

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

In re: Guam Waterworks Authority) Northern District) Sewage Treatment Plant) NPDES Permit No. CA 0020141)	NPDES Appeal Nos. 09-15 and 09-16 Index to the Administrative Record
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FINAL DECISION ADMINISTRATIVE RECORD

I. Final Decision Materials

- 1-72 Northern District STP Final Decision Document (FDD), September 30, 2009¹**
- 73-74 Northern District STP Notice of Final Decision, October 1, 2009
- 75-76 FDD certificate of service
- 77-122 Response to comments
- 123-124 FDD press release, October 1, 2009

II. Tentative Decision Materials

- 125-193 Northern District STP Tentative Decision Document (TDD), January 5, 2009**
- 194-197 Northern District STP TDD Fact Sheet
- 198-199 Northern District STP Notice of Tentative Decision, January 23, 2009
- 200-202 Northern District STP Notice of Public Hearing and Comment Period
Extension, April 12, 2009**
- 203 Northern District STP Press Release, January 7, 2009
- 204 Northern District STP Media Advisory, May 27, 2009
- 205-212 Copy of EPA NPDES webpage, showing posting of public notices

III. Public Hearing Materials

- 213-213.5 Formal request by Guam Waterworks Authority (GWA) for comment period extension, January 26, 2009
- 214 EPA response to GWA granting extension, February 24, 2009
- 215-282 EPA Public Hearing on Tentative Decisions transcript, June 3, 2009
- 283-291 EPA Public Hearing Powerpoint Presentation, June 3, 2009
- 292-293 Public Hearing Informational Sheet for Agana and Northern District variances
- 294 Public Workshop and Hearing Sign, June 3, 2009
- 295-298 Public Hearing Sign-in Sheet, June 3, 2009

¹ Documents marked in bold are provided in Exhibits

IV. Comments Received

- 299-305 GWA Powerpoint Presentation to EPA regarding waivers, June 3, 2009
- 306-309 Speaker Forms
- 310-311 Comment Form – John Stein
- 312-335 GWA Formal Comments regarding Northern District STP
- 336 Guam Environmental Protection Agency (GEPA) Position Statement, June 3, 2009
- 337-338 E-mailed Comments from Paul Tobiason, January 8, 2009
- 339 E-mailed Comments from Joe Payne, January 9, 2009
- 340-342 E-mailed Comments from Berrie Straatmans, January 11, 2009
- 343 E-mailed Comments from Greg Mesa, May 27, 2009
- 344 E-mailed Comments from William Tracey, May 29, 2009
- 345-348 E-mailed Comments from Senator Thomas Ada, June, 23, 2009
- 349 E-mailed Comments from Michael Park, June 28, 2009
- 350-352 E-mailed Comments from Ken Rekdahl, June 28, 2009
- 353-354 E-mailed Comments from J.R. Cruz, June 30, 2009

V. Electronic Copy of Newspaper articles regarding Guam 301(h) tentative decisions.

- 355 January 8, 2009 (1 article)
- 356-357 January 8, 2009 (2 articles)
- 358-361 January 8, 2009 (1 video link & 1 article) and January 8, 2009 (1 article)
- 362-368 January 9, 2009 (1 article), January 8, 2009 (1 article), January 9, 2009 (article), and January 8, 2009 (1 article)
- 369-371 January 10, 2009 (2 articles)
- 372-373 January 27, 2009 (1 article)
- 374-375 January 28, 2009 (1 article)
- 376-377 January 28, 2009 (2 articles)
- 378-392 March 26, 2009 (1 article and press conference presentation attachment)
- 393-395 March 27, 2009 (1 article) and March 26, 2009 (2 articles)
- 396-397 April 8, 2009 (1 article)
- 398-399 April 30, 2009 (1 article)
- 400-401 May 28, 2009 (2 articles)
- 402-404 May 29, 2009 (2 articles) and May 28, 2009 (1 article)
- 405-406 June 4, 2009 (1 article)
- 407-409 June 25, 2009 (2 articles) and June 24, 2009 (1 article)
- 410-411 June 30, 2009 (1 article)

VI. Other 301(h) Tentative and Final Decision Documents

- 412-561 City and County of Honolulu, Sand Island, Final Decision Document
- 562-671 City and County of Honolulu, Honouliuli, Final Decision Document
- 672-760 American Samoa Power Authority, Tafuna, Tentative Decision Document
- 761-845 American Samoa Power Authority, Utulei, Tentative Decision Document

- 846-953 City of San Diego, E.W. Blom Point Loma Metropolitan Wastewater Treatment and Ocean Outfall, Tentative Decision Document
- 954-1004 Monitoring Study Review, Puerto Rico Aqueduct and Sewer Authority (PRASA) 301(h) Ocean Discharges

VII. Summaries of Meetings with EPA Region 9, NPDES Permits Office

- 1005-1006 Teleconference Call with GWA on February 12, 2009
- 1007-1017 Teleconference Call with Guam Delegation on March 23, 2009
- 1018-1019 Teleconference Call with GWA on April 2, 2009
- 1020-1022 Trip Report and Discussions with GWA on June 1 to 4, 2009

VIII. E-mail Correspondences during Comment Period

- 1023-1084 Email Correspondence

IX. Monitoring Data

- 1085-1089 Updated TSS and BOD DMR Data Set (EPA-generated through ICIS)
- 1090-1150 First Quarter FY 2009 Wastewater Operation & Maintenance Progress Report (GWA)
- 1151-1211 Second Quarter FY 2009 Wastewater Operations & Maintenance Progress Report (GWA)
- 1212-1265 Third Quarter FY 2009 Wastewater Operations & Maintenance Progress Report (GWA)

X. Other

- 1266-1288 Final Decision Document regarding Public Utility Agency of Guam (PUAG), Agana and Northern District STPs, June 30, 1986
- 1289-1300 Final Decision Document regarding PUAG, Agana and Northern District STPs, Signed Cover Sheet, Briefing Sheet, and Fact Sheet
- 1301-1314 Northern District STP renewal application, December 28, 1990
- 1315-1372 EPA Guidance Document: Primer for Municipal Wastewater Treatment Systems, EPA 832-R-04-001
- 1373-1375 EPA Guidance Document: Technical Support Document for Water Quality-based Toxics Control, EPA/505/2-90-001
- 1376-1378 EPA Guidance Document: Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms, EPA/600/R-95/136

TENTATIVE DECISION ADMINISTRATIVE RECORD

- I. Introduction/Decision Criteria
- 1379 Introduction/decision criteria

1380-1425 Correspondence re: Guam Environmental Protection Agency 1991 Concurrence
 1426-1595 **Feb, 2001 Supplement to Revised Application**
 1596-1597 **index pages**
 1598-1888 **March 27, 1998 Revised Application (1998)**
 1889-2007 **Basis of Design**

2008-2127 Guam Water Quality Standards
 2128-2518 Amended Section 301(h) Technical Support Document (301(h) ATSD)

II. Description of Treatment System

2519-2520 Background
 2521-2540 **Northern District NPDES Permit**
 2541-2560 1988 Administrative Order, Docket No IX-FY88-45

Correspondences between EPA and GWA/PUAG

2561-2562 Aug 6, 1990 EPA letter
 2563 Dec 28, 1990 GWA letter
 2564-2565 March 6, 1991 GWA letter
 2566 April 19, 1991 PUAG letter
 2567-2569 Jan 27, 1992 EPA letter
 2570-2572 Oct 6, 1992 EPA letter
 2573-2575 Dec 7, 1992 EPA letter
 2576-2587 Jan 26, 1993 PUAG letter
 2588 Sept 7, 1993 PUAG letter
 2589-2590 Feb 22, 1995 EPA letter
 2591-2593 March 10, 1995 EPA letter
 2594-2596 Nov 27, 1995 EPA letter
 2597-2602 **April 4, 1997 EPA letter**
 2603-2606 **May 6, 1997 PUAG letter**
 2607-2608 **June 1, 1997 EPA letter**
 2609-2612 Mar 27, 1998 GEPA letter
 2613 April 9, 1998 GEPA letter
 2614-2615 **April 21, 1998 EPA letter**
 2616-2621 May 6, 1997, PUAG letter
 2622 July 16, 1998 EPA letter
 2623-2624 Aug 7, 1998 GWA letter
 2625-2629 Oct 14, 1998 GWA letter
 2630-2631 EP A letter
 2632-2633 Jan 15, 1999 GWA letter
 2634-2636 Aug 11, 1999 EPA letter
 2637-2648 Sept 15, 1999 GWA letter
 2649-2650 June 30, 2000 GWA letter
 2651-2652 Feb 5, 2001 GWA letter
 2653 Hagatna Basis of Design cover page
 2654-2655 Jan 18, 2002 EPA letter
 2656-2657 Dec 20, 2004 EPA letter

2658-2660 March 24, 2008 letter

2661 *Treatment System*

2662-2721 Scoping Meeting Summary Report for Marine Relocation to Guam
2722-2795 2006 Master Plan Volume III Ch. 5

2796 Improved Discharge

2797-2798 Memo to File: Calculation of BOD and TSS Mass Loadings to Reflect
Flow Increase to 12 MGD

2799 Existing Outfall Bathymetry/Topographic Map, GMP Associates Inc.
Proposed Outfall Schematics, GMP Associates Inc.

2800-2809 Construction Plans for ND Outfall extension

III. Description of Receiving Water

2810 Description of Receiving Water

2811 Dominant Current Character

2812-3015 H.D. Huddell *et al*: Nearshore currents and coral reef ecology of the West
Coast of Guam, Mariana Islands, 1971

3016 Stratification

3017 Coral Reefs

3018-3073 E.A. Matson: Fecal Pollution in Guam's Coastal Waters and Sediments,
1993

3074-3181 Dames and Moore: Impact Assessment of Non-Chlorinated Effluent from
Agana and Northern District

IV. Physical Characteristics of the Discharge

3182 Physical Characteristics of the Discharge

3183 Initial Dilution

3184-3203 EPA (Frick) Model runs

3204-3220 Frick and Lee email correspondence

3221-3224 Frick and Remigio email correspondence

3225-3419 Dilution Models for Effluent Discharges, 3rd Edition EPA 1994

3420 Application of Initial Dilution to WQS

3421-3423 Lee and GWA email correspondence

3424 Zone of Initial Dilution

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3425 Application of Statutory and Regulatory Criteria

3426 Attainment of Primary or Equivalent Treatment Requirements

3427-3514 2005 to 2008 DMR Data

**3515-3518 Bimonthly, seasonal, biannual rate change adjustment spreadsheet for BOD
& TSS removal performed by EPA, March 2008**

3519 Attainment of Water Quality Standards related to BOD, TSS, and Turbidity

- 3520 *Dissolved Oxygen Analysis based on monitoring data*
 3521 Analysis based on monitoring data
 3522 Memo to File: Presentation and analysis of submitted dissolved oxygen (DO) field monitoring data
 3523-3524 Memo to File: Determining dissolved oxygen (DO) saturation concentration at 75%
 3525-3529 Field monitoring data for Attainment of Water Quality Standards related to BOD, TSS, and Turbidity Section collected by Northern District STP reformatted by EPA, May 2008
- 3530 *Dissolved Oxygen Analysis based on predictive modeling*
 3531-3533 DO upon initial dilution-
 Memo to File: Selection of critical DO concentration for initial dilution and DO depression predictive modeling
 3534-3537 DO depression due to BOD exertion-
 Spreadsheets of used parameters and calculation by EPA to determine DO, created by EPA, May 2008
 3538-3539 DO Depression due to sediment oxygen demand-
 Spreadsheet of used parameters and calculation by EPA to determine DO, created by EPA, May 2008
 3540-3541 DO Depression due to abrupt sediment resuspension-
 Spreadsheet of used parameters and calculation by EPA to determine DO, created by EPA, May 2008
- 3542 *Suspended Solids Following Initial Dilution*
 3543 Suspended Solids and Turbidity
- 3544 *Suspended Solids Deposition*
 3545-3547 Metcalf and Eddy: Wastewater Engineering: Treatment, Disposal and Reuse. 1991. pg 222
- 3548 *Mass Emission Rate*
 3549-3550 Memo to File: Calculating Mass Emission Rate for Suspended Solid Deposition and Accumulation
- 3551 *Settling velocities and organic component of settleable solids*
 3552-3553 Memo to File: Settling Velocities and Organic Component of Settleable Solids
- 3554 *Depositional Distances*
 3555-3556 Memo to File: Calculation of Depositional Maximum Distances
- 3557 *Contour Area*
 3558-3559 Memo to File: Calculation of Depositional Contour Area
- 3560 *Deposition and Accumulation Rates*

- 3561-3571 Maughn and Oviat: Sediment and benthic response to wastewater solids in the marine mesocosm. 1993
- 3572-3573 Memo to File: Calculating Mass Deposition and Accumulation Based on MER and Area
- 3574 *Turbidity*
- 3575 Receiving Water Monitoring Turbidity Data from the application (March 1989 to April 1997)
- 3576 Attainment of Other WQS, Impact of Discharge on Public Water Supplies, Shellfish, Fish and Wildlife, and Recreation
- 3577 *Attainment of Other WQS and Criteria- Bacteria*
- 3578-3585 Miescier and Cabelli: Enterococci and other microbial indicators in municipal wastewater effluents, 1982
- 3586 *Toxics*
- 3587 Annual Toxic Pollutant Analysis 1998 by Montgomery Watson
- 3614 *pH*
- 3615 pH Field Data
- 3616 *Nutrients*
- 3617-3624 EPA Reference Monitoring and Assessing Water Quality website, accessed on October 3, 2008
- 3625 Receiving Water Monitoring Nutrients Data from the application (March 1989 to December 1989)
- 3626 *Temperature*
- 3627 Receiving Water Monitoring Temperature Data from the application (March 1989 to April 1997)
- 3628 *Salinity*
- 3629 Receiving Water Monitoring Salinity Data from the application (March 1989 to April 1997)
- 3630-3631 Remigio, Lee, Minas (GEPA) email correspondence
- 3632 *Whole Effluent Toxicity (WET)*
- 3633-3656 WET Bioassay Lab Result by MWH on Nov 12, 2007
- 3657 EPA Guidance Document: *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms*, 1995
- 3658-3659 Lee, Remigio, and Sian-Denton (GWA) email correspondence
- 3660-3678 WET Bioassay Lab Result by MWH on Jan 10, 2008
- 3679-3702 **WET Bioassay Lab Result by MWH on Nov 12, 2007 (copy)**
- 3703-3705 **Lee, Remigio, and Sian-Denton (GWA) email correspondence**
- 3706 *Impact of Discharge on Shellfish, Fish, and Wildlife*

- 3707 Technical Support Document for Water Quality-based Toxics Control (TSD),
1991
- 3708 *Review of Chemical-specific Data*
- 3709 *Review of WET Data*
- 3710-3887 USEPA R9 and R10 WET Guidance 2007
- 3888-3889 Grothe *et al*: Whole effluent toxicity testing: An evaluation of
methods and prediction of receiving system impacts, 1995.
- 3890 *Review of Biological Data*
- 3891-3922 Boyd: Review and Analysis of Past Biological Monitoring Data
for the Agana Wastewater Treatment Plant Outfall, Guam, 1998
- 3923-3997 2001 Baseline Benthic Community Studies
- 3998-4074 2007 Baseline Benthic Community Studies
- 4075 *Additional Requirements for Applications based on Improved or Altered
Discharge*
- 4076 *Impact of Discharge on Recreational Activities*
- 4077-4306 Testing the Waters 2004: A Guide to Water Quality at Vacation
Beaches, NRDC
- 4307-4585 Testing the Waters 2005: A Guide to Water Quality at Vacation
Beaches, NRDC
- 4586 *Establishment of a Monitoring Program*
- 4587-4589 Lee and GWA email correspondence
- 4590-4752 GWA Operation and Maintenance Quarterly Reports
- 4753 *Impact of Modified Discharge on Other Point and Non-point Sources*
- 4754-4758 Remigio and Cummings-Gutierrez email correspondence
- 4759 Pruvient Energy Guam Inc. Tanguisson Power Plant Google Earth Pro Image-
Google Earth Pro 4.2.0205.5730
- 4760 *Toxics Control Program*
- 4761 Urban Area Pretreatment Program
- 4762 Increase in Effluent Volume or Amount of Pollutants Discharged
- 4763 Guam Military Buildup Public Information Website Link
- 4764-4767 Military Buildup: Scoping Meeting Summary Report for Marine Relocation to
Guam (found in *Background*)
- 4768 Compliance with Other Applicable Laws
- 4769-4771 March 24, 2008 EPA Letter to GEPA for 301(h) application
concurrency/certification
- 4772-4775 emails Lee/Eberhardt correspondence

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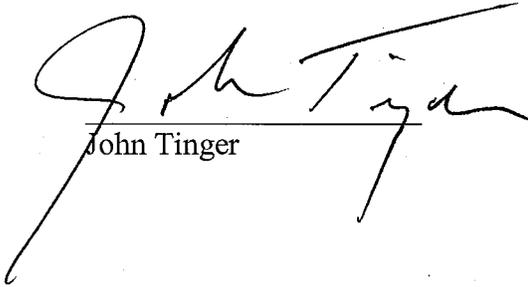
In re: Guam Waterworks Authority) Agana & Northern District) Sewage Treatment Plants) NPDES Permit No. CA 0020087) CA 0020141)	NPDES Appeal Nos. 09-15 and 09-16
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Certification of Indexes to the Administrative Record

I, John Tinger, state the following:

1. I am an Environmental Engineer employed by the U.S. Environmental Protection Agency, Region 9 ("EPA Region 9") in San Francisco, CA. Since December 2001, I have been employed in EPA Region 9's Water Division.
2. As part of my responsibilities, I oversaw compilation of the administrative records of materials on which the EPA Region 9 Acting Regional Administrator Laura Yoshii based her decision dated September 30, 2009 regarding applications filed by Guam Waterworks Authority for its Agana and Northern District Sewage Treatment Plants for renewed National Pollutant Discharge Elimination System permits with modifications of the secondary treatment requirements pursuant to Section 301(h) of the Clean Water Act. The materials comprising the administrative records for these decisions have been compiled, paginated, and listed in the attached Indexes to the Administrative Records.
3. Attached as exhibit A is the Index to the Administrative Record for the Agana decision. Attached as exhibit B is the Indexes to the Administrative Record for the Northern District decision.
4. For convenience, the documents are loosely grouped by subject matter in general categories as they relate to the tentative and final decisions. In some circumstances certain documents related to a specific subject area are found in another section and are referenced to that section rather than copied. Each document is given a number identifying the treatment plant ("A", Agana or "ND", Northern District), whether it's from the tentative or final decision ("T" or "F"), the general category, and the number for the specific document.
5. I certify that, to the best of my knowledge, the documents listed in the attached Indexes constitute the complete Administrative Records for these permitting actions.

I declare under penalty of perjury that the foregoing is true and correct. Executed this 10th day of March, 2010, at San Francisco, California.


John Tinger