EXHIBIT A

GUAM ENVIRONMENTAL PROTECTION AGENCY

AHENSIAN PRUTEKSION LINA'LA GUAHAN

D-107 Harmon Plaza, 130 Rojas St., Harmon, Guam 96911 Tel. No. 646-8863/5 FAX: 646-9402

MAR 11 11 54 AM '91

MAR 06 1991

Mr. Norm Lovelace, E-4
Chief
Office of Pacific Island and
Native American Programs
Water Management Division
U.S. Environmental Protection
Agency, Region IX
75 Hawthorne Street
San Francisco, California 94105

Re: 301(h) Application
PUAG - ~~Northern District Sewage Treatment~~ Agana Sewage Treatment
NPDES Permit ~~No. GU0020141~~ GU0020087

Dear Norm:

GEPA staff has completed the review of the 301(h) permit application submitted for the above reference facility and hereby provide State certification in accordance with Section 401 of the Clean Water Act.

Based on our determination and review of relevant data and in accordance with Section 124.53 and 124.54 of 40 CFR 124, the discharge of the above facility will comply with applicable provisions of State Laws and Regulation, including applicable water quality standards and will not result in additional treatment, pollution control or other requirements on any other point or nonpoint sources.

Furthermore, we have determined that there are no known or suspected toxics, industrial or pesticides contributors to the above facility.

Should you need additional information, please do not hesitate to contact us.

Sincerely yours,

FRED M. CASTRO
Administrator

CC: Chief Officer, PUAG
Director, Bureau of Planning

EXHIBIT B

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

OFFICE OF THE
REGIONAL ADMINISTRATOR

APR - 4 1997

Richard A. Quintanilla
General Manager
Guam Waterworks Authority
P.O. Box 3010
Agana, Guam 96910

Re: Applications for Modified Permits, Pursuant to Section 301(h) of the Clean Water Act for Agana and Northern District Sewage Treatment Plants

Dear Mr. Quintanilla:

During our review of the 301(h) waiver applications for the Agana and Northern District Wastewater Treatment Plants (WWTPs) and their monitoring program results, we have made a number of requests for additional information that would convince EPA Region IX that the waivers are warranted. Most recently, March 10, 1995, we requested updated outfall inspection reports and copies of certain specific historical databases which local Guam agencies have maintained over several years in the area of the two outfalls. Again, on November 27, 1995, we wrote requesting completion of water quality and biological data reports from the fourth quarter of 1994 to the present, as required by the 301(h) permits. However, to date these items have not been received.

Therefore, we conclude that the Guam Waterworks Authority, during the extended life of the present 301(h) permits (1) failed to carry out sufficient monitoring, particularly during the last two years when no monitoring of receiving waters was reported, and (2) failed to demonstrate that the discharges will not adversely impact public health or coral reef communities. Consequently, this letter is to inform you of my tentative decision to deny your applications for renewal of the modified NPDES permits for both Agana and Northern District WWTPs pursuant to section 301(h).

Of particular concern is the number of fecal coliform exceedances of Guam water quality standards reported at the offshore and shoreline monitoring stations during the five-year period from 1990 to 1994:

Agana Stations	A	B	C	D	E	F (Control)
No. of exceedances	17	5	3	4	2	0

No. Dist. Stations	A	B	C	D	E (Control)
No. of exceedances	14	4	3	1	0

Furthermore, as exemplified in the attached dissolved oxygen bar graphs, the trends in water quality in the offshore waters at Agana and Northern District are not improving and, in fact, may be deteriorating.

In 1990, E.A. Matson reported, in his routine monitoring reports, significant transport of sewage effluent toward both Agana's and Northern District's shoreline Stations "A". Benthic data in both areas indicated increased coverage of bare substrata near the outfalls. To avoid these problems, Matson recommended extending the outfalls to deeper waters.

Additionally, results of two PUAG-contracted surveys have been published: (1) E.A. Matson's *Fecal Pollution in Guam's Coastal Waters and Sediments* (16 March 1993) and (2) Dames and Moore's *Impact Assessment of Non-chlorinated Effluent from Agana and Northern District Wastewater Treatment Plants (December 1994)*. Both of these documents warned that significant fecal coliform contamination can enter coastal waters of Guam from stormwater runoff, point source contaminators (including outfalls) and perhaps resuspension of contaminated sediments.

Neither of the above surveys recommended chlorinating effluents. The detrimental effects of chlorination on marine biota could be more extensive than the bacterial pollution itself.

These wastewater discharge impacts to water quality also have detrimental impacts to the coral reef environment. Coral reefs are considered "distinctive habitats of limited distribution," and 301(h) dischargers must not adversely impact such habitats. Based on the available data and the current design and operation of the WWTPs, it is necessary to deny these

applications. However, one option to improve the chances of obtaining a favorable 301(h) decision in the future is outfall extensions with proper diffuser maintenance. We suggest that you consider extending both outfalls to deeper water farther from reef areas and shoreline beaches, and then filing revised 301(h) applications that take into account the outfall extensions.

Under this tentative decision denial, you have forty-five (45) days from the date of this letter to submit a "letter of intent" to revise your applications for Agana and Northern District WWTPs. If a letter of intent is not submitted within this time frame, you will have no further opportunity to submit a revised application and forfeit any further consideration for a 301(h) waiver under existing law. If you submit a letter of intent, a revision of your applications for these facilities must be submitted within one year of the date of this tentative decision. If the applications are not received within that time frame, this too would be grounds for denying a waiver. As a result, a final decision to deny the application will be made, and Agana and Northern District WWTPs will be required to achieve secondary treatment. The revised applications must address the entire applicant questionnaire in sufficient detail to adequately demonstrate compliance with all 301(h) requirements. A State determination from Guam EPA, in accordance with 40 CFR 125.61(b)(2) and 125.64(b), must be received no more than ninety (90) days following the submission of your revised application.

If a letter of intent is received within the 45-day period, further EPA proceedings on the tentative decision will be stayed. If no letter of intent is received within the given time period, we will proceed with preparation of a final decision to deny the 301(h) applications for Agana and Northern District WWTPs in accordance with 40 CFR 124. Dischargers who are denied a waiver will be required to achieve secondary treatment.

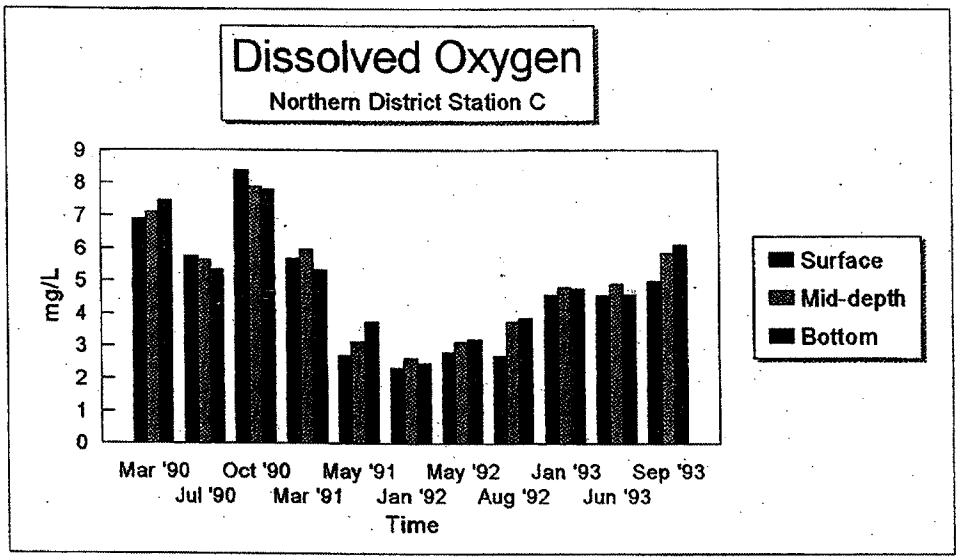
If you have any questions regarding this matter, please contact Norm Lovelace at 415-744-1599 or David Stuart at 415-744-1937.

Yours,

John C. Wise

Felicia Marcus for
Regional Administrator

Attachments
cc: Governor Carl T.C. Gutierrez
Jesus Salas, Guam EPA
GWA Board of Directors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Northern District Station C
mg/L
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Jul '90
Oct '90
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May '91
Jan '92
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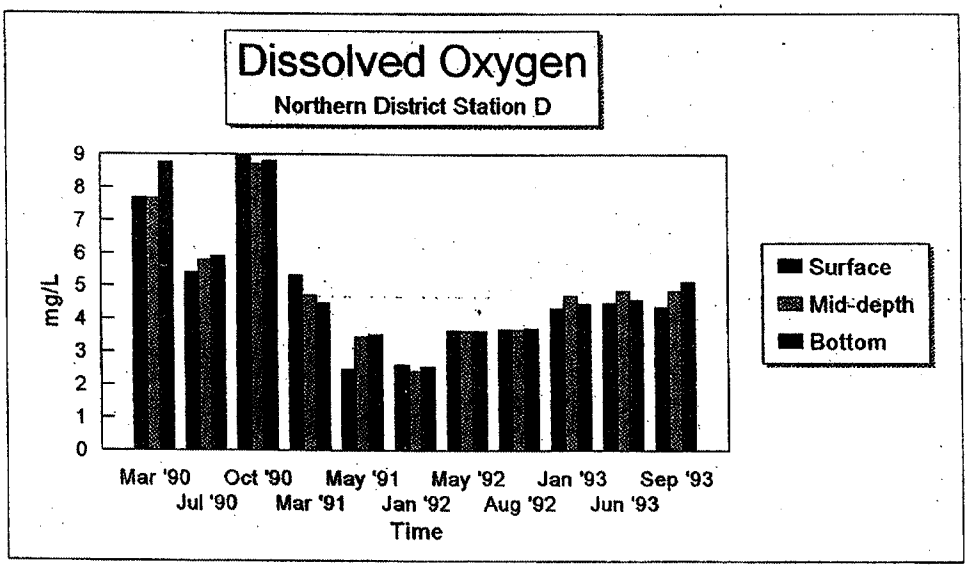
Jan '93
Jun '93
Sep '93
Time
Surface
Mid-depth
Bottom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Northern District Station D
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Time
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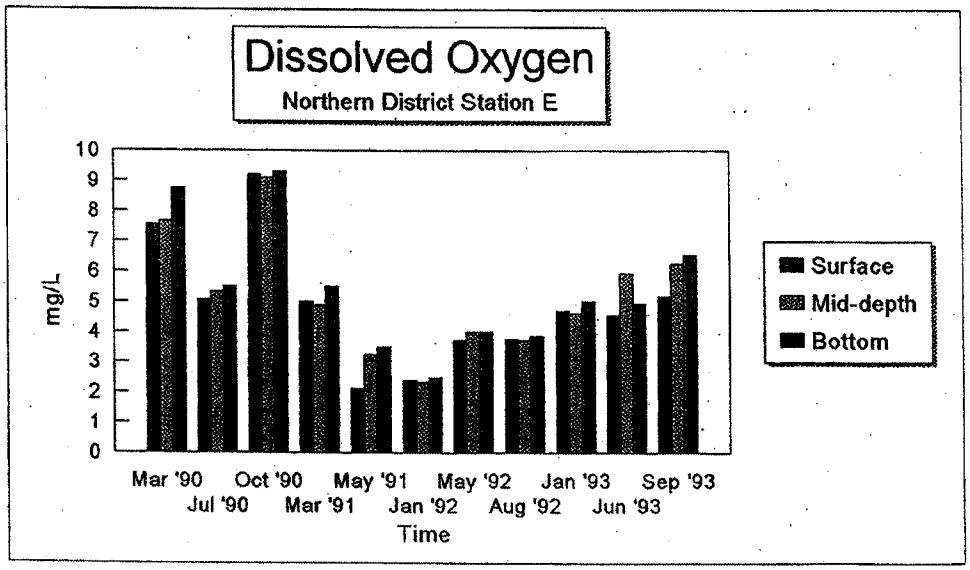
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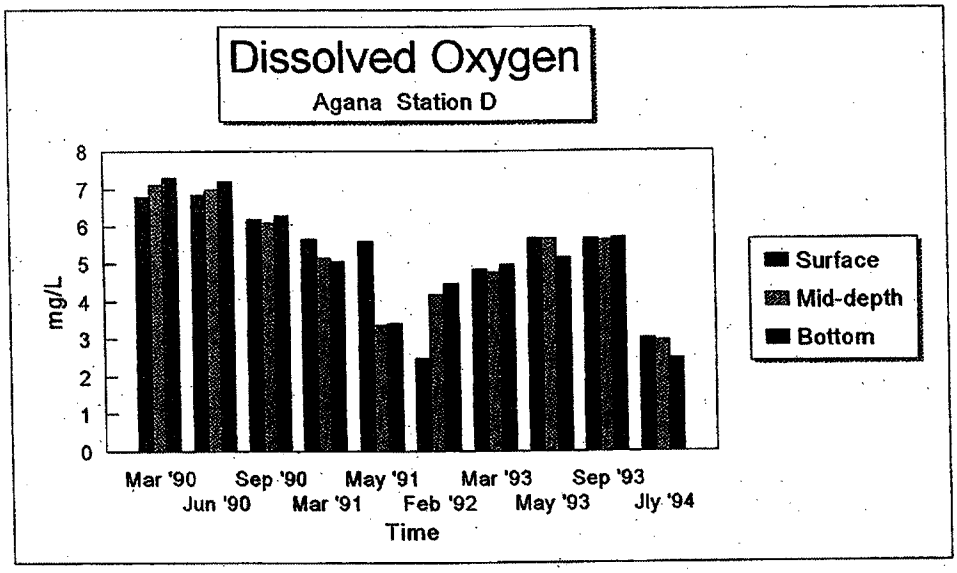
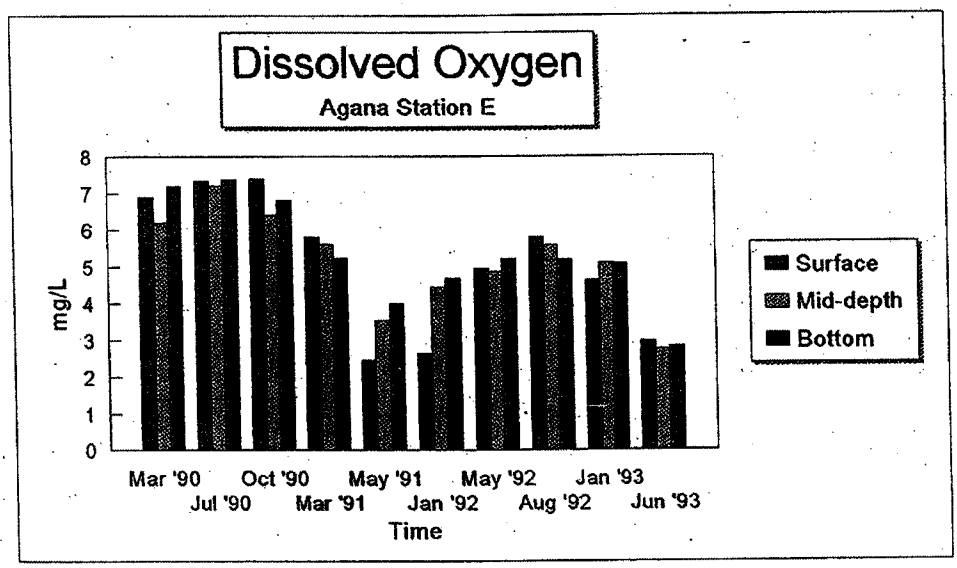
May '92
Aug '92
Jan '93
Jun '93
Sep '93
Time
Surface
Mid-depth
Bottom

Trend of Water Quality in Agana





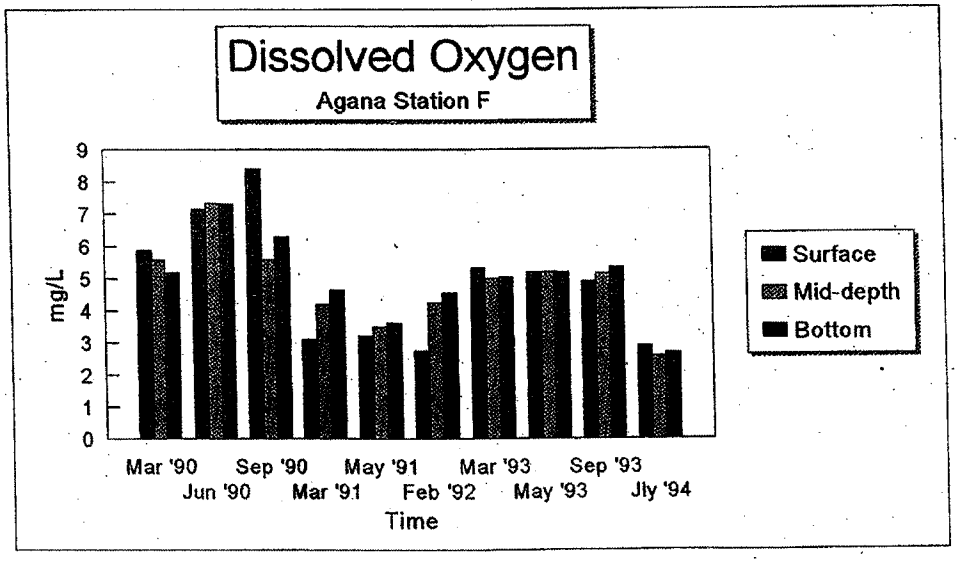


EXHIBIT C

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

DEC 21 1998

Richard A. Quintanilla
General Manager
Guam Waterworks Authority
Government of Guam
P.O. Box 3010
Agana, Guam 96932

OPTIONAL FORM 99 (7-90)

FAX TRANSMITTAL # of pages ▸ 2

To	From
Bert Johnston	Mike Lee
Dept./Agency	Phone #
Asst. GM, GWA	415-744-1484
Fax #	Fax #
671-479-7879	415-744-1604

NSN 7540-01-317-7368 5099-101 GENERAL SERVICES ADMINISTRATION

Re: Northern District and Agana STPs

Dear Mr. Quintanilla:

This is in response to your letter dated October 14, 1998, submitting a revised schedule of activities for completing the baseline surveys and outfall extensions for both the Northern District and Agana Sewage Treatment Plants (STP). The submitted revised schedule of activities calls for completing the baseline surveys and outfall extension basis of design report by early March, 1999, with construction for one of the outfall extensions estimated to commence in January, 2000, and be completed in June, 2000. Guam Waterworks Authority (GWA) further stated that funding for the construction of one of the outfall extensions is available and GWA will identify funding for the second outfall extension in time to allow for simultaneous construction start-up.

Your letter of October 14th states that the actual construction dates are not included and the construction schedule will not be created until the baseline surveys and the designs are completed. We hereby request that GWA estimate the construction schedule for both outfall extensions and incorporate them into the revised schedule. Although there may be some adjustments based on final locations and design considerations a schedule needs to be established which includes a construction schedule for starting and completing both outfall extensions. GWA will need to ensure that funding is available to maintain compliance with the established schedule.

Based on our review of the submitted schedule parts relating to benthic flora and fauna; sampling; sediment and fauna analysis; water quality analysis; and sediment quality analysis we are not clear as to what these parts actually include and request that GWA provide us with a copy of the baseline survey's work plan/scope of work for our review.

In the submitted schedule it appears that the above mentioned sampling and analysis will be conducted as a one time sampling event performed during the December, 1998-January, 1999, time frame. While we feel this would be adequate as an initial assessment for placement of the ocean outfalls we also feel that the baseline surveys should extend over a longer period of time and sampling be performed at least at quarterly intervals for the first 12-months and at a reduced frequency thereafter throughout outfall construction and until completion of the respective outfall

extensions. The sampling frequency after the first 12 months will be determined in consultation with us. We feel that sampling over a longer period will provide a good baseline of information in the areas of the outfall extensions. In addition, we would like to request that GWA provide us with semi-annual baseline survey status reports. The first status report should be submitted approximately sixty (60) days after the second quarterly sampling event. We do not feel that extending the baseline survey time frame should delay the progress on completing the design and moving forward with construction of the outfall extensions.

Although GWA has indicated that funding is available for one of the outfall extensions and would be identifying funding for the remaining outfall extension it is not clear to us that a actual funding source has been secured for the first outfall extension and whether a funding source for the second outfall extension will be identified and secured to ensure completion in a timely manner. Failure of GWA to identify and secure funding sources for the outfall extensions will result in the denial of its 301(h) NPDES permit renewals for the Northern District and Agana Sewage Treatment Plants. Denial of these 301(h) NPDES permit renewals will result in GWA having to meet secondary treatment requirements for the facilities, i.e., construction of secondary treatment plants.

Therefore, approval of the revised schedule is contingent upon GWA providing the above mentioned information and clearly identifying the funding source(s) to extend both outfalls. GWA needs to also provide us with information which clearly shows that these funds have been secured for their intended purpose, i.e., extension of both outfalls. Failure of GWA to provide this funding information will result in our reassessment on the credibility of the revised schedule. Please provide a written response which clearly addresses the concerns of this letter by January 15, 1999.

We would like to re-emphasize that we remain concerned that adequate funding has not been or will not be identified and secured for these projects. The extension of the outfalls are essential to GWA meeting Guam Water Quality Standards for the respective discharges and renewal of their respective NPDES permits. The extension of the outfalls are also essential to protecting the health and environment which is intregal to a healthy economy for Guam.

If you have any questions regarding this matter, please contact Mike Lee at (415) 744-1484 or Lily Lee at (415) 744-1592.

Sincerely,

for Norman L. Lovelace
Program Manager
Pacific Insular Area Programs

cc: B. Johnston, GWA
J. Salas, GEPA
N. Custodio, GEPA

EXHIBIT D

Julie Shane

From: Remigio.Richard@epamail.epa.gov
Sent: Thursday, June 18, 2009 2:49 AM
To: Julie Shane
Cc: Eberhardt.Doug@epamail.epa.gov
Subject: RE: Requested Scanned Letter Correspondences

Hi Julie,

I apologize for not immediately responding to your request. Enclosed are the documents that I was able to find in our own records post-1998. I've provided both GWA and EPA correspondences. Also, can please provide more specifics about the document that referenced the 1999 letter? Is this from the TDD, another letter correspondence, study, etc?

Regards,

Richard

Richard Remigio - Environmental Engineer
NPDES Permits Office
U.S. Environmental Protection Agency- Region 9
75 Hawthorne Street, WTR-5
San Francisco, CA 94105

P: 415. 947.4113
F: 415. 947.3545
remigio.richard@epa.gov

From: "Julie Shane" <jshane@guamwaterworks.org>
To: Richard Remigio/R9/USEPA/US@EPA
Cc: Doug Eberhardt/R9/USEPA/US@EPA
Date: 06/16/2009 07:11 PM
Subject: RE: Requested Scanned Letter Correspondences

Richard,

Can you please let me know about this ASAP? I don't want to make any errors in our response, and I found a reference to a 1999 letter that I can't locate a copy of.

Thanx,
Julie

From: Julie Shane [mailto:jshane@guamwaterworks.org]
Sent: Tuesday, June 16, 2009 9:41 AM
To: 'Remigio.Richard@epamail.epa.gov'
Subject: RE: Requested Scanned Letter Correspondences

Richard,

Were there any OTHER correspondence from USEPA to GWA after 1998 requesting additional information in support of the application? I have been unable to locate any.

Thanx,
Julie

From: Remigio.Richard@epamail.epa.gov [mailto:Remigio.Richard@epamail.epa.gov]
Sent: Saturday, April 04, 2009 8:40 AM
To: jshane@guamwaterworks.org
Cc: Lee.Michael@epa.gov
Subject: Requested Scanned Letter Correspondences

Greetings Julie:

Enclosed you will find the requested letter correspondences leading up to April 21, 1998. Please review, and feel free to contact either Mike or myself if you have any additional questions.

Cheers,

Richard

Richard Remigio - Environmental Engineer
NPDES Permits Office
U.S. Environmental Protection Agency- Region 9
75 Hawthorne Street, WTR-5
San Francisco, CA 94105

P: 415. 947.4113
F: 415. 947.3545
remigio.richard@epa.gov

EXHIBIT E

GUAM WATERWORKS AUTHORITY

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

JUN 3 0 2000

Norman L. Lovelace
Manager, Pacific Insular Area Programs
U.S. Environmental Protection Agency
Pacific Insular Areas Program
75 Hawthorne Street (CMD-5)
San Francisco, CA 94105

Re: Revised NPDES Permit Application for the Agana Wastewater Treatment Plant

Dear Norman,

Enclosed is GWA's revised NPDES permit application for the Agana Wastewater Treatment Plant. The information provided on the application is the latest regarding the operation, maintenance, and scheduled improvements for the plant. While we have basically completed all of the pertinent sections of the application, we acknowledge and have made note of the one section left incomplete. GWA is presently in the process of conducting a Priority Pollutant Scan for the Agana WWTP and will forward the results as soon as they are made available.

According to GMP Associates Inc. (consultant for the design and construction of the outfall extensions), they received approval (May 12, 2000) from the Army Corps of Engineers for the test boring of the Agana and Northern District reef lines. GMP and its subcontractor have recently mobilized to and have begun work on the Northern District reef line. Although work has already begun at the Northern District reef site, GMP is still in the process of preparing the construction schedules for both the Agana and Northern District WWTPs outfall extensions. Rather than wait for the schedules, GWA has decided to submit its NPDES application for the Agana WWTP and will forward the construction schedules as soon as they become available.

Submission of the receiving water quality and biological monitoring information requested on the outfall extensions i.e. baseline monitoring, effluent quality data, etc., will commence as soon as the outfall site locations have been established. GWA will keep you updated on the status of the exploratory test boring and subsequent matters surrounding the outfall extension.

Please advise me if additional information is needed to complete the application process. I can be reached at (671) 479-7823, fax (671) 479-7879 or e-mail at hjjohn@ite.net.

Sincerely,

Herbert J. Johnston
General Manager

GUAM WATERWORKS AUTHORITY

Aturidat Kinalamten Hanom Guahan

Government of Guam

Post Office Box 3010, Hagåtña, Guam 96932

Phone: (671)479-7823/7820 Fax: (671)649-0158

FEB 05 2001

Norman L. Lovelace
Manager, Pacific Insular Area Programs
U.S. Environmental Protection Agency
Pacific Insular Areas Program
75 Hawthorne Street (CMD-5)
San Francisco, CA 94105

Re: Revised NPDES Permit Application for the Northern District Wastewater Treatment Plant

Dear Norman,

Enclosed is GWA's revised 301(h) Modified NPDES permit application for the Northern District Wastewater Treatment Plant. The information provided on the application is the latest regarding the operation, maintenance, and scheduled improvements for the plant. GWA is presently in the process of conducting a new Expanded Effluent Testing for the Northern District WWTP and will submit the results as soon as they become available. We are currently reviewing the guidelines provided by your Office concerning the Toxicity Testing requirements. GWA will most likely contract this requirement out to one of the qualified labs listed by your Office. We will inform your Office of our arrangement no later than the end of March this year.

According to GMP Associates Inc. (consultant for the design and construction of the outfall extensions), its subcontractor has completed the test borings at both the Agana and Northern District outfall extension sites. Included in the Technical Support section of the revised application (Tab 4) is a copy of the receiving water quality report for both proposed outfall sites. The requested biological monitoring information will be sent to your office as soon as it becomes available.

Included in this revised application are the construction schedules for both the Agana and Northern District WWTPs outfall extensions. GWA will keep you updated on the status of the design, and all subsequent matters regarding the outfall extensions.

Please advise me if additional information is needed to complete the application process. I can be reached at (671) 479-7823, fax (671) 479-7879 or e-mail at hjjohn@ite.net.

Sincerely,

Herbert J. Johnston
General Manager

EXHIBIT F

Ann Borja

From: Remigio.Richard@epamail.epa.gov
Sent: Thursday, June 18, 2009 2:49 AM
To: Julie Shane
Cc: Eberhardt.Doug@epamail.epa.gov
Subject: RE: Requested Scanned Letter Correspondences

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I apologize for not immediately responding to your request. Enclosed are the documents that I was able to find in our own records post-1998. I've provided both GWA and EPA correspondences. Also, can please provide more specifics about the document that referenced the 1999 letter? Is this from the TDD, another letter correspondence, study, etc?

Regards,

Richard

Richard Remigio - Environmental Engineer
NPDES Permits Office
U.S. Environmental Protection Agency- Region 9
75 Hawthorne Street, WTR-5
San Francisco, CA 94105

P: 415. 947.4113
F: 415. 947.3545
remigio.richard@epa.gov

From: "Julie Shane" <jshane@guamwaterworks.org>
To: Richard Remigio/R9/USEPA/US@EPA
Cc: Doug Eberhardt/R9/USEPA/US@EPA
Date: 06/16/2009 07:11 PM
Subject: RE: Requested Scanned Letter Correspondences

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Thanx,
Julie

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Thanx,
Julie

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Cc: Lee.Michael@epa.gov
Subject: Requested Scanned Letter Correspondences

Greetings Julie:

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Cheers,

Richard

Richard Remigio - Environmental Engineer
NPDES Permits Office
U.S. Environmental Protection Agency- Region 9
75 Hawthorne Street, WTR-5
San Francisco, CA 94105

P: 415. 947.4113
F: 415. 947.3545
remigio.richard@epa.gov

Ann Borja

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To: jshane@guamwaterworks.org
Cc: Lee.Michael@epa.gov
Subject: Requested Scanned Letter Correspondences

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Cheers,

Richard

Richard Remigio - Environmental Engineer
NPDES Permits Office
U.S. Environmental Protection Agency- Region 9
75 Hawthorne Street, WTR-5
San Francisco, CA 94105

P: 415. 947.4113
F: 415. 947.3545
remigio.richard@epa.gov

EXHIBIT G

BEFORE THE ENVIRONMENTAL APPEALS BOARD
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C.

In the Matters of: GUAM WATERWORKS AUTHORITY'S NORTHERN DISTRICT SEWAGE TREATMENT PLANT APPLICATION FOR A MODIFIED NPDES PERMIT UNDER SECTION 301(h) OF THE CLEAN WATER ACT (NPDES Permit No. GU0020141) and GUAM WATERWORKS AUTHORITY'S AGANA SEWAGE TREATMENT PLANT APPLICATION FOR A AMODIFIED NPDES PERMIT UNDER SECTION 301(h) OF THE CLEAN WATER ACT (NPDES Permit No. GU0020087)	**DECLARATION OF JULIE SHANE IN SUPPORT IN SUPPORT OF THE GUAM WATERWORKS AUTHORITY'S APPEAL OF THE DENIAL OF ITS 301(h) WAIVERS FOR THE NORTHERN DISTRICT AND HAGÅTÑA SEWAGE TREATMENT PLANTS.**

I, Julie R. Shane, P.E. declare as follows:

1. I am the Senior Engineer Supervisor (Wastewater Section) for the Guam Waterworks Authority ("GWA") and a professional environmental engineer licensed in Connecticut and Guam. I began my employment for GWA in that capacity in October 2006. Previously I worked for DZSP21 as the wastewater engineer for the Navy's wastewater systems on Guam, and prior to that I worked for the Connecticut Department of Environmental Protection (CTDEP) in the Permits, Enforcement and Remediation Division (PERD). My work in PERD as a Sanitary Engineer III was specific to permits and enforcement of the National Pollution Discharge Elimination System ("NPDES") program, and Connecticut has primacy for NPDES. I have personal knowledge of the matters stated herein and, if called upon to testify, could and would competently testify thereto.

2. On June 30, 1986, USEPA issued GWA 301(h) NPDES permit GU0020141 for the Northern District Wastewater Treatment Plant's (NDWWTP) ocean discharge, which expired on June 30, 1991. On December 28, 1990 GWA, which was then the Public Utility Agency of Guam (PUAG), submitted a permit application for the discharge. On February 5, 2001 GWA submitted a revised permit application to reflect updated data. GWA has not received a new operating permit from USEPA.

3. On June 30, 1986, USEPA issued GWA 301(h) NPDES permit GU0020087 for the Agana WWTP's ocean discharge, which expired on June 30, 1991. On December 28, 1990 GWA, which was PUAG, submitted a permit application for the discharge. On June 30, 2000 GWA submitted a revised permit application to reflect updated data. GWA has not received a new operating permit from USEPA.

4. On April 3, 2008 GWA participated in a telephone conference call with U.S. EPA on the subject of GWA's application for a 301(h) waiver from secondary treatment requirements. Present for EPA were Nancy Woo, Associate Director Water Division; Mike Lee, Pacific Island's Office; Richard Remigio, NPDES Permit writer for Agana and Northern District WWTPs; Doug Eberhardt, NPDES Supervisor; and Marcela Vonzacano, identified as the Clean Water Act Attorney for 301(h) waiver issues. Present for GWA were myself; Len Olive, General

Manager; Don Antrobus, Chief Engineer; and Paul Kemp, Compliance Officer. Present for the Combined Commission on Utilities was the Chairman, Simon Sanchez.

5. During the conversation it was stated unequivocally by Mr. Eberhardt that the "window" for GWA to submit additional information with regard to the 301(h) waiver application had closed in 2001.

I declare under penalty of perjury under the laws of the Territory of Guam and the United States of America that the foregoing is true and correct.

Executed this 3rd day of November, 2009 at Tamuning, Guam.

Julie R. Shane, P.E.
GWA Senior Engineer Supervisor

BEFORE THE ENVIRONMENTAL APPEALS BOARD
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C.

In the Matters of: GUAM WATERWORKS AUTHORITY'S NORTHERN DISTRICT SEWAGE TREATMENT PLANT APPLICATION FOR A MODIFIED NPDES PERMIT UNDER SECTION 301(h) OF THE CLEAN WATER ACT (NPDES Permit No. GU0020141) and GUAM WATERWORKS AUTHORITY'S AGANA SEWAGE TREATMENT PLANT APPLICATION FOR A AMODIFIED NPDES PERMIT UNDER SECTION 301(h) OF THE CLEAN WATER ACT (NPDES Permit No. GU0020087)	**DECLARATION OF PAUL J. KEMP IN SUPPORT IN SUPPORT OF THE GUAM WATERWORKS AUTHORITY'S PETITION FOR REVIEW REGARDING THE DENIAL OF ITS 301(h) WAIVERS FOR THE NORTHERN DISTRICT AND HAGÅTÑA SEWAGE TREATMENT PLANTS.**

I, Paul J. Kemp, M. S. declare as follows:

1. I am the Assistant General Manager for Compliance and Safety for the Guam Waterworks Authority ("GWA") and a Guam EPA Level IV certified Operator in Water Treatment, Water Distribution, Waste Water Treatment and Waste Water Collection. I began working for GWA in July 2003. Prior to that, from February 1990 to July 2003, I worked for Brewer Chemical Company (BCC), (later to be renamed BEI, Hawaii) in Honolulu Hawaii as a Technical Support Engineer and provided technical support for all Hawaiian Islands, Johnston Island, Wake Island and to the Guam office of BCC/BEI. From September 1977 to February 1990, I was a Principal Consultant for first Olin Water Services and then its descendant, Associated Chemicals and Services. My work from 1977 to date has been in the chemistry of water treatment. The CEPT processes employed successfully by City and County of Honolulu at Sand Island Waste Water Treatment Plant was designed by a BEI colleague and me in conjunction with the City and County of Honolulu's consulting firm, R. M. Towill Inc. I also participated in the design and operation of the City and County of Honolulu's water reuse project at Honouliuli with their operating contractor, Veolia Water.

2. On June 30, 1986, USEPA issued GWA 301(h) secondary waiver in the National Pollution Discharge Elimination System (NPDES) permit GU0020141 for the Northern District Wastewater Treatment Plant's (NDWWTP) ocean discharge, which expired on June 30, 1991. On December 28, 1990 GWA, which was then the Public Utility Agency of Guam (PUAG), submitted a permit renewal application for this discharge. On February 5, 2001 GWA submitted a revised permit application to reflect updated data. GWA has not received a new operating permit from USEPA.

3. On June 30, 1986, USEPA issued GWA 301(h) secondary waiver in the NPDES permit GU0020087 for the Agana WWTP's ocean discharge, which expired on June 30, 1991. On December 28, 1990 GWA, which was then PUAG, submitted a permit renewal application for this discharge. On June 30, 2000 GWA submitted a revised permit application to reflect updated data. GWA has not received a new operating permit from USEPA.

4. On April 3, 2008 GWA I participated in a telephone conference call with U.S. EPA on the subject of GWA's application for a 301(h) waiver of secondary treatment requirements. Present for EPA were Nancy Woo, Associate Director Water Division; Mike Lee, Pacific Island's Office; Richard Remigio, NPDES Permit writer for Agana and Northern District WWTP's; Doug Eberhardt, NPDES Supervisor; and Marcela Vonzacano, identified as the Clean Water Act Attorney for 301(h) waiver issues. Present for GWA were me; Len Olive, General Manager; Don Antrobus, Chief Engineer; and Julie R. Shane, Senior Engineering Supervisor (Waste Water). Present for the Consolidated Commission on Utilities was the Chairman, Simon Sanchez.

5. During the conversation it was stated unequivocally by Mr. Eberhardt that the "window" for GWA to submit additional information with regard to the 301(h) waiver application had closed in 2001.

I certify under penalty of law that I have examined and am familiar with the information submitted in this document and that this document was prepared either by me personally, that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing and willful submission of a materially false statement.

Executed this 3rd day of November, 2009 at Tamuning, Guam.

PAUL J. KEMP, M. S.
Assistant General Manager for Compliance and Safety

EXHIBIT H

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UNITED STATES DISTRICT COURT

TERRITORY OF GUAM

UNITED STATES OF AMERICA, Plaintiff, v. GUAM WATERWORKS AUTHORITY and the GOVERNMENT OF GUAM, Defendants.	CIVIL NO. 02-00035 UNITED STATES' RESPONSE TO DEFENDANTS' MOTION FOR DISPUTE RESOLUTION

water wells. Complaint, ¶¶92, 105, 108 - 111, Att. B, C. In addition, GWA repeatedly violated the Maximum Contaminant Level ("MCL") for total coliforms and the treatment technique for turbidity in drinking water. Complaint, ¶¶119, 124, Att. E, F. The MCL violations led to the issuance of "boil water" notices for extended periods. Id. at ¶148. GWA's dilapidated public water systems experienced frequent breakdowns of essential equipment such as well pumps and chlorinators. Id. at ¶141, 145. Due to these breakdowns, the system frequently provided either low or no water pressure, and often provided water without adequate disinfection. Id. at ¶142, 145. In sum, both GWA's raw sewage discharges and its inadequately treated drinking water posed a serious threat to human health on Guam. Id. at ¶¶115, 132, 137, 143, 147.

The United States filed a complaint in this action on December 20, 2002, seeking injunctive relief and the assessment of civil penalties against GWA under the CWA, 33 U.S.C. §§ 1251 - 1387, and the Safe Drinking Water Act, 42 U.S.C. §§ 300f - 300j-26 (the "SDWA"). The complaint included allegations against GWA pursuant to the emergency provisions of both the CWA and SDWA -- section 504 of the CWA, 33 U.S.C. § 1364, and section 1431(a) of the SDWA, 42 U.S.C. § 300i(a) -- to address the imminent and substantial endangerment to the health and welfare of persons presented by: (1) the numerous and repeated discharges of untreated and inadequately treated wastewater from GWA's POTW, resulting in elevated levels of fecal coliform bacteria in both surface waters and drinking water wells on Guam; and (2) serious deficiencies in GWA's public water systems, causing contaminated water to be served to the public. Id., Fifth and Eighth Claims for Relief. The United States also sought both civil penalties and injunctive relief under CWA section 309(b) and (d), 33 U.S.C. § 1319(b) and (d), for violations of the CWA and the terms and conditions of applicable NPDES permits, and under SDWA section 1414(b), 42 U.S.C. § 300g-3(b), for violations of the SDWA and the National Primary Drinking Water Regulations. Id. at 28, Prayer for Relief. The United States joined the Government of Guam as a statutory defendant in this action pursuant to CWA section 309(e), 33 U.S.C. § 1319(e). Id. at ¶¶99, 100.

the Northern District STP. Stipulated Order (entered June 5, 2003), ¶39. The interim corrective action plan was required to include a schedule for completion of the improvements in the plan by November 26, 2004, which was 540 days after entry date. Id. In addition, by November 26, 2004, GWA was required to complete a design to fully renovate the Northern District STP to bring it into compliance with its NPDES permit requirements. Id.

Similarly, Paragraph 42 of the 2003 Stipulated Order required GWA to develop an interim corrective action plan and schedule to restore minimum primary treatment operational capacity to the Agana STP. Id. at ¶42. The interim corrective action plan was required to include a schedule for completion of the improvements in the plan by June 5, 2005, two years after the entry date. Id. In addition, by June 5, 2005, GWA was required to complete a design to fully renovate the Agana STP to bring it into compliance with its NPDES permit requirements. Id.

GWA did not meet the original compliance deadlines in Paragraphs 39 and 42 of the 2003 Stipulated Order for the renovation of the Northern District and Agana STPs. Lee Decl., ¶3. However, EPA did not impose stipulated penalties for these violations of the Stipulated Order. Id. Instead, the United States and GWA agreed to a modification of the Stipulated Order, which was approved by the Court on October 25, 2006 ("2006 Stipulated Order"). The modification required GWA to hire additional accounting and engineering support, and allowed GWA more time for the completion of certain compliance tasks, including the renovation of the Northern District and Agana STPs. See Stipulation Amending Stipulated Order for Preliminary Relief (filed October 19, 2006) at 4 (¶1.l., ¶1.m.).

In the modified Stipulated Order entered on October 25, 2006, the parties agreed to new scopes of work and compliance schedules for the Northern District and Agana STPs. In particular, Paragraph 39 now included a revised scope of work for corrective actions to restore operational capacity for the Northern District STP by the deadline of March 2, 2007, and required GWA to conduct and submit to EPA an operational performance evaluation by May 4, 2007, to

EXHIBIT I

ORIGINAL

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IN THE UNITED STATES DISTRICT COURT

FOR THE TERRITORY OF GUAM

UNITED STATES OF AMERICA, Plaintiff, v. GOVERNMENT OF GUAM, Defendant.	CIVIL CASE NO. 02-00022 UNITED STATES' REPLY BRIEF IN RESPONSE TO STATUS HEARING Date: November 20, 2007 Time: 9:00 a.m. Judge Tydingco-Gatewood

flexibility to adjust the landfill's footprint if, although not currently foreseeable, slight adjustments to the current footprint are warranted. Id. Therefore, GovGuam's acquisition of the land for the Layon landfill could start immediately and should be regarded as an independent activity that is not tied to the completion of the hydrogeological study. Id.

Furthermore, after review of the scope of the project for the hydrogeological study and after discussions with DPW, Guam EPA, and the study's contractor, EPA concluded that the study would aid in finalizing [illegible] design components, which are defined in the study objectives as the following tasks: (1) to establish design depths of the landfill; (2) to identify if a sub-drain system is needed; and (3) to design the sub-drain system (if needed). Id. at ¶ 10. However, the outcomes of the study have no foreseeable impact on the footprint of the new landfill. Id. Accordingly, GovGuam has no reason to wait for conclusion of the study to commence the condemnation action. The Court should not allow GovGuam to excuse its inactivity based on this study.

GovGuam also argues that it should be given 120 days after the formation of the new solid waste public corporation to initiate condemnation, as the Report originally recommended. The United States proposed that this time period be shortened to 60 days after entry of the Court's Order to take into account that the Magistrate's Report was filed 4 months ago. Moreover, unless the Guam Legislature amends Public Law 29-19, GovGuam will need to obtain the Layon site before it can expend any funds on site-specific preparation, design work, or mitigation relating to the site. Therefore, the Court should require GovGuam, within 60 days after entry of the Court's Order, to either negotiate the acquisition of the Layon site or to initiate an eminent domain proceeding to acquire the site.

V. The Court Should Adopt the Report's Recommendation Requiring CCU's Oversight of the New Solid Waste Public Corporation.

In concurrence with the Guam PUC and the United States, the Magistrate Judge recommended that GovGuam propose legislation to reconstitute DPW's Solid Waste

Management division as a public corporation subject to the oversight of the CCU. Report at 28. GovGuam objects to oversight by the CCU and would prefer to have a modified version of the status quo: a solid waste public corporation subject to a new Board appointed by the Governor. GovGuam presents the issue of CCU oversight as if the concept were solely attributable to the United States, and argues, based on Stone, that the Court should defer to GovGuam's policy decision. However, GovGuam's reliance on Stone is misplaced. In that case, the Ninth Circuit specifically noted that "federalism concerns do not prevent a federal court from enforcing a consent decree to which state officials have consented." Stone, 968 F.2d at 862 n. 20. The United States supports the Magistrate Judge's recommendation of CCU oversight, which is solidly justified, based not only on the experiences, observations, and recommendations of Guam's regulatory agencies, but also on the track record of CCU.

More than a year ago, the Guam Public Utilities Board ("PUC") sought implementation of the following recommendation for DPW's Solid Waste Management ("SWM") division: "[I]t is critical that the legislation recommended in the audit report be implemented . . . *paramount of which is the recommendation that SWM be reconstituted as a public corporation under the governance of the Consolidated Commission on Utilities*." PUC Order, Docket 06-2, September 28, 2006 (emphasis in original); see U.S. Subm. of Authorities (filed 1-31-07), Exh. 9 at 1. In addition, the Guam EPA, in its September 2006 Guam Integrated Solid Waste Management Plan, also recommended that solid waste management should be transferred to a public corporation under CCU's oversight. Arora Decl., Exh. 2 at 21-22. Finally, the Guam Office of the Public Auditor, in its August 2007 Performance Audit of DPW's Commercial Tipping Fees, stated its "agreement with PUC's rationale to realign DPW's SWM division as a public corporation under the auspices of the CCU." OPA Report No. 07-08 (August 2007) at 17 (see Court Document #138). Therefore, Guam's regulatory agencies, which are most familiar with DPW's operations and solid waste management issues on Guam, uniformly supported CCU's oversight of the new solid waste public corporation. The Magistrate's recommendation is derived from and consistent

with the well-founded views of Guam's own regulatory agencies.

In his Report, the Magistrate Judge stated that the reconstitution of SWM as a public corporation was intended to "address its organizational deficits, to improve the quality of SWM's services to its residential customers, and to establish a reliable billing and collection system -- all of which are critical prerequisites for obtaining the bond financing necessary to pay for the Consent Decree projects." Report at 28. All of the problems of SWM noted by the Magistrate Judge -- its organizational deficits, the poor quality of its service, and its inadequate billing and collection service -- occurred and continue to occur while SWM is in its present organizational form. The United States continues to support the Magistrate Judge's recommendation as an appropriate and necessary response to the current crisis in solid waste management on Guam.

In contrast to the new, untested board proposed by GovGuam, the CCU has a proven track record in its oversight of GWA and GPA, which are both Guam public corporations. The CCU's oversight experience would be directly relevant to its proposed role in this case. For example, while subject to CCU's oversight, GWA not only had to manage its compliance with this Court's Stipulated Order for Preliminary Relief in United States v. Guam Waterworks Authority and Government of Guam, Civ. No. 02-00035, it also had to raise funds for compliance through the issuance of bonds. As an autonomous elected body, the CCU would be in a better position to apply its independent judgment to issues affecting solid waste disposal operations on Guam, and to reach decisions about policies, rates, tipping fees, and personnel/contractor needs that are operationally driven rather than politically driven.

VI. Conclusion

For the reasons stated herein, the United States requests the Court to adopt the Magistrate Judge's Report and Recommendation, as modified in accordance with recommendations in our supplemental brief, as an Order of this Court. The people of Guam, especially the residents in the vicinity of the Ordot Dump, deserve to see their government take immediate and concrete

EXHIBIT J

Within 90 days after GWA has prepared a final reorganization plan, GWA shall submit to EPA and Guam EPA a draft report containing position descriptions and minimum job qualifications that meet industry standards and Guam laws for each position in the new organization. Within 30 days after receipt of EPA's comments on the draft report, GWA shall respond to EPA's comments in accordance with Paragraph 2 and shall provide a final report to EPA and Guam EPA.

Within 90 days after GWA has provided a final reorganization plan, GWA shall also submit to EPA and Guam EPA a draft Staffing Plan Report that includes the following information: (1) an evaluation of current staff resources at GWA and a discussion of where new hires or retraining will be needed to staff the new organization; (2) a timetable for implementation of staffing measures; and (3) procedures for the transferring of staff and staff reductions (and recommended legislation to enable such changes) as necessary. The draft Staffing Plan Report shall require: (1) all positions in the reorganization of GWA shall be filled with an employee qualified at the minimum level required for that position within 180 days after the final Staffing Plan Report has been issued; and (2) when GWA hires a new employee to fill a position, that employee must be properly qualified for the position at the time of hire. EPA will review the draft Staffing Plan Report and may require changes, additions, deletions or modifications it deems necessary to ensure proper operation and maintenance of GWA's POTW and public water systems. Within 30 days after receipt of EPA's comments on the draft report, GWA shall respond to EPA's comments in accordance with Paragraph 2 and shall provide the final Staffing Plan Report to EPA and Guam EPA. GWA shall implement the Staffing Plan Report's measures in accordance with the timetable in the final Staffing Plan Report. If current employees are not certified at the required level, GWA shall notify such employees within ten working days after the final Staffing Plan Report has been issued.

III. Operations at GWA

10. Water Resources Master Plan: Within 30 days after the Entry Date, GWA shall

prepare a draft scope of work and a draft Request for Proposals ("RFP") for the preparation of a Water Resources Master Plan ("Master Plan") and submit them to EPA for approval. GWA shall provide a copy of the documents concurrently to Guam EPA. EPA will review the draft scope of work and RFP and may require any changes, additions, deletions or modifications it deems necessary. Within 30 days after receipt of EPA's comments, GWA shall respond to EPA's comments in accordance with Paragraph 2 and shall submit a final scope of work and RFP to EPA and Guam EPA. GWA shall advertise the RFP for the preparation of the Master Plan nationally.

Within 90 days after submitting the final RFP to EPA and Guam EPA, GWA shall provide a list of at least five qualified offerors, including the qualifications of each offeror, to EPA and Guam EPA. EPA will provide written notice of the names of any offeror(s) that it disapproves and an authorization to proceed with any of the other offerors. GWA may select any offeror from that list that is not disapproved and may award the contract to that offeror. GWA shall select and retain one of the qualified offerors within 105 days after obtaining EPA's authorization to proceed, shall notify EPA and Guam EPA of the name of the contractor, and shall begin to prepare the Master Plan (the "Commencement Date").

GWA shall develop a Master Plan that includes:

(1) A comprehensive analysis, using as a guideline the "10 States Standards" as they apply to wastewater, of wastewater treatment, collection, and conveyance systems, improvement alternatives, and needs for the next twenty years. The Master Plan shall include an infiltration and inflow assessment of GWA's wastewater collection systems sufficient to identify and prioritize problem areas. The Master Plan shall also include an assessment of the following: septic system hookup needs and alternatives, decentralized treatment systems, consolidation with the U.S. military's wastewater systems, biosolids management and re-use, and an analysis of costs and other impacts.

(2) A comprehensive analysis, using as a guideline the Hawaii Water Standards of 2002, of public water system improvement alternatives and needs for the next twenty years that addresses disinfection, system pressure, surface water and groundwater resources, treatment needs (including any drinking water well needing treatment due to a determination that the well uses a groundwater source under the direct influence of surface water), transmission and distribution system improvements, potential consolidation with the U.S. military's systems, and water re-use.

(3) A comprehensive analysis of the costs and benefits of water conservation on Guam.

(4) An evaluation of necessary process control system improvements, including a Supervisory Control and Data Acquisition ("SCADA") system, information management systems, telemetry, and other applicable types of automation.

(5) A financial plan that details how revenue will be generated. The financial plan shall include a user fee system, including fees for services such as sewer connection fees. The user fees shall be based on actual water usage, estimated wastewater generation, and actual costs of services provided. GWA shall coordinate with the Public Utilities Commission ("PUC") to ensure that: (1) GWA complies with the public notification requirements for proposed rate increases in 12 GCA §§ 12001.1, 12001.2; and (2) GWA's filings for rate increases are made in accordance with applicable PUC regulations.

(6) A detailed five-year plan for financing the continued operation, maintenance, and repair of the POTW and three public water systems, including: (a) an estimated annual budget for each of the next five years for all costs of operating, maintaining, and repairing the POTW and three public water systems, including the establishment and maintenance of the Financial Reserves listed in Paragraph

32 below; and (b) a detailed descriptive plan for raising sufficient revenue to meet the projected costs as outlined in the annual budgets, including adjustments or increases in user fees, taxes, assessments or other sources of revenue. Revenues shall be sufficient to cover all compliance activities and deliverables required by this Stipulated Order for Preliminary Relief, as well as any other anticipated expenses, including any measures necessary to ensure compliance with the CWA and SDWA, costs related to the infrastructure improvements recommended in the Master Plan, all related operations and maintenance costs, and corresponding utility expenses, including maintenance of all required Financial Reserves listed in Paragraph 32 below.

The following five tasks shall be completed as part of the Master Plan. Within the designated time for completing each task, GWA shall submit a written draft to EPA for review and approval. GWA shall provide a copy of each draft concurrently to Guam EPA. Within 30 days after receipt of EPA's comments, GWA shall respond to EPA's comments in accordance with Paragraph 2 and shall provide the final written product to EPA and Guam EPA. The schedule for these tasks is the following:

(1) Within 180 days after the Commencement Date, GWA shall complete a leak detection study for all three public water systems.

(2) Within 240 days after the Commencement Date, GWA shall complete an estimated water budget that quantifies and describes how and where water is produced and utilized on Guam.

(3) Within 270 days after the Commencement Date, GWA shall locate, map, and develop Geographical Information System ("GIS") layers for all of the following: treatment facilities, wells, water lines greater than or equal to six inches in diameter, collection system, pump stations, and GWA's and Guam EPA's water quality monitoring stations.

(4) Within one year after the Commencement Date, GWA shall perform a hydraulic analysis of the three public water systems and develop a hydraulic model of the systems.

(5) Within 540 days after the Commencement Date, GWA shall locate, map, and develop GIS layers for all of the following (not included in subparagraph (3) above): all other water lines, wastewater laterals, and all septic tanks over the Northern Guam Sole Source Aquifer.

The Master Plan shall be completed according to the following schedule:

(1) By October 31, 2006, GWA shall complete a draft Master Plan and shall provide a copy of it to EPA and Guam EPA. Upon completion, GWA shall issue a press release and publish notice in a local newspaper, indicating that the draft Master Plan is available for public review at convenient locations (such as public libraries on Guam and GWA's website) and announcing the date and location of any public meeting to discuss the Plan. The draft Master Plan shall be made available for public comment for at least 45 days. During the public comment period, GWA shall hold at least one public meeting. GWA shall issue the public notice at least 30 days before the date of the public meeting.

(2) By January 31, 2007, GWA shall complete a final Master Plan and shall address all significant comments raised during the public comment period in its final Master Plan. GWA shall provide the final Master Plan to EPA and Guam EPA and shall perform the required tasks in accordance with the schedule set out in the final Master Plan.

11. Interim Disinfection Program: GWA shall develop an interim disinfection program for its three public water systems to ensure that the water being provided to the public is adequately disinfected by chlorination. In order to ensure optimal chlorination and disinfection,

39. Northern District STP Renovation: GWA shall implement corrective actions to restore primary treatment operational capacity to the Northern District STP. The corrective actions shall include, but not be limited to, the following: primary clarifiers, preaeration and aerated grit removal systems, and installation of primary sludge pumps and solids handling (as necessary). GWA shall complete the corrective actions to restore primary treatment operational capacity by March 2, 2007. After completion of the corrective actions to restore primary treatment, GWA shall conduct an operational performance evaluation by May 4, 2007, to determine whether advanced primary treatment is needed to comply with NPDES permit effluent limitations. By May 4, 2007, GWA shall submit to EPA and Guam EPA for review and comments the operational performance evaluation with a determination of the need for advanced primary treatment. Within 30 days after receipt of EPA's comments, GWA shall respond to EPA's comments in accordance with Paragraph 2. If advanced primary treatment is needed, the submitted operational performance evaluation shall include a schedule for the design and installation of the advanced primary treatment system. GWA shall perform the required tasks in accordance with the schedule set out in the operational performance evaluation.

40. Agana Main Sewage Pump Station: GWA shall develop a schedule to stop overflows of raw sewage from the Agana Main Sewage Pump Station. The schedule shall include time frames for developing and completing a scope of work, design, and construction. The schedule shall require construction to be completed within 300 days after the Entry Date. Within 60 days after the Entry Date, GWA shall submit to EPA for review and approval the schedule required by this Paragraph. GWA shall provide a copy of the document concurrently to Guam EPA. Within 30 days after receipt of EPA's comments, GWA shall respond to EPA's comments in accordance with Paragraph 2, shall provide the final schedule to EPA and Guam EPA, and shall perform the required tasks in accordance with the final schedule.

41. Ugum Surface Water Treatment Plant: GWA shall develop a scope of work and schedule for the rehabilitation, renovation and/or design and construction of new (alternative)

treatment facilities of the Ugum Surface Water Treatment Plant to bring the plant into compliance with SDWA requirements and performance standards. The scope of work shall detail all rehabilitation, renovation, and/or recommended design and construction of new (alternative) treatment work to be performed based on the findings of the CPE of the Ugum Surface Water Treatment Plant prepared for GWA by Belanger and Associates and International Studies & Training Institute, Inc., in May 2001. The scope of work may include other documentation or studies needed to determine the extent of the rehabilitation and renovation needs of the existing plant, and/or may include alternative water treatment feasibility or preliminary engineering studies deemed by GWA to be necessary to determine if other alternative treatment design and construction projects may be preferable and/or feasible to bring the plant into full compliance with all SDWA requirements. The schedule shall include, but not be limited to, time frames for developing and completing all activities contained in the scope of work, any additional studies needed to determine the preferred course of action (rehabilitation/renovation or alternative treatment design and construction), design, and construction. The schedule shall require construction to be completed by January 5, 2008. Within 90 days after the Entry Date, GWA shall submit to EPA for review and approval the scope of work and schedule required by this Paragraph. GWA shall provide a copy of the documents concurrently to Guam EPA. Within 30 days after receipt of EPA's comments, GWA shall respond to EPA's comments in accordance with Paragraph 2, shall provide the final scope of work and schedule to EPA and Guam EPA, and shall perform the required tasks in accordance with the schedule set out in the final scope of work.

42. Agana STP Renovation: GWA shall implement corrective actions to restore primary treatment operational capacity to the Agana STP and shall renovate the grit removal/screening system and wet well at the Agana Main Sewer Pump Station ("SPS"). GWA shall complete the corrective actions to restore the primary treatment operational capacity of the Agana STP by March 2, 2007, and shall complete renovations at the Agana Main SPS by June 1,

2007. After completion of the corrective actions to restore full primary treatment, GWA shall conduct an operational performance evaluation by April 30, 2007, to determine whether advanced primary treatment is needed to comply with NPDES permit effluent limitations. GWA shall submit to EPA and Guam EPA for review and comments the operational performance evaluation with a determination of the need for advanced primary treatment. Within 30 days after receipt of EPA's comments, GWA shall respond to EPA's comments in accordance with Paragraph 2. If advanced primary treatment is needed, the submitted operational performance evaluation shall include a schedule for the design and installation of the advanced primary treatment system. GWA shall perform the required tasks in accordance with the schedule set out in the operational performance evaluation.

43. Agat, Baza Gardens, and Umatac-Merizo STPs Renovations and/or Expansions: GWA shall develop a schedule for the performance of CPEs of the Agat, Baza Gardens, and Umatac-Merizo STPs to identify performance-limiting factors and recommended improvements needed to bring each of these STPs into compliance with their respective NPDES permit requirements. The CPEs shall be performed by a qualified engineering firm experienced in performing a CPE for wastewater treatment facilities. Each CPE shall be performed in accordance with EPA guidelines for performing a CPE as described in the following publications: *Handbook: Optimizing Water Treatment Plant Performance Using the Composite Correction Program (CCP)* (EPA/625/6-91/027, August 1998); and *Handbook: Improving POTW Performance Using the Composite Correction Program Approach* (EPA-625/6-84-008, October 1984), or a later publication if available. The schedule shall include time frames for the following: (1) developing and completing a scope of work, initiating and completing the CPEs, and submitting draft CPEs for the three STPs within one year after the Entry Date; and (2) completion of the final CPEs for the three STPs by September 5, 2004. Within 90 days after the Entry Date, GWA shall submit to EPA for review and approval the schedule required by this Paragraph. GWA shall provide a copy of the document concurrently to Guam EPA. Within 30

EXHIBIT K

GUAM WATERWORKS AUTHORITY
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June 30, 2009

Richard Remigio
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VIA EMAIL TO: R9-ND-301h-Comments@epa.gov

RE: USEPA's tentative decision to deny GWA's CWA 301(h) variance for the NDWWTP

Dear Mr. Remigio:

On January 5, 2009, Wayne Nestri, the previous Administrator for Region IX, United States Environmental Protection Agency, issued a tentative decision to deny GWA's application for a section 301(h) of the CWA variance from secondary treatment requirements. GWA's numerous concerns with this decision, which are elaborated in detail in the attached Response document, include:

- Lack of corroborative evidence supporting the basis for the decision as protection of the environment
- Lack of demonstrated negative environmental impact of primary treatment
- Utilization of outdated data as the basis for the tentative decision and the subsequent failure of EPA to request updated data
- EPA's ranking of secondary treatment as the highest CWA priority project at this time
- The inconsistency of positions taken by two divisions of EPA on GWA's planning priorities
- Legal actions and subsequent approvals by EPA guiding GWA into primary treatment rather than secondary, with no revelation of EPA's planned move towards secondary treatment
- Fallacious factual bases of decision

GWA requests that EPA reconsider its decision to tentatively deny GWA's 301(h) waiver application. Instead, EPA should delay this decision and work with GWA to complete studies on the discharges of effluent from the new deep ocean outfalls, and provide GWA with an opportunity to propose additional facility improvements such as disinfection and fine screening. In conjunction with these potential process improvements, EPA, GEPA and GWA should also work on methods for reducing greenhouse gas emissions and improving the treatment of biosolids.

Sincerely,

Dr. Leonard Olive

General Manager

Cc: Mike Lee, Pacific Islands Office, Region 9, USEPA
Lorilee T. Crisostomo, Guam EPA
Manuel Minas, Guam EPA
Angel Marquez, Guam EPA
Benny Cruz, Guam EPA
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Heidi Ballendorf
Senator Thomas Ada
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GUAM WATERWORKS AUTHORITY

FORMAL RESPONSE BY THE GUAM WATERWORKS AUTHORITY TO THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY'S TENTATIVE DECISION DOCUMENT ON GWA'S NORTHERN DISTRICT WWTP APPLICATION FOR A MODIFIED NPDES PERMIT UNDER SECTION 301(h) OF THE CLEAN WATER ACT

Introduction

On January 5, 2009, Wayne Nastri, the previous Administrator for Region IX, United States Environmental Protection Agency, issued a tentative decision to deny GWA's application for a section 301(h) of the CWA variance from secondary treatment requirements. GWA's numerous concerns with this decision, which are elaborated in detail in the attached Response document, include:

- Lack of corroborative evidence supporting the basis for the decision as protection of the environment
- Lack of demonstrated negative environmental impact of primary treatment
- Utilization of outdated data as the basis for the tentative decision and the subsequent failure of EPA to request updated data
- EPA's ranking of secondary treatment as the highest CWA priority project at this time
- The inconsistency of positions taken by two divisions of EPA on GWA's planning priorities
- Legal actions and subsequent approvals by EPA guiding GWA into primary treatment rather than secondary, with no revelation of EPA's planned move towards secondary treatment
- Fallacious factual bases of decision

GWA requests that EPA reconsider its decision to tentatively deny GWA's 301(h) waiver application. Instead, EPA should delay this decision and work with GWA to complete studies on the discharges of effluent from the new deep ocean outfalls, and provide GWA with an opportunity to propose additional facility improvements such as disinfection and fine screening. In conjunction with these potential process improvements, EPA, GEPA and GWA should also work on methods for reducing greenhouse gas emissions and improving the treatment of biosolids.

Abbreviations utilized in this response:

- BOD – Biochemical Oxygen Demand
- CCH – City and County of Honolulu
- CCTV – Closed Circuit Television (sanitary sewer video camera)
- CCU – Guam Consolidated Commission on Utilities (elected board that oversees both GWA and the Guam Power Authority)
- CHP – Combined Heat and Power
- CIP – Capital Improvement Projects
- CWA – Clean Water Act
- EPA –The United States Environmental Protection Agency, Region IX
- GEPA – Guam Environmental Protection Agency, Guam's Territorial environmental regulatory authority. Does not have primacy for NDPES oversight. Issues WQS
- GPA – Guam Power Authority
- GWA – Guam Waterworks Authority
- MGD – Million gallons per day
- NDPES – National Pollution Discharge Elimination System, generally, 40 CFR 125
- NDWWTP – Northern District Wastewater Treatment Plant
- PUAG – Pubic Utility Agency of Guam (predecessor to GWA)
- SDWA – Safe Drinking Water Act
- SO – Stipulated Order entered into between EPA and GWA on July 5, 2003 and modified on October 25, 2006
- TDD – Tentative Decision Document
- TSS – Total Suspended Solids
- WERI – Water and Environmental Research Institute of the Western Pacific, located at the University of Guam
- WET – Whole Effluent Toxicity
- WQS – Guam Water Quality Standards
- WRMP – GWA's Water Resources Master Plan (also referred to as the "Master Plan")
- WWTP – Wastewater Treatment Plant
- ZID – Zone of Initial Dilution

Environmental Protection

The current EPA Director, Ms. Lisa Jackson, stated in a January 23, 2009 memorandum that all EPA decisions should be based upon the best available science. There is no substantive scientific basis for moving the NDWWTP to secondary treatment. GWA concurs that additional information is needed to identify any potential impacts. GWA is completely committed to protecting Guam's environment; however, utilizing our limited resources to move to a process that could potentially be environmentally detrimental is not in the best long-term interests of the residents of Guam and their environment.

EPA has been reviewing the current application since 2001. GWA, GEPA and EPA all concur that there is inadequate information to fully make a complete determination and that more information is necessary (see Need for Additional Information section below). Therefore GWA must be allowed time and assisted with resources in order to obtain such information. Otherwise, any EPA decision based on inadequate information is not scientifically based or designed to provide environmental protection; rather it is simply an arbitrary response.

In addition, secondary treatment can create additional negative environmental impacts. EPA's Water Division has not coordinated with the Pacific Island's Office, Waste Division on solids reduction, or Air Division for discussion of greenhouse gas emissions. GWA feels strongly that to install secondary treatment for debatable water quality improvements while creating environmental impacts in other areas is not best for holistic protection of Guam's environment. In EPA's response to comments on the Honouliuli WWTP denial, they note that the criteria for making the 301(h) "decision do not include evaluating the impacts of secondary treatment." This statement is contrary to EPA's fundamental mission to protect the environment.

Septic Systems

Northern Guam has a prolific water lens located in a limestone aquifer. This sole-source aquifer is a precious resource that provides drinking water to 75% of Guam's population. The aquifer is threatened by the proliferation of septic systems. 86% of Guam's septic systems are located over this aquifer, serving 35% of Guam's residents. According to the Northern Guam Lens Study (GEPA, 1982), water from septic systems percolates rapidly through the limestone aquifer, carrying pollutants such as nitrates and bacteria. Well exceedances of bacteria levels in drinking water wells are traceable to septic tank proliferation. Additionally, there are numerous septic systems located within 1000 feet of existing wells.

The WRMP includes $70M for sewer connections in critical areas to protect the aquifer, and another $103M for improvements to existing sewers. This addresses only the most critical areas: those within 1000 feet of a well, within 200 feet of an existing sewer, or where the sewer extension reaches housing clusters at densities greater than one per unit acre over groundwater recharge zones. The plan noted that upgrading just those connections near both a well and an existing sewer would be $47M (in 2004 dollars). The costs in 2009 dollars will be significantly higher.

Other possible mitigation measures are outlined in the WRMP, including decentralized systems, advanced on-site treatment, and on-site nitrogen removal filters. However, the WRMP recommends centralized wastewater treatment as being the most cost effective and environmentally protective.

GWA strongly believes that aquifer water quality protection is a much higher environmental priority than secondary treatment. The limited resources of Guam's ratepayers would be far better spent in implementing programs to connect unsewered properties to the wastewater system to protect the sole source aquifer.

Nutrient Loading

A substantial body of research has been accumulated in an effort to evaluate the impacts of discharging primary treated wastewater into deep ocean outfalls in areas where the sea water quality is very low in nutrients. These studies have occurred in oceanic waters near islands far from continental influences. The primary common characteristics of the sea water in such areas are that it is of very low turbidity and lacking in significant amounts of basic nutrients to fuel the lowest levels of the food chain.

Near continents, the runoff from rivers and streams provides a regular natural supply of decaying vegetation and animal wastes. These food sources are essential to the marine life. On a continental shelf, the balance is very favorable. In the deep ocean where the percentage of land is very small, what runoff (if any) that does exist is minute compared to a continental costal environment.

What this means is that island environments have beautiful beaches with clear waters, and a very sparse ecology. The predominant organisms are corals.

Studies by the University of Hawaii Water Resources Research Center and the EPA funded Mamala Bay Study in Hawaii have shown that the delivery of primary treated wastewaters through properly constructed discharge outfalls have a favorable impact. They are a means providing essential nutrients to the marine ecology by providing food to the area's waters so that the planktonic plant life can flourish and support an expanded marine biological community.

Biosolids

The addition of secondary treatment will substantially increase the biosolids production at the WWTP. Currently biosolids are dried in drying beds or trucked to the Agana WWTP, where they are reduced in aerobic digesters and a sludge thickener and dried in one of two 21" centrifuges. The result is 21-30% dry solids. This is disposed of at the Ordot dump. GWA has also programmed to rehabilitate the anaerobic digesters at the NDWWTP in the next bond issuance to improve solids reduction at the facility.

Guam is facing a solid waste crisis. The dump is operating in violation of NPDES requirements, is virtually full, and the Department of Public Works' solid waste division

has been placed into receivership to expedite building of a new landfill and closure of the old dump. As a small island, Guam has limited land area for solid waste disposal, and recycling and solid waste minimization is critical. EPA Water Division should coordinate with the EPA Waste Division and the Pacific Islands office, as any decision to go to secondary treatment will dramatically increase solids production and could potentially have very detrimental impacts on the design life of the new landfill.

Instead of pouring all of GWA's resources into plant upgrades to secondary, it would be better for Guam's environment to spend those limited resources on biosolids treatment that would reduce solid impacts by allowing for biosolids recycling and reuse. This could have the added benefit of providing a high-quality product for Guam's agricultural community, which deals with poor soil conditions. It is likely that EPA would respond that GWA could implement such improvements with secondary treatment, but the reality of Guam's limited resources for wastewater CIP projects would be to make such a program unaffordable (see Affordability section).

Greenhouse gas emissions

Director Jackson also committed EPA to addressing greenhouse gas emissions. There are numerous studies showing that secondary treatment plants contribute heavily to this world-wide problem. Moving the plant to secondary treatment would dramatically increase greenhouse gas emissions.

Typical secondary treatment utilizes activated sludge, a process which requires large amounts of aeration and consequently considerable power. Other technologies are even more power intensive. There would clearly be an increase in greenhouse gas emissions from a secondary treatment facility. Based on current flows and influent BOD, secondary treatment at the NDWWTP would produce 7,257 lb/day or 2,650,495 lb/year of carbon dioxide.

In EPA's response to comments in their denial of the City of Honolulu's Honouliuli WWTP waiver, EPA referenced certain mitigation methods that can be employed in the implementation of secondary treatment, and consistently referred to the "Opportunities for and Benefits of Combined Heat and Power at Wastewater Treatment Facilities." The NDWWTP:

- Is not large enough. Minimum MGD in the study EPA references is 6.8. The NDWWTP today doesn't reach that even at peak loads.
- Does not have strong enough influent BOD to utilize CHP, as weak influent BOD makes for poor methane production. This is demonstrated at the Apra Harbor WWTP, which has similarly low influent BOD, and which utilizes anaerobic digesters and a waste heat boiler for digester heating. There has never been adequate methane production to operate the waste heat boiler, which therefore runs on fuel oil, and the waste gas burner at the facility has never been lit.
- Methane use still generates greenhouse gas emissions.

Typical secondary treatment utilizes activated sludge, a process which requires large amounts of aeration and consequently considerable power. Other technologies are even more power intensive. There would clearly be a significant increase in greenhouse gas emissions from a secondary treatment facility.

History

GWA's NDPES permit expired in 1991. PUAG applied on time in December 1990 for their permit renewal. In March 1991, the Guam Environmental Protection Agency (GEPA) concurred with the 301(h) waiver.

PUAG operated under an administrative extension for six years until April 15, 1997, when EPA sent PUAG a letter informing them that they intended to issue a tentative denial of the secondary treatment waiver and offered PUAG the opportunity to resubmit their permit application, stating that in order to receive the treatment waivers, the deep ocean outfalls would need to be extended. In June, 1997, EPA sent a letter acknowledging GWA's intent to submit a revised application. On October 6, 1997, EPA sent GWA an approval of the proposed baseline surveys for the proposed outfalls. On March 27, 1998, GWA resubmitted their application and included projects to extend the outfalls. Additional information was provided in a February 05, 2001 supplemental submittal.

In the basis for the tentative decision, EPA states that GWA's application was deficient, but acknowledges that GWA submitted additional information to support the application, and that all information submitted through 2001 was considered in the determination. *GWA received no further communications from EPA after 1998 regarding submittal requirements or deficiencies* (except for those specifically related to the outfall extensions, which are addressed in detail below). In a June 17, 2009 email, Richard Remigio of EPA confirmed that no other correspondence from EPA to GWA was included in the determination.

EPA noted in it's response to comments on the Honouliuli WWTP waiver denial that the causes for delays in issuance of the permit were due to CCH's delays in providing information. EPA will no doubt make the same case for the reason there was no new permit issued for the NDWWTP from 1991-2001, although the first tentative was not issued until 1997. However, by EPA's own admission, the "window" for submittal of additional information closed in 2001. Had EPA issued a permit in 2001, the permit would have expired in 2006, and GWA would be a year away from preparing another renewal application. As noted by the Honouliuli commenter, the timely response expectation certainly gives all the outward appearances of being a one way street. Therefore, the TDD constitutes an arbitrary denial.

In 2001, the Guam Legislature passed 26-76, creating the Consolidated Commission of Utilities. This law replaced the appointed Board of Directors with an elected Board. The intent of the law was to improve the way GWA was governed, since the appointed Board had failed to improve GWA operations since it had become a public corporation in 1998. From 1988 to 2002, GWA lost over $60 million. In December of 2002, EPA sued GWA for noncompliance with the CWA and SDWA.

The first elected board took office on June 1, 2003. Within six months, the CCU and GWA negotiated and entered into a Stipulated Order with EPA and the federal court to address the gross non-compliance that was the subject of the 2002 lawsuit. By November 2005, GWA raised its first $105M to comply with the initial requirements of the Stipulated Order. GWA management and finances have continued to improve since the changeover to CCU governance and GWA continues to work closely with EPA to fully comply with the SO, a fact acknowledged by EPA itself in its November 9, 2007 brief in District Court of Guam Case No. 02-00022 at page 6. Progress continues to this day. GWA has complied with over 90% of the Stipulated Order items originally required in 2003, and continues to coordinate closely with EPA on all facets of progress.

Up until this time and by virtue of entering into the SO in 2003, GWA acknowledged that there were significant deficiencies in compliance and expediting timely data. Since 2003 GWA has made enormous strides in our compliance and reporting, and has been focusing its attention and limited resources fully on the items and issues identified in the Stipulated Order and Water Resources Master Plan. **At no time after the in the 6 years since the CCU took office in 2003 has the USEPA requested that GWA provide additional information to support the 301(h) waiver application.**

Stipulated Order

The Stipulated Order made no mention of secondary treatment, although it was designed to address non-compliance of the Clean Water Act and Safe Drinking Water Act violations alleged by EPA in their civil action, including "issues of compliance in GWA's Publicly Owned Treatment Works."

Paragraph 39 of the SO required GWA to "restore minimum primary treatment capacity" to the NDWWTP. This included correcting the "primary clarifiers, preaeration and aerated grit removal systems, and installation of primary sludge pumps." GWA implemented and completed a project to implement all of these recommendations. GWA then implemented additional, non-SO work at the WWTP, including rehabilitation of the redundant preaeration and aerated grit removal system, replacement of six additional solids handling pumps including all valves and appurtenances, replacement of sluice gates throughout the facility, and overhaul of the drying beds.

Had EPA included secondary treatment in the Paragraph 39 requirements, the combined costs of doing both projects together would have been significantly less than doing them separately, so clearly this was not a compliance issue. Since the permit had been expired since 1991, the most recent reapplication was in 2001, and EPA has stated that the "window" for submitting additional information to address the 301(h) application closed in 2001 (see below), EPA had sufficient time to analyze GWA's compliance with 301(h) requirements prior to issuance of the Stipulated Order, so EPA's statement that the two processes are separate has no merit (see further discussion below under WRMP).

In 2006, EPA and GWA re-negotiated the Stipulated Order. Again, the revised SO made no mention of secondary treatment, clearly indicated to GWA that as of 2006 EPA was not considering secondary treatment.

The SO also required outfall extension. These outfalls were designed specifically for primary treated waste; secondary treated waste would not have required the depth and distance of these outfalls and would therefore have been significantly less expensive. EPA's failure to address GWA's planning requirements holistically would, should they proceed in their determination, cost Guam ratepayers millions of dollars in unnecessary asset creation.

Water Resources Master Plan

Paragraph 10 of the Stipulated Order required GWA to prepare a Water Resources Master Plan "that includes a comprehensive analysis... of wastewater treatment... needs for the next twenty years." The WRMP was to include "an infiltration and inflow assessment... septic system hookup needs and alternatives, decentralized treatment systems, consolidation with the U.S. military's wastewater systems, biosolids management and re-use, and an analysis of costs and other impacts."

The WRMP final draft was completed by GWA in 2005. After being public noticed the final document was approved by EPA on June 12, 2007. In its approval letter dated June 12, 2007, EPA stated that "GWA's Final WRMP Report lays out a comprehensive financial program, recommended capital improvement projects and schedule to move GWA towards compliance with the Clean Water Act and the Safe Drinking Water Act."

The WRMP included $338M worth of wastewater projects. These projects included $34.5M for upgrades to the NDWWTP. There was no mention anywhere in the document of secondary treatment. EPA clearly had an opportunity to give GWA some indication that they were considering issuing a determination to move GWA to secondary treatment, yet EPA remained silent on the issue – a complete waiver of any opportunity to deny GWA's 301(h) permit. The WRMP is clearly intended to bring the wastewater plant into compliance using only primary treatment. If the EPA had concerns about GWA's need to go to secondary treatment it should have required it in the WRMP – failing to do so again constitutes a waiver on EPA's part and makes the decision to deny GWA's waiver completely arbitrary in nature.

During a March 21, 2008 teleconference between EPA and GWA, Mike Lee and Doug Eberhardt concurred that GWA's planning process has not included any anticipation of the need for secondary treatment, and Mike Lee agreed that EPA approved the GWA Master Plan, which includes only primary.

EPA has pointed out that the WRMP was meant to be a living document, updated as regulatory requirements and priorities change. GWA concurs with this, but argues that the complete failure to even mention moving the two largest Guam treatment plants to secondary treatment, at a cost that could be equal to the total of all other wastewater projects identified in the WRMP, showed clearly that this was in no way a priority or consideration of EPA during the 20 year planning horizon identified in the WRMP.

EPA has argued that the WRMP couldn't be expected to address potential future regulatory requirements such as secondary treatment, but this is inaccurate. The WRMP does include planning for the possibility that Guam's Northern Aquifer could possibly be declared Ground Water Under Direct Influence, and included alternative planning for the possibility that such a determination is made some time in the future. There was no such provision for the potential that the 301(h) waivers might be denied, and no indication anywhere in the documents that secondary planning should even be considered, thereby rendering EPA's statements on this point unreasonable and arbitrary.

During the March 21, 2008 teleconference, Region IX personnel also stated that the NPDES and Stipulated Order processes are completely separate because they are handled in "different divisions" of EPA. However, GWA cannot separate these projects for our planning purposes. When making long term decisions with hundreds of millions of dollars worth of impacts to our ratepayers it is unreasonable to ask us to deal with two separate EPAs and to ask that GWA do so is inherently unreasonable and arbitrary. EPA's Water Division should have coordinated its tentative decision with the actions of the Pacific Islands Office, which is responsible for regulatory compliance, the Stipulated Order, and development of GWA's CIP priorities. Any decision to deny the waivers would force GWA to look at doubling its projected 20 year CIP expenditure (which is clearly not possible based upon the economic realities of Guam's populace), or postpone most or all of the projects that EPA had signed off as being GWA's priorities. In short, it is unreasonable to expect GWA to develop plans, set rates, and move forward in coordination with "one EPA" only to be told by a "separate EPA" that those approved plans and projections are meaningless. Should EPA move to finalize the decision to force GWA to secondary treatment, there would already have been millions of dollars worth of unnecessary expenditures by our ratepayers (see discussion of Outfalls and Stipulated Order).

Additional Repairs

In the TDD, EPA states that according to the WRMP, the preaeration, aerated grit removal, one primary clarifier and the influent flow meter were out of service. All of these items have since been repaired. EPA's Pacific Island's Office is well aware of these repairs, as they have been discussed in meetings and teleconferences, they've seen the work during site visits, and the work was documented in the Discharge Monitoring Reports submitted quarterly pursuant to NDPES requirements. This would appear to be another example of a lack of coordination between the Pacific Islands Office and the Water Division.

Arbitrary Decision

What makes this decision even more arbitrary is that in an April 4, 1997 letter from Felicia Marcus, the Region IX EPA Administrator, she stated that

> "[o]ne option to improve the chances of obtaining a favorable 301(h) decision in the future is outfall extensions with proper diffuser maintenance. We suggest that you consider extending both outfalls to deeper waters farther from reef areas and

shoreline beaches, and then filing revised 301(h) applications that take into account the outfall extensions."

This letter shows the how utterly arbitrary the decision of EPA really is because on one hand EPA specifically told GWA that it would be able to reapply for the 301(h) waivers after it built deeper and longer outfalls and then prior to GWA even completing work on the outfalls, EPA issued its intention to deny GWA's waiver (GWA was notified on January 8, 2009 that EPA was intending to deny its waivers yet GWA did not complete work on the outfalls until January 15, 2009). The letter clearly implies that a new round of testing would be allowed. Ironically, on January 18, 2002, EPA again sent GWA a letter which indicated testing at the new outfall sites would not only be permitted but required.

Even more pertinent is the fact that the April 4, 1997 letter was a notice of intention to deny GWA's 301(h) waiver, yet from April of 1997 to January 8, 2009, a period of approximately 12 years passed which seems to constitute a waiver on the EPA's part to deny GWA's 301(h) variance. Regardless of whether or not the EPA waived its enforcement capacity by doing nothing, in the aftermath of the 1997 letters in 2002 EPA sued GWA to enforce the CWA and in the settlement of that dispute (the SO) the requirement to extend and deepen the outfalls were included. This means that the provisions of the 1997 letter must have still had merit, otherwise EPA in the SO would have simply required that GWA build a new secondary treatment plant instead of requiring GWA to first extensive renovate both plants at great expense and also extend and deepen the outfalls at additional great expense.

Additionally, requiring GWA to provide secondary treatment could force the CCU to choose extremely high rates over their own existence, as the Legislature may eliminate the CCU if their constituents perceive "excessive" rate increases that would be required to pay for both WRMP projects and secondary treatment. EPA is cognizant of the progress GWA has made so CCU's control compared to previously.

Affordability

According to the WRMP, the SO requirements were estimated to be $220M to implement (not including debt service). The WRMP outlined an additional $900M worth of projects over 20 years. Those costs are in 2005 dollars, and will have increased significantly since then due to inflation, fuel costs (which also drives up all material costs as all materials must be shipped to Guam), increased cost of borrowing due to a tighter credit market, increased labor costs due to the military buildup on Guam, and the fact that the WRMP consultant did not take into account a full Guam factor (such as the 2.76 factor utilized by DoD) when calculating cost. Thus, the $900M in costs will likely exceed $1 Billion at the end of the 20 year cycle and these costs do not include the **ADDITIONAL** $300M in costs for secondary treatment.

The WRMP planning was designed to keep rates at an industry and EPA standard 2% of average household income, but concluded that within the first five years of rate increases required to support the CIP projects defined in the WRMP the 25% of lowest income households would exceed the 4% that is considered to define "affordable".

Secondary treatment would require a 600% rate increase just for the capital costs. This does not include additional operating costs, which are significantly higher than those for operation of a primary treatment plant. This massive rate increase will have a negative impact not only on GWA's ratepayers, but Guam's economy as a whole. Guam's competes with Hawaii and other Asian destinations to attract tourists (its number #1 industry) and even now there is fierce competition between destinations. If GWA raises its rates by 600%, the water and sewer costs to Guam's hotels will likely price them out of the market. A corresponding drop in revenues from tourists will have far reaching affects on the Government of Guam to educate its children, to pay for health and safety and to conduct its operations and make debt payments on its obligations. Moreover, the Government will have less money to spend on actual programs since the government is also a customer of GWA. Guam does not have a mainland residential market like Hawaii and Guam's location presents only limited opportunities for other types of industries that are present in Hawaii.

In EPA's response to comments on the Honouliuli WWTP denial, they noted that the affordability criterion is "not one EPA may consider in determining whether to grant a variance under section 301(h) of the CWA." GWA believes this to be false both legally and factually. In fact, the denial, extension or granting of a waiver by EPA is a discretionary act.

In EPA's response to comments on the Honouliuli WWTP denial, EPA concurred that a consideration of all wastewater management priorities is appropriate in determining schedules for future treatment upgrades. EPA has not demonstrated this in issuing the NDWWTP denial at this time, when GWA is operating under an EPA enforcement action and has been closely coordinating with the Pacific Islands Office to define those other priorities. EPA has shown no sensitivity to GWA's improvements over the past six years, Guam's limited resources in terms of both dollars and personnel, and has shown clearly that there is no coordination between the Pacific Islands Office and the Water Division.

Outfalls

In letters dated December 1998 and August 1999, EPA informed PUAG that if the outfalls for Agana and NDWWTPs aren't extended, the 301(h) waivers would be denied. Although not explicitly stated, the obvious implication was that if the outfalls were extended, the waivers would be extended as well. (In the Honouliuli response, EPA noted that WQS have changed since those dates; GWA addresses this under WQS, below.)

GWA designed and installed a new outfall in accordance with the 1998 permit application and 2000 application addendum. The total spent on construction was $10,225,742. The outfall was specifically designed using dilution factors for primary treated wastewater. Construction costs were high because of the depths involved and because the pipe was horizontally directionally drilled to protect the reef; a process which created numerous problems due to the limestone formation. The outfall was put on line in January of 2008, and was receiving 100% of the flow as of January of 2009. An outfall designed for secondary treated wastewater would have been shorter and shallower, and any reduction in depth and length would have significantly reduced the cost.

During a March 21, 2008 teleconference between EPA and GWA, Doug Eberhart acknowledged that there was an anticipation that the installation of the new outfalls would allow for the waivers.

Need for Additional Information

125.57 (a)(2) The discharge interferes with the attainment or maintenance of water quality which ensures the protection and propagation of a balanced indigenous population of shellfish, fish and wildlife and allows recreational activities in and on the water.
125.57(a)(3) The applicant has established a system for monitoring the impact of such discharge on a representative sample of aquatic biota

There is no data that shows that GWA does not meet these requirements. EPA's argument throughout the TDD is that GWA has not provided adequate information for EPA to make a determination and therefore EPA is forced to presume that GWA is not meeting these requirements. Stated simply, there is no evidence and no scientific argument presented by the EPA to support the assertion that GWA does not meet this requirement.

As noted by EPA in their TDD, GWA completed offshore monitoring for the 1998 reapplication. GWA has also been sampling offshore since the new outfall was put on line in January 2008 (offshore monitoring actually began October 2008). This outfall was installed pursuant to EPA direction and in full coordination with EPA (see Outfall section above). Since the outfall was put on line, there has been no time to perform any studies to show that the effluent as discharged out of this outfall ensures "protection and propagation."

In February 2009, Dr. Laurie Raymundo, Coral Ecologist for the University of Guam's Marine Lab, began a study to look specifically at potential wastewater impacts on Guam's reefs. As of June 2009, Dr. Raymundo has stated that it is too early to see any pattern in the data. GWA has not yet had the opportunity to perform comparisons of biological impact assessments that involve comparisons of biological conditions and habitat characteristics as discussed in the TDD. Therefore, GWA is requesting that EPA allow GWA adequate time to complete and implement studies that will demonstrate compliance with this requirement and demonstrate protection of Guam's marine habitat. As a precedent, when EPA determined that there was inadequate data to evaluate Honolulu's 301(h) discharges, EPA funded the Mamala Bay study. To add scientific rigor to EPA's decision making process, GWA is requesting both the time to complete such studies now that the new outfall is on-line, and EPA funding to execute complete and thorough scientific research expeditiously. In their June 3, 2009 Position Statement regarding EPA's tentative determination, GEPA concurred that there is a lack of data to determine the impacts based upon the 2001 WQS (see section on WQS below).

EPA has consistently stated both in press releases and throughout the TDD that GWA "failed to submit the information required." During a March 21, 2008 conference call, EPA stated that the "window" for GWA to provide information closed in 2001. EPA references the June 1997 letter as the basis of their request for information. Prior to issuance of the TDD, current GWA staff did not even have a copy of this letter. The "new" GWA under the CCU cannot be expected to address comments sent to a less efficient PUAG/GWA six years prior to the CCU and the SO. No additional requests for the information described as being deficit were ever received, and to

current GWA staff was given no indication after 2003 that the application was considered to be incomplete. As an additional example of this, on January 18, 2002, EPA sent a letter asking EPA to do additional baseline monitoring. GWA did not complete additional monitoring at that time. On December 20, 2004, during the post-CCU area, EPA again sent a letter requesting that GWA perform additional baseline monitoring at the outfall sites. GWA fully complied with this request, completed the quarterly analysis, and submitted it to EPA, who concurred that the analyses fully complied with the request.

GWA as a public corporation under the CCU is a fundamentally different organization than previously. The Justice Department recommended to the Guam Federal Court in connection with the Ordot Dump and landfill case that that the CCU should take over operation of Guam's solid waste division because of their effectiveness in overseeing GWA and GPA. It is contradictory to state that actions by the pre-CCU PUAG are binding on the new GWA when even EPA itself has recognized that GWA is not the same as before. It is arbitrary and misleading to have EPA officials speak with GWA on a weekly basis from 2003 to 2007 without mentioning in any way that EPA was intending to deny GWA's waivers based on a lack of inforamation. If it had been, GWA could have been provided an opportunity to spend the approximately $35M spent in rehabilitation to Agana and Northern towards upgrading its plants. EPA is well aware of GWA's funding constraints (see Affordability) and has at least some duty to help GWA spend those limited resources in the most environmentally beneficial manner possible.

EPA is required to provide "reasonable response times." GWA has addressed any requests that EPA made for additional information in the post-CCU era; therefore, GWA counters that the lack of written communication on the 301(h) waiver application from 1999 to 2009 is not a "reasonable response time" and that today's GWA could not anticipate that their application was inadequate or insufficient as stated in the TDD. In denying its application at this juncture EPA has acted in an arbitrary and capricious fashion without regard to environmental concerns, costs to Guam or to GWA's ratepayers. Moreover, had the "new" GWA been informed at any time from 2003-2009 that EPA required additional information, studies, or other data in order to maintain the 301(h) waivers, it would have been promptly procured. For example, when EPA requested that GWA perform toxicity testing at the NDWWTP in 2007, it was completed promptly.

In EPA's response to comments on the Honouliuli WWTP denial, they noted that "If EPA's concerns with the application were limited to the monitoring program, EPA would work with CCH on improvements to the monitoring program." Since the "window" for GWA to submit information closed in 2001 (according to EPA personnel and the TDD page 7), and EPA's last request for information from GWA on the 301(h) application was 1997, GWA therefore requests that EPA work with GWA on developing improvements to the monitoring program prior to issuance of a final decision.

<u>30% Removal Requirement</u>

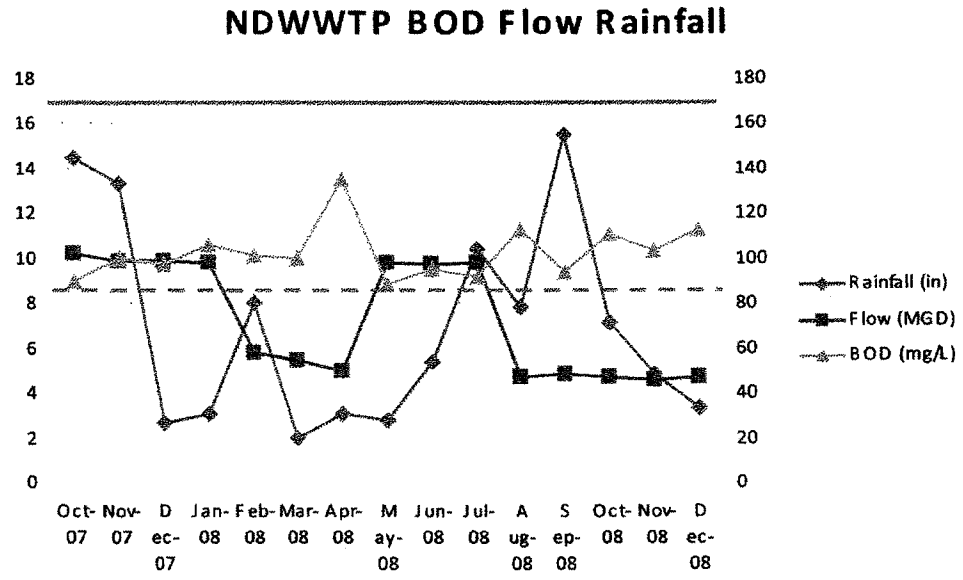
EPA states that GWA has not complied with the requirement to remove 30% of BOD and TSS.

BOD

Industry standard influent BOD is 300 mg/L. GWA's influent BOD averaged 103 mg/L between October 2007 and December 2008. This is below the daily maximum discharge limit of 170 mg/L and some months falls below the average discharge limit of 85 mg/L. The physical treatment process simply cannot remove 30% of this small of a concentration of influent. Secondary treatment would require 85% removal, and despite additional biological treatment processes would not be successful in removing that percentage from such low influent; moving to secondary therefore would not address this problem. This can be shown by the fact that secondary wastewater treatment plants on Guam, including the Apra Harbor WWTP, all have the same issue with low influent BOD and an inability to remove the required percentage, yet these facilities meet permitted discharge limits.

Typically it is presumed that low influent BOD is caused by inflow and infiltration (I&I). Graph 1 shows that there is no correlation between rainfall, influent flow and BOD, and there is no fluctuation in inflow to the plant between rainy season and dry season, so there is no demonstrable inflow source to the plant. The solid green line is the maximum effluent discharge limit and the dashed green line is the average discharge limit. In other words, the influent BOD is in many cases less than the requirements for effluent BOD.

Graph 1. NDWWTP Rainfall, Flow and BOD



Additionally, one of EPA's consultants stated during a site visit to Guam (during which he was accompanying the Pacific Island's Office) that tropical environments typically have low influent BOD, and that EPA needs to complete studies to validate this and to determine the cause.

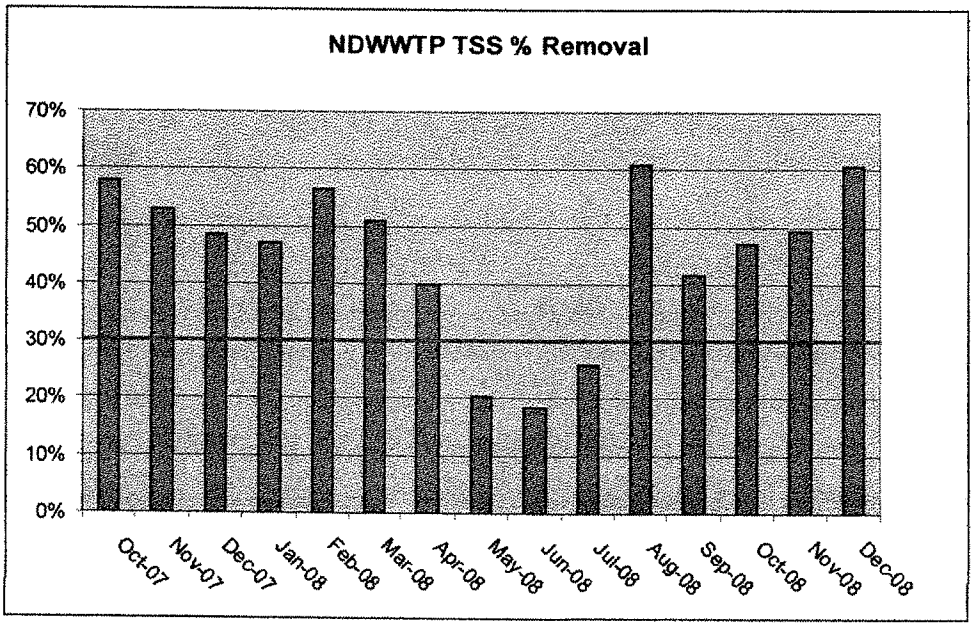
One additional potential source of low influent BOD is groundwater infiltration. GWA has a robust CCTV inspection program and is programming annual collection system repairs into our five year rate plan. There have not been significant amounts of groundwater infiltration discovered to date, but any CIP repairs that found to be necessary as a result of this program are promptly implemented. Should GWA be forced to move to secondary treatment, money for such collection system rehabilitation would not be available.

The percentage removed is therefore not relevant; the critical criteria are whether or not the plant can protect water quality. EPA concurred in their TDD that GWA could meet the WQS at the ZID for both BOD and TSS. While it is true that 30% removal is a requirement of 301(h), EPA does have some discretion in this, such as in modifying the averaging period. It is clear that environmental protection should take precedence over arbitrary, non-material and theoretical requirements. EPA's failure to issue a decision for 10 years demonstrates that it has discretion in this matter, yet when the EPA tries to deny GWA's waiver at this juncture, it is clearly an abuse of this discretion.

TSS

EPA states that GWA has not met the 30% removal requirement for TSS at the NDWWTP. Graph 2 shows the percent removal since the plant was put on line after renovation as required under the SO.

Graph 2. NDWWTP Percent Removal of TSS



Graph 2 shows that GWA has in fact met the 30% removal requirement since the SO required renovations were completed, except for one quarter between May – July 2008. This was the result of an excessive build-up of solids in the clarifiers, which has been remedied by overhauling the drying beds and stopping the recirculation of digester supernatant to the

headworks, information that was documented on the Discharge Monitoring Reports. Since those adjustments have been made, the WWTP has met its design treatment removal of 50-75% of TSS.

EPA should allow GWA time to address the programmed addition of grit removal systems and rehabilitation of the digesters. Additionally, EPA should recognize that any funding that would be available to address any potential groundwater infiltration would be diverted by a requirement to go to secondary treatment (see Affordability) and therefore GWA would be equally unlikely to meet the 85% removal required of a secondary treatment plant.

Monitoring Program

EPA states that GWA has not "continued the monitoring program specified in its current section 301(h) modified permit." While acknowledging that past practices were inadequate, GWA is in fact currently completing off-shore monitoring in accordance with the permit requriements. The offshore monitoring was initiated just prior to putting the new outfall on line (in October 2008), and therefore all necessary data relative to the new outfall is being collected. EPA did have this data prior to issuance of the TDD. The outfall has only been on-line since December 2008, and therefore even if GWA had a history of monitoring data there would not yet be adequate monitoring informaiton to determine compliance with the regulations. The permit requires GWA to monitor only for floating materials, odor, color, total coliform bacteria, temperature, salinity, pH, dissolved oxygen and turbidity so information on these parameters would not have impacted any of the TDD determinations on nutrients, toxics, etc.

EPA states that GWA has not demonstrated that it has the resources to carry out the monitoring program. However, the program is now budgeted and being consistently implemented. As EPA's Pacific Island's Office is aware, GWA now has a modern and well-staffed laboratory located at the Agana WWTP with a full-time Laboratory Manager and Laboratory Technician who are responsible for the monitoring. The laboratory is managed by Veolia Water Guam, a subsidiary of Veolia Water Eau, which is one of the largest water / wastewater companies in the world and which has a successful track record of compliance. There is no question of GWA ensuring that this monitoring is completed as required.

Bacteria

EPA states that the design of the new outfall does not allow sufficient dilution for the discharge to meet the WQS for bacteria.

In EPA's 1997 letter tentatively denying the original permit application, EPA cited two fecal coliform studies and noted that the documents warned that "significant fecal coliform contamination can enter coastal waters of Guam from stormwater runoff, point source contaminators and perhaps resuspension of contaminated sediments." Nothing in the studies or EPA's statements verified that there was significant point source contamination from the outfalls, and recent information from GEPA indicates that non-point source pollution and stormwater runoff are significant sources of bacterial contamination.

Ironically the April 1997 EPA letter also noted that the studies did NOT recommend chlorination because chlorine can be far more detrimental to marine biota than bacteria.

The letter recommended that GWA resubmit their application and include a proposal to extend the outfall. GWA did so (see sections on History and Outfalls above). EPA and GEPA approved the design of the outfalls.

During a teleconference between EPA and GWA on March 21, 2008, EPA stated that the primary bacteriological reason discussed for the denial was the Beach Act pathogen criteria, although EPA staff then noted that this doesn't really apply to Guam because GEPA already has adequate pathogen criteria in their Water Quality Standards. GWA noted that bacteria can be addressed with disinfection and this does not necessarily require secondary treatment. Region IX personnel emphatically stated that GWA applied for a 301(h) waiver without requesting disinfection and therefore the denial will be based on the 1998 application, and there is no opportunity for revision of that application or discussion of any alternative other than secondary treatment (despite the fact that the application is 11 years old).

During a teleconference with EPA staff on April 3, 2009, EPA stated that the "window" for GWA to submit any additional information had closed in 2001. The current version of the GWQS was issued in 2001. GWA is being arbitrarily denied the opportunity to provide any modifications after this date to adjust to the new WQS. The permit application was submitted based upon the WQS issued on January 2, 1992, which included only a fecal coliform standard of 200/100 mL for a 30 day period and 400/100mL at any time. GWA has been provided no subsequent opportunity to modify our application to address the updated WQS, which were used in evaluating our permit application and as the basis for the tentative decision.

The fact that GWA is being denied the opportunity to present new information, despite the fact that the EPA has on at least one occasion since 2001 indicated to GWA in writing that if it extends out its outfalls it will be provided a new opportunity to obtain a 301(h) waiver, is unreasonable, arbitrary and capricious on the part of EPA.

Enterococcus as pathogen indicator

Tests that actually identify the presence of fecal pathogen (disease causing bacteria) contamination in water and the environment from mammalian sources, particularly those which can infect humans, are difficult, tedious, time consuming and expensive. The generally take so long that by the time a positive test result is obtained, it may well be too late to manage a problem for which they could be a cause. Because of this, organisms that are used to evaluate water quality and the environment are not the actual pathogens that can cause disease, but rather they are classes of bacteria that tend to live in the same conditions as the pathogens and can be identified quickly.

It has long been recognized that the organisms that have historically been used to indicate the presence of fecal contamination in tropical environments are not reliable for this purpose. The reason is that the classes of organisms used for water and environmental quality evaluations are able to thrive in the soils where the growth conditions are always

warm and moist. This ability then prevents a determination of the actual source of the indicator organisms and does not provide precise human health related information on the quality of the water or the environment being monitored. Research done by the University of Hawaii Water Resources Research Center by Roger Fujioka et. al. in the early 1990's was among the first presentations documenting this situation, and some alternative organisms were proposed. In 1999, they published a second study in Guam, using the same methods as the Hawaii studies. This study found that "soil becomes an environmental non-faecal source of faecal indicator bacteria" and concluded that "USEPA water quality standards may not be directly applicable to tropical island environments."

The *Development of New or Revised Recreational Water Quality Criteria* (EPA 823-R-07-006; June 2007) notes that enterococci, the indicator organism in the WQS and referenced in the TDD, has several shortcomings in its use as a fecal indicator and that experts "agreed that enterococci are probably not appropriate indicators in all climatic regions (e.g. in tropical and subtropical climates)." EPA, in concurrence with the need of a better method for microbiological evaluation of waters and the environment, has an ongoing program to seek out alternative indicator organisms which provide more precise information on the presence of fecal contamination and likely sources of it.

EPA stated in their Honouliuli TDD response that "Until new methods to detect pathogens are finalized and adopted in 40 CFR 136 and criteria using these new methods are developed and promulgated, the existing criteria remain in effect. In EPA's 301(h) analysis of whether a discharge can attain water quality standards for bacteria, EPA must use the currently applicable water quality standards." This statement proves fundamentally that EPA's scientific arguments lack rigor to make decisions which will result in significant environmental and cost impacts on the Island of Guam. Enterococci are a poor indicator for tropical environments such as Guam according to numerous studies, including EPA's, yet EPA holds GWA to an inappropriate, unscientific standard. EPA's argument that this is based on the law is rendered ineffective by its own failure to issue a decision for 11 years; this demonstrates clearly that EPA has discretion in these matters.

GWA believes that a non-arbitrary and reasonable approach is that EPA postpone a final decision on this topic while allowing GWA and other Guam entities including WERI to contribute to research on appropriate indicator species for tropical environments, and/or allow GWA an opportunity to propose disinfection to address the hypothetical bacteria issue. GWA would be an ideal test platform for such research.

Guam Water Quality Standards

In addition to bacteria (discussed above), EPA's tentative decision states that GWA has not submitted sufficient information to determine whether or not the proposed discharge can meet the WQS for nutrients, whole effluent toxicity, toxic pollutants and pesticides.

Nutrients

EPA states that GWA failed to submit adequate receiving water monitoring data to demonstrate that the proposed discharge would attain WQS for nutrients at and beyond the zone of initial dilution. According to EPA's tentative decision document, the basis of design for the new outfall and an initial dilution of 200:1 were used in making the tentative determination, and concluded that this is a conservative estimate (EPA's own calculated initial dilution was 275:1). The new outfall was designed to meet nutrient concentration compliance (with orthophosphate as the limiting factor at the zone of initial dilution), and according to EPA's own calculations, this design is conservative. Receiving water data from the existing, old outfall would not have been relevant to the ZID for the new outfall. GWA has been monitoring receiving water data and submitting such data to EPA since the new outfall was put on line. However, this monitoring data does not include nutrients. (Please see the discussions above regarding the Need for Additional Information.)

EPA acknowledges that GWA submitted receiving water monitoring data in 1998, but discusses gaps in that data. The TDD also states that EPA has expressed to GWA on "several occasions" since 1997 that GWA "should collect and provide EPA with more recent monitoring information, such as water quality data for nutrients." However, GWA has received no written feedback on the 1998 data submittal, and has had no written communication from EPA on nutrients since September 23, 1997. While acknowledging that PUAG did not complete all quarterly offshore monitoring required by the existing 1986 permit, GWA notes that there was no requirement in this permit for nutrient monitoring. GWA disputes the assertion that it was requested to do additional nutrient monitoring in the period since the CCU has been in office. GWA also disputes EPA's assertion that such monitoring would have shown whether or not GWA could meet GWQS with the new outfall, since it was clearly designed to meet such standards but was not put on line until January 2009.

In the Honouliuli WWTP response to TDD comments, EPA noted that there has been a change in the Hawaii WQS since 1991 when their previous decision was made, and that therefore their decision reflects new criteria. However, EPA stopped requesting nutrient information in 1997 and stopped accepting information from GWA in 2001, the same year that the latest Guam WQS were issued, so for any decision based on the standards of the 2001 WQS, EPA must allow GWA an opportunity to provide additional information and studies so that all information is scientifically rigorous (instead of based on "inadequate information") and relevant to the most current standards. Otherwise the EPA's decision is arbitrary, unreasonable and contrary to mandates that the agency base its decisions on what's best for the environment.

GWA requests that EPA provide GWA with a specific request for the nutrient monitoring data required with the new outfalls and most recent WQS and allow GWA an opportunity to meet that request prior to issuance of a final decision.

Toxicity

EPA states that GWA has failed to demonstrate that the discharge is not toxic due to a lack of representative WET data. However, each time the Pacific Island's office has requested GWA to sample for WET, GWA has done so (the claim of inadequate information based on the 1997 EPA letter is discussed in detail elsewhere in this document).

EPA states "in response to EPA's expressed concern for the lack of WET data, GWA finally submitted results for a single WET test from October of 2007." Or put another way, when EPA actually asked the post-CCU GWA to do a WET test, GWA promptly did so. Since 2003, GWA has made every effort to comply with EPA requests. Had EPA provided feedback or additional requests for sampling after 2003 GWA would have complied.

EPA also states that GWA utilized an inappropriate species. GWA used the same species that was listed in our Umatac-Merizo and Baza Gardens NPDES permits. These plants discharge into fresh water, but lacking any guidance from EPA on desired species, the biologist chose to be consistent with other permit requirements results. No feedback was ever received from EPA regarding this choice until the TDD was issued.

GWA is confident that, like the test completed, any additional testing would also have shown that the discharge is not toxic at the ZID.

If EPA found these submittals inadequate, they should have submit in writing a request for GWA to do additional WET testing and specified the species to be used. EPA should postpone the waiver decision until adequate testing can be completed to fully analyze this issue.

Toxic Pollutants & Pesticides

EPA states that in their 1997 letter they instructed GWA to conduct toxic pollutant analysis, and that GWA did so in 1998. Based upon that data, according to the TDD, "*except for lead, concentrations of all four of the detected toxic pollutants were estimated to be below the water quality criteria at the ZID.*" EPA also noted that GWA did provide a submittal stating that the lead results were a misrepresentation of effluent concentrations, but falsely states that GWA provided not additional data to confirm this point.

EPA states that GWA has not done any additional toxic scans. This is false. GWA completed toxic scans pursuant to requests from EPA's Pacific Island's Office in 2007 and 2008. These results also showed that the discharge is non-toxic, including for lead.

As noted in earlier sections of this response, EPA's basis for concluding that GWA has not demonstrated that the discharge would not be toxic is because "GWA has not provided additional toxic pollutant analyses as specified by EPA." While EPA's 1997

letter did request annual analysis, no communications from EPA since that date have requested such analysis, and the "new" GWA under the CCU has completed all additional analysis requested by EPA, as shown by the 2007 and 2008 results.

EPA's conclusion that GWA has not completed adequate analysis to demonstrate that the discharge is not toxic is false. If EPA feels that additional data is necessary, EPA must request that GWA perform additional monitoring prior to finalizing a decision in order to demonstrate that all information is scientifically based (instead of based on "inadequate information"). Otherwise the EPA's decision is arbitrary, unreasonable and contrary to mandates that the agency base its decisions on what's best for the environment.

Industrial Pretreatment

EPA states that GWA has not complied with the pretreatment provisions of the regulation. The regulation applies to Categorical Industrial Users as defined in 40 CFR Part 403. The TDD states that GWA did not provide updated information regarding categorical industrial dischargers to the treatment system. GWA submitted with our 2000 application update a copy of the Discharge Survey that was completed in 1999. Based upon survey responses and a review of industrial customers via GWA's billing records showed that there is only one Categorical Industrial User as defined in the regulation discharging into the NDWWTP collection system (the Anderson Air Force Base Landfill). Since EPA only looked at information provided through 2001, this would not have included the recent requests that GWA made to the Pacific Islands Office for assistance in dealing with military categorical industrial discharges to GWA facilities. DoD has been extremely uncooperative in providing information or sampling and analysis at their categorical industrial facilities (e.g. Naval Hospital and AAFB Landfill). GWA requests that EPA provide assistance in enforcing pretreatment requirements on federal facilities.

As the Pacific Island's Office is aware, GWA's primary pretreatment issue is not toxics, but is fats, oil and grease, and GWA has kept the Pacific Island's Office abreast of efforts to reduce FOG contributions to the collection system. This effort has included numerous requests that GEPA and EPA provide assistance, as the FOG regulations under GEPA contradict those of GWA, and are inadequate. EPA will no doubt argue that this is not relevant to compliance with 301(h) requirements; however, it does demonstrate that GWA has a robust pretreatment program which focuses on the issue that has the largest impact to operations and therefore effluent quality.

Nonindustrial Source Control

EPA states that GWA does not have a nonindustrial source control program. Current GWA staff state that public education was conducted in 1999, however, copies of such campaign are no longer available. EPA has had no discussions with GWA since 1997 regarding this issue.

The post-CCU GWA has a full time Public Relations Manager and GWA performs extensive on-going public education that includes education of the public on proper disposal of waste. Upon request GWA will submit a CD containing examples of some of GWA's public education campaigns over the past couple of years (the video files are too large to email). GWA also does an extensive public relations campaign to eliminate illegal discharges by septage haulers (see

BOD above). GWA would have been more than happy to provide such information to EPA at any time upon request, or to modify the program to include any elements that EPA considers to be necessary.

GWA requests that EPA provide GWA with assistance on defining the desired elements of this nonindustrial program and with the opportunity to implement such a program.

Military Build-Up

It has become impossible to discuss the issue of secondary treatment without referencing Guam's impending military build-up. The military build-up will dramatically increase the population of the island of Guam and may drive the plant capacity over its current design of 12 MGD. Once the plant has to be upgraded to increase its capacity, there is no longer an opportunity for a waiver to apply. Without the build-up, this WWTP would not need a capacity increase within the 20-year planning horizon of the WRMP. Therefore, any need to go to secondary within that planning horizon is driven by DoD impacts, direct and indirect, and therefore DoD is fully responsible for any necessary upgrades to secondary treatment that take place within that planning horizon.

In Summary

- ✓ Moving to secondary treatment would be at a prohibitive cost for no demonstrable environmental benefit. GWA must be allowed time operating with the new outfall to complete studies to demonstrate compliance with the regulations.
- ✓ Due to EPA's failure to address the permit application for 9 years, GWA has been given no opportunity to resubmit under the current applicable WQS, so GWA must be given the opportunity to resubmit and address the new standards.
- ✓ EPA has stated, as a party to the Stipulated Order and by approving the WRMP, that EPA's priorities for GWA do not include secondary treatment at this time.
- ✓ EPA's statement that GWA has not provided requested information to support its application has no basis in fact, as no information has been requested since 1998 and GWA therefore had no choice but to determine that all such information was addressed in the 2000 and 2001 submittals.
- ✓ There is a lack of rigorous scientific behind EPA's assertions that there it would be deleterious to continue the waiver, and that this needs to be mitigated. More data and analysis is required so that both EPA and GWA can deal with the facts.

GUAM WATERWORKS AUTHORITY
578 North Marine Corp Drive
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June 30, 2009

Richard Remigio
U.S. Environmental Protection Agency
Region IX, WTR-5
75 Hawthorne St
San Francisco, CA 941054-3901
VIA EMAIL TO: R9-Agana-301h-Comments@epa.gov

RE: USEPA's tentative decision to deny GWA's CWA 301(h) variance

Dear Mr. Remigio:

On January 5, 2009, Wayne Nestri, the previous Administrator for Region IX, United States Environmental Protection Agency, issued a tentative decision to deny GWA's application for a section 301(h) of the CWA variance from secondary treatment requirements. GWA's numerous concerns with this decision, which are elaborated in detail in the attached Response document, include:

- Lack of corroborative evidence supporting the basis for the decision as protection of the environment
- Lack of demonstrated negative environmental impact of primary treatment
- Utilization of outdated data as the basis for the tentative decision and the subsequent failure of EPA to request updated data
- EPA's ranking of secondary treatment as the highest CWA priority project at this time
- The inconsistency of positions taken by two divisions of EPA on GWA's planning priorities
- Legal actions and subsequent approvals by EPA guiding GWA into primary treatment rather than secondary, with no revelation of EPA's planned move towards secondary treatment
- Fallacious factual bases of decision

GWA requests that EPA reconsider its decision to tentatively deny GWA's 301(h) waiver application. Instead, EPA should delay this decision and work with GWA to complete studies on the discharges of effluent from the new deep ocean outfalls, and provide GWA with an opportunity to propose additional facility improvements such as disinfection and fine screening. In conjunction with these potential process improvements, EPA, GEPA and GWA should also work on methods for reducing greenhouse gas emissions and improving the treatment of biosolids.

Sincerely,

Dr. Leonard Olive
General Manager

Cc: Mike Lee, Pacific Islands Office, Region 9, USEPA
Lorilee T. Crisostomo, Guam EPA
Manuel Minas, Guam EPA
Angel Marquez, Guam EPA
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- Simon Sanchez
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- Art Perez
- Heidi Ballendorf

Senator Thomas Ada
GWA Chief Engineer
GWA Legal Counsel
Gerald Fitzgibbon Veolia Water PMC
File

GUAM WATERWORKS AUTHORITY

FORMAL RESPONSE BY THE GUAM WATERWORKS AUTHORITY TO THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY'S TENTATIVE DECISION DOCUMENT ON GWA'S AGANA WWTP APPLICATION FOR A MODIFIED NPDES PERMIT UNDER SECTION 301(h) OF THE CLEAN WATER ACT

Introduction

On January 5, 2009, Wayne Nastri, the previous Administrator for Region IX, United States Environmental Protection Agency, issued a tentative decision to deny GWA's application for a section 301(h) of the CWA variance from secondary treatment requirements. GWA's numerous concerns with this decision, which are elaborated in detail in the attached Response document, include:

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Abbreviations utilized in this response:

- BOD – Biochemical Oxygen Demand
- CCH – City and County of Honolulu
- CCTV – Closed Circuit Television (sanitary sewer video camera)
- CCU – Guam Consolidated Commission on Utilities (elected board that oversees both GWA and the Guam Power Authority)
- CHP – Combined Heat and Power
- CIP – Capital Improvement Projects
- CWA – Clean Water Act
- EPA –The United States Environmental Protection Agency, Region IX
- GEPA – Guam Environmental Protection Agency, Guam's Territorial environmental regulatory authority. Does not have primacy for NDPES oversight. Issues WQS
- GPA – Guam Power Authority
- GWA – Guam Waterworks Authority
- MGD – Million gallons per day
- NDPES – National Pollution Discharge Elimination System, generally, 40 CFR 125
- NDWWTP – Northern District Wastewater Treatment Plant
- PUAG – Pubic Utility Agency of Guam (predecessor to GWA)
- SDWA – Safe Drinking Water Act
- SO – Stipulated Order entered into between EPA and GWA on July 5, 2003 and modified on October 25, 2006
- TDD – Tentative Decision Document
- TSS – Total Suspended Solids
- WERI – Water and Environmental Research Institute of the Western Pacific, located at the University of Guam
- WET – Whole Effluent Toxicity
- WQS – Guam Water Quality Standards
- WRMP – GWA's Water Resources Master Plan (also referred to as the "Master Plan")
- WWTP – Wastewater Treatment Plant
- ZID – Zone of Initial Dilution

Environmental Protection

The current EPA Director, Ms. Lisa Jackson, stated in a January 23, 2009 memorandum that all EPA decisions should be based upon the best available science. There is no substantive scientific basis for moving the Agana WWTP to secondary treatment. GWA concurs that additional information is needed to identify any potential impacts. GWA is completely committed to protecting Guam's environment; however, utilizing our limited resources to move to a process that could potentially be environmentally detrimental is not in the best long-term interests of the residents of Guam and their environment.

EPA has been reviewing the current application since 2001. GWA, GEPA and EPA all concur that there is inadequate information to fully make a complete determination and that more information is necessary (see Need for Additional Information section below). Therefore GWA must be allowed time and assisted with resources in order to obtain such information. Otherwise, any EPA decision based on inadequate information is not scientifically based or designed to provide environmental protection; rather it is simply an arbitrary response.

In addition, secondary treatment can create additional negative environmental impacts. EPA's Water Division has not coordinated with the Pacific Island's Office, Waste Division on solids reduction, or Air Division for discussion of greenhouse gas emissions. GWA feels strongly that to install secondary treatment for debatable water quality improvements while creating environmental impacts in other areas is not best for holistic protection of Guam's environment. In EPA's response to comments on the Honouliuli WWTP denial, they note that the criteria for making the 301(h) "decision do not include evaluating the impacts of secondary treatment." This statement is contrary to EPA's fundamental mission to protect the environment.

Septic Systems

Northern Guam has a prolific water lens located in a limestone aquifer. This sole-source aquifer is a precious resource that provides drinking water to 75% of Guam's population. The aquifer is threatened by the proliferation of septic systems. 86% of Guam's septic systems are located over this aquifer, serving 35% of Guam's residents. According to the Northern Guam Lens Study (GEPA, 1982), water from septic systems percolates rapidly through the limestone aquifer, carrying pollutants such as nitrates and bacteria. Well exceedances of bacteria levels in drinking water wells are traceable to septic tank proliferation. Additionally, there are numerous septic systems located within 1000 feet of existing wells.

The WRMP includes $70M for sewer connections in critical areas to protect the aquifer, and another $103M for improvements to existing sewers. This addresses only the most critical areas: those within 1000 feet of a well, within 200 feet of an existing sewer, or where the sewer extension reaches housing clusters at densities greater than one per unit acre over groundwater recharge zones. The plan noted that upgrading just those connections near both a well and an existing sewer would be $47M (in 2004 dollars). The costs in 2009 dollars will be significantly higher.

Other possible mitigation measures are outlined in the WRMP, including decentralized systems, advanced on-site treatment, and on-site nitrogen removal filters. However, the WRMP recommends centralized wastewater treatment as being the most cost effective and environmentally protective.

GWA strongly believes that aquifer water quality protection is a much higher environmental priority than secondary treatment. The limited resources of Guam's ratepayers would be far better spent in implementing programs to connect unsewered properties to the wastewater system to protect the sole source aquifer.

Nutrient Loading

A substantial body of research has been accumulated in an effort to evaluate the impacts of discharging primary treated wastewater into deep ocean outfalls in areas where the sea water quality is very low in nutrients. These studies have occurred in oceanic waters near islands far from continental influences. The primary common characteristics of the sea water in such areas are that it is of very low turbidity and lacking in significant amounts of basic nutrients to fuel the lowest levels of the food chain.

Near continents, the runoff from rivers and streams provides a regular natural supply of decaying vegetation and animal wastes. These food sources are essential to the marine life. On a continental shelf, the balance is very favorable. In the deep ocean where the percentage of land is very small, what runoff (if any) that does exist is minute compared to a continental costal environment.

What this means is that island environments have beautiful beaches with clear waters, and a very sparse ecology. The predominant organisms are corals.

Studies by the University of Hawaii Water Resources Research Center and the EPA funded Mamala Bay Study in Hawaii have shown that the delivery of primary treated wastewaters through properly constructed discharge outfalls have a favorable impact. They are a means providing essential nutrients to the marine ecology by providing food to the area's waters so that the planktonic plant life can flourish and support an expanded marine biological community.

Biosolids

The addition of secondary treatment will substantially increase the biosolids production at the WWTP. Currently biosolids are reduced in aerobic digesters and a sludge thickener and dried in one of two 21" centrifuges. The result is 29-30% dry solids. This is disposed of at the Ordot dump.

Guam is facing a solid waste crisis. The dump is operating in violation of NPDES requirements, is virtually full, and the Department of Public Works' solid waste division has been placed into receivership to expedite building of a new landfill and closure of the old dump. As a small island, Guam has limited land area for solid waste disposal, and

recycling and solid waste minimization is critical. EPA Water Division should coordinate with the EPA Waste Division and the Pacific Islands office, as any decision to go to secondary treatment will dramatically increase solids production and could potentially have very detrimental impacts on the design life of the new landfill.

Instead of pouring all of GWA's resources into plant upgrades to secondary, it would be better for Guam's environment to spend those limited resources on biosolids treatment that would reduce solid impacts by allowing for biosolids recycling and reuse. This could have the added benefit of providing a high-quality product for Guam's agricultural community, which deals with poor soil conditions. It is likely that EPA would respond that GWA could implement such improvements with secondary treatment, but the reality of Guam's limited resources for wastewater CIP projects would be to make such a program unaffordable (see Affordability section).

Greenhouse gas emissions

Director Jackson also committed EPA to addressing greenhouse gas emissions. There are numerous studies showing that secondary treatment plants contribute heavily to this world-wide problem. Moving the plant to secondary treatment would dramatically increase greenhouse gas emissions.

Typical secondary treatment utilizes activated sludge, a process which requires large amounts of aeration and consequently considerable power. Other technologies are even more power intensive. There would clearly be an increase in greenhouse gas emissions from a secondary treatment facility. Based on current flows and influent BOD, secondary treatment at the Agana WWTP would produce 4,308 lb/day or 1,673,611 lb/year of carbon dioxide.

In EPA's response to comments in their denial of the City of Honolulu's Honouliuli WWTP waiver, EPA referenced certain mitigation methods that can be employed in the implementation of secondary treatment, and consistently referred to the "Opportunities for and Benefits of Combined Heat and Power at Wastewater Treatment Facilities." The Agana WWTP:

- Does not employ anaerobic digesters; replacing the current aerobic digesters would dramatically increase the capital outlay for upgrades
- Is not large enough. Minimum MGD in the study EPA references is 6.8. The Agana WWTP today doesn't reach that even at peak loads.
- Does not have strong enough influent BOD to utilize CHP, as weak influent BOD makes for poor methane production. This is demonstrated at the Apra Harbor WWTP, which has similarly low influent BOD, and which utilizes anaerobic digesters and a waste heat boiler for digester heating. There has never been adequate methane production to operate the waste heat boiler, which therefore runs on fuel oil, and the waste gas burner at the facility has never been lit.
- Methane use still generates greenhouse gas emissions.

Typical secondary treatment utilizes activated sludge, a process which requires large amounts of aeration and consequently considerable power. Other technologies are even more power intensive. There would clearly be a significant increase in greenhouse gas emissions from a secondary treatment facility.

History

GWA's NDPES permit expired in 1991. PUAG applied on time in December 1990 for their permit renewal. In March 1991, the Guam Environmental Protection Agency (GEPA) concurred with the 301(h) waiver.

PUAG operated under an administrative extension for six years until April 15, 1997, when EPA sent PUAG a letter informing them that they intended to issue a tentative denial of the secondary treatment waiver and offered PUAG the opportunity to resubmit their permit application, stating that in order to receive the treatment waivers, the deep ocean outfalls would need to be extended. In June, 1997, EPA sent a letter acknowledging GWA's intent to submit a revised application. On October 6, 1997, EPA sent GWA an approval of the proposed baseline surveys for the proposed outfalls. On March 27, 1998, GWA resubmitted their application and included projects to extend the outfalls. Additional information was provided in a June 30, 2000 supplemental submittal.

In the basis for the tentative decision, EPA states that GWA's application was deficient, but acknowledges that GWA submitted additional information to support the application, and that all information submitted through 2001 was considered in the determination. *GWA received no further communications from EPA after 1998 regarding submittal requirements or deficiencies* (except for those specifically related to the outfall extensions, which are addressed in detail below). In a June 17, 2009 email, Richard Remigio of EPA confirmed that no other correspondence from EPA to GWA was included in the determination.

EPA noted in it's response to comments on the Honouliuli WWTP waiver denial that the causes for delays in issuance of the permit were due to CCH's delays in providing information. EPA will no doubt make the same case for the reason there was no new permit issued for the Agana WWTP from 1991-2001, although the first tentative was not issued until 1997. However, by EPA's own admission, the "window" for submittal of additional information closed in 2001. Had EPA issued a permit at in 2001, the permit would have expired in 2006, and GWA would be a year away from preparing another renewal application. As noted by the Honouliuli commenter, the timely response expectation certainly gives all the outward appearances of being a one way street. Therefore, the TDD constitutes an arbitrary denial.

In 2001, the Guam Legislature passed 26-76, creating the Consolidated Commission of Utilities. This law replaced the appointed Board of Directors with an elected Board. The intent of the law was to improve the way GWA was governed, since the appointed Board had failed to improve GWA operations since it had become a public corporation in 1998. From 1988 to 2002, GWA lost over $60 million. In December of 2002, EPA sued GWA for noncompliance with the CWA and SDWA.

The first elected board took office on June 1, 2003. Within six months, the CCU and GWA negotiated and entered into a Stipulated Order with EPA and the federal court to address the gross non-compliance that was the subject of the 2002 lawsuit. By November 2005, GWA raised its first $105M to comply with the initial requirements of the Stipulated Order. GWA management and finances have continued to improve since the changeover to CCU governance and GWA continues to work closely with EPA to fully comply with the SO, a fact acknowledged by EPA itself in its November 9, 2007 brief in District Court of Guam Case No. 02-00022 at page 6. Progress continues to this day. GWA has complied with over 90% of the Stipulated Order items originally required in 2003, and continues to coordinate closely with EPA on all facets of progress.

Up until this time and by virtue of entering into the SO in 2003, GWA acknowledged that there were significant deficiencies in compliance and expediting timely data. Since 2003 GWA has made enormous strides in our compliance and reporting, and has been focusing its attention and limited resources fully on the items and issues identified in the Stipulated Order and Water Resources Master Plan. **At no time after the in the 6 years since the CCU took office in 2003 has the USEPA requested that GWA provide additional information to support the 301(h) waiver application.**

Stipulated Order

The Stipulated Order made no mention of secondary treatment, although it was designed to address non-compliance of the Clean Water Act and Safe Drinking Water Act violations alleged by EPA in their civil action, including "issues of compliance in GWA's Publicly Owned Treatment Works."

Paragraph 42 of the SO required GWA to "restore minimum primary treatment capacity" to the Agana WWTP. This included addressing all issues documented in the 2002 Comprehensive Performance Evaluation of the facility. The CPE recommended restoring all unit processes and improving solids dewatering facilities. GWA implemented and completed (on time) a project to implement all of these recommendations (including new centrifuges for solids dewatering), at a cost of over $11M. This project was completed in February 2007.

Had EPA included secondary treatment in the Paragraph 42 requirements, the combined costs of doing both projects together would have been significantly less than doing them separately, so clearly this was not a compliance issue. Since the permit had been expired since 1991, the most recent reapplication was in 2000, and EPA has stated that the "window" for submitting additional information to address the 301(h) application closed in 2001 (see below), EPA had sufficient time to analyze GWA's compliance with 301(h) requirements prior to issuance of the Stipulated Order, so EPA's statement that the two processes are separate has no merit (see further discussion below under WRMP).

In 2006, EPA and GWA re-negotiated the Stipulated Order. Again, the revised SO made no mention of secondary treatment, clearly indicated to GWA that as of 2006 EPA was not considering secondary treatment.

The SO also required outfall extension. These outfalls were designed specifically for primary treated waste; secondary treated waste would not have required the depth and distance of these outfalls and would therefore have been significantly less expensive. EPA's failure to address GWA's planning requirements holistically would, should they proceed in their determination, cost Guam ratepayers millions of dollars in unnecessary asset creation.

Water Resources Master Plan

Paragraph 10 of the Stipulated Order required GWA to prepare a Water Resources Master Plan "that includes a comprehensive analysis... of wastewater treatment... needs for the next twenty years." The WRMP was to include "an infiltration and inflow assessment... septic system hookup needs and alternatives, decentralized treatment systems, consolidation with the U.S. military's wastewater systems, biosolids management and re-use, and an analysis of costs and other impacts."

The WRMP final draft was completed by GWA in 2005. After being public noticed the final document was approved by EPA on June 12, 2007. In its approval letter dated June 12, 2007, EPA stated that "GWA's Final WRMP Report lays out a comprehensive financial program, recommended capital improvement projects and schedule to move GWA towards compliance with the Clean Water Act and the Safe Drinking Water Act."

The WRMP included $338M worth of wastewater projects. These projects included $18M for upgrades to the Agana WWTP, scheduled for 2015. There was no mention anywhere in the document of secondary treatment. EPA clearly had an opportunity to give GWA some indication that they were considering issuing a determination to move GWA to secondary treatment, yet EPA remained silent on the issue – a complete waiver of any opportunity to deny GWA's 301(h) permit. The WRMP is clearly intended to bring the wastewater plant into compliance using only primary treatment. If the EPA had concerns about GWA's need to go to secondary treatment it should have required it in the WRMP – failing to do so again constitutes a waiver on EPA's part and makes the decision to deny GWA's waiver completely arbitrary in nature.

During a March 21, 2008 teleconference between EPA and GWA, Mike Lee and Doug Eberhardt concurred that GWA's planning process has not included any anticipation of the need for secondary treatment, and Mike Lee agreed that EPA approved the GWA Master Plan, which includes only primary.

EPA has pointed out that the WRMP was meant to be a living document, updated as regulatory requirements and priorities change. GWA concurs with this, but argues that the complete failure to even mention moving the two largest Guam treatment plants to secondary treatment, at a cost that could be equal to the total of all other wastewater projects identified in the WRMP, showed clearly that this was in no way a priority or consideration of EPA during the 20 year planning horizon identified in the WRMP.

EPA has argued that the WRMP couldn't be expected to address potential future regulatory requirements such as secondary treatment, but this is inaccurate. The WRMP does include planning for the possibility that Guam's Northern Aquifer could possibly be declared Ground

Water Under Direct Influence, and included alternative planning for the possibility that such a determination is made some time in the future. There was no such provision for the potential that the 301(h) waivers might be denied, and no indication anywhere in the documents that secondary planning should even be considered, thereby rendering EPA's statements on this point unreasonable and arbitrary.

During the March 21, 2008 teleconference, Region IX personnel also stated that the NPDES and Stipulated Order processes are completely separate because they are handled in "different divisions" of EPA. However, GWA cannot separate these projects for our planning purposes. When making long term decisions with hundreds of millions of dollars worth of impacts to our ratepayers it is unreasonable to ask us to deal with two separate EPAs and to ask that GWA do so is inherently unreasonable and arbitrary. EPA's Water Division should have coordinated its tentative decision with the actions of the Pacific Islands Office, which is responsible for regulatory compliance, the Stipulated Order, and development of GWA's CIP priorities. Any decision to deny the waivers would force GWA to look at doubling its projected 20 year CIP expenditure (which is clearly not possible based upon the economic realities of Guam's populace), or postpone most or all of the projects that EPA had signed off as being GWA's priorities. In short, it is unreasonable to expect GWA to develop plans, set rates, and move forward in coordination with "one EPA" only to be told by a "separate EPA" that those approved plans and projections are meaningless. Should EPA move to finalize the decision to force GWA to secondary treatment, there would already have been millions of dollars worth of unnecessary expenditures by our ratepayers (see discussion of Outfalls and Stipulated Order).

Arbitrary Decision

What makes this decision even more arbitrary is that in an April 4, 1997 letter from Felicia Marcus, the Region IX EPA Administrator, she stated that

> "[o]ne option to improve the chances of obtaining a favorable 301(h) decision in the future is outfall extensions with proper diffuser maintenance. We suggest that you consider extending both outfalls to deeper waters farther from reef areas and shoreline beaches, and then filing revised 301(h) applications that take into account the outfall extensions."

This letter shows the how utterly arbitrary the decision of EPA really is because on one hand EPA specifically told GWA that it would be able to reapply for the 301(h) waivers after it built deeper and longer outfalls and then prior to GWA even completing work on the outfalls, EPA issued its intention to deny GWA's waiver (GWA was notified on January 8, 2009 that EPA was intending to deny its waivers yet GWA did not complete work on the outfalls until January 15, 2009). The letter clearly implies that a new round of testing would be allowed. Ironically, on January 18, 2002, EPA again sent GWA a letter which indicated testing at the new outfall sites would not only be permitted but required.

Even more pertinent is the fact that the April 4, 1997 letter was a notice of intention to deny GWA's 301(h) waiver, yet from April of 1997 to January 8, 2009, a period of approximately 12 years passed which seems to constitute a waiver on the EPA's part to deny GWA's 301(h)

variance. Regardless of whether or not the EPA waived its enforcement capacity by doing nothing, in the aftermath of the 1997 letters in 2002 EPA sued GWA to enforce the CWA and in the settlement of that dispute (the SO) the requirement to extend and deepen the outfalls were included. This means that the provisions of the 1997 letter must have still had merit, otherwise EPA in the SO would have simply required that GWA build a new secondary treatment plant instead of requiring GWA to first extensive renovate both plants at great expense ($11M for Agana alone) and also extend and deepen the outfalls at additional great expense.

Additionally, requiring GWA to provide secondary treatment could force the CCU to choose extremely high rates over their own existence, as the Legislature may eliminate the CCU if their constituents perceive "excessive" rate increases that would be required to pay for both WRMP projects and secondary treatment. EPA is cognizant of the progress GWA has made so CCU's control compared to previously.

Affordability

According to the WRMP, the SO requirements were estimated to be $220M to implement (not including debt service). The WRMP outlined an additional $900M worth of projects over 20 years. Those costs are in 2005 dollars, and will have increased significantly since then due to inflation, fuel costs (which also drives up all material costs as all materials must be shipped to Guam), increased cost of borrowing due to a tighter credit market, increased labor costs due to the military buildup on Guam, and the fact that the WRMP consultant did not take into account a full Guam factor (such as the 2.76 factor utilized by DoD) when calculating cost. Thus, the $900M in costs will likely exceed $1 Billion at the end of the 20 year cycle and these costs do not include the **ADDITIONAL** $300M in costs for secondary treatment.

The WRMP planning was designed to keep rates at an industry and EPA standard 2% of average household income, but concluded that within the first five years of rate increases required to support the CIP projects defined in the WRMP the 25% of lowest income households would exceed the 4% that is considered to define "affordable".

Secondary treatment would require a 600% rate increase just for the capital costs. This does not include additional operating costs, which are significantly higher than those for operation of a primary treatment plant. This massive rate increase will have a negative impact not only on GWA's ratepayers, but Guam's economy as a whole. Guam's competes with Hawaii and other Asian destinations to attract tourists (its number #1 industry) and even now there is fierce competition between destinations. If GWA raises its rates by 600%, the water and sewer costs to Guam's hotels will likely price them out of the market. A corresponding drop in revenues from tourists will have far reaching affects on the Government of Guam to educate its children, to pay for health and safety and to conduct its operations and make debt payments on its obligations. Moreover, the Government will have less money to spend on actual programs since the government is also a customer of GWA. Guam does not have a mainland residential market like Hawaii and Guam's location presents only limited opportunities for other types of industries that are present in Hawaii.

In EPA's response to comments on the Honouliuli WWTP denial, they noted that the affordability criterion is "not one EPA may consider in determining whether to grant a variance under section 301(h) of the CWA." GWA believes this to be false both legally and factually. In fact, the denial, extension or granting of a waiver by EPA is a discretionary act.

In EPA's response to comments on the Honouliuli WWTP denial, EPA concurred that a consideration of all wastewater management priorities is appropriate in determining schedules for future treatment upgrades. EPA has not demonstrated this in issuing the Agana WWTP denial at this time, when GWA is operating under an EPA enforcement action and has been closely coordinating with the Pacific Islands Office to define those other priorities. EPA has shown no sensitivity to GWA's improvements over the past six years, Guam's limited resources in terms of both dollars and personnel, and has shown clearly that there is no coordination between the Pacific Islands Office and the Water Division.

Outfalls

In letters dated December 1998 and August 1999, EPA informed PUAG that if the outfalls for Agana and NDWWTPs aren't extended, the 301(h) waivers would be denied. Although not explicitly stated, the obvious implication was that if the outfalls were extended, the waivers would be extended as well. (In the Honouliuli response, EPA noted that WQS have changed since those dates; GWA addresses this under WQS, below.)

GWA designed and installed a new outfall in accordance with the 1998 permit application and 2000 application addendum. The total spent on construction was $10,203,222. The outfall was specifically designed using dilution factors for primary treated wastewater. Construction costs were high because of the depths involved (275 feet requires special precautions on the part of the divers completing the installation) and because the pipe was horizontally directionally drilled to protect the reef; a process which created numerous problems due to the limestone formation. The outfall was put on line in December of 2008, and was receiving 100% of the flow as of January of 2009. An outfall designed for secondary treated wastewater would have been shorter and shallower, and any reduction in depth and length would have significantly reduced the cost. It is even possible that GWA could have repaired or sliplined the existing outfall for a secondary discharge instead of installing a new pipe, which would have been constructed at a fraction of the cost.

During a March 21, 2008 teleconference between EPA and GWA, Doug Eberhart acknowledged that there was an anticipation that the installation of the new outfalls would allow for the waivers.

Need for Additional Information

125.57 (a)(2) The discharge interferes with the attainment or maintenance of water quality which ensures the protection and propagation of a balanced indigenous population of shellfish, fish and wildlife and allows recreational activities in and on the water.
125.57(a)(3) The applicant has established a system for monitoring the impact of such discharge on a representative sample of aquatic biota

There is no data that shows that GWA does not meet these requirements. EPA's argument throughout the TDD is that GWA has not provided adequate information for EPA to make a determination and therefore EPA is forced to presume that GWA is not meeting these requirements. Stated simply, there is no evidence and no scientific argument presented by the EPA to support the assertion that GWA does not meet this requirement.

As noted by EPA in their TDD, GWA completed offshore monitoring for the 1998 reapplication. GWA has also been sampling offshore since the new outfall was put on line in December 2008 (offshore monitoring actually began October 2008). This outfall was installed pursuant to EPA direction and in full coordination with EPA (see Outfall section above). Since the outfall was put on line, there has been no time to perform any studies to show that the effluent as discharged out of this outfall ensures "protection and propagation."

In February 2009, Dr. Laurie Raymundo, Coral Ecologist for the University of Guam's Marine Lab, began a study to look specifically at potential wastewater impacts on Guam's reefs. As of June 2009, Dr. Raymundo has stated that it is too early to see any pattern in the data. GWA has not yet had the opportunity to perform comparisons of biological impact assessments that involve comparisons of biological conditions and habitat characteristics as discussed in the TDD. Therefore, GWA is requesting that EPA allow GWA adequate time to complete and implement studies that will demonstrate compliance with this requirement and demonstrate protection of Guam's marine habitat. As a precedent, when EPA determined that there was inadequate data to evaluate Honolulu's 301(h) discharges, EPA funded the Mamala Bay study. To add scientific rigor to EPA's decision making process, GWA is requesting both the time to complete such studies now that the new outfall is on-line, and EPA funding to execute complete and thorough scientific research expeditiously. In their June 3, 2009 Position Statement regarding EPA's tentative determination, GEPA concurred that there is a lack of data to determine the impacts based upon the 2001 WQS (see section on WQS below).

EPA has consistently stated both in press releases and throughout the TDD that GWA "failed to submit the information required." During a March 21, 2008 conference call, EPA stated that the "window" for GWA to provide information closed in 2001. EPA references the June 1997 letter as the basis of their request for information. Prior to issuance of the TDD, current GWA staff did not even have a copy of this letter. The "new" GWA under the CCU cannot be expected to address comments sent to a less efficient PUAG/GWA six years prior to the CCU and the SO. No additional requests for the information described as being deficit were ever received, and to current GWA staff was given no indication after 2003 that the application was considered to be incomplete. As an additional example of this, on January 18, 2002, EPA sent a letter asking EPA to do additional baseline monitoring. GWA did not complete additional monitoring at that time. On December 20, 2004, during the post-CCU area, EPA again sent a letter requesting that GWA perform additional baseline monitoring at the outfall sites. GWA fully complied with this request, completed the quarterly analysis, and submitted it to EPA, who concurred that the analyses fully complied with the request.

GWA as a public corporation under the CCU is a fundamentally different organization than previously. The Justice Department recommended to the Guam Federal Court in connection with the Ordot Dump and landfill case that that the CCU should take over operation of Guam's solid

waste division because of their effectiveness in overseeing GWA and GPA. It is contradictory to state that actions by the pre-CCU PUAG are binding on the new GWA when even EPA itself has recognized that GWA is not the same as before. It is arbitrary and misleading to have EPA officials speak with GWA on a weekly basis from 2003 to 2007 without mentioning in any way that EPA was intending to deny GWA's waivers based on a lack of information. If it had been, GWA could have been provided an opportunity to spend the approximately $35M spent in rehabilitation to Agana and Northern towards upgrading its plants. EPA is well aware of GWA's funding constraints (see Affordability) and has at least some duty to help GWA spend those limited resources in the most environmentally beneficial manner possible.

EPA is required to provide "reasonable response times." GWA has addressed any requests that EPA made for additional information in the post-CCU era; therefore, GWA counters that the lack of written communication on the 301(h) waiver application from 1999 to 2009 is not a "reasonable response time" and that today's GWA could not anticipate that their application was inadequate or insufficient as stated in the TDD. In denying its application at this juncture EPA has acted in an arbitrary and capricious fashion without regard to environmental concerns, costs to Guam or to GWA's ratepayers. Moreover, had the "new" GWA been informed at any time from 2003-2009 that EPA required additional information, studies, or other data in order to maintain the 301(h) waivers, it would have been promptly procured. For example, when EPA requested that GWA perform toxicity testing at the Agana WWTP in 2007, it was completed promptly.

In EPA's response to comments on the Honouliuli WWTP denial, they noted that "If EPA's concerns with the application were limited to the monitoring program, EPA would work with CCH on improvements to the monitoring program." Since the "window" for GWA to submit information closed in 2001 (according to EPA personnel and the TDD page 7), and EPA's last request for information from GWA on the 301(h) application was 1997, GWA therefore requests that EPA work with GWA on developing improvements to the monitoring program prior to issuance of a final decision.

BOD Removal

When the Agana WWTP was put back on line in 2007 after its renovation, BOD removal quickly came into full compliance. At the same time, GWA discovered that septage haulers throughout Guam were indiscriminately dumping into GWA manholes and that the Agency had no control over what these haulers were putting into the system.

The Agana WWTP was the only one being operated 24 hours/day. A decision was made to require all septage haulers on island to dispose of their loads at the Agana WWTP where the loads could be monitored for oil and grease and randomly sampled. All haulers were licensed and a fee structure implemented for disposal. A public relations campaign was implemented to inform all residents that if they saw any truck dumping anywhere else they should call GWA Dispatch immediately.

Once the haulers began to discharge to Agana WWTP, the NPDES BOD limit became increasingly difficult to meet. GWA performed a sampling and analysis study looking at BOD in

hauled waste, including the percent of soluble BOD. (See Attachment 1.) This showed clearly that the hauled waste was the likely cause of the BOD exceedances. However, the need for control over septage haulers remains. GWA put into the next bond issuance project list a project for a septage receiving station, which will be located at the NDWWTP. In the meantime, ND does not have any location for receiving septage, and the smaller wastewater plants would be even less able to attenuate the flows than Agana is. Once the septage can be removed, GWA is confident that BOD will once again be in full compliance. EPA has been fully apprised of these conclusions and efforts, both in meetings and via Discharge Monitoring Reports.

EPA has concurred that GWA's BOD discharges will meet the WQS at the ZID of the new outfall. However, the clear lack of negative impacts from GWA's discharge is critical in discussions of GWA's % removal requirement (see below).

30% Removal Requirement

EPA states that GWA has not complied with the requirement to remove 30% of BOD and TSS.

BOD

Industry standard influent BOD is 300 mg/L. GWA's influent BOD averaged 96 mg/L between October 2007 and December 2008. This is below the daily maximum discharge limit of 160 mg/L and some months falls below the average discharge limit of 80 mg/L. The physical treatment process simply cannot remove 30% of this small of a concentration of influent. Secondary treatment would require 85% removal, and despite additional biological treatment processes would not be successful in removing that percentage from such low influent; moving to secondary therefore would not address this problem. This can be shown by the fact that secondary wastewater treatment plants on Guam, including the Apra Harbor WWTP, all have the same issue with low influent BOD and an inability to remove the required percentage, yet these facilities meet permitted discharge limits.

Typically it is presumed that low influent BOD is caused by inflow and infiltration (I&I). Graph 1 shows that there is no correlation between rainfall, influent flow and BOD, and there is no fluctuation in inflow to the plant between rainy season and dry season, so there is no demonstrable inflow source to the plant. The solid green line is the maximum effluent discharge limit and the dashed green line is the average discharge limit. In other words, the influent BOD is in many cases less than the requirements for effluent BOD.

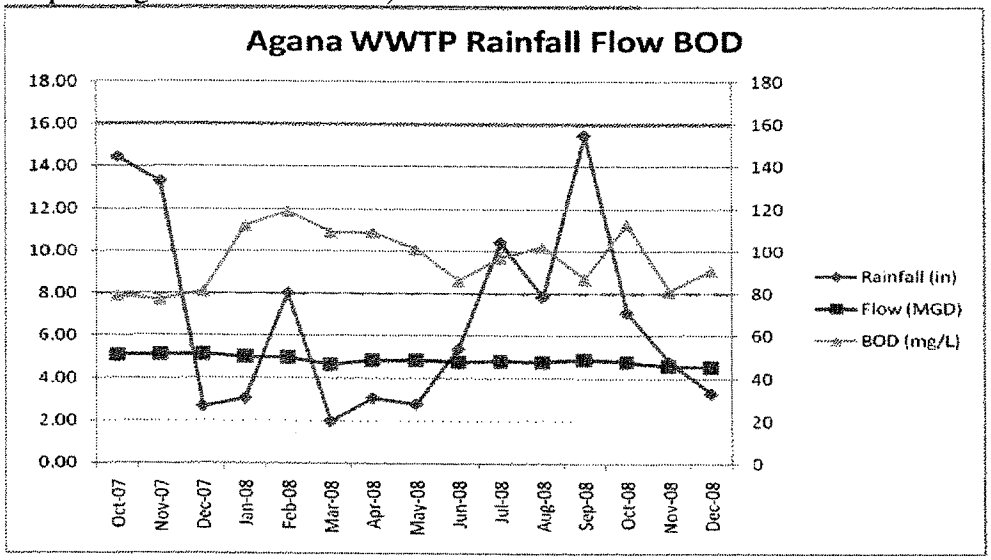
Additionally, one of EPA's consultants stated during a site visit to Guam (during which he was accompanying the Pacific Island's Office) that tropical environments typically have low influent BOD, and that EPA needs to complete studies to validate this and to determine the cause.

One additional potential source of low influent BOD is groundwater infiltration. GWA has a robust CCTV inspection program and is programming annual collection system repairs into our five year rate plan. There have not been significant amounts of groundwater infiltration discovered to date, but any CIP repairs that found to be necessary as a result of this program are promptly implemented. Should GWA be forced to move to secondary treatment, money for such

collection system rehabilitation would not be available.

The percentage removed is therefore not relevant; the critical criteria are whether or not the plant can protect water quality. EPA concurred in their TDD that GWA could meet the WQS at the ZID for both BOD and TSS. While it is true that 30% removal is a requirement of 301(h), EPA does have some discretion in this, such as in modifying the averaging period. It is clear that environmental protection should take precedence over arbitrary, non-material and theoretical requirements. EPA's failure to issue a decision for 10 years demonstrates that it has discretion in this matter, yet when the EPA tries to deny GWA's waiver at this juncture, it is clearly an abuse of this discretion.

Graph 1. Agana WWTP Rainfall, Flow and BOD

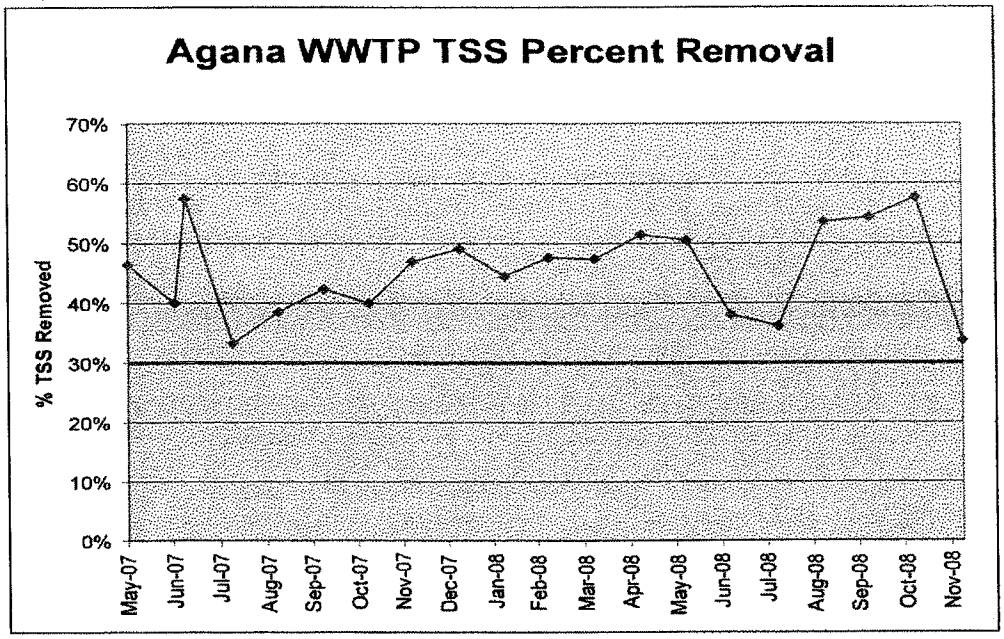


TSS

GWA has met the 30% removal requirement for TSS at the Agana WWTP. Graph 2 shows the percent removal since the plant was put on line after renovation as required under the SO.

EPA should allow GWA time to address the programmed septage hauler program and grit removal systems to meet this paper BOD requirement, since according to the TDD there is no negative environmental impact from BOD or TSS. Additionally, EPA should recognize that any funding that would be available to address any potential groundwater infiltration would be diverted by a requirement to go to secondary treatment (see Affordability) and therefore GWA would be equally unlikely to meet the 85% removal required of a secondary treatment plant.

Graph 2. Agana WWTP Percent Removal of TSS



Monitoring Program

EPA states that GWA has not "continued the monitoring program specified in its current section 301(h) modified permit." While acknowledging that past practices were inadequate, GWA is in fact currently completing off-shore monitoring in accordance with the permit requriements. The offshore monitoring was initiated just prior to putting the new outfall on line (in October 2008), and therefore all necessary data relative to the new outfall is being collected. EPA did have this data prior to issuance of the TDD. The outfall has only been on-line since December 2008, and therefore even if GWA had a history of monitoring data there would not yet be adequate monitoring informaiton to determine compliance with the regulations. The permit requires GWA to monitor only for floating materials, odor, color, total coliform bacteria, temperature, salinity, pH, dissolved oxygen and turbidity so information on these parameters would not have impacted any of the TDD determinations on nutrients, toxics, etc.

EPA states that GWA has not demonstrated that it has the resources to carry out the monitoring program. However, the program is now budgeted and being consistently implemented. As EPA's Pacific Island's Office is aware, GWA now has a modern and well-staffed laboratory located at the Agana WWTP with a full-time Laboratory Manager and Laboratory Technician who are responsible for the monitoring. The laboratory is managed by Veolia Water Guam, a subsidiary of Veolia Water Eau, which is one of the largest water / wastewater companies in the world and which has a successful track record of compliance. There is no question of GWA ensuring that this monitoring is completed as required.

Bacteria

EPA states that the design of the new outfall does not allow sufficient dilution for the discharge to meet the WQS for bacteria.

In EPA's 1997 letter tentatively denying the original permit application, EPA cited two fecal coliform studies and noted that the documents warned that "significant fecal coliform contamination can enter coastal waters of Guam from stormwater runoff, point source contaminators and perhaps resuspension of contaminated sediments." Nothing in the studies or EPA's statements verified that there was significant point source contamination from the outfalls, and recent information from GEPA indicates that non-point source pollution and stormwater runoff are significant sources of bacterial contamination.

Ironically the April 1997 EPA letter also noted that the studies did NOT recommend chlorination because chlorine can be far more detrimental to marine biota than bacteria.

The letter recommended that GWA resubmit their application and include a proposal to extend the outfall. GWA did so (see sections on History and Outfalls above). EPA and GEPA approved the design of the outfalls.

During a teleconference between EPA and GWA on March 21, 2008, EPA stated that the primary bacteriological reason discussed for the denial was the Beach Act pathogen criteria, although EPA staff then noted that this doesn't really apply to Guam because GEPA already has adequate pathogen criteria in their Water Quality Standards. GWA noted that bacteria can be addressed with disinfection and this does not necessarily require secondary treatment. Region IX personnel emphatically stated that GWA applied for a 301(h) waiver without requesting disinfection and therefore the denial will be based on the 1998 application, and there is no opportunity for revision of that application or discussion of any alternative other than secondary treatment (despite the fact that the application is 11 years old).

During a teleconference with EPA staff on April 3, 2009, EPA stated that the "window" for GWA to submit any additional information had closed in 2001. The current version of the GWQS was issued in 2001. GWA is being arbitrarily denied the opportunity to provide any modifications after this date to adjust to the new WQS. The permit application was submitted based upon the WQS issued on January 2, 1992, which included only a fecal coliform standard of 200/100 mL for a 30 day period and 400/100mL at any time. GWA has been provided no subsequent opportunity to modify our application to address the updated WQS, which were used in evaluating our permit application and as the basis for the tentative decision.

The fact that GWA is being denied the opportunity to present new information, despite the fact that the EPA has on at least one occasion since 2001 indicated to GWA in writing that if it extends out its outfalls it will be provided a new opportunity to obtain a 301(h) waiver, is unreasonable, arbitrary and capricious on the part of EPA.

Enterococcus as pathogen indicator

Tests that actually identify the presence of fecal pathogen (disease causing bacteria) contamination in water and the environment from mammalian sources, particularly those which can infect humans, are difficult, tedious, time consuming and expensive. The generally take so long that by the time a positive test result is obtained, it may well be too late to manage a problem for which they could be a cause. Because of this, organisms that are used to evaluate water quality and the environment are not the actual pathogens that can cause disease, but rather they are classes of bacteria that tend to live in the same conditions as the pathogens and can be identified quickly.

It has long been recognized that the organisms that have historically been used to indicate the presence of fecal contamination in tropical environments are not reliable for this purpose. The reason is that the classes of organisms used for water and environmental quality evaluations are able to thrive in the soils where the growth conditions are always warm and moist. This ability then prevents a determination of the actual source of the indicator organisms and does not provide precise human health related information on the quality of the water or the environment being monitored. Research done by the University of Hawaii Water Resources Research Center by Roger Fujioka et. al. in the early 1990's was among the first presentations documenting this situation, and some alternative organisms were proposed. In 1999, they published a second study in Guam, using the same methods as the Hawaii studies. This study found that "soil becomes an environmental non-faecal source of faecal indicator bacteria" and concluded that "USEPA water quality standards may not be directly applicable to tropical island environments."

The *Development of New or Revised Recreational Water Quality Criteria* (EPA 823-R-07-006; June 2007) notes that enterococci, the indicator organism in the WQS and referenced in the TDD, has several shortcomings in its use as a fecal indicator and that experts "agreed that enterococci are probably not appropriate indicators in all climatic regions (e.g. in tropical and subtropical climates)." EPA, in concurrence with the need of a better method for microbiological evaluation of waters and the environment, has an ongoing program to seek out alternative indicator organisms which provide more precise information on the presence of fecal contamination and likely sources of it.

EPA stated in their Honouliuli TDD response that "Until new methods to detect pathogens are finalized and adopted in 40 CFR 136 and criteria using these new methods are developed and promulgated, the existing criteria remain in effect. In EPA's 301(h) analysis of whether a discharge can attain water quality standards for bacteria, EPA must use the currently applicable water quality standards." This statement proves fundamentally that EPA's scientific arguments lack rigor to make decisions which will result in significant environmental and cost impacts on the Island of Guam. Enterococci are a poor indicator for tropical environments such as Guam according to numerous studies, including EPA's, yet EPA holds GWA to an inappropriate, unscientific standard. EPA's argument that this is based on the law is rendered ineffective by its own failure to issue a decision for 11 years; this demonstrates clearly that EPA has discretion in these matters.

GWA believes that a non-arbitrary and reasonable approach is that EPA postpone a final decision on this topic while allowing GWA and other Guam entities including WERI to contribute to research on appropriate indicator species for tropical environments, and/or allow GWA an opportunity to propose disinfection to address the hypothetical bacteria issue. GWA would be an ideal test platform for such research.

Guam Water Quality Standards

In addition to bacteria (discussed above), EPA's tentative decision states that GWA has not submitted sufficient information to determine whether or not the proposed discharge can meet the WQS for nutrients, whole effluent toxicity, toxic pollutants and pesticides.

Nutrients

EPA states that GWA failed to submit adequate receiving water monitoring data to demonstrate that the proposed discharge would attain WQS for nutrients at and beyond the zone of initial dilution. According to EPA's tentative decision document, the basis of design for the new outfall and an initial dilution of 100:1 were used in making the tentative determination, and concluded that this is a conservative estimate (EPA's own calculated initial dilution was 219:1). The new outfall was designed to meet nutrient concentration compliance (with orthophosphate as the limiting factor at the zone of initial dilution), and according to EPA's own calculations, this design is conservative. Receiving water data from the existing, old outfall would not have been relevant to the ZID for the new outfall. GWA has been monitoring receiving water data and submitting such data to EPA since the new outfall was put on line. However, this monitoring data does not include nutrients. (Please see the discussions above regarding the Need for Additional Information.)

EPA acknowledges that GWA submitted receiving water monitoring data in 1998, but discusses gaps in that data. The TDD also states that EPA has expressed to GWA on "several occasions" since 1997 that GWA "should collect and provide EPA with more recent monitoring information, such as water quality data for nutrients." However, GWA has received no written feedback on the 1998 data submittal, and has had no written communication from EPA on nutrients since September 23, 1997. While acknowledging that PUAG did not complete all quarterly offshore monitoring required by the existing 1986 permit, GWA notes that there was no requirement in this permit for nutrient monitoring. GWA disputes the assertion that it was requested to do additional nutrient monitoring in the period since the CCU has been in office. GWA also disputes EPA's assertion that such monitoring would have shown whether or not GWA could meet GWQS with the new outfall, since it was clearly designed to meet such standards but was not put on line until December 2008.

In the Honouliuli WWTP response to TDD comments, EPA noted that there has been a change in the Hawaii WQS since 1991 when their previous decision was made, and that therefore their decision reflects new criteria. However, EPA stopped requesting nutrient information in 1997 and stopped accepting information from GWA in 2001, the same year that the latest Guam WQS were issued, so for any decision based on the standards of

the 2001 WQS, EPA must allow GWA an opportunity to provide additional information and studies so that all information is scientifically rigorous (instead of based on "inadequate information") and relevant to the most current standards. Otherwise the EPA's decision is arbitrary, unreasonable and contrary to mandates that the agency base its decisions on what's best for the environment.

GWA requests that EPA provide GWA with a specific request for the nutrient monitoring data required with the new outfalls and most recent WQS and allow GWA an opportunity to meet that request prior to issuance of a final decision.

Toxicity

EPA states that GWA has failed to demonstrate that the discharge is not toxic due to a lack of representative WET data. However, each time the Pacific Island's office has requested GWA to sample for WET, GWA has done so (the claim of inadequate information based on the 1997 EPA letter is discussed in detail elsewhere in this document).

EPA states "in response to EPA's expressed concern for the lack of WET data, GWA finally submitted results for a single WET test from December of 2007." Or put another way, when EPA actually asked the post-CCU GWA to do a WET test, GWA promptly did so. GWA also completed a WET test at Agana in 2003 that was submitted to EPA but is not referenced in the TDD. Since 2003, GWA has made every effort to comply with EPA requests. Had EPA provided feedback or additional requests for sampling after 2003 GWA would have complied.

EPA also states that GWA utilized an inappropriate species. GWA used the same species that was listed in our Umatac-Merizo and Baza Gardens NPDES permits. These plants discharge into fresh water, but lacking any guidance from EPA on desired species, the biologist chose to be consistent with other permit requirements results. No feedback was ever received from EPA regarding this choice until the TDD was issued.

GWA is confident that, like the two tests completed, any additional testing would also have shown that the discharge is not toxic at the ZID.

If EPA found these submittals inadequate, they should have submit in writing a request for GWA to do additional WET testing and specified the species to be used. EPA should postpone the waiver decision until adequate testing can be completed to fully analyze this issue.

Toxic Pollutants & Pesticides

EPA states that in their 1997 letter they instructed GWA to conduct toxic pollutant analysis, and that GWA did so in 1998. Based upon that data, according to the TDD, "*concentrations of all eight of the detected toxic pollutants were estimated to be below the water quality criteria at the ZID.*" In other words, the discharge is not toxic.

EPA also states that GWA has not done any additional toxic scans. This is false. GWA completed toxic scans pursuant to requests from EPA's Pacific Island's Office in 2003, 2007 and 2008. These results also showed that the discharge is non-toxic.

As noted in earlier sections of this response, EPA's basis for concluding that GWA has not demonstrated that the discharge would not be toxic is because "GWA has not provided additional toxic pollutant analyses as specified by EPA." While EPA's 1997 letter did request annual analysis, no communications from EPA since that date have requested such analysis, and the "new" GWA under the CCU has completed all additional analysis requested by EPA, as shown by the 2003, 2007 and 2008 results.

EPA's conclusion that GWA has not completed adequate analysis to demonstrate that the discharge is not toxic is false. If EPA feels that additional data is necessary, EPA must request that GWA perform additional monitoring prior to finalizing a decision in order to demonstrate that all information is scientifically based (instead of based on "inadequate information"). Otherwise the EPA's decision is arbitrary, unreasonable and contrary to mandates that the agency base its decisions on what's best for the environment.

Industrial Pretreatment

EPA states that GWA has not complied with the pretreatment provisions of the regulation. The regulation applies to Categorical Industrial Users as defined in 40 CFR Part 403. The TDD states that GWA did not provide updated information regarding categorical industrial dischargers to the treatment system. GWA submitted with our 2000 application update a copy of the Discharge Survey that was completed in 1999. Based upon survey responses and a review of industrial customers via GWA's billing records showed that there are only two Categorical Industrial Users as defined in the regulation discharging into the Agana WWTP collection system. Since EPA only looked at information provided through 2001, this would not have included the recent requests that GWA made to the Pacific Islands Office for assistance in dealing with military categorical industrial discharges to GWA facilities. DoD has been extremely uncooperative in providing information or sampling and analysis at their categorical industrial facilities (e.g. Naval Hospital and AAFB Landfill). GWA requests that EPA provide assistance in enforcing pretreatment requirements on federal facilities.

GWA acknowledges that the Guam Memorial Hospital is also a Categorical Discharger and is perusing efforts to have that facility complete monitoring pursuant to the regulation.

As the Pacific Island's Office is aware, GWA's primary pretreatment issue is not toxics, but is fats, oil and grease, and GWA has kept the Pacific Island's Office abreast of efforts to reduce FOG contributions to the collection system. This effort has included numerous requests that GEPA and EPA provide assistance, as the FOG regulations under GEPA contradict those of GWA, and are inadequate. EPA will no doubt argue that this is not relevant to compliance with 301(h) requirements; however, it does demonstrate that GWA has a robust pretreatment program which focuses on the issue that has the largest impact to operations and therefore effluent quality.

Nonindustrial Source Control

EPA states that GWA does not have a nonindustrial source control program. Current GWA staff state that public education was conducted in 1999, however, copies of such campaign are no longer available. EPA has had no discussions with GWA since 1997 regarding this issue.

The post-CCU GWA has a full time Public Relations Manager and GWA performs extensive on-going public education that includes education of the public on proper disposal of waste. Upon request GWA will submit a CD containing examples of some of GWA's public education campaigns over the past couple of years (the video files are too large to email). GWA also does an extensive public relations campaign to eliminate illegal discharges by septage haulers (see BOD above). GWA would have been more than happy to provide such information to EPA at any time upon request, or to modify the program to include any elements that EPA considers to be necessary.

GWA requests that EPA provide GWA with assistance on defining the desired elements of this nonindustrial program and with the opportunity to implement such a program.

General

The data in Table 1 regarding the new outfall is inaccurate. Design drawings were submitted to EPA for review and approval prior to construction; GWA recommends that these be reviewed and asks that this information be corrected.

Military Build-Up

It has become impossible to discuss the issue of secondary treatment without referencing Guam's impending military build-up. The military build-up will dramatically increase the population of the island of Guam and may drive the plant capacity over its current design of 12 MGD. Once the plant has to be upgraded to increase its capacity, there is no longer an opportunity for a waiver to apply. Without the build-up, this WWTP would not need a capacity increase within the 20-year planning horizon of the WRMP. Therefore, any need to go to secondary within that planning horizon is driven by DoD impacts, direct and indirect, and therefore DoD is fully responsible for any necessary upgrades to secondary treatment that take place within that planning horizon.

In Summary

- ✓ Moving to secondary treatment would be at a prohibitive cost for no demonstrable environmental benefit. GWA must be allowed time operating with the new outfall to complete studies to demonstrate compliance with the regulations.
- ✓ Due to EPA's failure to address the permit application for 9 years, GWA has been given no opportunity to resubmit under the current applicable WQS, so GWA must be given the opportunity to resubmit and address the new standards.
- ✓ EPA has stated, as a party to the Stipulated Order and by approving the WRMP, that EPA's priorities for GWA do not include secondary treatment at this time.
- ✓ EPA's statement that GWA has not provided requested information to support its application has no basis in fact, as no information has been requested since 1998 and GWA therefore had no choice but to determine that all such information was addressed in the 2000 and 2001 submittals.
- ✓ There is a lack of rigorous scientific behind EPA's assertions that there it would be deleterious to continue the waiver, and that this needs to be mitigated. More data and analysis is required so that both EPA and GWA can deal with the facts.

EXHIBIT L

(Copy to Mike)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

APR 21 1998

Richard A. Quintanilla, General Manager
Guam Waterworks Authority
Government of Guam
Post Office Box 3010
Agana, Guam 96932

Dear Mr. Quintanilla:

On April 1, 1998, our office received Guam Waterworks Authority's (GWA) 301(h) Modified Permit Applications for the Northern District and Agana Sewage Treatment Plants (STP). Although we have not fully completed our review of the two modified permit applications, our initial review finds that the modified applications are significantly deficient in providing sufficient information to support the proposed extensions and placement of the ocean outfalls as stated in your Letter of Intent dated May 6, 1997 and as discussed in our letter of June 18, 1997.

It does not appear that GWA has made the good faith efforts committed to in its May 6, 1997 letter, where GWA indicated its awareness that the revised (modified) applications shall account for the outfall extensions and ensure that the modified applications will sufficiently and adequately demonstrate compliance with all 301(h) requirements. Information contained in the submitted modified applications for both facilities indicate that GWA has only recently (March 1998) initiated some efforts to perform necessary baseline studies and outfall extension designs; GWA understood that these two requirements would be critical in supporting proposed outfall extensions and demonstrating compliance with 301(h) requirements.

The submitted outfall extension schedules appear inconsistent with supporting documentation. For example, the request to Guam Department of Public Works (March 13, 1998) for baseline studies and scope of work from GMP Associates, Inc. (March 25, 1998) for design work are not complementary. The timeline for baseline studies and design work commencement and implementation is extremely unclear. Although GWA states that it is committed to extending the outfalls, recent actions or lack thereof cast uncertainty over that commitment.

Our June 18, 1997 letter to you regarding receipt of your Letter of Intent to submit revised 301(h) applications provided an April 4, 1998 deadline to submit the revised applications. GWA has only minimally complied with the submittal of the modified renewal applications because the applications were significantly deficient in providing essential information supporting the outfall extensions.

GWA needs to clearly demonstrate its commitment to providing the requested information that will support revised applications for 301(h) variances. Furthermore, GWA needs to demonstrate its commitment by providing a firm schedule for commencing, implementing and completing the

baseline studies and outfall extension designs by October 31, 1998. Finally, GWA needs to revise its outfall extension compliance schedules, as necessary, and identify secured funding sources for both outfall extensions. GWA shall submit the requested schedules and identify secured funding sources by May 31, 1998. Failure to supply the necessary information can result in a final waiver denial, based on the grounds that a satisfactory demonstration of compliance with all 301(h) requirements was not met (40 CFR 125.59(b)(1)), and GWA will be required to comply with secondary treatment requirements.

The proposed scope of work for the baseline survey is adequate, but a more detailed description of the methods, locations and time of sampling must be included. If the extended outfall locations have been established, then a minimum of four water quality monitoring stations equally spaced around each of the proposed diffuser sites may be appropriate (further discussion with our office would be helpful). If, however, the extended outfall locations have not been determined, then a suitable baseline design of the potentially impacted area must be established and we strongly encourage you to consult with us about an adequate monitoring design. In order for EPA Region IX to adequately assess the potential impact of the extended outfalls, it is necessary to provide this baseline monitoring data.

At this point, we have not completely reviewed the two modified permit applications. Since we are still continuing to evaluate both applications, we may be requesting further information to support compliance of the permit applications with our 301(h) requirements. One item which was not provided earlier, but which you will need to complete as part of your modified renewal applications, is a "Sewage Sludge Permit Application Form" (enclosed) for each facility. Please follow the form instructions as you may not be required to fill out all parts of the form depending on how you treat and dispose of your sewage sludge.

As always, we are prepared to work with you and your staff to implement an adequate baseline monitoring program to support renewal of your 301(h) applications. If you have any questions, please feel free to contact Mike Lee, Pacific Insular Area Program, at (415) 744-1484 or Janet Hashimoto, Chief of Monitoring and Assessment, at (415) 744-1933.

Sincerely,

Alexis Strauss
Director, Water Division (acting)

enclosure: Sewage Sludge Permit Application Form

cc: B. Johnston, GWA
R. Quinata, GWA Board
J. Salas, GEPA