Include fines un s	oths and 5 years)
0.54	1,60	7								CERTIFY UNDER PENALTY OF LAW THAT I HAVE	ON MY INQUIRY OF THOSE INDUMINATION SUBMITTED HEREIN AND BASED OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED INFORMATION IS THE SUBMITTED INFORMATION INCLUDED THE SUBMITTED INFORMATION INCLUDED THE SUBMITTED INFORMATION INCLUDED.	THE POSSIBILITY OF FINE AND IMPRISONMENT SEE, 18 USC \$1001 AND 33 USC \$1319 (Penalties under these statutes may include fines in a second	and or a maximum imprisonment of between 6 months and 5 years) nce all attachments here)
0.48	9	9								CERTIFY UNDER PI	N MY INQUIRY OF BTAINING THE INF	HE POSSIBILITY OF USC \$1319 (Penalt	e all attachment
SAMPLE MEASUREMENT PERMIT	REQUIREMENT SAMPLE MEASUREMENT PERMIT	SAMPLE SAMPLE MEASUREMENT PERMIT RECITION OF THE PERMIT	SANCIAN SANCIA	SAMPLE MEASUREMENT PERMIT	SAMPLE MEASUREMENT PERMIT	SAMPLE MEASUREMENT PERMIT	SAMPLE SAMPLE MEASUREMENT PERMIT	SAMPLE MEASUREMENT PERMIT	SAMPLE MEASUREMENT PERMIT			0.00	Y VIOLATIONS (Reference
Nitrate en (NO ₂ - N)	Total Kjedahl Nitrogen	Ammonia Nitrogen (mg/L NH _s +NH ₆ -N)	Dissolved Oxygen	Turbidity	EFFLUENT OIL & GREASE	Heavy Metais (mg/L or ug/L)	Hardness (mg/L CaCO ₃)	Pesticides (mg/L or ug/L)	Whole Effluent Toxicity (Tu _c)	NAME/TITLE PRINCIPLE EXECUTIVE OFFICER	GIL A. SHINOHARA ACTING GENERAL MANAGER	GWA TYPED OR PRINTE	Committed I AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here) SUSPENDED SOLIDS AS DELICATIONS

SUSPENDED SOLDS (% REMOVAL) LESS THAN 85%
BOD (% REMOVAL) LESS THAN 85%
"ECAL 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 (ibs/day) daily max exceeded (4 violations)
Nitrate-Nitrogen (ibs/day) daily max exceeded (4 violations)
Iurbidity daily max exceeded (3 violations)

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UMATAC II....ATMENT PLANT WASTEWATER RESULTS FOR THE MONTH OF JANUARY 2002

Total Chlorine Residual (µg/l)	0.00	0.00	0.00	0.00	0.00	6.1
Enterococci CFU/100ml	620	2390	410	200	4570 4570 4570	
FECAL COLIFORM CFU/100ml	100.00	2300,00	500.00	64.00	741 64 2300	126/100ml 406/100ml
BOD %removal	%29	%19	%98	88%	76% 62% 88%	85
SUSP. SOLIDS %removal	%0	63%	%0	91%	39% 0% 91%	82
BOD Ibs/day	33	96	44	ဖ	44 6 96	98 150
SUSP. SOLIDS Ibs/day	0	1.1	12	11	24 0 71	98 130
SETTL. SOLID mI/I	0.0	0.1	0.1	0.2	0.00	
80D mg/l	=	19	44	2	12 2 19	30
SUSP. SOLIDS mg/l		14	4	4	904	64
РН 234	2.	7.05	7.34	7.42	7.28	6.50 8.50
EFFLUENT DATE	6 4 B	7277984	4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	22 22 22 24 26 26 27 27	28 29 30 31 MIN MAX	monthly avg weekly max
FLOW mgd 0.389 0.356	0.443 0.334 0.334	0.334 0.334 0.334 0.277 0.334	0.277 0.374 0.339 0.334 0.277	0.277 0.277 0.337 0.334 0.389 0.334		MAX
BOD lbs/day		288	309	48	183] STV
SUSP. SOLIDS Ibs/day		192	12	124	82.0 0.0 191.7	REQUIRMENTS
SETTL. SOLID ml/l		2.4	3.7	89	1.2.2.3	
BOD mg/l		- 29	66	17	50.6 17 99	ESS THAN
SUSP. SOLIDS mg/l		88	4	44	44	EMOVAL) L
рн 7.13		6.82	7.07	6.97	7.00	SOUDS (% R)
DATE 1	4 5 9 1 8	o 0 1 1 2 1 4 4	200 118 129 139 139 139 139 139 139 139 139 139 13	24 24 25 26 27 28 29	31 AVG MIN MAX	VIOLATIONS SOURS (% REMOVAL) LESS THAN 85%
						_ 0,4

VIOLATIONS
SUSPENDED SOLIDS (% REMOVAL) LESS THAN 85%
BOD (% REMOVAL) LESS THAN 85%
BOD (% REMOVAL) LESS THAN 85%
COLIFORMS DALY WAX (2 VIOLATIONS) AND MONTHLY AVERAGE Orthophosphate (mg/l) daily max exceeded (4 violations) Orthophosphate (lbs/day) daily max exceeded (1 violations) Nitrate-Nitrogen (lbs/day) daily max exceeded (1 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

Temp.	21.0	21.0	26.0	22.33 21.00 25.00
Turbidity NTU N/S	16.3	3,9	4.8	8.33 3.90 16.30
DISSOLVED OXYGEN mg/L	7.2	9.9	6.0	6.60
Ammonia Nitrogen Ibs/day 31.472	16.853	9.233	10.821	47.094 9.233 31.472
Total Kjedahi Nitrogen Ibs/day 31.472	22,654	11.822	14.390	20.059 11.822 31,472
Nitrate Nitrogen Ibs/day	2.336	1,694	1,203	1.669 1.203 2.336
Ortho- Phosphate Ibs/day	2.351	1,285	1,431	1.897 1.285 2.351
Ammonia Nitrogen (mg/L)	3.340	2,960	3.85	5.19 2.96 10.60
Total Kjedahi Nitrogen (mg/L TKN) 10.600	4.470	3.790	6.12	6.00 3.79 10.60
Nitrate Nitrogen (NO ₃ -N) 0.487	0,463	0,542	0,428	0.48 0.43 0.54 0.54
Phosphate (PO ₄ -P)	0.466	0.412	0.509	0.49 0.41 0.58
DATE 3	000000000000000000000000000000000000000	203 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	228748252	31 31 MAX

PERMITTEE NAME/ADDRESS !!											
facility Name/Location if Different)	•	NATIO	NAL POLLUTION DI DISCHARGE	OLLUTION DISCHARGE ELIMINATION SYST DISCHARGE MONITORING REPORT (DMR)	NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) DISCHARGE MONITORING REPORT (DMR)				Form Approved		
NAME: Guam Waterworks Authority ADDRESS: P.O. Box 3010 AGANA, GUAM 96932		PER	(2-16) GU0020273 PERMIT NUMBER		111	(17-19) 001 DISCHARGE NUMBER			OMB No. 2040-0004 Approval expires 9-30-85	9-30-85	
FACILITY: Umatac Sewage Treatment Plant LOCATION: Umatac, Guam	it Plant	FROM	YEAR MO 2002 2 (20-21) (22-23) (MON DAY 1 (24-25)	MONITORING PERIOD YEAR TO 2002 (26-27)	MO DAY 2 28 (28-29) (30-31)	NOTE: Res	inclinitian	NOTE: Road instructions halves sometime the con-		
PARAMETER (32-37)		(3 Card only) (46-53)	QUANTITY OR LOA (54-61)	LOADING	(4 Card Only) (38-45)	QUANTITY OR C	QUANTITY OR CONCENTRATION		NO.	FREQUENCY	SAMPLE
FLOW	SAMPLE MEASUREMENT PERMIT	AVERAGE	MAXIMUM	UNITS	MINIMUM 0.22	AVERAGE 0.40	MAXIMUM 1.50	UNITS	(62-63)	0F ANALYSIS (64-68) 30/31	TYPE (69-70)
INFLUENT BOD	SAMPLE MEASUREMENT PERMIT	80	86	lbs/day	163	583	987	mg/l	**		CONTINUOUS
BOD	SAMPLE MEASUREMENT PERMIT	30	34	lbs/day	73	98	86	Mg/l	-	1/7	COMPOSITE
INFLUENT SUSPENDED SOLIDS	SAMPLE SAMPLE MEASUREMENT PERMIT	88	96	lbs/day	104	30	1201	l/gm		9 40	COMPOSITE
EFFLUENT SUSPENDED SOLIDS	MEASUREMENT PERMIT	22	24	lbs/day	58	63	29	mg/l			COMPOSITE
FECAL COLIFORM	MEASUREMENT PERMIT	86			4060.00	30 5405.0	6750.0	cfu/100ml	2	417	COMPOSITE
Enterococci	MEASUREMENT PERMIT				4570.00	126 4570.0	406	cfu/100ml		1/7	DISCRETE
TOTAL CHLORINE RESIDUAL	SAMPLE SAMPLE MEASUREMENT PERMIT	0.00		ug/L	0.00	100	0.0	ng/L		1 11	DISCRETE
EFFLUENT PH	SAMPLE SAMPLE MEASUREMENT PERMIT REQUIREMENT	0,000	0.039		7.2	6.1	12.		4	117	DISCRETE
Temperature °C	SAMPLE MEASUREMENT PERMIT REQUIREMENT				23.80	23.8	8.5	ပ္စ		111	DISCRETE
Orthophosphate (PO ₄ -P)	SAMPLE MEASUREMENT PERMIT REQUIREMENT	9.0	0.6	lbs/day	1.84	1.84	1.84	mg/l	2		DISCRETE
							0.10			117	COMPOSITE

	mg/l	me.ii d/7 COMPOSITE	COMPOSITE 177 COMPOSITE	mg/l COMPOSITE	mg/l DISCRETE		mg/l Annually DISCRETE Annually DISCRETE	ug/L Annually COMPOSITE Annually COMPOSITE	mg/l Annually COMPOSITE Annually COMPOSITE	Annually composite Annually composite	Annually COMPOSITE Annually COMPOSITE	TELEPHONE DATE	671 479-7676 (AFV () 200-
lheidau	0.24 0	lbs/day 10 10 10 10	lbs/day 4	bs/dav		4.20 17.3 30.3 lbs/day 1.0	ng/L	lbs/day			RECONALLY EXAMINED TED HEREIN AND BASED	DUATELY RESPONSIBLE FOR SUBMITTED INFORMATION ARE THAT THERE ARE SIG. INFORMATION INCLUDING	16 USC \$1001 AND 16 Mines up to \$10,000 SIGNATURE OF PRINCIPAL EXECUTIVE and \$ versa's
T 0.08 0.08		3 3	-	alu s							I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILLAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON WY NATIRY OF YARDS	OBTAINING THE INFORMATION BELLEVE THE SUBMITTED INFORMATION INCLUDING ITHE POSSIBILITY OF FIRE AND INFORMATION INCLUDING	33 USC 51319 (Penalities under these statutes may include fines up to \$10,000 fines up
Nitrate 3en (NO ₃ - N) MESSUREMENT	Total Kjedahi Nitrogen MEASUREMENT	1	Ammonia Nitrogen MEASUREMENT (mg/L NH3+NH4-N) PERMIT REOLIMBENESS	Dissolved Oxygen SAMPLE MEASUREMENT PERMIT	REQUIREMENT SAMPLE MEASUREMENT Turbidity PERMT	REQUIREMENT SAMPLE SAMPLE SAMPLE OIL & GREASE PERMIT PERMIT	Heavy Metals SAMPLE MEASUREMENT (mg/L or ug/L) PERMIT PERM	Hardness SAMPLE MEASUREMENT (mg/L CaCO ₃) PERMIT	Pesticides (mg/L or ug/L) MEASUREMENT PERMIT	Whole Effluent Toxicity MESSUREMENT FEMILIA PERMIT PEMILIA PEMILIA	NAME/TITLE PRINCIPLE EXECUTIVE OFFICER	GIL A. SHINOHARA ACTING GENERAL MANAGER GWA	TYPED OR PRINTED 33 USC \$1316 (Penalties under GOMMENT AND EXPLANATION OF ANY VIOLATIONS (Beforessee

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

TO: UMATAC S.

UMATAC TREATMENT PLANT WASTEWATER RESULTS FOR THE MONTH OF FEBRUARY 2002

DATE pH S	- 2 8 4	5 7 7 8 8 9	10 11 12 13 14 14 16 16	7.55	25 26 27 27 6.95 30	31 AVG 7.14 MIN 6.95 MAX 7.55	
SOLIDS mg/l		36	09	96	42	36 36 96	
BOD		86	80	72	16	79.75 58 98	
SETTL. SOLID mM	$\parallel \parallel$	4.4	6	9,6	6.0	9.9	
SUSP. SOLIDS Ibs/day		104	169	1201	455	482.3 104.2 1201.0	PERMIT REQUIRMENTS
BOD lbs/day		284	163	901	987	163 163 987	STATE
FLOW	0.334 0.277 0.389	0.334 0.277 0.347 0.334	0.277 0.337 0.337 0.277 0.389	0.389 0.277 0.334 1.600 0.334 0.277	0.334 0.334 0.227 1.300 0.389	0.40	MAX
DATE	- 2 6	4 2 9 7 8	0114244	22210384 2321038	25 27 25 25 25 25 25 25 25 25 25 25 25 25 25	AVG MIN MAX	monthly avg weekly max
됩		7.45	7.23			7.34 7.23 7.46	6.50 8.50
SUSP. SOLIDS mg/l		20	24	NOT DI	NOT DI	22 20 24	30
BOD		34	26	SCHARGE	SCHARGI	30 34 34	30
SETTL. SOLID		0.1	2.	NG INTO T	NG INTO	1.000	
SUSP. SOLIDS	fee	28	29	NOT DISCHARGING INTO TOGUAN RIVER	NOT DISCHARGING INTO TOGUAN RIVER	63 58 67	98 130
BOD	Annoen .	86	73	2	<u>«</u>	86 73 98	98 150
SUSP. SOLIDS	Wielloval Wielloval	%0	%0			%0 %0	85
BOD	меттом	%59	25%			60% 65% 65%	85
FECAL		6750.00	4060.00			5405 4060 6750	126/100ml 406/100ml
Enterococci	CFUNDOM	TNTC	100			4570 4570 4570	
Total Chlorine Residual (ucil)	resinger (Fd	0.00	0.00			0.00	F. 6.

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

Temp.	23.8	23.8			23.80 23.80 23.80	
Turbidity	4.2	30.3			17.25 4.20 30.30	
DISSOLVED OXYGEN mg/L	4.6	2.4			3.50 2.40 4.60	
Ammonia Nitrogen Ibs/day	3,994				3.994	
Total Kjedahl Nitrogen Ibs/day	9.637				9.637 9.637 9.637	
Nitrate Nitrogen Ibs/day	0.243				0.243 0.243 0.243	9
Ortho- Phosphate Ibs/day	1.843	RATORS			1.843 1.843	0.33
Ammonia Nitrogen (mg/L.)	1.380	BY PLANT OPE	SUAN RIVER	SUAN RIVER	1.38 1.38 1.38	
Total Kjedahi Nitrogen (mg/L TKN)	3.330	LE PROVIDED	SING INTO TO	SING INTO TO	3.33	
Nitrate Nitrogen (NO ₃ -N)	0.084	IO GRAB SAMPLE PROVIDED BY PLANT OPERATORS	NOT DISCHARGING INTO TOGUAN RIVER	NOT DISCHARGING INTO TOGUAN RIVER	80°0 80°0 80°0	0.5
Phosphate (PO ₄ -P)	0,637	Z			0.64	0.1
DATE 2	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	- 2274ver	22222	300 52 52 52 52 52 52 52 52 52 52 52 52 52	AVG MAX MAX	J

PERMITTEE NAME/ADDRESS (Include	c										
facility Name/Location if Different)		OILWAI	NAL POLLUTION DI. DISCHARGE I	OLLUTION DISCHARGE ELIMINATION SYST DISCHARGE MONITORING REPORT (DMR)	NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) DISCHARGE MONITORING REPORT (DMR)				Form Approved.		
NAME: Guam Waterworks Authority ADDRESS: P.O. Box 3010 AGANA, GUAM 96837	***************************************	PERI	(2-16) GU0020273 PERMIT NUMBER		DISC	(17-19) 001 DISCHARGE NUMBER			OMB No. 2040-0004 Appraval expires 9-30-85	s 9-30-85	
ACILITY: Umatac Sewage Treatment Plant OCATION: Umatac, Guam	it Plant	FROM	YEAR MO 2002 3 (20-21) (22-23) (2	MONI DAY 1 (24-25)	MONITORING PERIOD YEAR TO 2002 (26-27) (MO DAY 3 31 (28-29) (30-31)	NOTE: Read	instructions	NOTE: Read Instructions before completing this form	o this form	
PARAMETER (32-37)		(3 Card only) (46-53) AVERAGE	QUANTITY OR LOADING (54-61) MAXIMIM	DING	(4 Card Only) (38-45)	QUANTITY OR CONCENTRATION (46-53) (54-61)	ONCENTRATION (54-61)		EX.O	FREQUENCY OF ANALYSIS	SAMPLE
FLOW	SAMPLE MEASUREMENT PERMIT REGIREMENT			MGD	0.22	AVERAGE 0.30	MAXIMUM 0.39	UNITS	(62-63)	(64-68)	(02-59)
INFLUENT BOD	SAMPLE MEASUREMENT PERMIT RECUREMENT	ч	116	lbs/day	106	180	268	l/gm		31/31	CONTINUOUS
ВОБ	SAMPLE MEASUREMENT PERMIT REGILIBEMENT	15	27	lbs/day	14	36	62	l/gm	-	0 2/4	COMPOSITE
INFLUENT SUSPENDED SOLIDS	SAMPLE MEASUREMENT PERMIT REQUIREMENT	82	126	lbs/day	108	30 216	351	l/gm		7/17	COMPOSITE
EFFLUENT SUSPENDED SOLIDS	SAMPLE MEASUREMENT PERMIT RECHIPEMENT	32	0.2	lbs/day	24	83	195	l/gm	8	.0.0	COMPOSITE
FECAL COLIFORM	SAMPLE MEASUREMENT PERMT REOUREMENT	900			100.00	30	800.0	cfu/100ml	2	117	COMPOSITE
Enterococci	SAMPLE MEASUREMENT PERMIT				820.00	126 23156.7	406	cfu/100ml		117	DISCRETE
TOTAL CHLORINE RESIDUAL	SAMPLE MEASUREMENT PERMIT	0000		T/6n	00'0	0.0	0.0	ug/L		7/1	DISCRETE
EFFLUENT pH	SAMPLE MEASUREMENT PERMIT		9000		7.2	6.1	7.6			111	DISCRETE
Temperature °C	SAMPLE MEASUREMENT PERMIT REQUIREMENT				5.5	24.2	8.5	ပ္		117	DISCRETE
Orthophosphate (PO ₄ -P)	SAMPLE MEASUREMENT PERMIT REQUIREMENT	0.2	0.3	lbs/day	0.11	0.45	0.86	l/gm	4	117 C	DISCRETE
			6647		1000年の日本の日本の日本の日本の日本の日本の日本の日本の日本の日本の日本の日本の日本の		0.10		の計画のは	111	COMPOSITE

Total Minister - Mills Minister - Minis		=			IIE	ITE	ITE	Ľ.		E	ш	U			E	'n		ITE	TTE	TE	TE	4	1	11	ITE	1				8	DAY
1160 1184/day 1007 14 143 mg/l 4 1160 11)	COMPOS	SCANCO		SOMMOS	COMPOS	COMPOS	COMPOS		DISCRET	DISCRETI	DISCOULT	DISCRET	DISCRET	DISCRETI	DISCRETI		COMPOSI	COMPOS	COMPOSI	COMPOS	COMPOS		COMPOS	COMPOS	COMPOSI		DAIE		ć.:	L
1160 184/day 1007 1 143 mgfl 4 150 184/day 10 144 21 mgfl 4 150 184/day 10 144 21 mgfl 144/day 14 21 mgfl 144/day 14 22 24 mgfl 144/day 14 25 20 20 20 20 20 20 20			47			117		417			111			1/1	Annually	Annually		Annually	Annually	Annually	Annually	Annually	1	Annually	Annually	Annually		+		3	YEAR
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10 14 143 17 143 17 140 150 150 17 143 17 140 17 140 17 140 17 140 17 140 17 140 17 140 17 140 17 140 17 140 1				_								_			_												101	i ceer	_	_	
1.60 1.60		/gm		/ow			/gm	10.41		mg.		ŧ			/gm		ll more	ng.		/bm										671	AREA
1.60 1.60		1.43	0,50	21			19		,	4	Total Control	30.3		1.0				· · · · · · · · · · · · · · · · · · ·			経典を			が発送がある。		8.5			N	1	XECUTIVE
1.60 1.60															2000年の日本												,	1			PRINCIPAL E
1.60 1.60		-		14			4		·	4	30	20.5								Section Section 1					S S S S S S S S S S S S S S S S S S S		141		X	-	IGNATURE OF
1.60 Ibs/day 7 Ibs/day 7 Ibs/day 1 Ibs/day 1 Ibs/day 1 Ibs/day 1 Ibs/day Ibs/	-									10 may 10 miles		-			445							-						Х	1	Ų	<u> </u>
Nitrate - Nifu-yon (NO ₃ - N) NEAGUEMENT 0.33 0.62 Ibs/day		20.0		10			2					15.40						. 明朝 . 明 .		A SHOW MANY						6.5			٧	,	/
Nitrate - Nitroyen NaSISREMENT 0.33 0.62 1bs/day PERMIT PERMIT 1.60 1bs/day PERMIT	-																				10000					EVALUATED	N AND BASED	NSIBLE FOR	E ARE SIG-	001 AND	up to \$10,000 rs)
Nitrate - Nitrugen (NO3 - Nit MEASUREMENT 0.33 0.62		lbs/day		lbs/day		1	lbs/day		lbs/day	•				Baddan	instag		ng/L			lbs/day						F PERSONALLY	BMITTED HEREI	MATELY RESPO	RE THAT THER	SEE. 18 USC \$1	ay include fines onths and 5 year
MEASUREMENT 0.33 0.9	ŀ	.62	09	7		1									The second second							The state of the s				AW THAT I HAV	ORMATION SU	10UALS IMMED BELIEVE THE S	ETE. I AM AWA	MPRISONMENT	of between 6 m
Nitrate - Nitrogen (NO, - N) MEASUREMENT 6 REQUIREMENT 5 SAMPLE MEASUREMENT 6 FERMIT REQUIREMENT 7 SAMPLE MEASUREMENT 7 FERMIT REQUIREMENT 7 SAMPLE MEASUREMENT 7 SAMPLE MEASUREMENT 7 FERMIT REQUIREMENT 7 SAMPLE MEASUREMENT 7 FERMIT REQUIREMENT 7 FERMIT REQUIREMENT 7 SAMPLE MEASUREMENT 7 SAMPLE MEASUREMENT 7 FERMIT PERMIT PERMIT 8 ON MY NATIONINY OFFICER MEASUREMENT 7 FERMIT PERMIT PERMIT NATIONINY THE POSSIBILITY OFFICER MEASUREMENT 1 REQUIREMENT 1 REQUIREMENT 1 FERMIT PERMIT PERMIT PERMI	-	0								100																PENALTY OF L	WITH THE INF	F THOSE INDIV	E AND COMPLES FOR SUBM	OF FINE AND II	imprisonment
Nitrate - Nitroyen (NO3 - N) MEASUREMENT PERMIT Ammonia Nitrogen Ammonia Nitrogen MEASUREMENT PERMIT Dissolved Oxygen MEASUREMENT PERMIT PERMIT REQUIREMENT PERMIT PERM		0.33		9		V																				RTIFY UNDER	AM FAMILIAR	MY INQUIRY OI FAINING THE IN	RUE ACCURAT	POSSIBILITY (or a maximum
Nitrate - Nitroyen (NO3 - N) Total Kjedahi Nitrogen Ammonia Nitrogen Ammonia Nitrogen FEGUIREMEN SAMPLE FERMIT REQUIREMEN SAMPLE MEASUREMEN FERMIT REQUIREMEN SAMPLE MEASUREMEN PERMIT REQUIREMEN SAMPLE MEASUREMEN REQUIREMEN SAMPLE MEASUREMEN REQUIREMEN SAMPLE MEASUREMEN REQUIREMEN SAMPLE MEASUREMEN SAMPLE MEASUREMEN SAMPLE MEASUREMEN SAMPLE MEASUREMEN SAMPLE SAMPLE REQUIREMEN SAMPLE MEASUREMEN SAMPLE REQUIREMEN SAMPLE SAMPLE REQUIREMEN SAMPLE REQUIREMEN SAMPLE SAMPLE REQUIREMEN SAMPLE REQUIREMEN SAMPLE REQUIREMEN SAMPLE SAMPLE SAMPLE SAMPLE SAMPLE SAMPLE REQUIREMEN		1			1	_			1		<u> </u>	Action in the	L	-			11		_					-		Ī	ANG	0 0	IST	THE	pue
Total Kjedahi Nitrogen (NO3 - N) M M S S M M M M M M M M M M M M M M M	AMPLE	EASUREMEN ERMIT	AMPLE	EASUREMEN	EQUIREMEN	AMPLE EASUREMEN	RMIT	AMPLE	EASUREMEN	QUIREMEN	WPLE	RMIT	QUIREMEN	AMPLE EASUREMEN	RMIT	AMPLE	EASUREMEN	QUIREMEN	AMPLE EASUREMEN	RMIT	MPLE	RMIT	QUIREMEN	WMPLE EASUREMEN	RMIT	VE OFFICER			GER		
Ammonia Nitrogen (MO3 Total Kjedahi Nitrogen (mg/L NH,+NH,-N) Dissolved Oxygen Turbidity EFFLUENT OIL & GREASE Heavy Metals (mg/L or ug/L) Hardness (mg/L or ug/L) Pesticides (mg/L or ug/L) Whole Effluent Toxicit, (Tu,) NAMETITILE PRINCIPI GIL A. SH ACTING GENE G	Γ		T		2	àΣ	a a	S	Σį	2 8	S	a	N C	N N	d a	S	≥ 6	2	S Z	0.0			2		d a	E EXECUT		HINOHARA	RAL MANA	WA	RPRINTED
Ammoni (mg/L N Dissolve Dissolve (mg/L & 1 Ur & 1 Ur A Ur	CIN) CO	egen (NO3		ani Nitroge		a Nitrogen	H3+NH4-N)		ed Oxygen			bidity		-UENT	GREASE		/ Metals	1 100	dness	CaCO ₃)	and from	ingir of ug		sent Toxicit	(°	E PRINCIPI		GIL A. SI	TING GENE	O	TYPED 0
	Vitrate . Nitr	and and	Table 1971	oral Med		Ammoni	(mg/L N	;	Dissolve			Tur		EFFL	OIL &		(ma/l	1	Han	(mg/L	Posticidos (contained .		Whole Effl	C	NAME/TITL			AC		ENT AND

VIOLATIONS
Suspended solids (mg/l) daily max (1 violation) Suspended solids (bs/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 (1bs/day) daily max exceeded (2 violations)

Nitrate-Nitrogen (Ibs/day) daily max exceeded (2 violations) \Im $\mathop{\rm Sym}\nolimits_{\rm L}$

TO. UMATAC

UMATAC TREATMENT PLANT WASTEWATER RESULTS FOR THE MONTH OF MARCH 2002

SUSP. SUSP. SOLIDS SOLIDS Mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l m	DATE PH SUSP. SUSP. SUSP. SUSP. SUSP. 1	DATE PH SUSP. SETTL SUSP.	EFFLUENT SUSP. SULDS SULDS SULDS SUSP. S	1	PH SOLIDS BOD SOLID SOLIDS BOD mg/l mg/l mg/l ml/l lbs/day lbs/day			7440	24				2			7.98 82 116 N/S 189 268	***		OPERATORS DID NOT COLLECT A FULL 24 COMPOSITE SAMPLE			7.44 82 70.66667 3.6 216.3 180 7.13 38 38 3.1 108.4 106	126 116 4.0 351.0
рН SUSP. SETTL. SUSP. SUSP. SOLIDS BOD SOLIDS BOD SOLIDS BOD BOD SOLIDS BOD BOD <td>2.49 SOLIDS SOLI</td> <td> Sulsp. Sulsp. Sulsp. Sulsp. Sulsp. Sulsp. Sulsp. Solubs S</td> <td> Susp. Susp. Susp. Susp. Susp. Susp. Susp. Solids Solids </td> <td>EFFLUENT</td> <td></td> <td>0.389</td> <td><u> </u></td> <td></td> <td>1 T</td> <td>Ш</td> <td>П</td> <td></td> <td>Ш</td> <td></td> <td>П</td> <td></td> <td>Ш</td> <td>П</td> <td>П</td> <td>Ш</td> <td>П</td> <td>П</td> <td>L T</td>	2.49 SOLIDS SOLI	Sulsp. Sulsp. Sulsp. Sulsp. Sulsp. Sulsp. Sulsp. Solubs S	Susp. Susp. Susp. Susp. Susp. Susp. Susp. Solids	EFFLUENT		0.389	<u> </u>		1 T	Ш	П		Ш		П		Ш	П	П	Ш	П	П	L T
15P. BOD 15s/day 15s/d	Susp. Susp. Susp. Sulbs siday balday wremoval solubs solubs and wremoval solubs are supplied as a subject of the subj	SUSP. SUSP. SUSP. BOD SOLIDS BOD Soliday %removal %removal	Susp. Susp. FECAL Soliday Susp. Soliday So		Ŧ				7.49				7.57			7.23						7.43	7.57
15P. BOD 15s/day 15s/d	Susp. Susp. Susp. Sulbs siday balday wremoval solubs solubs and wremoval solubs are supplied as a subject of the subj	SUSP. SUSP. SUSP. BOD SOLIDS BOD Soliday %removal %removal	Susp. Susp. FECAL Soliday Susp. Soliday So		SUSP. SOLIDS				- 20				92			o			OPERATO	A FULL 2		32	202
JSP. BOD Ibs/day Ibs/day 154	Susp. Susp. Susp. Sulbs siday balday wremoval solubs solubs and a solubs solubs and a solubs siday wremoval siday	Susp. Susp. Susp. Solubs Bob Solubs Bob Solubs Bob Solubs Bob Solubs Bob Solubs Bob Solubs Suspension Suspension	Susp. Susp. FECAL Solubs Solu		BOD	1		T	12			Ī	۵	T		27			ORS DID N	4 COMPO		15	27
JSP. BOD Ibs/day Ibs/day 154	Susp. Susp. Susp. Sulbs siday balday wremoval solubs solubs and a solubs solubs and a solubs siday wremoval siday	Susp. Susp. Susp. Solubs Bob Solubs Bob Solubs Bob Solubs Bob Solubs Bob Solubs Bob Solubs Suspension Suspension	Susp. Susp. FECAL Solubs Solu		SETTL. SOLID		Ħ		0.0				0.0			0		1	TOT COLL	SITE SAM	T	0.0	0.0
	SUSP. SOLIDS %removal 62% 89% 44% 89%	SUSP. SOLIDS %removal %removal %removal 44% 68% 89% 77% 89% 89% 89% 89% 89%	SUSP. SOLIDS BOD COLIFORM %removal %removal CFU/100ml A4% 68% 800 89% 77% 300 62% 77% 400 62% 78% 400 89% 92% 800		SOLIDS Bedday	instray			195				51			21			ECT	PLE		88	21
SUSP. SOLIDS %removal 44% 89% 89%		BOD %removal 68% 68% 77% 77% 77% 79% 68% 99%	BOD COLFORM %removal GFU/100ml 68% 800 77% <100 77% 300 77% 400 88% 100 92% 800		BOD	ins/day			33				14			62						36	14
		BOD %removal 68% 68% 77% 77% 77% 79% 68% 99% 68% 99% 68% 99% 99%	BOD COLFORM %removal CFU/100ml GB% 800 77% 7100 77% 400 67% 100 67% 500		SUSP.	%removal			44%				23%			%68						62%	44%

12

126/100ml 406/100ml

VIOLATIONS
Suspended solids (mg/l) daily max (1 violation)
Suspended solids (mg/l) daily max (1 violation)
Suspended solids (Brs/day) monthly average
Suspended Solids % removal leate was presented solids % removal less than 65%
EOOD '9c removal less than 65%
Fool 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)
Nitrate-Nitrogen (losiday) daily max exceeded (2 violations)
Turbidity daily max exceeded (3 violations)

UMATAC TREATMENT PLANT WASTEWATER RESULTS FOR THE MONTH OF MARCH 2002

Temp.	23.0	23.8	25.7	24.17 23.00 25.70
Turbidity	15.8	30,3	15.4	20.50 15.40 30.30
DISSOLVED OXYGEN mg/L	1.1	2.4	3,9	2.47 1.10 3.90
Ammonia Nitrogen Ibs/day	4.763	19.281	8.165	10,733 4,763 19,281
Total Kjedahl Nitrogen Ibs/day	9.527	20,593	12.752	14.291 9.527 20.593
Nitrate Nitrogen Ibs/day	0.981	0.074	1.432	0.829 0.074 1.432
Ortho- Phosphate Ibs/day	0.111	0.864	0.381	0.451
Ammonia Nitrogen (mg/L)	1.710	6.760	3.530	4.00
Total Kjedahi Nitrogen (mg/L TKN)	3.420	7.220	6.520	5.39 3.42 7.22
Nitrate Nitrogen (NO ₃ -N)	0,352	0.026	0.620	0.033
Ortho- Phosphate (PO ₄ -P)	0.040	0.302	0.166	0.17
DATE 1	4 00 00 00 00 00 00 00 00 00 00 00 00 00	77274	255 222 209 22 22 22 22 22 22 22 22 22 22 22 22 22	AVG AVG MIN MAX

ATTACHMENT B

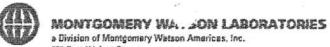
HEAVY METALS, PESTICIDES, AND STAINS RESULTS STAINS AND STAINS AND

FOR

ATS TADA

ATTACHMENT B.1

AGAT METALS AND PESTICIDES JANUARY 2001



a Division of Montgomery Watson Americas, Inc. 555 East Walnut Street Pasadena, California 91191 Tel: 626 568 6400 Fax: 626 568 6324 1 800 566 LABS (1 808 566 5227)

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

Prepared	Analyzed	QC Ref#	Hethod	Analyte	Result	Units	MRL	Dilution
AGAT	STP (2201:	220025) Samp	oled on 01/14/02 15:00)	-		
	01/31/02 12:41	163070	(EPA/ML 200.8) Aluminum, Total, ICAP/MS	239	209/1	25	1
	01/31/02 12:41	163075	(EPA/ML 200.8) Copper, Total, ICAP/MS	11	ug/1	2.0	1
	01/31/02 12:41	163074	(EPA/ML 200.8) Nickel, Total, ICAP/MS	5.1	ug/1	5.0	1
	01/31/02 12:41	163075	(EPA/ML 200.8) Zinc, Total, ICAP/MS	35	ug/1	5.0	1
			Pesticide	es/PCBs				
31/31/02	02/27/02 00:00	164972	(ML/EPA 608	PCB 1016 Aroclor	na	ug/1	0.50	3
11/31/02	02/27/02 00:00	164972	(ML/EPA 608	PCB 1221 Aroclor	NA	ug/1	0.50	ı
01/31/02	02/27/02 00:00	164972	(ML/EPA 608) PCB 1232 Aroclor	NA	ug/l	0.50	I
1/31/02	02/27/02 00:00	164972	(ML/EPA 508) PCB 1242 Aroclor	NA	ug/1	0.50	1
1/31/02	02/27/02 00:00	164972	(ML/EPA 508	I PCB 1248 Aroclor	NA	29/1	0.50	1
1/31/02	02/27/02 00:00	164972	(ML/EPA 608) PCB 1254 Aroclor	NA	ug/1	0.50	1
1/31/02	02/27/02 00:00	164972	(ML/EPA 608) PCB 1260 Arcclor	NA	ug/l	0.50	1
1/31/02	02/27/02 00:00	164972	(ML/EPA EDS) Alpha-BHC	MA	ug/1	0.020	1
1/31/02	92/27/02 00:00	164972	(ML/EFA 608) Aldrin	NA	ug/1	0.020	1
1/31/02	02/27/02 00:00	164972	ML/EPA 608	} Beta-BHC	NA	ug/1	0.020	1
1/31/02	02/27/02 00:00	164972	(ML/EPA 608) Chlordane	NA	ug/1	0.20	1
1/31/02	02/27/02 00:00	164972	(ML/EPA 608) Delta-EHC	NA	ug/1	0.020	2
1/31/02	02/27/02 00:00	164972	(ML/EFA 608) p,p' DDD	NA	ug/3	0.020	1
1/31/02	02/27/02 00:00	164972	(ML/EPA 508	p,p' DDE	NA	ug/1	0.020	3
1/31/02	02/27/02 00:00	164972	(ML/EPA 608	p.p. DDT	MA	ug/1	0.020	ī
1/31/02	02/27/02 00:00	164972	(ML/EPA 608) Dieldrin	NA	ug/l	0.020	2
1/31/02	02/27/02 00:00	164972	(ML/EPA 608) Endrin Aldehyde	NA	ug/l	0.020	ı
1/31/02	02/27/02 00:00	164972	(ML/EPA SOB) Endrin Ketone	NA	ug/l	0.50	1
2/31/02	02/27/02 00:00	164972	(ML/EPA SOB) Rodrin	MA	ug/1	0.010	1
1/31/02	02/27/02 00:00	164972	(ML/EPA 608) Endosulfan I (alpha)	NA	ug/l	0.020	1
1/31/02	02/27/02 00:00	264972	(ML/EPA 508	1 Endosulfan II (beta)	NA	ug/1	0.020	1
1/31/02	02/27/02 00:00	164972	(ML/EPA 608) Endosulfan sulfate	NA	uġ/l	0.020	1
/31/02	02/27/02 00:00	164972	(ML/EPA 608	} Gamma-BHC	NA	ug/1	0.020	1
/31/02	02/27/02 00:00	164972	(ML/EPA 608	Heptachlor	NA	ug/l	0.010	1
/31/02	02/27/02 00:00	164972	(ML/EPA 508	Heptachlor Epoxide	NA	ug/1.	0.010	1

ATTACHMENT B.2 AGAT METALS AND PESTICIDES MARCH 2002

a Division of Montgomery Watson Americas, Inc. 555 East Walnut Street Pasadena, California 91101 Tel: 526 588 6400 Fax: 626 568 5324 I 800 566 LABS (1 800 566 5227)

Guam Water Authority Carmen Sian-Denton Government of Guam P.O. Box 3010 Agana , GU 96910 Samples Received 03/14/02

Prepared	l Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
AGAT	STP (2203	140159) Sar	mpled on 03/11/02	15:00			
	03/27/02 14:16	167368	(EPA/ML 200.1) Aluminum, Total, ICAP/MS	410	ug/I	25	ĭ
	04/03/02 15:00	167938	(EPA/ML 200.6) Copper, Total, ICAP/MS	9.4	ug/1	2.0	1
	04/03/02 15:00	167936	(EPA/ML 200.8) Nickel, Total, ICAP/MS	ND	ug/1	5.0	1
	04/03/02 15:00	167940	(EPA/ML 200.8) Zinc, Total, ICAP/MS	46	ug/1	5.0	1
			Pesticio	es/PCBs				
03/18/02	03/27/02 00:00	167219	(ML/EPA 608) PCB 1016 Aroclor	ND	ug/l	0.50	1
13/18/02	03/27/02 00:00	167219	(ML/EPA 608) PCB 1221 Aroclor	ND	ug/l	0.50	ı
03/18/02	03/27/02 00:00	167219	(ML/EPA 608) PCB 1232 Aroclor	ND	ug/l	0.50	1
13/18/02	03/27/02 00:00	167219	(ML/EPA 608) PCB 1242 Aroclor	ND	ug/l	0.50	1
3/18/02	03/27/02 00:00	167219	(ML/EPA 608) PCB 1246 Aroclor	ND	ug/l	0.50	1
3/18/02	03/27/02 00:00	167219	(ML/EPA 608) PCB 1254 Aroclor	ND	ug/1	0.50	1
3/18/02	03/27/02 00:00	167219	(ML/EPA 608) PCB 1260 Aroclor	ND	ug/1	0.50	1
3/18/02	03/27/02 00:00	167219	(ML/EPA 608) Alpha-BHC	ND	ug/l	0.020	1
3/18/02	03/27/02 00:00	167219	(ML/EPA 608) Aldrin	ND	ug/1	0.020	1
3/18/02	03/27/02 00:00	167219	(ML/EPA 608) Beta-BHC	ND	ug/l	0.020	1
3/18/02	03/27/02 00:00	167219	(ML/EPA 508) Chlordane	ND	ug/l	0.20	1
3/18/02	03/27/02 00:00	167219	(ML/EPA 608) Delta-BHC	ND	ug/l	0.020	1
3/18/02	03/27/02 00:00	167219	(ML/EPA 608) p.p' DDD	ND	ug/1	0.020	1
3/18/02	03/27/02 00:00	167219	(ML/EPA 608) p,p' DDE	סא	ug/l	0.020	1
3/18/02	03/27/02 00:00	167219	(ML/EPA 608) p.p' DDT	ND	ug/1	0.020	1
3/18/02	03/27/02 00:00	167219	(ML/EPA 608) Dieldrin	ND	ug/1	0.020	1
3/18/02	03/27/02 00:00	167219	(ML/EPA 608) Endrin Aldehyde	ND	ug/l	0.020	1
3/18/02	03/27/02 00:00	167219	(ML/EPA 608) Endrin	ND	ug/l	0.010	1
1/18/02	03/27/02 00:00	167219	(ML/EPA 608) Endosulfan I (alpha)	ND	ug/l	0.020	1
1/18/02	03/27/02 00:00	167219	(ML/EPA 608) Endosulfan II (beta)	ND	119/1	0.020	ı
/18/02	03/27/02 00:00	167219	(ML/EPA 608) Endosulfan sulfate	ND	ug/1	0.020	1
/15/02	03/27/02 00:00	167219	(ML/EPA 608) Gamma-BHC	ND	ug/1	0.020	1
/18/02	03/27/02 00:00	167219	(ML/EPA 608) Heptachlor	ND	ug/l	0.010	1
/18/02	03/27/02 00:00	167219	(ML/EPA 608) Heptachlor Epoxide	ND	ug/l	0.010	1
/18/02	03/27/02 00:00	167219	(ML/EPA 608) Methoxychlor	ND	ug/1	0.20	1

ATTACHMENT B.3 AGAT STP WHOLE EFFLUENT TOXICITY RESULTS JANUARY 2002



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 %

TUc = 31.75

IC25 = >3.15 %

IC50 = >3.15%

Yours very truly,

Thomas (Tim) Mikel Laboratory Director

ATTACHMENT B.4 AGAT STP WHOLE EFFLUENT TOXICITY RESULTS MARCH 2002

GWA 9.3667



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

TUc = 31.75

IC25 = >3.15 %

IC50 = >3.15%

Yours very truly,

Thomas (Tim) Mikel Laboratory Director

6265686324

Led

CA0000000

T-355

P.02/09 F-891

perm Cell Fertilization Test-Proportion Fel Start Date: 03/19/2002 Test ID: MON0320833 End Date: 03/19/2002

Lab ID: CAABC

Sample ID: Sample Type:

Test Species:

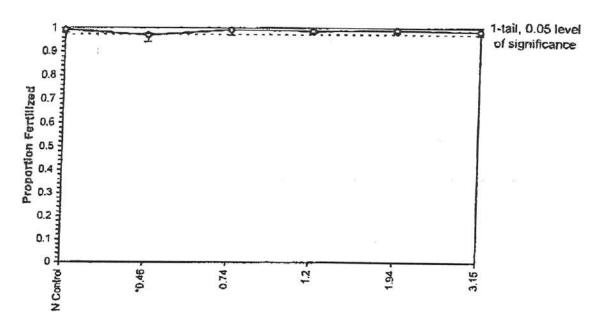
EFF1-POTW

Sample Date: 03/14/2002 AGAT-STP Comments:

Protocol: CHAP 92-Chapman

SP-Strongylocentrotus purpuratus

Dose-Response Plot



perm Cell Fertilization Test-Proportion Fer

Start Date: 03/19/2002 End Date: 03/19/2002

Test ID: MON0320833

Lab ID: CAABC

Sample ID: Sample Type: 76Q

CA0000000

EFF1-POTW

Sample Date: 03/14/2002 Comments: AGAT-STP Protocol: CHAP 92-Chapman

Test Species:

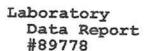
SP-Strongylocentrotus purpuratus

			Aux	ciliary Dat	a Summa	iry		
Conc-%	Parameter	Mean	Min	Mex	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	O.D0	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	36.	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 1st quarter 2001 DMR due to unavailability of results from contracted laboratory



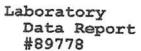


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Guam Water Authority Carmen Sian-Denton Government of Guam P.O. Box 3010 Agana , GU 96910

Samples Received 12/19/01

AGAT	(21121902	66)	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/1	25	1
	01/04/02 15:18	160873	(EPA/ML 200.8) Arsenic, Total, ICAP/MS	ND	ug/1	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/1	1.0	1
	12/19/01 16:00	159912	(ML/SW 7196) Hexavalent chromium (Cr VI)	ND	mg/1	0.005	1
	01/04/02 15:18	160870	(EPA/ML 200.8) Copper, Total, ICAP/MS	9.8	ug/1	2.0	1
	12/31/01 13:30	160440	(EPA/ML 245.1) Mercury	ND	ug/1	0.20	1
	01/29/02 17:17	160869	(EPA/ML 200.8	Nickel, Total, ICAP/MS	ND	ug/1	5.0	1
	01/04/02 15:18	160883	(EPA/ML 200.8)	Lead, Total, ICAP/MS	0.79	ug/1	0.50	1
	01/04/02 15:18	160872	(EPA/ML 200.8)	Zinc, Total, ICAP/MS	28	ug/1	5.0	1
			BNA Extra	ctable				
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	01/03/02 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/1	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
.2/20/01		161489	- 11	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/1	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		161489		2-Methylnaphthalene	ND	ug/1	5.0	1
2/20/01		161489	(ML/EPA625/8270)	2-Methylphenol	ND	ug/l	5.0	1
2/20/01	01/08/02 00:00	161489	(ML/EPA625/8270)		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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Guam Water Authority (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/1	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/1	5.0	1
2/20/01	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/1	5.0	1
12/20/01	01/08/02 00:00	161489	(ML/EPA625/8270) 4-Methylphenol	ND	ug/1	5.0	1
2/20/01	01/08/02 00:00	161489	(ML/EPA625/8270) 4-Nitroaniline	ND	ug/l	20	1
2/20/01	01/08/02 00:00	161489	(ML/EPA625/8270) 4-Nitrophenol	ND	ug/1	10	1
2/20/01	01/08/02 00:00	161489	(ML/EPA625/8270) Acenaphthene	ND	ug/l	5.0	1
2/20/01	01/08/02 00:00	161489	(ML/EPA625/8270) Acenaphthylene	ND	ug/l	5.0	1
2/20/01	01/08/02 00:00	161489	(ML/EPA625/8270)	Aniline	ND	ug/l	5.0	1
2/20/01	01/08/02 00:00	161489	(ML/EPA625/8270)	Anthracene	ND	ug/1	5.0	1
2/20/01	01/08/02 00:00	161489	(ML/EPA625/8270)	Benzo(a)anthracene	ND	ug/l	5.0	1
2/20/01	01/08/02 00:00	161489	(ML/EPA625/8270)	Benzo(a)pyrene	ND	ug/l	5.0	1
2/20/01	01/08/02 00:00	161489	(ML/EPA625/8270)	Benzo(b) fluoranthene	ND	ug/1	5.0	1
2/20/01	01/08/02 00:00	161489	(ML/EPA625/8270)	Benzo(g,h,i)perylene	ND	ug/l	10	1
2/20/01	01/08/02 00:00	161489	(ML/EPA625/8270)	Benzo(k)fluoranthene	ND	ug/l	5.0	1
/20/01	01/08/02 00:00	161489	(ML/EPA625/8270)	bis(2-Chloroethyl)ether	ND	ug/l	10	1
/20/01	01/08/02 00:00	161489	(ML/EPA625/8270)	bis(2-Chloroethoxy)methane	ND	ug/l	10	1
/20/01	01/08/02 00:00	161489	(ML/EPA625/8270)	bis(2-Chloroisopropyl)ether	ND	ug/l	10	1
/20/01	01/08/02 00:00	161489	(ML/EPA625/8270)	Di(2-Ethylhexyl)phthalate	5.2	ug/l	4.0	1
/20/01	01/08/02 00:00	161489	(ML/EPA625/8270)	Butylbenzylphthalate	ND	ug/l	5.0	1
/20/01 (01/08/02 00:00	161489	(ML/EPA625/8270)	Benzidine	ND	ug/l	50	1
/20/01 0	01/08/02 00:00	161489	(ML/EPA625/8270)	Benzoic Acid	ND	ug/l	50	1
/20/01 0	1/08/02 00:00	161489	(ML/EPA625/8270)	Benzyl Alcohol	ND	ug/l	5.0	1
/20/01 0	1/08/02 00:00	161489	(ML/EPA625/8270)	Chrysene	ND	ug/l	5.0	1
/20/01 0	1/08/02 00:00	161489	(ML/EPA625/8270)	Dibenzo(a,h) anthracene	ND	ug/l	10	1
/20/01 0	1/08/02 00:00	161489	(ML/EPA625/8270)	Dibenzofuran	ND	ug/l	5.0	1
/20/01 0	1/08/02 00:00	161489	(ML/EPA625/8270)	Diethylphthalate	ND	ug/l	5.0	1
/20/01 0	1/08/02 00:00	161489	(ML/EPA625/8270)	Dimethylphthalate	ND	ug/l	5.0	1
20/01 0	1/08/02 00:00	161489	(ML/EPA625/8270)	Di-n-butylphthalate	ND	ug/1	10	1
20/01 0	1/08/02 00:00	161489	(ML/EPA625/8270)	Di-n-octylphthalate	ND	ug/1	10	1
20/01 0	1/08/02 00:00	161489	(ML/EPA625/8270)	Fluoranthene	ND	ug/1	5.0	1
20/01 0	1/08/02 00:00	161489	(ML/EPA625/8270)	Fluorene	ND	ug/l	5.0	1
20/01 0	1/08/02 00:00	161489	(ML/EPA625/8270)	Hexachlorobenzene	ND	ug/l	5.0	1



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Guam Water Authority (continued)

12/20/0	1 01/08/02 00:0	0 161400	1 NO (DDS COE (A)	270	N. T				
ACCUS 0000000 00000) Hexachlorobutadiene	ND	ug/l	10	1
12/20/0			Marian Santana and Santana Maria) Hexachlorocyclopentadiene	ND	ug/l	10	1
12/20/0			- 1		Hexachloroethane	ND	ug/l	5.0	1
12/20/0					Indeno(1,2,3-c,d)pyrene	ND	ug/l	10	1
12/20/0						ND	ug/l	5.0	1
12/20/0			(ML/EPA625/82		Company Security Secu	ND	ug/l	5.0	1
12/20/0			(ML/EPA625/82			ND	ug/l	5.0	1
12/20/03					N-Nitrosodimethylamine	ND	ug/l	5.0	1
12/20/01			(ML/EPA625/82	70)	N-Nitrosodi-N-propylamine	ND	ug/1	5.0	1
12/20/01	1 01/08/02 00:00	161489	(ML/EPA625/82	70)	N-Nitrosodiphenylamine	ND	ug/l	5.0	1
12/20/01	L 01/08/02 00:00	161489	(ML/EPA625/82	70)	p-Chloro-m-cresol	ND	ug/l	5.0	1
12/20/01	01/08/02 00:00	161489	(ML/EPA625/82	70)	Pentachlorophenol	ND	ug/l	20	1
12/20/01	01/08/02 00:00	161489	(ML/EPA625/82	70)	Phenanthrene	ND	ug/l	5.0	1
12/20/01	01/08/02 00:00	161489	(ML/EPA625/82	70)	Phenol	ND	ug/l	5.0	1
12/20/01	01/08/02 00:00	161489	(ML/EPA625/82	70)	Pyrene	ND	ug/l	5.0	1
	£0		(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		
			Pesticid	28	/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
L2/19/01	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
.2/19/01	12/22/01 00:00	160385	(ML/EPA 608)	PCB 1260 Aroclor	ND	ug/l	0.50	1
2/19/01	12/22/01 00:00	160385	(ML/EPA 608)	Alpha-BHC	ND	ug/l	0.020	1
2/19/01	12/22/01 00:00	160385	(ML/EPA 608)	Aldrin	ND	ug/l	0.020	1
2/19/01	12/22/01 00:00	160385	(ML/EPA 608)	Beta-BHC	ND	ug/l	0.020	1
2/19/01	12/22/01 00:00	160385	(ML/EPA 608)	Chlordane	0.26	ug/l	0.20	1
2/19/01	12/22/01 00:00	160385	(ML/EPA 608) !	Delta-BHC	ND	ug/l	0.020	1
2/19/01	12/22/01 00:00	160385	(ML/EPA 608)]	p,p' DDD	ND	119/1	0.020	1



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Guam Water Authority (continued)

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/1	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/1	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) (21	12190	268) S	ampled 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/1	1.0	1	
	12/31/01 13:30	160440	(EPA/ML 245.1) Mercury	ND	ug/1	0.20	1	
	01/04/02 15:21	160883	(EPA/ML 200.8) Lead, Total, ICAP/MS	1.3	ug/1	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 2nd 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 Dischrage 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 checksheet.

ATTACHMENT C.2

AGANA RECEIVING WATER DATA

GUAM WATERWORKS AUTHORITY

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	ں =	PREVIOUS R	PREVIOUS RAINFALL (in)
1/24/02	10:30 a.m. Sunny skies, rough surf, high tide. No floating material, no odor, clear water for all sites.	~	7	-	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	9	0.87	Ξ

TABLE 2. OFFSHORE RECEIVING WATERS

DATE

	pottom	bottom	bottom	_
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Offshore receiving waters were not sampled this quarter due to hazardous surf and sea conditions on the scheduled sampling

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						
3 2	VISUAL OBSERVATIONS	STATION	ENTEROCOCCI	N-EON	Total PO ₄ NH ₃ -N	NH3-N
1145100	27.00		MPN	ma-N/I	1/d-bm	14 50
70/01/1		TS-1	<100	0.00	0.313	0000
	ude. All sites had no odor, no floating	TS-1	<100	0.001	0.044	NIA
	material, no sheen, clear water.	TS-3	<100	0.024	0.008	NA
2136102						
2010212	8.12 a.m. Clear skies with light breeze. Mild	TS-1	300	0.08	0 392	0000
	surt (1' - 2'). High tide. All sites no floating	TS-2	< 100	0.006	0.037	N/A
	material, no odor, no sheen, clear water.	TS-3	< 100	0.012	0.04	NA
00/00/6	L					
20/02/6	10:15 a.m. Cloudy with scattered showers.	TS-1	< 100	0.093	0 144	0.003
	Mild surf (1' - 3'). High tide. All sites no	TS-2	< 100	0.012	0.030	N/A
	noating material, clear water, no sheen, no	TS-3	< 100	0.011	0.017	NIA
	loadr.					100

Carmen Sian-Denton Laboratory Services Administrator

 $\psi / \omega / \omega$ 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 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.

 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

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 ₃ -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.

NAME

ADDRESS

U.S. Navy Public works Center, Guam

Commanding Officer

FACILITY LOCATION

Apra Harbor Wastewater Treatment Plant

PSC 455, Box 195 FPO AP 96540-2937

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

RECEIVING WATER DISCHARGE MONITORING REPORT (DMR)

GU 0110019

PERMIT NUMBER

DISCHARGE NUMBER

YEAR MO DAY YEAR MO DAY

FROM 02 01 01 TO 02 01 31

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)	TYPED OR PRINTED	LABORATORY MANAGER	RALPH BURPEE	NAME/TITLE PRINCIPAL EXECUTIVE OFFICER				Oil and Grease		Zinc (Zn)		NA COS	Nickel (Ni)			Aluminum (AI)		Copper (Cu)			Enterococci		PARAMETERS
LATIONS (Reference all at	IMPRISC		DESIGN		PERMIT REQUIREMENTS	SAMPLE MEASUREMENTS	REQUIREMENTS	SAMPLE MEASUREMENTS	REQUIREMENTS	MEASUREMENTS PERMIT	SAMPLE	REQUIREMENTS	MEASUREMENTS	CANONIT	PERMIT	SAMPLE MEASUREMENTS	REQUIREMENTS	MEASUREMENTS	SAMPLE	PERMIT REQUIREMENTS	MEASUREMENTS	CANONE	
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MO DAY	- 28		DATE					GRAB		GRAB			GRAB		0	GRAB		GRAB			GBAB	TYPE	SAMPLE

(DMR) (NPDES)

U.S. Navy Public works Center, Guam PSC 455, Box 195 Commanding Officer

NAME

ADDRESS

Guam Apra Harbor Wastewater Treatment Plant FPO AP 96540-2937

LOCATION FACILITY

> PERMIT NUMBER GU 0110019

DISCHARGE NUMBER TBI

YEAR 02 MO 2 MONITORING PERIOD DAY 2 TO YEAR MO 2 9 DAY 3

FROM

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)	TYPED OR PRINTED	RALPH BURPEE LABORATORY MANAGER		NAME/TITLE PRINCIPAL EXECUTIVE OFFICED		LEAD		MAGNESIUM	SOLIDS	TOTAL SUSPENDED		TURBIDITY		AMMONIA		NITRATE-NITROGEN		ORTHOPHOSPHATE		PARAMETERS
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EPA Form 3320-1

RECEIVING WATER DISCHARGE MONITORING REPORT (DMR)

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

PERMIT NUMBER DISCHARGE NUMBER

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0	MO	YEAR	DAY	MO	MAH

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COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)	TYPED OR PRINTED	KALPH BURPEE LABORATORY MANAGER		NAME/TITLE PRINCIPAL EXECUTIVE OFFICER				Oil and Grease		Zinc (Zn)		Nickel (Ni)		Aluminum (Al)	:	Copper (Cu)		Enterococci		PARAMETERS
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AREA NUMBER		71 , 339-3157	TELEPHONE				OBS.	VISUA	MG/L		MOL	NO.	NO.	XG.	MG/L		CF0/10		UNITS	
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NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM RECEIVING WATER DISCHARGE MONITORING REPORT

'STEM (NPDES)
EPORT (DMR)

Commanding Officer
U.S. Navy Public works Center

NAME

ADDRESS

U.S. Navy Public works Center, Guam PSC 455, Box 195

FPO AP 96540-2937

Apra Harbor Wastewater Treatment Plant Guam

FROM

OZ YEAR

2 8

DAY 01

YEAR 02

9 N

DAY 31

7

MONITORING PERIOD

FACILITY LOCATION

> GU 0110019 PERMIT NUMBER

TB2 DISCHARGE NUMBER

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here) NITRATE-NITROGEN ORTHOPHOSPHATE TOTAL SUSPENDED NAME/TITLE PRINCIPAL EXECUTIVE OFFICER PARAMETERS MAGNESIUM TURBIDITY AMMONIA SOLIDS LEAD LABORATORY MANAGER TYPED OR PRINTED RALPH BURPEE SAMPLE MEASUREMENTS MEASUREMENTS REQUIREMENTS MEASUREMENTS MEASUREMENTS MEASUREMENTS MEASUREMENTS SAMPLE MEASUREMENTS REQUIREMENTS REQUIREMENTS REQUIREMENTS REQUIREMENTS REQUIREMENTS REQUIREMENTS SAMPLE PERMIT SAMPLE PERMIT SAMPLE PERMIT SAMPLE PERMIT SAMPLE PERMIT PERMIT CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED WINDER THE DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY CATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED OM MY INQUIRY OF THE PERSON OR PERSONS UNFO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE BEST OF MY KNOWLEDGE AND ELEF, TRUE, ACCUPATE, AND COMPLETE. IAM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS AVERAGE QUANTITY OR LOADING MAXIMUM STIND SURFACE <0.045 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORISED AGENT SAMPLE TYPE MID-DEPTH <0.045 BOTTOM <0.045 AREA 671 STIND TELEPHONE MG/L PLN MG/L MG/L MG/L MG/L 339-3157 NUMBER FREQUENCY ANALYSIS YEAR 2 1/90 1/90 1/90 1/90 1/90 1/90 1/90 DATE MO 2 SAMPLE TYPE GRAB GRAB GRAB GRAB GRAB GRAB GRAB DAY 28

ADDRESS

U.S. Navy Public works Center, Guam

Commanding Officer

FACILITY LOCATION

Apra Harbor Wastewater Treatment Plant

PSC 455, Box 195 FPO AP 96540-2937

GU 0110019 TB3

PERMIT NUMBER

DISCHARGE NUMBER

MONITORING PERIOD

| YEAR | MO | DAY | YEAR | MO | DAY | O1 | O1 | TO | O2 | O1 | 31 |

OF AINY VIOLATIONS (Reference all attachments here)	COMMENT AND EXPLANATION OF TRINIED	LABORATORY MANAGER	RALPH BURPEE	NAME/TITLE PRINCIPAL EXECUTIVE OFFICER				Oil and Grease		Zinc (Zn)		Nickel (Ni)			Aluminum (Al)		Copper (Cu)		Enterococci		PARAMETERS
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AREA NUMBER	┝	671 339-3157	TELEPHONE				OBS.	VIISIV	MG/L		WO.	MGI		MG/L		MIG/L		CFO/10		UNITS	
YEAR	_,	3						1/30		1/30		1/30			1/30	+	1/30		1/30	OF ANALYSIS	FREQUENCY
MO DAY	_	28	DATE		T			GRAB		GRAB		GRAB			GRAB		GRAB		GRAB		Y SAMPLE

(DMR) (NPDES)

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

Apra Harbor Wastewater Treatment Plant

LOCATION FACILITY

> PERMIT NUMBER GU 0110019

DISCHARGE NUMBER TB3

FROM YEAR 2 MO 9 MONITORING PERIOD DAY 2 TO YEAR MO 2 2 4 DAY

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COMMEN I AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)	TYPED OR PRINTED	LABORATORY MANAGER	ם או מנו מנות מאוים	NAME/TITLE PRINCIPAL EXECUTIVE OFFICER		LEAD		MAGNESIUM	SOLIDS	TOTAL SUSPENDED		TURBIDITY		AMMONIA		NITRATE-NITROGEN		ORTHOPHOSPHATE		PARAMETERS
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AREA NUMBER		671 , 339-3157	TELEPHONE		NG/F	XC,	MG/L		MG/L		UTN		MG/L		MG/L		NO.	MG/I	UNITS	
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MO DAY	H	04 28	DATE		Ci e d	GRAB		GRAR		GRAB	TYPE	co								

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

Manufacing Anglysis	ol Information Monitoring Frequency	Bottle Type	Preservative
Monitoring Analysis 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 ₃ -F
Total Suspended Solids	SM 2540D
Nitrate	SM-19 4500-N0₃-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	Depth	Temp	DO	рН
Location	HHMMSS	meters	øC	mg/l	Units
	111 11111100				
TD 4	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 TB-1	95807	33.8	27.86	8.02	8.11
	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	100575	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	100703	20.4	27.88	8.01	8.10
TB-2		21.8	27.88	8.00	8.10
TB-2	100752	23.8	27.87	8.06	8.10
TB-2	100810	25.5	27.86	8.02	8.10
TB-2	100832	28.3	27.86	7.99	8.10
TB-2	100940	20.3	27.50		

Continuous Depth Profile February 7, 2002

		100	07.00	8.02	8.10
TB-2	100953	30.3	27.86		
TB-2	101010	31.7	27.86	7.98	8.10
TB-2	101107	34.0	27.86	7.98	8.10
	105255	2.20	27.98	8.62	8.10
TB-3			27.95	8.49	8.11
TB-3	105313	3.90			8.12
TB-3	105338	5.90	27.90	8.44	
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
	105501	13.8	27.91	8.19	8.11
TB-3			27.87	8.15	8.12
TB-3	105520	15.8		8.11	8.12
TB-3	105538	17.6	27.86		
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
	105654	26.3	27.87	8.04	8.11
TB-3		28.0	27.86	8.02	8.11
TB-3	105726			8.02	8.12
TB-3	105744	30.3	27.86		
TB-3	105801	32.9	27.87	7.97	8.11
TB-3	105818	34.6	27.87	7.99	8.11

ADDRESS

U.S. Navy Public works Center, Guam

Commanding Officer

PSC 455, Box 195

FPO AP 96540-2937

FACILITY

Apra Harbor Wastewater Treatment Plant

PERMIT NUMBER GU 0110019

TBI

DISCHARGE NUMBER

MO MONITORING PERIOD DAY YEAR MO DAY

YEAR

LOCATION Guam		1011	FROM	02 02	01 TO 02	02 28				
PARAMETERS		QUAN	QUANTITY OR LOADING			SAMPLE TYPE			FREQUENCY	SAMPLE
		AVERAGE	MAXIMUM	UNITS	SURFACE	MID-DEPTH	воттом	UNITS	ANALYSIS	TYPE
Enterococci	SAMPLE MEASUREMENTS				3.1	1.0	<u>.</u>	OEI I/I O	1/30	GRAB
	PERMIT REQUIREMENTS							Ci Ci Ci		
Copper (Cu)	SAMPLE MEASUREMENTS		9		1.50	4.20	2.80	MG/I	1/30	GRAB
THE WEST	PERMIT REQUIREMENTS									
Aluminum (Al)	SAMPLE MEASUREMENTS				ND	ND	ND	MG/I	1/30	GRAB
	PERMIT REQUIREMENTS							- 1		
Nickel (Ni)	SAMPLE MEASUREMENTS	3			ND	N	ND	MG/I	1/30	GRAB
	PERMIT REQUIREMENTS									
Zinc (Zn)	SAMPLE MEASUREMENTS				ND	N	ND	MG/I	1/30	GRAB
	PERMIT REQUIREMENTS									
PLT	SAMPI E					-				-

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

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

LABORATORY MANAGER TYPED OR PRINTED

CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREFARED UNDER THE DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT OULLIFED PERSONNEL PROPERTY AGHER AND EXLAUTE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR BATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. IAM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND MAPRISONMENT FOR KNOWING VIOLATIONS.

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

AREA

NUMBER

YEAR

MO

DAY

671

339-3157

02

2

28

TELEPHONE

DATE

RALPH BURPEE

Oil and Grease

MEASUREMENTS

No Sheen

VISUA OBS.

1/30

GRAB

PERMIT REQUIREMENTS

MEASUREMENTS

SAMPLE

REQUIREMENTS

ADDRESS

U.S. Navy Public works Center, Guam

Commanding Officer

PSC 455, Box 195

FPO AP 96540-2937

LOCATION FACILITY

Apra Harbor Wastewater Treatment Plant

(DMR) (NPDES)

RECEIVING WATER DISCHARGE MONITORING REPORT

TBI

GU 0110019 PERMIT NUMBER

DISCHARGE NUMBER

FROM YEAR 22 MO 22 MONITORING PERIOD DAY 2 To YEAR 8 MO 2 DAY 28

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)	TYPED OR PRINTED	RALPH BURPEE LABORATORY MANAGER	NAME/TITLE PRINCIPAL EXECUTIVE OFFICER		LEAD		MAGNESIUM	SOLIDS	TOTAL SUSPENDED		TURBIDITY	AMPROXICES POWER OR SECTION	AMMONIA		NITRATE-NITROGEN		ORTHOPHOSPHATE		PARAMETERS
DLATIONS (Reference all at	IMPRISO			PERMIT REQUIREMENTS	SAMPLE MEASUREMENTS	PERMIT REQUIREMENTS	SAMPLE MEASUREMENTS	PERMIT REQUIREMENTS	SAMPLE MEASUREMENTS	PERMIT REQUIREMENTS	SAMPLE MEASUREMENTS	PERMIT REQUIREMENTS	SAMPLE MEASUREMENTS	PERMIT REQUIREMENTS	SAMPLE MEASUREMENTS	PERMIT REQUIREMENTS	SAMPLE MEASUREMENTS		
tachments here)	IMPRISONMENT FOR KNOWING VIO	ED TO ASSURE THAT CUALINATION SUBMITTED. BASED BASED FOR THOSE FOR ATION, THE INFORMATION STRUE, ACCURATE, AND CONTRUE, ACCURATE, AND CONTRUE, ACCURATE, AND CONTRUE, ACCURATE, AND CONTRUE, ACCURATE, AND CONTRUE.	Y UNDER PENALTY OF LAW			-	0.30				30							AVERAGE	QUAN
	VIOLATIONS.	DESIGNED TO ASSURE THAT UNLIFIED REPRODUCED PROPERTY AGATHER AND EVALUATE THE INFORMATION SUBMITTED, BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR AGTHERNOR 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	THAT THIS DOCUMENT AND															MAXIMUM	QUANTITY OR LOADING
	THE POSSIBILITY	THERE ARE SIGNIF	ALL ATTACHMENT															UNITS	
+	_		'S WERE		ND		1,400		13.0		0.19		<0.045		0.012		<0.004	SURFACE	
	OFFICER OR AUTHORIZED AGENT	Selle b	0 1		ND		1,400		8.00		0.28		<0.045		0.016		<0.004	MID-DEPTH	SAMPLE TYPE
	_				ND		1,300		18.0		0.25		<0.045		0.012		0.004	воттом	
AREA NUMBER	+	671 339-3157	TEI EDHONE		MG/L	MOSE	MG/I		MG/I	NTU		MG/L			MG/I		MG/L	UNITS	
SER YEAR		57 02			1/90		1/90		1/90		1/90	1	1/90		1/90		1/90	ANALYSIS	FREQUENCY
MO DAY		04 28	DATE		GRAB		GRAB) GRAB		GRAB		GRAB		GRAB		GRAB		Y SAMPLE

EPA Form 3320-1

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

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

> PERMIT NUMBER GU 0110019

FROM

2

To

YEAR

MO 2

DAY 2

YEAR 02

MO 2

DAY 28

MONITORING PERIOD

DISCHARGE NUMBER TB1

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)	TYPED OR PRINTED	RALPH BURPEE LABORATORY MANAGER		NAME/TITLE BRINGIBAL EXECUTIVE OFFICER				1 EMPERATURE, pH, DO				CYANIDE		MERCURY		IRON		SILVER		PARAMETERS
IOLATIONS (Reference all a	IMPRIS	8197			PERMIT	SAMPLE MEASUREMENTS	PERMIT REQUIREMENTS	SAMPLE MEASUREMENTS												
ttachments here)	IMPRISONMENT FOR KNOWING VIOLATIONS.	TO SASSONE ITM AUGULINED PERSONNEL PROPERLY SATHER AND EVALUATE THE INFORMATION SUBMITTED, BASED ON MY INQUIRY OF THE PERSON OF PERSONS UNFORMATION. SUBMITTED, BASED ON MY INQUIRY OF THE PERSON OF RETRIEVE WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR CATHERING THE INFORMATION. ATTE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND DELIEF, TRUE, ACCUPATE, AND COMPLETE. IAM AWARE THAT THERE ARE SIGNIFICANT	PY UNDER PENALTY OF LAW				. 192	7	99	\$2. Sk		-1	ř.v.			E. 12			AVERAGE	QUAN
	EINFORMATION, INCLUDING T	THED PERSONNEL PROPERLY ON MY INQUIRY OF THE PER- PERSONS DIRECTLY RESPON SUBMITTED IS, TO THE BEST I PLETE. I AM AWARE THAT I	THAT THIS DOCUMENT AND OR SUPERVISION IN ACCORD																MAXIMUM	QUANTITY OR LOADING
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	OF FINE AND	ALUATE THE S WHO SE AND SE AND	'S WERE					See Attached		٠		ON		ND ND		dN		ND	SURFACE	
	OFFICER OR AUTHORIZED AGENT	9 5/18/	101,0									ND		ND		ND		ND	MID-DEPTH	SAMPLE TYPE
A	T		П		1							ND		ND		N		ND	воттом	
AREA NUMBER	-	671 339-3157	TELEPHONE		reg C	dear		MG/L		units		MG/L		MG/L		MG/L		MG/L	UNITS	
BER		57																		
YEAR		02	a			1/90		1/90		1/90		1/90		1/90		1/90		1/90	ANALYSIS	FREQUENCY
MO DAY	-	04 28	DATE			CDP		CDP		CDP		GRAB		GRAB		GRAB		GRAB	TYPE	SAMPLE

ADDRESS

U.S. Navy Public works Center, Guam

Commanding Officer

PSC 455, Box 195

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

RECEIVING WATER DISCHARGE MONITORING REPORT (DMR)

GU 0110019 PERMIT NUMBER

TB2 DISCHARGE NUMBER

FPO AP 96540-2937
Apra Harbor Wastewater Treatment Plant
Guam

FACILITY LOCATION

YEAR MO DAY YEAR MO DAY
02 02 01 TO 02 02 28

FROM

																	-		
TYPED OR PRINTED IMPRISONMENT FOR KI COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)	RALPH BURPEE LABORATORY MANAGER	TO STATE OF THE PARTY OF THE PA	NAME/TITLE PRINCIPAL EXECUTIVE OFFICER				Oil and Grease		Zinc (Zn)		Nickel (Ni)		Aluminum (Al)		Copper (Cu)		Enterococci		PARAMETERS
TOLATIONS (Reference all i				PERMIT REQUIREMENTS	SAMPLE MEASUREMENTS	PERMIT REQUIREMENTS	SAMPLE MEASUREMENTS	PERMIT REQUIREMENTS	SAMPLE MEASUREMENTS	REQUIREMENTS	SAMPLE MEASUREMENTS	PERMIT REQUIREMENTS	SAMPLE MEASUREMENTS	PERMIT REQUIREMENTS	SAMPLE MEASUREMENTS	PERMIT REQUIREMENTS	SAMPLE MEASUREMENTS		154
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THE POSSIBILITY	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 CUMALIFIED 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, ACCUPATE, AND COMPLETE. IAM KNAWER THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.	-															STINU		
	T	TS WERE					No Sheen		ND		ND		ND		2.10		<u>.</u>	SURFACE	
OFFICER OR AUTHORIZED AGENT	WEB-	101							ND		N		ND		2.10		۵	MID-DEPTH	SAMPLE TYPE
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AREA NUMBER	671 339-3157	TELEPHONE		7		OBS.	VISUA	MON	MC/I	- I	MG/I		MG/I	ä	Mori	C. C.	CEI 1/10	UNITS	
BER YEAR	02						1/30		1/30		1/30		1/30		1/30		1/30	ANALYSIS	FREQUENCY
MO DAY	04 28	DATE					GRAB		GRAB		GRAB		GRAB		GRAB		GRAB		SAMPLE

EPA Form 3320-1

NAME **ADDRESS**

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

PSC 455, Box 195

FPO AP 96540-2937

Apra Harbor Wastewater Treatment Plant

FACILITY LOCATION

> PERMIT NUMBER GU 0110019

DISCHARGE NUMBER TB2

FROM YEAR 02 02 Mo MONITORING PERIOD DAY 2 TO YEAR 2 MO 2 DAY 28

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)	TYPED OR PRINTED	RALPH BURPEE LABORATORY MANAGER	THE TRIVE OF PARCOTTY OF THE	NAME TITLE DEBAGEAL EXECUTE	LEAD		MAGNESIUM	SOLIDS	TOTAL SUSPENDED		TURBIDITY		AMMONIA		NITRATE-NITROGEN		ORTHOPHOSPHATE		PARAMETERS
IOLATIONS (Reference all a	IMPRIS			IREM	MEASUREMENTS PERMIT	PERMIT REQUIREMENTS	SAMPLE MEASUREMENTS												
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STATE OF THE STATE	OFFICER OF PRINCIPAL EXECUTIVE	9378			ND		1,400		<2.00		0.25		<0.045		0.016		0.013	MID-DEPTH	SAMPLE TYPE
	ACEUTIVE				ND.		1,400		<2.00		0.20		<0.045	an l	0.021		0.012	BOTTOM	
AREA NUN		671 339-3157	TELEPHONE		MG/L	30	MG/I		MG/I	UIN		MG/L		100	MG/I		MG/L	UNITS	
NUMBER YI																		ANA	FREQ
YEAR MO		02 - 04	DATE		1/90		1/90		1/90		1/90		1/90		1/90		1/90	ANALYSIS	FREQUENCY
10 DAY		4 28	E		GRAB		GRAB		GRAB		GRAB		GRAB		GRAB		GRAB	HE	SAMPLE

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
DIS

TB2
DISCHARGE NUMBER

YEAR MO DAY YEAR MO DAY
02 02 01 TO 02 02 28

FROM

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)	TYPED OR PRINTED	RALPH BURPEE LABORATORY MANAGER	NAME TITLE PRINCIPAL EXECUTIVE OFFICER				TEMPERATURE, pH, DO				CYANIDE		MERCURY		IRON		SILVER		PARAMETERS
IOLATIONS (Reference all a	IMPRIS			IREM	SAMPLE MEASUREMENTS	PERMIT REQUIREMENTS	SAMPLE MEASUREMENTS												
ttachments here)	MPRISONMENT FOR KNOWING VIOLATIONS.	DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER MADE SWALLATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE FERSON OR PERSONS THE MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEGGE AND BELIEF, TRUE, ACCUPATE, AND COMPLETEL. I AM AVMAE THAT THERE ARE SIGNIFICANT	FY UNDER PENALTY OF LAW				3.6		Se C				=				# ₁ #	AVERAGE	NAUD
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AREA NUMBER	+	671 339-3157	TELEPHONE		deg C		MG/L		units		MG/L		MG/L		MG/L		MG/L	UNITS	
BER YEAR	+	157 02			1/90		1/90		1/90		1/90		1/90		1/90		1/90	ANALYSIS	FREQUENCY
MO DAY		04 28	DATE		0 CDP		CDP		0 CDP		GRAB		GRAB		GRAB		GRAB	-	NCY SAMPLE

ADDRESS

U.S. Navy Public works Center, Guam

Commanding Officer

PSC 455, Box 195

FPO AP 96540-2937

LOCATION FACILITY

Guam

Apra Harbor Wastewater Treatment Plant

FROM

02

02

9

To

28

RECEIVING WATER DISCHARGE MONITORING REPORT (DMR)

GU 0110019

PERMIT NUMBER YEAR Mo MONITORING PERIOD DAY YEAR 02 8 8 DAY

DISCHARGE NUMBER TB3

TYPED OR PRINTED TYPED OR PRINTED MPRISONMENT FOR MY COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)	RALPH BURPEE LABORATORY MANAGER	NAME/TITLE PRINCIPAL EXECUTIVE OFFICER				Oil and Grease		Zinc (Zn)	(()	Nickel (Ni)	(-2)	Aluminum (Al)	- 11	Copper (Cu)		Enterococci		PARAMETERS
VIOLATIONS (Reference all			PERMIT REQUIREMENTS	SAMPLE MEASUREMENTS														
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OFFICER OR AUTHORIZED AGENT	SUS. S							ND		ND		ND		2.50		Δ	MID-DEPTH	SAMPLE TYPE
_								ND		ND		ND		2.40		_	BOTTOM	
AREA NUMBER	671 339-3157				OBS.	VISUA		MG/I		MG/L		MG/L		MG/L		CFU/10	UNITS	
H	157 02					_		_		1		1/		1/30		1/30	ANA	FREQU
YEAR MO		DATE				1/30		1/30		1/30		1/30		30		ŏ	SIS	FREQUENCY
O DAY	28	E				GRAB	:	SAMPLE										

ADDRESS

PSC 455, Box 195

FPO AP 96540-2937

U.S. Navy Public works Center, Guam

Commanding Officer

FACILITY

Apra Harbor Wastewater Treatment Plant

LOCATION

(DMR) (NPDES)

PERMIT NUMBER GU 0110019

DISCHARGE NUMBER TB3

YEAR MO 02 02 MONITORING PERIOD DAY 2 o YEAR 02 MO 2 DAY 28

FROM

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)	TYPED OR PRINTED	RALPH BURPEE LABORATORY MANAGER	NAME/TITLE PRINCIPAL EXECUTIVE OFFICER		LEAD		MAGNESIUM	SOLIDS	TOTAL SUSPENDED		TURBIDITY		AINOMIA	4	NITRATE-NITROGEN		ОКТНОРНОЅРНАТЕ		PARAMETERS
/IOLATIONS (Reference all	PENAL			REQUIREMENTS	SAMPLE MEASUREMENTS	PERMIT REQUIREMENTS	SAMPLE MEASUREMENTS												
nce all attachments here)	TIES FOR SUBMITTING FALS	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 CATHERING THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND DELLEF, TRUE, ACCUPATE AND COMPLETE I AM ANABET THAT THESE ARE RESPONSIBLE.	I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER THE DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM				71	2						15	12			AVERAGE	VAND
DIATIONS.	E INFORMATION, INCLUDING	IFIED PERSONNEL PROPERLY ON MY INQUIRY OF THE PER PERSONS DIRECTLY RESPONS SUBMITTED IS, TO THE BEST MPLETE I AM AWARE THAT	V THAT THIS DOCUMENT AND															MAXIMUM	QUANTITY OR LOADING
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NAME LOCATION FACILITY ADDRESS U.S. Navy Public works Center, Guam PSC 455, Box 195 Commanding Officer Apra Harbor Wastewater Treatment Plant FPO AP 96540-2937

> PERMIT NUMBER GU 0110019

DISCHARGE NUMBER TB3

28	22	22	OI	2	22	2	FROM
DAY	MO	YEAR		DAY	MO	YEAR	
		G PERIOD	RING PE	MONITORING	_		

TYPED OR PRINTED IMPRISONMENT FOR W	RALPH BURPEE LABORATORY MANAGER	NAME/TITLE PRINCIPAL EXECUTIVE OFFICER				MPERATURE, pH, DO.				CYANIDE		MERCURY		IRON		SILVER		PARAMETERS
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AREA NUM	671 339-3157			deg C		MG/L		units		MG/L		MG/L		MG/L		MG/L	UNITS	
NUMBER YEAR	157 02			1/90		1/90		1/90		1/90		1/90		1/90		1/90	ANALYSIS	FREQUENCY
MO DAY	04 28	DATE		CDP		CDP		CDP		GRAB		GRAB		GRAB		GRAB		SAMPLE TYPE

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	HNO3 / 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 ₃ -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.

ADDRESS

LOCATION

Apra Harbor Wastewater Treatment Plant

FPO AP 96540-2937

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

RECEIVING WATER DISCHARGE MONITORING REPORT (DMR)

U.S. Navy Public works Center, Guam PSC 455, Box 195 Commanding Officer

FROM PERMIT NUMBER YEAR 2 GU 0110019 Mo MONITORING PERIOD DAY

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2

TO

2

YEAR

MO င္သ

DAY 3

DISCHARGE NUMBER TBI

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here) NAME/TITLE PRINCIPAL EXECUTIVE OFFICER Aluminum (Al) PARAMETERS Oil and Grease Copper (Cu) Enterococci Nickel (Ni) Zinc (Zn) LABORATORY MANAGER TYPED OR PRINTED RALPH BURPEE MEASUREMENTS MEASUREMENTS MEASUREMENTS REQUIREMENTS MEASUREMENTS REQUIREMENTS SAMPLE MEASUREMENTS MEASUREMENTS REQUIREMENTS REQUIREMENTS MEASUREMENTS REQUIREMENTS REQUIREMENTS REQUIREMENTS SAMPLE SAMPLE SAMPLE PERMIT SAMPLE PERMIT PERMIT SAMPLE PERMIT SAMPLE PERMIT PERMIT PERMIT 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 QUALIFED PERSONNEL PROPERTY CASH-BE AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGET THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR CATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIET, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND MAPRISONMENT FOR KNOWING VIOLATIONS. AVERAGE QUANTITY OR LOADING MAXIMUM STIND SURFACE No Sheen 0.11 S B R 20 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR ADTHORIZED AGENT SAMPLE TYPE MID-DEPTH 0.05 0.26 4 ND R BOTTOM ND B B R 4 AREA 671 TELEPHONE UNITS MG/L VISUA MG/L MG/L MG/L CFU/10 OBS. 339-3157 NUMBER FREQUENCY OF ANALYSIS YEAR 1/30 02 1/30 1/30 1/30 1/30 1/30 DATE 2 MO SAMPLE GRAB GRAB GRAB GRAB GRAB GRAB DAY 28

Commanding Officer

U.S. Navy Public works Center, Guam

ADDRESS

LOCATION FACILITY

Apra Harbor Wastewater Treatment Plant

FPO AP 96540-2937 PSC 455, Box 195

RECEIVING WATER DISCHARGE MONITORING REPORT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

(DMR) (NPDES)

TBI

GU 0110019

DISCHARGE NUMBER

FROM PERMIT NUMBER YEAR 8 ឩ MO MONITORING PERIOD 2 DAY TO 02 03 YEAR MO <u>ي</u> DAY

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Commanding Officer

ADDRESS

PSC 455, Box 195

FPO AP 96540-2937

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

RECEIVING WATER DISCHARGE MONITORING REPORT (DMR)

U.S. Navy Public works Center, Guam

PERMIT NUMBER

GU 0110019

DISCHARGE NUMBER TB2

Apra Harbor Wastewater Treatment Plant FROM YEAR 2 MO 03 MONITORING PERIOD DAY 2

TO

03

3 DAY

YEAR MO 23

LOCATION FACILITY

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ADDRESS

U.S. Navy Public works Center, Guam

Commanding Officer

PSC 455, Box 195 FPO AP 96540-2937

LOCATION FACILITY

Guam

Apra Harbor Wastewater Treatment Plant

(NPDES)

(DMR)

RECEIVING WATER DISCHARGE MONITORING REPORT

PERMIT NUMBER GU 0110019 TB2

DISCHARGE NUMBER

FROM YEAR 2 MO DAY 3 MONITORING PERIOD 9 oT YEAR MO 25 03 31 DAY

EPA Form 3220 1	COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)	TYPED OR PRINTED	RALPH BURPEE LABORATORY MANAGER	FAUNCH AL EXECUTIVE OFFICER	NAME TITLE BROKEN	LEAD		MAGNESIUM	COLLING	TOTAL SUSPENDED		TURBIDITY		AINOIMIMA			NITRATE-NITROGEN		ORTHOPHOSPHATE		PARAMETERS	
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ADDRESS

LOCATION FACILITY

Apra Harbor Wastewater Treatment Plant

FPO AP 96540-2937 PSC 455, Box 195

U.S. Navy Public works Center, Guam

Commanding Officer

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

RECEIVING WATER DISCHARGE MONITORING REPORT (DMR)

PERMIT NUMBER GU 0110019 DISCHARGE NUMBER TB3

FROM YEAR 22 MO 03 MONITORING PERIOD DAY 2 TO YEAR MO 22 DAY

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NAME **ADDRESS**

TO THE TOTAL TOTA

RECEIVING WATER DISCHARGE MONITORING REPORT

(NPDES)

TB3

(DMR)

PERMIT NUMBER GU 0110019

YEAR 02 MO 03 MONITORING PERIOD 2 DAY TO YEAR MO 22 DISCHARGE NUMBER 03 DAY 3

FROM

LOCATION FACILITY

Apra Harbor Wastewater Treatment Plant

FPO AP 96540-2937 PSC 455, Box 195

U.S. Navy Public works Center, Guam

Commanding Officer

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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
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TABLE 1. RECEIVING WATER DATA			FLOW
TOTAL TOTAL ORTHO- NITRATE- DISSOLVED			FLOW
ENTEROCOCCI PHOSPHATE NITROGEN PHOSPHATE NITROGEN OXYGEN	TURBIDITY		(ft ³ /s)
DATE STATION CFU/100 ml pH mg/L mg/L mg/L mg/L (mg/l)	NTU	°C	92000
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	3.7	23.1	2.4
	4.2	24.2	2.4
	5.3	24.8	2.3
	5.3	25.1	1.4
	3.2	24.8	2.0
	4.4	24.6	10.5
	8.1	24.2	10.5
		24.8	10.5
		25.3	10.5
		25.2	10.5
		24.4	10.5
		24.9	18.0
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그렇게 하루를 가게 하고 있다면 그리아들의 사람이들이 사람이들이 아니는		25.7	
		25.9	
		22.5	
		26	
		27	
3/4/02 H < 100 8.1 0.043 0.09 0.001 0.021 7.8 1	2	27.2	
3/11/02 H < 100 7.68 0.023 0.627 0.018 0.006 6.8 0).7 2	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. 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

COORDINATES (°, ', ")
N 13° 22' 5.9 "
E 144° 45' 10.5"
N 13° 22' 6.6"
E 144° 45′ 10.8"
N 13° 22' 8.5"
E 144° 45' 12.5"
N 13° 22' 5.8"
E 144° 45' 10.4"
N 13° 22' 6.8"
E 144° 45' 11.8"
N 13° 22' 2.5"
E 144° 46' 11.2"
N 13° 22' 1.3"
E 144° 46' 11.8"
N 13° 22' 0.4"
E 144° 46' 11.9"

ATTACHMENT C.5

NORTHERN DISTRICT STP RECEIVING WATER RESULTS

GUAM WATERWORKS AUTHORITY

NORTHERN DISTRICT SEWAGE TREATMENT PLANT RECEIVING WATER QUALITY MONITORING

2nd QUARTER 2002

TABLE 1. SHORELINE RECEIVING WATER RESULTS

DATE	TIME/TIDE/SURF OBSERVATIONS	A FC/1	FC/100 mi	PREVIOUS RAINFALL (in) 2 days 5 days	AINFALL (in)
1/24/02	9:00 a.m. Sunny skies, rough surf, high tide. No floating material, no odor, clear water for all sites.	0	0	0.18	0.31
2/6/02	9:30 a.m. Sunny skies, high tide, rough surf. All sites no floating materail, 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	2

TABLE 2. OFFSHORE RECEIVING WATERS

DATE

SIATION	SJATION FLOATING MATERIALS FECAL ODOR, GOLOR COLIFORM FOLTON		TEMP. DISSOLVED OXYGEN	GEN pH	SALINITY	URBIDI	T SUSPENDED SOLIDS
D surface mid bottom		3	96		bpt	UTN	mg/L
E surface mid bottom					-		
F surface mid bottom					+		
Comments	Offshore receiving waters were not sampled this						

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

TEMP °C 23.9 24.3 24.9 24.3 24.7 24.3 25.3 25.3	23 24.5 24.9 23.9 24 24.7 25 24.9 25.4	
DISSOLVED OXYGEN mg/L 6.8 7.4 6 4.7 7.90 7.6 9.5 8.4	6.7 9.3 9.1 7.6 6.4 6.6 7.6	
TURBIDITY NTU 35.70 1.10 1.50 3.50 2.10 1.20 0.90 1.00		7.46
pH units 7.73 8.22 8.05 8.00 8.10 8.14 8.77	7.61 7.98 7.63 7.56 7.84 8.22 7.82 7.56	7.41
ORTHO- PHOSPHATE mg/L 0.064 0.013 0.042 n/s 0.016 0.027 0.016		0.180
NITRATE- NITROGEN mg/L 0.022 0.028 0.007 0.010 n/s 0.022 0.011	1,450 0.601 0.568 0.323 n/s 0.097 0.1	0.025
ENTEROLERT CFU/100mi 3320 740 610 23330 630 1050	8160 410 740 11600 1090 960 1090 91390 740	1830
FLOW ft ³ /sec 0.0297 0.0059 0.0099 0.0149 0.0149 0.0149 0.0099	0.0297 0.0149 0.0149 0.0149 0.0149 0.0149	
STATION DATE 1/15/02 TR1 1/22/02 2/5/02 2/12/02 2/19/02 3/5/02 3/12/02 3/12/02 3/12/02	1/15/02 TR2 1/22/02 2/5/02 2/12/02 2/19/02 3/5/02 3/12/02 3/19/02 3/19/02	1/15/02 TB

UMATAC-MERIZO RECEIVING WATERS MONITORING

TABLE 2. OBSERVATIONS

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		4

8:08 a.m. Cloudy skies, mild surf, high tide. All sites detritus, no odor, turbid water. 1/15/02

8:00 a.m. Sunny clear skies, mild surf, high tide. All sites no floating material, no odor, clear water. 1/22/02

9:04 a.m. Partly cloudy skies, mild surf, high tide. All sites detritus, no odor, and clear water. 2/5/02

9.25 a.m. Cloudy, overcast skies with light showers; mild surf, high tide. TR1 had no floating materail, no odor, and clear water. 2/12/02

TR2 had slightly turbid water, light musty odor, and detritus

8:36 a.m. All sites no odor, clear water. TR1 had no floating material; TR2 had detritus. 2/19/02

9:00 a.m. Partly cloudy skies, mild surf, high tide. All sites no floating material, no odor, clear water. 3/5/02

8:00 a.m. Partly cloudy skies, moderate surf, high tide. All sites no odor, clear water, detritus floating in water 3/12/02

8:30 a.m. Breezy clear skies. Rough surf, high tide. All sites no odor, clear water, detritus present. 3/19/02

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,

3/26/02

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 using handheld analyzers. Total phosphate, orthophosphate, total nitrogen, and nitrate-nitrogen are analyzed by WERI. Enterococci analyzed using Enterolert 1:10. dilution. 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 multiparameter probe. Prior to obtaining readings, the altitude of the station is inputted to compesate 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: Lachet 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 ColilertTM method using the QuantiTrayTM 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 Kjedahl 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-nm (No. 200) Sieve in Mineral Aggregates by Washing" ASTM C136, "Sieve Analysis of Fine and Coarse Aggregates"



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

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 were sewage spills occurred:

Chaot SPS
Agana SPS
- Approximately 5 and ½ hours – 76,999 gallons
- Approximately 8 and ½ hours – 462,500 gallons
- Approximately 12 and ½ hours – 65,000 gallons
- Approximately 12 and ½ hours – 8,000 gallons
- Approximately 12 and ½ hours – 9,500 gallons
- Approximately 12 and ½ hours – 9,500 gallons
- 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 30th, 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.



Aturidåt Kinalamten Hånom Guåhan Post Office Box 3010, Hagåtña, Guam 96932 Phone: (671) 479-7861/7886 Fax: (671) 649-0158

MAY 0 3 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 1st Quarter Order On Consent Report

Dear Sir:

We regret to inform you that the 1st 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,

Acting General Manager

CC:

GEPA, Administrator

AGMA Wastewater

Lab



Government of Guam

Post Office Box 3010, Hagatna, Guam 96932 Phone: (671) 479-7847 Fax: (671) 479-7879

MAY 0 3 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,

Acting General Manager

Cc: GEPA



Aturidåt Kinalamten Hånom Guåhan Post Office Box 3010, Hagåtña, Guam 96932 Phone: (671) 479-7861/7886 Fax: (671) 649-0158

MAY 0 3 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:

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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 were sewage spills occurred:

Chaot SPS
Agana SPS
Agana SPS

Harmon SPS
Astumbo #1 SPS
Astumbo #2 SPS
Santa Ana SPS

- Approximately 5 and ½ hours – 76,999 gallons
- Approximately 8 and ½ hours – 462,500 gallons
- Approximately 12 and ½ hours – 65,000 gallons
- Approximately 12 and ½ hours – 9,500 gallons
- Approximately 12 and ½ hours – 9,500 gallons
- 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 30th, 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.

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,

Acting General Manager

cc:

AGMO LAB GEPA

Wastewater Division



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,

General Manager



APR 11 2002

MEMORANDUM

TO:

HERBERT JOHNSTON JR.

GENERAL MANAGER

GUAM WATERWORKS AUTHORITY

FROM:

GOVERNOR CARL T.C. GUTIERRI

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.

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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 2nd 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 2nd 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, Ugum 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 .

Sincerely,

Michael J. Lee Guam Water Program Lead Pacific Islands Office cc: J. Salas, GEPA C. Lund, GEPA



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



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.

GIII A. SPINOHARA Acting General Manager

b. Title

Acting, General Manager

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Name of Authorized Representative

d. Signature of Authorized Representative III

11 A. Shinohara

Standard Form 424 (Rev. 7-97)
Prescribed by OMB Circular A-102

c. Telephone Number

e. Date Signed

(671) 479-7823

BUDGET INFORMATION - Non-Construction Programs

OMB Approval No. 0348-0044

Grant Program Function	Catalog of Federal Domestic Assistance	Estimated Ur	Estimated Unobligated Funds		New or Revised Budget	get
or Activity (a)	Number (b)	Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal	
		\$	€	8	69	(8)
2.						
9.						
4.						
5. Totals		€	€9	€	€	S
		SECT	SECTION B - BUDGET CATEGORIES	GORIES		
Object Class Categories	ories		GRANT PROGRAM,	GRANT PROGRAM, FUNCTION OR ACTIVITY		Total
		(3)	(2)	(3)	(4)	
a. Personnel		9	Ð	est.	↔	₩
b. Fringe Benefits	fits					
c. Travel						
d. Equipment						
e. Supplies						
f. Contractual		\$115,000.00				\$115,000,00
g. Construction						00.000,6217
h. Other						
i. Total Direct C	i. Total Direct Charges (sum of 6a-6h)	\$115,000.00				\$11E 000 00
j. Indirect Charges	seb					00.000.001
k. TOTALS (sum of 6i and 6j)		\$ 115,000.00	8	₩		\$ 115,000.00
7. Program Income		\$0	0 \$	\$	\$	6
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Standard Form 424A (Rev. 7-97) Prescribed by OMB Circular A-102

(a) Grant Program 8. 9.		(b) Applicant	(c) State	(d) Othor Courses	
3. 9. 10.			Aur. (A)	(a) Other sources	(e) IOTALS
9.		69	↔	₩	49
10.					
11.					
12. TOTAL (sum of lines 8-11)		49	€9	€	8
	SECTIO	SECTION D - FORECASTED CASH NEEDS	SH NEEDS		
L	Total for 1st Year	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
lo. rederal	€9	€	€	49	₩
14. Non-Federal					
15. TOTAL (sum of lines 13 and 14)	8	€9	₩	8	es es
SECTION E - BUDG	GET ESTIMATES O	SECTION E - BUDGET ESTIMATES OF FEDERAL FUNDS NEEDED FOR BALANCE OF THE PROJECT	EDED FOR BALANCE	OF THE PROJECT	
(a) Grant Program			FUTURE FUNDIN	FUTURE FUNDING PERIODS (Years)	
		(b) First	(c) Second	(d) Third	(e) Fourth
16.		€9	↔	€	\$
17.					
18.					
19.					
20. TOTAL (sum of lines 16-19)		69	€9	8	₩
	SECTION	SECTION F - OTHER BUDGET INFORMATION	FORMATION		
21. Direct Charges:		22. Indirec	22. Indirect Charges:		
20 Demonitor					

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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 P.O. Box 3010 Complete Address: 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 A delress: 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 Proje	ct 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 in eligible, 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 judg ment 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	
Type d Name & Title of Authorized Representative	20
Signature of Authorized Representative Date	
I am unable to certify to the above statements. My explanation is attached.	2518
	is w

EPA Form 5700-49 (11-88)

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	*
Mai:	N S
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Anil	20202
SIGNATURE OF AUTHORIZED REPRESENTATIVE D	ATE
7	22*

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 <u>DO NOT</u> 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:

- 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.
- 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 aquired in whole or in part with Federal assistance funds to assure non-discrimination during the useful life of the project.
- 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.
- Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.
- 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.

- 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).
- 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 nondiscrimination. 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 seg.), 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).

- 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.
- 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.).
- 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.
- 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."
- Will comply with all applicable requirements of all other Federal laws, executive orders, regulations, and policies governing this program.

AL			
SIGNATURE OF AUTHORIZED CERTIFYING OFFICE	CIAL TITLE		
Gil A. Shimohara	Acting	g, General Manager	
APPLICANT ORGANIZATION	D	ATE SUBMITTED	
Guam Waterworks Authority		6 .020	2007

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.
- 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)

- 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 Distrist 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:

CentralSouthernSanta RitaUmatacPitiInarajanAsanMerizo

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)

- 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



Carl T. C. Gutterrez Magálliú Governor Mudéleine Z. Bordalle Tiliente Gutetradora L. Governor

DIPAT AMENTON KULETSIO DEPARTMENT OF COMMERCE

GOBETNON GUAHAN GOVERNMENT OF GUAM

> Gumi 107, Chalan M 102 M Street Tiyan, Guillan Tiyan, Guan 96913

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Direktor
Edward L.C.
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Deputy Direk

Facsimile

Til: (671) 475-0321/2

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U.S. Census Bureau

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	POP	ULATION	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%	

Census Bureau News		Page 2 of
L.	130	Page 2 of 2

lr.	***	122	133)	1 age 2 01
Agat District	5,656	4,960	690	5 14%
Asan District	2,090	2,070	20	1%
Barrigada District	8,652	8,846	-194	
Chalan Pago-Ordot District	5,923	4,451	1,472	
Dededo District	42,980	31,728	11,252	
Hagatña district	1,100	1,139		
Inarajan District	3,052	2,469	583	
Mangilao District	13,313	10,483	2,830	
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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Guarra

Department of Commerce

2000 Final Population Totals

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Chalan Pago-Ordot District	5,923	8,846	-194	-2%
Dededo District		4,451	1,472	33%
Hagama district	42,980	31,728	11,252	35%
Inarajan District	1,100	1,139	-39	-3%
Mangilao District	3,052	2,469	583	24%
	13,313	10,483	2,830	27%
Merizo County	2,163	1,742	421	24%
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	0,707	2,330	1.146	21%

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FOR PICKUP OR TRACKING CALL 1-800-222-1811	_			N W W TO PUDER	AL 56/7 12	Weekend Holiday Acceptance Clerk Initials Total Postage & Feek	Int'l Aipha Countr	Time in Military Military Return Receipt Fee	Second	ORIGIN (POSTAL USE ONLY) PO ZIP Code Day of Delivery Hat Rate Envelope	MAIL WHITED STATES POST OF FICE TO ADDRESSES
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*** THANK YOU ***



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. SPINOHARA Acting General Manager



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:

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.

Sinserament

Acting General Manager

Administrator, GEPA **GWA AGMA** Wastewater

Lab



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/

Acting General Manager

CC:

Administrator, GEPA GWA AGMA Wastewater Lab



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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 2nd 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 28th 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. 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

Acting General Manager

CC:

GEPA, Administrator **AGMA** Wastewater Lab



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
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



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 though 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. SHINOHARA Acting General Manager

Cc: AGMO

LAB GEPA

Wastewater Division



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APR 1 1 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 involve 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.

HENBERT JOHNSTON, JR.

cc:

AGMO Wastewater Laboratory