UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX

IN THE MATTER OF:	)	Docket No.: CWA 309(a)-10-025
	)	
GUAM POWER AUTHORITY	)	
Tanguisson Power Plant	)	
	)	**FINDINGS OF VIOLATION**
	)	**AND**
	)	**ORDER FOR COMPLIANCE**
	)	
NPDES Permit No. GU0000027	)	
	)	Proceeding under Sections 308(a)
	)	and 309(a) of the Clean Water Act
_____	)	33 U.S.C. §§ 1318 and 1319(a)

STATUTORY AUTHORITY

The following Findings of Violation are made and Order for Compliance issued pursuant to the authority vested in the Administrator of the United States Environmental Protection Agency (EPA) under Sections 308(a) and 309(a) of the Clean Water Act (Act), as amended, 33 U.S.C. §§1318(a) and 1319(a). The Administrator has delegated these authorities to the Regional Administrator of EPA, Region IX, who has in turn delegated them to the Director of the Water Division of EPA, Region IX.

FINDINGS OF VIOLATION

On the basis of the following facts, the Director finds that Guam Power Authority ("GPA") is in violation of Section 301(a) of the Act, 33 U.S.C. §§ 1311(a):

1) Under section 301(a) of the Act, 33 U.S.C. § 1311(a), it is unlawful for any person to discharge any pollutant from a point source into "navigable waters" except in compliance with various sections of the Act, including section 402 of the Act, 33 U.S.C. § 1342.

2) Section 402 of the Act establishes the National Pollutant Discharge Elimination System ("NPDES") permits program. Pursuant to section 402 of the Act, EPA may

issue NPDES permits for the discharge of pollutants into navigable waters located within the Territory of Guam.

3) ‘‘Pollutant” means, among other things, sewage, garbage, sewage sludge, rock, sand, chemical wastes, biological materials, dredged spoil, solid waste, incinerator residue, munitions, radioactive materials, heat, wrecked or discarded equipment, cellar dirt, and industrial, municipal, and agricultural waste discharged into water. 33 U.S.C. § 1362(6).

4) A “point source” means any discernable, confined and discrete conveyance including, but not limited to, any pipe or other conduit from which pollutants are, or may be, discharged. 33 U.S.C. § 1362(14).

5) A “discharge of pollutants” means any addition of any pollutant to navigable waters from any point source. 33 U.S.C. § 1362(12).

6) “Navigable waters” means the “waters of the United States,” which includes all waters used in interstate commerce, including tidal waters and their tributaries. 33 U.S.C. § 1362(7); 40 C.F.R. §§ 122.3 and 230.3(s).

7) GPA is the owner of Tanguisson Power Plant, located at Tanguisson Point in the Municipality of Dededo, Guam. Tanguisson Power Plant is operated by Pruvient Energy Guam. GPA is a “person” in the context of section 502(5) of the Act. 33 U.S.C. §§ 1362(4) and 1362(5). As such, it is subject to the provisions of the Act. 33 U.S.C. Section 1251 et seq.

8) GPA’s Tanguisson Power Plant discharges to the Phillipine Sea, which is a ‘‘navigable water” as defined by Section 502(7) of the Act, 33 USC §1362(7), and a “water of the United States” as defined by EPA regulations in 40 CFR §122.2.

9) On March 10, 2010, an EPA contractor, PG Environmental, and Guam EPA conducted a compliance evaluation inspection of GPA’s Tanguisson Power Plant. GPA representatives were present during the inspection. Various noncompliance issues were noted during the inspection and shared with GPA representatives. These noncompliance issues are further documented in EPA’s report. A copy of the inspection report is attached to and made a part of this Finding of Violation and Order.

10) EPA issued NPDES Permit No. GU0000027 to the GPA, which became effective on January 31, 2001, expired on January 31, 2006, and has been administratively extended. The NPDES permit regulates the discharge of non-contact cooling water from two generating units through Outfall Serial No. 001, and low-volume wastewater from Outfall Serial No. 001A, and traveling screen wash water from Outfall Serial No. 001B. The discharge of storm water is not permitted under GU0000027. The NPDES permit does not authorize the discharge of pollutants from any other sources or from any other points of discharge.

Findings related to monitoring required by NPDES permit:

11) Part 1 and Part 2 of NPDES Permit No. GU0000027, require GPA to conduct continuous monitoring of the effluent flow from Outfall Serial Nos. 001, 001A, and 001B. During the March 10 inspection, the inspectors found that there were no flow measurement devices located on Outfalls Serial Nos. 001, 001A, or 001B to continuously monitor effluent flow. The inspectors found that GPA had calculated effluent flow through Outfall Serial No. 001 based on pump run times and pump capacity.

Findings related to reporting required by NPDES permit:

12) Part 1 and Part 2 of NPDES Permit No. GU0000027, require GPA to conduct continuous monitoring of the effluent flow at Outfall Serial No. 001A and report on the DMR each month. Based on a review of GPA's DMRs for the calendar year 2009, the inspectors found that, lacking a flow monitoring device, GPA did not continuously measure the flow, and was incorrectly reporting the same effluent flow of 0.0178 MGD for Outfall Serial No. 001A on the Discharge Monitoring Report (DMR) for each month during 2009.

13) Part 5 of NPDES Permit No. GU0000027 requires the Discharger to conduct quarterly monitoring of the combined effluent of Outfall Serial Nos. 001 and 001A for toxicity. A review of the DMR data between July 2005 and June 2010 indicates that the Discharger did not report toxicity results on the DMRs as required. Instead, GPA reported a code to indicate either that the test was not valid or that the equipment improperly functioned. Attachment 1 provides a list of toxicity data not reported.

14) Part 1.a. of the Permit requires GPA to continuously monitor influent temperature. Part 10 of the Permit requires reporting of the monitoring data. GPA failed to continuously monitor influent temperature at the cooling water intake as required by the Permit. Review of the DMRs revealed that GPA failed to properly report influent

temperature, instead used a “no discharge” code on its DMR between July 2005 and June 2010. Attachment 1 provides a list of influent temperature data not reported by GPA.

15) Standard Condition 11 to NPDES Permit No. GU0000027 requires the Discharger to maintain records of monitoring information, including the date and time of sampling or measurements, and the results of such analyses. Standard Condition 10 requires that records that are required to be maintained are available to inspectors. During the March 2010 inspection, GPA was unable to provide supporting monitoring information including time or date of sample collection or analysis or calibration records for the effluent pH values reported by GPA on its 2009 DMRs.

Findings related to NPDES permit effluent limit violations:

16) A review of DMR data submitted by the discharger during the period beginning July 2005 and continuing through June 2010 revealed over 250 occurrences in which the discharger exceeded the effluent limitations established by its NPDES permit. Attachment 2 provides a listing of effluent limitation violations for Outfall Serial No. 001 and 001A as reported by GPA in its DMRs.

Findings related to BMPs and O&M:

17) Standard Condition 6 of NPDES Permit No. GU0000027 requires GPA to properly operate and maintain “all facilities and systems of treatment and control which are installed or used by the permittee to achieve compliance with the conditions of this permit”. Prior to discharge via Outfall 001A, GPA must properly treat its low-volume waste waters, including oil-water separation. The inspectors observed that the oil-water separator was missing the top baffle, rendering it ineffective. GPA has failed to properly operate and maintain its treatment facilities as required by the Permit.

18) Part 9 of NPDES Permit No. GU0000027 requires the Discharger to maintain a stormwater BMP (Best Management Practices) Plan. During the March 2010 inspection, the inspectors reviewed a document provided by the facility and identified as the stormwater BMP Plan.

a) Part 9.a of the Permit requires the BMP Plan to identify a pollution prevention committee. The pollution prevention committee identified in the BMP Plan was not representative of the current personnel at the facility. GPA has failed to maintain an up-to-date BMP Plan as required by the Permit.

b) Part 9.g of the Permit requires the Discharger to include weekly visual inspections of the Facility as part of the BMP Plan. Part 4.2 of the Discharger’s BMP Plan establishes weekly inspections and requires records of the weekly

inspections to be maintained at the facility and made available for EPA and GEPA inspectors. During the March 2010 inspection, these records were not available for review. GPA has failed to maintain the BMP inspection records as required by Part 9.g. of the Permit.

Considering the foregoing Findings, EPA has determined that compliance in accordance with the following requirements is reasonable. Pursuant to the authority of sections 308(a) and 309(a) of the Act, it is hereby ORDERED that GPA immediately comply with the following requirements:

ORDER FOR COMPLIANCE

1) Upon receipt of this Order, GPA shall immediately take all steps feasible to fully and properly comply with all terms and conditions of its NPDES permit.
2) Upon receipt of this Order GPA shall immediately maintain monitoring records as required by Standard Condition 11 of its NPDES Permit.
3) By 30 days following receipt of this Order, GPA shall submit brief responses to each of the Findings numbers 11 through 18 above, explaining reasons for each violation of the Permit cited in this Finding of Violation and Order.
4) By 30 days following receipt of this Order, with the exception of flow monitoring, GPA will achieve and maintain compliance with all monitoring and reporting requirements of its Permit.
5) By 45 days following receipt of this Order, GPA shall provide documentation in support of the DMRs submitted for the period beginning January 2005 and continuing through July of 2010. The supporting documentation to be submitted includes, but is not limited to, description of the influent, effluent, and receiving water sampling locations, an explanation of flow data, an explanation of how GPA calculated the effluent mass discharge data reported in its DMRs, and the basis for any assumptions used in the calculations.
6) By 90 days following receipt of this Order, GPA shall submit a plan and schedule that is capable of bringing the facility into full compliance with its NPDES permit. The Plan shall address all Findings above related to monitoring, reporting, effluent limitations, BMPs, and O&M. The Plan shall cover all steps required of the discharger to control all process waters, storm water, and low volume wastewater in compliance with the NPDES permit. The plan shall include, at a minimum:
    a) An O&M plan. The plan shall include repair of the oil/water separator and low-volume wastewater treatment system so that each operates as intended. The schedule for completion of all work shall not exceed 6 months;

b) A plan for sampling, monitoring, and reporting required by the NPDES permit. This plan shall include the necessary steps required for complete and proper compliance with the NPDES permit. The plan shall describe collection of influent and effluent samples, chain of custody, methods, roles and responsibilities, transcription of data sheets to DMRs; and

c) A plan for achieving compliance with each of the effluent limitations cited as violations in Part16 of the Finding of Violation. The Plan shall describe all measures that GPA will take to achieve compliance with effluent limits including process modifications, treatment system repairs, and installation of treatment systems such that GPA achieves continuous compliance with all effluent limitations within six months of receipt of this Order.

7) By 90 days following receipt of this Order, GPA shall submit a revision of its BMP plan. The revision shall list current facility personnel on the pollution prevention committee and establish procedures for ensuring that weekly facility inspections are completed and inspection documentation records are maintained on-site as required by the Permit. Documentation of inspections shall contain date-stamped photographs.

8) By 90 days following receipt of this Order, GPA shall submit an estimate of the cost to comply with this Order.

9) GPA shall implement its plans developed pursuant to Part 6 of this Order such that, by six months following receipt of this Order, GPA shall:

   a) Achieve and maintain compliance with all flow monitoring and reporting requirements of its Permit.

   b) Complete all repairs necessary to bring the oil-water separator and low-volume wastewater treatment system into proper function.

   c) Achieve and maintain full compliance with the effluent limitations and other requirements of the NPDES permit.

10) COMPLETION CERTIFICATION REPORT:

   a) Nine months following receipt of this Order, GPA shall submit a written summary report detailing implementation of the requirements of this Order. The reports shall include photographs to aid in documenting progress. The reports shall also evaluate the effectiveness of the programs, and certify that GPA has completed all requirements and has achieved compliance with this Order.

3) INFORMATION SUBMITTAL

a) All submittals made pursuant to this Order shall be mailed to the following addresses:

JoAnn Cola
United States Environmental Protection Agency
Region 9
75 Hawthorne St. (WTR-7)
San Francisco, CA 94105

Bradley Dunagan, Deputy Administrator
Guam EPA
P.O. Box 22439- GMF
Barrigada, Guam 96921

b) All reports submitted pursuant to this Order shall be signed by a principal executive officer, ranking elected official or duly authorized representative of GPA [as specified by 40 CFR §122.22(b)(2)] and shall include the following statement:

i) "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

c) The information requested herein must be provided notwithstanding its possible characterization as confidential business information or trade secrets. EPA has promulgated regulations to protect the confidentiality of the business information it receives. These regulations are set forth in part 2, subpart B of Title 40 of the Code of Federal Regulations. A claim of business confidentiality may be asserted in the manner specified by 40 C.F.R. §2.203(b) for part or all of the information requested. EPA will disclose business information covered by such a

claim only as authorized under 40 C.F.R. part 2, subpart B. If no such claim accompanies the business information at the time EPA receives it, EPA may make it available to the public without further notice.

4) GENERAL PROVISIONS

a) This Order shall be binding upon GPA and its officers, directors, agents, employees, contractors, heirs, successors, and assigns.

b) This Order is not and shall not be interpreted to be a National Pollutant Discharge Elimination System permit under Section 402 of the Act, [33 U.S.C. § 1342]. In addition, this Order shall not in any way extinguish, waive, satisfy, or otherwise affect GPA's obligation to comply with the Act or its regulations, as well as any other Federal, State or local law.

c) This Order is not deemed an election by EPA to forego any remedies available to it under the law, including without limitation, any administrative, civil, or criminal action to seek penalties, fines, or other appropriate relief under the Act. EPA reserves all rights and remedies, legal and equitable, available to enforce any violations cited in this Order and to enforce this Order.

d) Requests for information contained with this Order are not subject to review by the Office of Management and Budget under the Paperwork Reduction Act because it is not "collection of information" within the meaning of 44 U.S.C. § 3502(3). It is directed to fewer than ten persons and is an exempt investigation under 44 U.S.C. § 3518(c)(1) and 5 CFR 1320.4(a)(2).

e) Respondent may not withhold from EPA any information on the grounds that it is confidential business information. However, EPA has promulgated, under 40 CFR Part 2, Subpart B, regulations to protect confidential business information it receives. If legally supportable, a claim of business confidentiality may be asserted in the manner specified by 40 CFR 2.203(b) for all or part of the information requested by EPA. EPA will disclose business information covered by such claim only as authorized under 40 CFR Part 2, Subpart B. If no claim of business confidentiality accompanies the information at the time EPA receives it, EPA may make it available to the public without further notice.

f) Section 309(a), (b), (d), and (g) of the Act, 33 U.S.C. § 1319(a), (b), (d), and (g), provides administrative and/or judicial relief for failure to comply with the CWA. In addition, Section 309(c) of the Act, 33 U.S.C. § 1319(c), provides criminal sanctions for negligent or knowing violations of the CWA and for knowingly making false statements.

g) This Order takes effect upon the date of receipt by GPA.

h) This Order remains in effect until terminated by the Director of the Water Division, EPA, Region 9.

Dated this _____ day of _____, 2010

_____

Alexis Strauss
Director, Water Division
U.S. Environmental Protection Agency, Region 9

Attachment 1
Unreported Data for Influent and Outfalls Serial Nos. 001 and 001A
Tables Produced from EPA's ICIS Database of Data Reported by GPA on DMR Forms
July 2005 – June 2010

TANGUISSON POWER PLANT Effective Date: 01/30/2001 Expiration Date: 01/31/2006

INFLUENT

Temperature, water deg. centigrade 00010 Monitoring Location = G (Raw Sewage Influent)

Limit Start Date = 01/30/2001 Limit End Date = 01/31/2006
Season 0

Limit Value	Req. Mon.	Req. Mon.
Units	deg C C2	deg C C3
Stat Base	MO AVG	DAILY MX
07/31/2005	NODI = C	NODI = C
08/31/2005	NODI = C	NODI = C
09/30/2005	NODI = C	NODI = C
10/31/2005	NODI = C	NODI = C
11/30/2005	NODI = C	NODI = C
12/31/2005	NODI = C	NODI = C
01/31/2006	NODI = C	NODI = C
02/28/2006	NODI = C	NODI = C
03/31/2006	NODI = C	NODI = C
04/30/2006	NODI = C	NODI = C
05/31/2006	NODI = C	NODI = C
06/30/2006	NODI = C	NODI = C
07/31/2006	NODI = C	NODI = C
08/31/2006	NODI = C	NODI = C
09/30/2006	NODI = C	NODI = C
10/31/2006	NODI = C	NODI = C
11/30/2006	NODI = C	NODI = C
12/31/2006	NODI = C	NODI = C

01/31/2007	NODI = C	NODI = C
02/28/2007	NODI = C	NODI = C
03/31/2007	NODI = C	NODI = C
04/30/2007	NODI = C	NODI = C
05/31/2007	NODI = C	NODI = C
06/30/2007	NODI = C	NODI = C
07/31/2007	NODI = C	NODI = C
08/31/2007	NODI = C	NODI = C
09/30/2007	NODI = C	NODI = C
10/31/2007	NODI = C	NODI = C
11/30/2007	NODI = C	NODI = C
12/31/2007	NODI = C	NODI = C
01/31/2008	NODI = C	NODI = C
02/29/2008	NODI = C	NODI = C
03/31/2008	NODI = C	NODI = C
04/30/2008	NODI = C	NODI = C
05/31/2008	NODI = C	NODI = C
06/30/2008	NODI = C	NODI = C
07/31/2008	NODI = C	NODI = C
08/31/2008	NODI = C	NODI = C
09/30/2008	NODI = C	NODI = C
10/31/2008	NODI = C	NODI = C
11/30/2008	NODI = C	NODI = C
12/31/2008	NODI = C	NODI = C
01/31/2009	NODI = C	NODI = C
02/28/2009	NODI = C	NODI = C
03/31/2009	NODI = C	NODI = C
04/30/2009	NODI = C	NODI = C
05/31/2009	NODI = C	NODI = C
06/30/2009	NODI = C	NODI = C
07/31/2009	NODI = C	NODI = C
08/31/2009	NODI = C	NODI = C
09/30/2009	NODI = C	NODI = C

10/31/2009	NODI = C	NODI = C
11/30/2009	NODI = C	NODI = C
12/31/2009	NODI = C	NODI = C
01/31/2010	NODI = C	NODI = C
02/28/2010	NODI = C	NODI = C
03/31/2010	NODI = C	NODI = C
04/30/2010	NODI = C	NODI = C
05/31/2010	NODI = C	NODI = C
06/30/2010	NODI = C	NODI = C

Attachment Note:

1) NODI=C is a code entered on a DMR by the Discharge to indicate that no discharge of effluent occurred during the monitoring period

Outfall 001 / Quarterly monitoring &
reporting
Static 1Hr Chronic Tripneustes Gratilla TTE3W Monitoring Location = 1 (Effluent Gross)

Limit Start Date = 01/30/2001 Limit End Date = 01/31/2006
Season 0

Limit Value	Req. Mon.
Units	tox chronic C3
Stat Base	DAILY MX
09/30/2005	NODI = H
12/31/2005	NODI = H
03/31/2006	NODI = H
06/30/2006	NODI = 4
09/30/2006	NODI = H
12/31/2006	NODI = 4
03/31/2007	NODI = H
06/30/2007	NODI = H
09/30/2007	Not Submitted
12/31/2007	NODI = H
03/31/2008	NODI = H
06/30/2008	NODI = H
09/30/2008	NODI = H
12/31/2008	NODI = 4
03/31/2009	NODI = H
06/30/2009	NODI = H
09/30/2009	NODI = H
12/31/2009	NODI = H
03/31/2010	NODI = G
06/30/2010	NODI = H

Attachment Notes:

1) NODI=H is a code entered on the DMR by the Discharger that means the test is invalid
2) NODI=G is a code entered on the DMR by the Discharger that means sampling equipment failure
3) NODI=4 is a code entered on the DMR by the Discharger that means discharge is to a lagoon

Outfall 001A / Quartely monitoring &
reporting
Static 1Hr Chronic Tripneustes Gratilla TTE3W Monitoring Location = 1 (Effluent Gross)

Limit Start Date = 01/30/2001 Limit End Date = 01/31/2006
Season 0

Limit Value	Req. Mon.
Units	tox chronic C3
Stat Base	DAILY MX
09/30/2005	NODI = H
12/31/2005	NODI = H
03/31/2006	NODI = H
06/30/2006	NODI = 4
09/30/2006	NODI = H
12/31/2006	NODI = 4
03/31/2007	NODI = H
06/30/2007	NODI = H
09/30/2007	Not Submitted
12/31/2007	Not Submitted
03/31/2008	NODI = H
06/30/2008	NODI = H
09/30/2008	NODI = H
12/31/2008	NODI = H
03/31/2009	NODI = H
06/30/2009	NODI = H
09/30/2009	NODI = H
12/31/2009	NODI = H
03/31/2010	NODI = G
06/30/2010	NODI = H

Attachment Notes:

1) NODI=H is a code entered on the DMR by the Discharger that means the test is invalid
2) NODI=G is a code entered on the DMR by the Discharger that means sampling equipment failure
3) NODI=4 is a code entered on the DMR by the Discharger that means discharge is to a lagoon

Attachment 2
Effluent Limitation Exceedances for Outfalls Serial Nos. 001 and 001A
Tables Produced from EPA's ICIS Database of Data Reported by GPA on DMR Forms
July 2005 – June 2010

Outfall No.	Monitoring Period End Date	Parameter	Standard	DMR Value	Over Effluent Limit
001	09/30/2007	pH	MAXIMUM	9.73	
001	09/30/2009	Nitrogen, ammonia total (as N)	DAILY MX	118.2	59%
001	12/31/2009	Nitrogen, ammonia total (as N)	DAILY MX	460.	520%
001	02/28/2010	Nitrogen, ammonia total (as N)	DAILY MX	186.7	152%
001	03/31/2010	Nitrogen, ammonia total (as N)	DAILY MX	.447	124%
001	05/31/2010	Nitrogen, ammonia total (as N)	DAILY MX	.211	6%

Outfall No.	Monitoring Period End Date	Parameter	Standard	DMR Value	Over Effluent Limit
001A	07/31/2005	Nitrogen, ammonia total (as N)	DAILY MX	.062	377%
001A	07/31/2005	Nitrogen, ammonia total (as N)	DAILY MX	.926	363%
001A	07/31/2005	Iron, total recoverable	MO AVG	.037	1,133%
001A	07/31/2005	Iron, total recoverable	DAILY MX	.037	1,133%
001A	07/31/2005	Iron, total recoverable	MO AVG	.551	1,002%
001A	07/31/2005	Iron, total recoverable	DAILY MX	.551	1,002%
001A	07/31/2005	Copper, total recoverable	MO AVG	.002	100%
001A	07/31/2005	Copper, total recoverable	DAILY MX	.002	100%
001A	07/31/2005	Copper, total recoverable	MO AVG	.034	70%
001A	07/31/2005	Copper, total recoverable	DAILY MX	.034	70%
001A	08/31/2005	Nitrogen, ammonia total (as N)	DAILY MX	.113	769%
001A	08/31/2005	Nitrogen, ammonia total (as N)	DAILY MX	1.68	740%
001A	08/31/2005	Iron, total recoverable	MO AVG	.054	1,700%
001A	08/31/2005	Iron, total recoverable	DAILY MX	.054	1,700%
001A	08/31/2005	Iron, total recoverable	MO AVG	.796	1,492%
001A	08/31/2005	Iron, total recoverable	DAILY MX	.796	1,492%
001A	09/30/2005	Iron, total recoverable	MO AVG	.031	933%
001A	09/30/2005	Iron, total recoverable	DAILY MX	.031	933%
001A	09/30/2005	Iron, total recoverable	MO AVG	.453	806%
001A	09/30/2005	Iron, total recoverable	DAILY MX	.453	806%
001A	10/31/2005	Nitrogen, ammonia total (as N)	DAILY MX	.086	562%
001A	10/31/2005	Nitrogen, ammonia total (as N)	DAILY MX	1.28	540%

Outfall No.	Monitoring Period End Date	Parameter	Standard	DMR Value	Over Effluent Limit
001A	10/31/2005	Iron, total recoverable	MO AVG	.008	167%
001A	10/31/2005	Iron, total recoverable	DAILY MX	.008	167%
001A	10/31/2005	Iron, total recoverable	MO AVG	.124	148%
001A	10/31/2005	Iron, total recoverable	DAILY MX	.124	148%
001A	10/31/2005	Copper, total recoverable	MO AVG	.005	400%
001A	10/31/2005	Copper, total recoverable	DAILY MX	.005	400%
001A	10/31/2005	Copper, total recoverable	MO AVG	.079	295%
001A	10/31/2005	Copper, total recoverable	DAILY MX	.079	295%
001A	11/30/2005	Nitrogen, ammonia total (as N)	DAILY MX	.108	731%
001A	11/30/2005	Nitrogen, ammonia total (as N)	DAILY MX	1.6	700%
001A	11/30/2005	Iron, total recoverable	MO AVG	.05	1,567%
001A	11/30/2005	Iron, total recoverable	DAILY MX	.05	1,567%
001A	11/30/2005	Iron, total recoverable	MO AVG	.749	1,398%
001A	11/30/2005	Iron, total recoverable	DAILY MX	.749	1,398%
001A	11/30/2005	Copper, total recoverable	MO AVG	.021	5%
001A	11/30/2005	Copper, total recoverable	DAILY MX	.021	5%
001A	12/31/2005	Nitrogen, ammonia total (as N)	DAILY MX	.09	592%
001A	12/31/2005	Nitrogen, ammonia total (as N)	DAILY MX	1.34	570%
001A	12/31/2005	Iron, total recoverable	MO AVG	.015	400%
001A	12/31/2005	Iron, total recoverable	DAILY MX	.015	400%
001A	12/31/2005	Iron, total recoverable	MO AVG	.221	342%
001A	12/31/2005	Iron, total recoverable	DAILY MX	.221	342%
001A	12/31/2005	Copper, total recoverable	MO AVG	.002	100%
001A	12/31/2005	Copper, total recoverable	DAILY MX	.002	100%
001A	12/31/2005	Copper, total recoverable	MO AVG	.031	55%
001A	12/31/2005	Copper, total recoverable	DAILY MX	.031	55%
001A	01/31/2006	Iron, total recoverable	MO AVG	.032	967%
001A	01/31/2006	Iron, total recoverable	DAILY MX	.032	967%
001A	01/31/2006	Iron, total recoverable	MO AVG	.472	844%
001A	01/31/2006	Iron, total recoverable	DAILY MX	.472	844%
001A	02/28/2006	Nitrogen, ammonia total (as N)	DAILY MX	.073	462%
001A	02/28/2006	Nitrogen, ammonia total (as N)	DAILY MX	1.08	440%
001A	02/28/2006	Iron, total recoverable	MO AVG	.065	2,067%
001A	02/28/2006	Iron, total recoverable	DAILY MX	.065	2,067%
001A	02/28/2006	Iron, total recoverable	MO AVG	.961	1,822%
001A	02/28/2006	Iron, total recoverable	DAILY MX	.961	1,822%
001A	02/28/2006	Copper, total recoverable	MO AVG	.002	100%
001A	02/28/2006	Copper, total recoverable	DAILY MX	.002	100%
001A	02/28/2006	Copper, total recoverable	MO AVG	.034	70%
001A	02/28/2006	Copper, total recoverable	DAILY MX	.034	70%
001A	03/31/2006	Nitrogen, ammonia total (as N)	DAILY MX	.094	623%
001A	03/31/2006	Nitrogen, ammonia total (as N)	DAILY MX	1.39	595%
001A	03/31/2006	Iron, total recoverable	MO AVG	.009	200%
001A	03/31/2006	Iron, total recoverable	DAILY MX	.009	200%
001A	03/31/2006	Iron, total recoverable	MO AVG	.138	176%

Outfall No.	Monitoring Period End Date	Parameter	Standard	DMR Value	Over Effluent Limit
001A	03/31/2006	Iron, total recoverable	DAILY MX	.138	176%
001A	04/30/2006	Nitrogen, ammonia total (as N)	DAILY MX	.019	46%
001A	04/30/2006	Nitrogen, ammonia total (as N)	DAILY MX	.28	40%
001A	04/30/2006	Iron, total recoverable	MO AVG	.01	233%
001A	04/30/2006	Iron, total recoverable	DAILY MX	.01	233%
001A	04/30/2006	Iron, total recoverable	MO AVG	.155	210%
001A	04/30/2006	Iron, total recoverable	DAILY MX	.155	210%
001A	04/30/2006	Copper, total recoverable	MO AVG	.002	100%
001A	04/30/2006	Copper, total recoverable	DAILY MX	.002	100%
001A	04/30/2006	Copper, total recoverable	MO AVG	.044	120%
001A	04/30/2006	Copper, total recoverable	DAILY MX	.044	120%
001A	05/31/2006	Nitrogen, ammonia total (as N)	DAILY MX	.022	69%
001A	05/31/2006	Nitrogen, ammonia total (as N)	DAILY MX	.33	65%
001A	05/31/2006	Iron, total recoverable	MO AVG	.016	433%
001A	05/31/2006	Iron, total recoverable	DAILY MX	.016	433%
001A	05/31/2006	Iron, total recoverable	MO AVG	.24	380%
001A	05/31/2006	Iron, total recoverable	DAILY MX	.24	380%
001A	05/31/2006	Copper, total recoverable	MO AVG	.022	10%
001A	05/31/2006	Copper, total recoverable	DAILY MX	.022	10%
001A	06/30/2006	Nitrogen, ammonia total (as N)	DAILY MX	.024	85%
001A	06/30/2006	Nitrogen, ammonia total (as N)	DAILY MX	.36	80%
001A	06/30/2006	Iron, total recoverable	MO AVG	.006	100%
001A	06/30/2006	Iron, total recoverable	DAILY MX	.006	100%
001A	06/30/2006	Iron, total recoverable	MO AVG	.095	90%
001A	06/30/2006	Iron, total recoverable	DAILY MX	.095	90%
001A	06/30/2006	Copper, total recoverable	MO AVG	.022	10%
001A	06/30/2006	Copper, total recoverable	DAILY MX	.022	10%
001A	07/31/2006	Nitrogen, ammonia total (as N)	DAILY MX	1.5	650%
001A	07/31/2006	Iron, total recoverable	MO AVG	.011	267%
001A	07/31/2006	Iron, total recoverable	DAILY MX	.011	267%
001A	07/31/2006	Iron, total recoverable	MO AVG	.165	230%
001A	07/31/2006	Iron, total recoverable	DAILY MX	.165	230%
001A	08/31/2006	Nitrogen, ammonia total (as N)	DAILY MX	.11	746%
001A	08/31/2006	Nitrogen, ammonia total (as N)	DAILY MX	1.7	750%
001A	08/31/2006	Iron, total recoverable	MO AVG	.012	300%
001A	08/31/2006	Iron, total recoverable	DAILY MX	.012	300%
001A	08/31/2006	Iron, total recoverable	MO AVG	.183	266%
001A	08/31/2006	Iron, total recoverable	DAILY MX	.183	266%
001A	09/30/2006	Nitrogen, ammonia total (as N)	DAILY MX	.094	623%
001A	09/30/2006	Nitrogen, ammonia total (as N)	DAILY MX	1.4	600%
001A	09/30/2006	Iron, total recoverable	MO AVG	.019	533%
001A	09/30/2006	Iron, total recoverable	DAILY MX	.019	533%
001A	09/30/2006	Iron, total recoverable	MO AVG	.292	484%
001A	09/30/2006	Iron, total recoverable	DAILY MX	.292	484%
001A	10/31/2006	Nitrogen, ammonia total (as N)	DAILY MX	.112	762%

Outfall No.	Monitoring Period End Date	Parameter	Standard	DMR Value	Over Effluent Limit
001A	10/31/2006	Nitrogen, ammonia total (as N)	DAILY MX	1.66	730%
001A	11/30/2006	Nitrogen, ammonia total (as N)	DAILY MX	.109	738%
001A	11/30/2006	Nitrogen, ammonia total (as N)	DAILY MX	1.62	710%
001A	12/31/2006	Solids, total suspended	MO AVG	2.42	20%
001A	12/31/2006	Solids, total suspended	MO AVG	36.1	20%
001A	12/31/2006	Nitrogen, ammonia total (as N)	DAILY MX	.107	723%
001A	12/31/2006	Nitrogen, ammonia total (as N)	DAILY MX	1.59	695%
001A	12/31/2006	Iron, total recoverable	MO AVG	.053	1,667%
001A	12/31/2006	Iron, total recoverable	DAILY MX	.053	1,667%
001A	12/31/2006	Iron, total recoverable	MO AVG	.792	1,484%
001A	12/31/2006	Iron, total recoverable	DAILY MX	.792	1,484%
001A	01/31/2007	Nitrogen, ammonia total (as N)	DAILY MX	.07	438%
001A	01/31/2007	Nitrogen, ammonia total (as N)	DAILY MX	1.05	425%
001A	01/31/2007	Iron, total recoverable	MO AVG	.06	1,900%
001A	01/31/2007	Iron, total recoverable	DAILY MX	.06	1,900%
001A	01/31/2007	Iron, total recoverable	MO AVG	.877	1,654%
001A	01/31/2007	Iron, total recoverable	DAILY MX	.877	1,654%
001A	02/28/2007	Nitrogen, ammonia total (as N)	DAILY MX	.094	623%
001A	02/28/2007	Nitrogen, ammonia total (as N)	DAILY MX	1.39	595%
001A	02/28/2007	Iron, total recoverable	MO AVG	.04	1,233%
001A	02/28/2007	Iron, total recoverable	DAILY MX	.04	1,233%
001A	02/28/2007	Iron, total recoverable	MO AVG	.602	1,104%
001A	02/28/2007	Iron, total recoverable	DAILY MX	.602	1,104%
001A	02/28/2007	Copper, total recoverable	MO AVG	.008	700%
001A	02/28/2007	Copper, total recoverable	DAILY MX	.008	700%
001A	02/28/2007	Copper, total recoverable	MO AVG	.118	490%
001A	02/28/2007	Copper, total recoverable	DAILY MX	.118	490%
001A	03/31/2007	Nitrogen, ammonia total (as N)	DAILY MX	.1	669%
001A	03/31/2007	Nitrogen, ammonia total (as N)	DAILY MX	1.49	645%
001A	03/31/2007	Iron, total recoverable	MO AVG	.166	5,433%
001A	03/31/2007	Iron, total recoverable	DAILY MX	.166	5,433%
001A	03/31/2007	Iron, total recoverable	MO AVG	2.47	4,840%
001A	03/31/2007	Iron, total recoverable	DAILY MX	2.47	4,840%
001A	03/31/2007	Copper, total recoverable	MO AVG	.025	25%
001A	03/31/2007	Copper, total recoverable	DAILY MX	.025	25%
001A	04/30/2007	Nitrogen, ammonia total (as N)	DAILY MX	.14	977%
001A	04/30/2007	Nitrogen, ammonia total (as N)	DAILY MX	2.08	940%
001A	05/31/2007	Nitrogen, ammonia total (as N)	DAILY MX	.044	238%
001A	05/31/2007	Nitrogen, ammonia total (as N)	DAILY MX	.633	217%
001A	06/30/2007	Nitrogen, ammonia total (as N)	DAILY MX	4.428	33,962%
001A	06/30/2007	Nitrogen, ammonia total (as N)	DAILY MX	1.17	485%
001A	06/30/2007	Iron, total recoverable	MO AVG	.01	233%
001A	06/30/2007	Iron, total recoverable	DAILY MX	.01	233%
001A	06/30/2007	Iron, total recoverable	MO AVG	.156	212%
001A	06/30/2007	Iron, total recoverable	DAILY MX	.156	212%

Outfall No.	Monitoring Period End Date	Parameter	Standard	DMR Value	Over Effluent Limit
001A	07/31/2007	Iron, total recoverable	MO AVG	.008	167%
001A	07/31/2007	Iron, total recoverable	DAILY MX	.008	167%
001A	07/31/2007	Iron, total recoverable	MO AVG	.127	154%
001A	07/31/2007	Iron, total recoverable	DAILY MX	.127	154%
001A	07/31/2007	Copper, total recoverable	MO AVG	.003	200%
001A	07/31/2007	Copper, total recoverable	DAILY MX	.003	200%
001A	07/31/2007	Copper, total recoverable	MO AVG	.052	160%
001A	07/31/2007	Copper, total recoverable	DAILY MX	.052	160%
001A	09/30/2007	Nitrogen, ammonia total (as N)	DAILY MX	.03	131%
001A	09/30/2007	Nitrogen, ammonia total (as N)	DAILY MX	.446	123%
001A	09/30/2007	Iron, total recoverable	MO AVG	.053	6%
001A	09/30/2007	Iron, total recoverable	DAILY MX	.053	6%
001A	09/30/2007	Copper, total recoverable	MO AVG	.003	200%
001A	09/30/2007	Copper, total recoverable	DAILY MX	.003	200%
001A	09/30/2007	Copper, total recoverable	MO AVG	.046	130%
001A	09/30/2007	Copper, total recoverable	DAILY MX	.046	130%
001A	10/31/2007	Nitrogen, ammonia total (as N)	DAILY MX	.073	462%
001A	10/31/2007	Nitrogen, ammonia total (as N)	DAILY MX	1.09	445%
001A	11/30/2007	Nitrogen, ammonia total (as N)	DAILY MX	.16	1,131%
001A	11/30/2007	Nitrogen, ammonia total (as N)	DAILY MX	2.41	1,105%
001A	11/30/2007	Iron, total recoverable	MO AVG	.16	5,233%
001A	11/30/2007	Iron, total recoverable	DAILY MX	.16	5,233%
001A	11/30/2007	Iron, total recoverable	MO AVG	2.41	4,720%
001A	11/30/2007	Iron, total recoverable	DAILY MX	2.41	4,720%
001A	11/30/2007	Copper, total recoverable	MO AVG	.005	400%
001A	11/30/2007	Copper, total recoverable	DAILY MX	.005	400%
001A	11/30/2007	Copper, total recoverable	MO AVG	.078	290%
001A	11/30/2007	Copper, total recoverable	DAILY MX	.078	290%
001A	12/31/2007	Nitrogen, ammonia total (as N)	DAILY MX	.12	823%
001A	12/31/2007	Nitrogen, ammonia total (as N)	DAILY MX	1.83	815%
001A	12/31/2007	Iron, total recoverable	MO AVG	.013	333%
001A	12/31/2007	Iron, total recoverable	DAILY MX	.013	333%
001A	12/31/2007	Iron, total recoverable	MO AVG	.204	308%
001A	12/31/2007	Iron, total recoverable	DAILY MX	.204	308%
001A	01/31/2008	Nitrogen, ammonia total (as N)	DAILY MX	.037	185%
001A	01/31/2008	Nitrogen, ammonia total (as N)	DAILY MX	.559	180%
001A	02/29/2008	Nitrogen, ammonia total (as N)	DAILY MX	.094	623%
001A	02/29/2008	Nitrogen, ammonia total (as N)	DAILY MX	1.41	605%
001A	02/29/2008	Iron, total recoverable	MO AVG	.052	4%
001A	02/29/2008	Iron, total recoverable	DAILY MX	.052	4%
001A	02/29/2008	Copper, total recoverable	MO AVG	.042	4,100%
001A	02/29/2008	Copper, total recoverable	DAILY MX	.042	4,100%
001A	02/29/2008	Copper, total recoverable	MO AVG	.626	3,030%
001A	02/29/2008	Copper, total recoverable	DAILY MX	.626	3,030%
001A	06/30/2008	Iron, total recoverable	MO AVG	.058	1,833%

Outfall No.	Monitoring Period End Date	Parameter	Standard	DMR Value	Over Effluent Limit
001A	06/30/2008	Iron, total recoverable	DAILY MX	.058	1,833%
001A	06/30/2008	Iron, total recoverable	MO AVG	.868	1,636%
001A	06/30/2008	Iron, total recoverable	DAILY MX	.868	1,636%
001A	07/31/2008	Nitrogen, ammonia total (as N)	DAILY MX	.022	69%
001A	07/31/2008	Nitrogen, ammonia total (as N)	DAILY MX	.335	68%
001A	07/31/2008	Iron, total recoverable	MO AVG	.097	3,133%
001A	07/31/2008	Iron, total recoverable	DAILY MX	.097	3,133%
001A	07/31/2008	Iron, total recoverable	MO AVG	1.45	2,800%
001A	07/31/2008	Iron, total recoverable	DAILY MX	1.45	2,800%
001A	07/31/2008	Copper, total recoverable	MO AVG	.023	15%
001A	07/31/2008	Copper, total recoverable	DAILY MX	.023	15%
001A	08/31/2008	Iron, total recoverable	MO AVG	.077	2,467%
001A	08/31/2008	Iron, total recoverable	DAILY MX	.077	2,467%
001A	08/31/2008	Iron, total recoverable	MO AVG	1.15	2,200%
001A	08/31/2008	Iron, total recoverable	DAILY MX	1.15	2,200%
001A	02/28/2009	Nitrogen, ammonia total (as N)	DAILY MX	.025	92%
001A	02/28/2009	Nitrogen, ammonia total (as N)	DAILY MX	.38	90%
001A	03/31/2009	Copper, total recoverable	MO AVG	.003	200%
001A	03/31/2009	Copper, total recoverable	DAILY MX	.003	200%
001A	05/31/2009	Iron, total recoverable	MO AVG	.0045	50%
001A	05/31/2009	Iron, total recoverable	DAILY MX	.0045	50%
001A	05/31/2009	Iron, total recoverable	MO AVG	.0725	45%
001A	05/31/2009	Iron, total recoverable	DAILY MX	.0725	45%
001A	07/31/2009	Copper, total recoverable	MO AVG	.026	30%
001A	07/31/2009	Copper, total recoverable	DAILY MX	.026	30%
001A	09/30/2009	Iron, total recoverable	MO AVG	.012	300%
001A	09/30/2009	Iron, total recoverable	DAILY MX	.012	300%
001A	09/30/2009	Iron, total recoverable	MO AVG	.191	282%
001A	09/30/2009	Iron, total recoverable	DAILY MX	.191	282%
001A	11/30/2009	Copper, total recoverable	MO AVG	.021	5%
001A	11/30/2009	Copper, total recoverable	DAILY MX	.021	5%
001A	12/31/2009	Copper, total recoverable	MO AVG	.002	100%
001A	12/31/2009	Copper, total recoverable	DAILY MX	.002	100%
001A	12/31/2009	Copper, total recoverable	MO AVG	.036	80%
001A	12/31/2009	Copper, total recoverable	DAILY MX	.036	80%
001A	02/28/2010	Iron, total recoverable	MO AVG	.054	8%
001A	02/28/2010	Iron, total recoverable	DAILY MX	.054	8%
001A	02/28/2010	Copper, total recoverable	MO AVG	.006	500%
001A	02/28/2010	Copper, total recoverable	DAILY MX	.006	500%
001A	02/28/2010	Copper, total recoverable	MO AVG	.1	400%
001A	02/28/2010	Copper, total recoverable	DAILY MX	.1	400%
001A	03/31/2010	Nitrogen, ammonia total (as N)	DAILY MX	.07	438%
001A	03/31/2010	Nitrogen, ammonia total (as N)	DAILY MX	1.05	425%
001A	03/31/2010	Iron, total recoverable	MO AVG	.004	33%
001A	03/31/2010	Iron, total recoverable	DAILY MX	.004	33%

Outfall No.	Monitoring Period End Date	Parameter	Standard	DMR Value	Over Effluent Limit
001A	03/31/2010	Iron, total recoverable	MO AVG	.063	26%
001A	03/31/2010	Iron, total recoverable	DAILY MX	.063	26%
001A	05/31/2010	Iron, total recoverable	MO AVG	.004	33%
001A	05/31/2010	Iron, total recoverable	DAILY MX	.004	33%
001A	05/31/2010	Iron, total recoverable	MO AVG	.067	34%
001A	05/31/2010	Iron, total recoverable	DAILY MX	.067	34%
001A	06/30/2010	Nitrogen, ammonia total (as N)	DAILY MX	.019	46%
001A	06/30/2010	Nitrogen, ammonia total (as N)	DAILY MX	.296	48%
001A	06/30/2010	Iron, total recoverable	MO AVG	.005	67%
001A	06/30/2010	Iron, total recoverable	DAILY MX	.005	67%
001A	06/30/2010	Iron, total recoverable	MO AVG	.081	62%
001A	06/30/2010	Iron, total recoverable	DAILY MX	.081	62%

EPA Region IX, Guam
NPDES Compliance Evaluation Inspection (CEI)

Name and Location of Facility Inspected **Facility Name:** Tanguisson Power Plant **Address:** Tanguisson Point **City, State, ZIP:** Municipality of Dededo, 96929	**Entry Date** 03/10/10 **Entry Time** 1:30 PM	**Permit Effective Date** 01/30/2001
NPDES Permit Number: GU0000027 ☒ **Major** ☐ **Minor**		**Permit Expiration Date** 01/30/2006 Administratively Extended
Name(s) & Title(s) of On-Site Representative(s) Mike Alvarez (Plant Manager) Mike Cruz (Environmental Specialist)	**Contact Information:** Phone: (671) 648-3217 Fax:	**Notified of Inspection?** ☒ **Yes** ☐ **No**
Name, Title & Address of Responsible Official Sylvia Ipanag (GPA Engineering Supervisor) Guam Power Authority 1911 Route 16 Harmon, GU 96913	**Contact Information:** Phone: (671) 648-3217 Fax:	**Official Contacted?** ☒ **Yes** ☐ **No**
Inspector(s) **Primary:** Dan Connally (PG Environmental, LLC) **Other(s):** Maricar Quezon (GEPA)		**Presented Credentials?** ☒ **Yes** ☐ **No**
Weather Conditions at the Time of the Inspection: Sunny, no recent precipitation	**Facility Receiving Water Name:** Philippine Sea	
Prepared By: Dan Connally (PG Environmental, LLC) on 3/14/2010 Reviewed By: Max Kuker (PG Environmental, LLC) on 5/13/2010		

On 3/10/2010, a USEPA contractor inspected the Tanguisson Power Plant, located between Dos Amantes Point and Tanguisson Point on the northwest corner of Guam. Discharges from the facility are regulated by NPDES Permit No. GU0000027. The primary purpose of the inspection was to evaluate compliance with the Discharger's NPDES permit. The primary on-site facility representative was Mike Alvarez (Plant Manager, Pruvient Energy Guam, Inc.). The weather at the time of the inspection was sunny, with no signs of recent precipitation.

Introduction

The Tanguisson Power Plant, owned by Guam Power Authority (GPA) (hereinafter Discharger) and operated by Pruvient Energy Guam, Inc., consists of two steam electric generating units with a total rated output of 53 megawatts (MW) of electricity (26.5 MW each).

The two generating units share a common intake structure that is located on the shoreline just northwest of the Facility and draws water from the Philippine Sea

NPDES Permit No. GU0000027 regulates the discharge of non-contact cooling water from generating Units 1 and 2 through Outfall Serial No. 001; low volume wastes (reverse osmosis brine, floor drainage, blowdown drainage, boiler wash water, metal cleaning wastes, and other municipal wastewaters) from Outfall Serial No. 001A; and traveling screen washwater from Outfall Serial No. 001B. Outfall Serial Nos. 001, 001A, and 001B all discharge to the Philippine Sea. The discharge of storm water is not permitted under GU0000027.

Facility Description

The Discharger operates two generating units at the Facility. Units 1 and 2 are steam electric generating units with a generating capacity of 26.5 MW each. Unit 1 was built in 1969 and commissioned in 1971, and Unit 2 was built in 1971 and commissioned in 1973.

Units 1 and 2 share a common intake structure on the shoreline of the Philippine Sea. Cooling water for Units 1 and 2 is provided by four pumps (two per unit; however, only one pump is operated at a time for each unit). Each pump has a rated pumping capacity of 17,500 gallons per minute (gpm) (for a total of up to 25.2 million gallons per day (mgd) per pump). The Discharger stated that the intake structure's design capacity is 34,000 gpm (48.96 mgd). The permit references an average daily flow of 97.92 mgd; however, based upon review of recent discharge monitoring reports (DMRs) the average monthly intake flow appears to be between 25 and 65 mgd. Further, the Discharger stated that the intake was developed with a low intake velocity of 0.93 feet per second. However, the Facility's 2005 316(b) Phase I study, conducted by the University of Guam, states *"The channel area in front of the Cooling Water Intake Structure and the Intake was dredged twice during*

the course of this study… A noticeable increase in the velocity of the intake flow was observed by the authors after dredging had occurred."

Water entering the intake structure first passes through bar racks. The bar racks were below the water line and could not be observed; however, a design drawing provided by the Discharger indicated that the bar racks have a height of 7' 4" and a width of 6' 6". The bar rack assemblies are constructed of 3/8" bar stock placed 5.577" apart. Behind each bar screen is a traveling water screen with 3/8" mesh screens.

The traveling water screens are equipped with a high pressure seawater wash system; however, this wash system is not used by the Discharger. Due to sand infiltration into Outfall Serial No. 001B that effectively clogs the discharge location for the traveling water screen wash water unless frequently cleaned, the Discharger elects to manually hand clean the screens (simply removing debris on the screen by hand). [proposed revision to previous sentence, if accurate: Due to sand infiltration, traveling water screen wash water cannot be discharged from Outfall Serial No. 001B and the screens are manually cleaned.] The Discharger is permitted to discharge up to 0.004 mgd of traveling screen wash water through Outfall Serial No. 001B.

Intake water for Units 1 and 2 is pumped to condensers where it is used to condense the steam exhausted from the turbine back to condensate. Some non-contact cooling water is also used for auxiliary Facility equipment. These processes are non-contact, which should result in only additional heat added to the final non-contact cooling water discharge. The Discharger reports that additives are not added to the non-contact cooling water.

Units 1 and 2 discharge the non-contact cooling water through Outfall Serial No. 001back to the Philippine Sea, adjacent to the intake location.

The Discharger also discharges reverse osmosis reject water, water treatment area and chemical floor drain water, blowdown drainage, boiler wash water, and additional miscellaneous low volume wastewaters through Outfall Serial No. 001A. A treatment system for these low volume wastes is available on-site; however, it is only used when the Discharger suspects the discharge may contain metals (i.e., boiler wash water). Standard operating procedures have not been established by the Discharger when the treatment system shall be used, however the Facility representative stated that the treatment system is operated when wastewaters that are likely to contain metals, such as boiler wash water, are discharged. The permit references an average daily discharge of 0.0178 mgd of low volume wastes through Outfall Serial No. 001A, although does not establish a flow limitation.

The on-site low volume treatment system consists of a settling basin with HCl acid injection, filters (50 micron, 100, micron, 5 micron), and a pH adjustment tank (caustic additive). The Discharger also claims that the treatment system has an

oil/water separator; however, the inspector could not verify the statement based on the structure observed on-site as it did not appear to have a top baffle that would separate oil on the surface of the water.

The Discharge of storm water from the Facility is not permitted under GU0000027. The Facility representative stated that storm water naturally infiltrates into the ground and is not discharged to surface water.

Monitoring

Effluent monitoring requirements are specified in Parts 1, 2, and 3 of NPDES Permit No. GU0000027. Toxicity monitoring requirements are specified in Part 5 of the Permit for the combined effluent.

Effluent sample collection is conducted by the Facility operations staff. Receiving water sampling is performed by the University of Guam. Effluent sample analysis for pH and temperature is performed on-site; however, chain of custodies (COCs) and sampling records for the collection and analysis of pH were not available for review. Temperature monitoring is performed using a temperature probe. Sample analysis for all other parameters is performed off-site at a contract laboratory (AECOS, Inc., 45-939 Kamehameha Hwy, Suite 104, Kaneohe, Oahu, HI 96744).

The effluent monitoring location for Outfall Serial No. 001 is taken approximately 50 feet from the outfall in the receiving water. At this location, the effluent has mixed with effluent from Outfall Serial No. 001A, although the flow from Outfall Serial No. 001A makes up only a small fraction (~0.07[1] percent) of the commingled effluent. It was not clear to the inspector to what extent the contributed flow from Outfall Serial No. 001A affects the monitoring results for Outfall Serial No. 001. It appears the monitoring location could be moved closer to Outfall Serial No. 001 to prevent any commingled effluent from Outfall Serial No. 001A from being included in the sample.

The monitoring location for Outfall Serial No. 001A is located directly at the end of pipe, prior to discharge into the receiving water and appears to be representative of the discharge.

The Discharger is required to conduct continuous “measurement” of the effluent flow from Serial Outfall Nos. 001, 001A, and 001B. Flow metering devices were not in place to continuously monitor effluent flow for any of the three outfalls. Effluent flow through Outfall Serial No. 001 is calculated based on pump run times and pump capacity. Effluent flow through Outfall Serial No. 001A is regularly estimated monthly to be 0.0178 mgd, although this value appears to be based on the treatment capacity and not on actual daily measurements (i.e., flow meters). Since Outfall Serial No. 001B is not used by the Discharger, flow monitoring is not conducted at this location.

[1] Calculated based on a conservative estimate of the average daily cooling water effluent volume (25 mgd) and the maximum daily low volume waste volume (0.0178 mgd).

Multiple potential issues were identified regarding the Discharger's monitoring procedures and are identified in the 'Major Findings' portion of this report.

Records and Reports

As part of the inspection, records, plans, reports, and documentation specifically required by the NPDES permit or Standard Provisions were viewed on-site or shortly following the inspection. The on-site review was not a thorough review of each record, plan, or report, and it's inclusion in the following list as being reviewed does not indicate complete adequacy and acceptance by the permitting agency. The records review is conducted to identify issues with record keeping, verify proper monitoring and reporting practices, identify required reports that have not been completed as specified in the NPDES permit, identify recent effluent limitation exceedances, and identify any other major compliance issues that may become apparent through quick on-site reviews. Records, plans, reports, and documentation requested on the date of the inspection include:

- Copy of the current NPDES permit;
- 12 months of discharge monitoring reports (for the year 2009) with COCs and lab bench sheets;
- Best Management Practices (BMP) Plan (with employee training records and inspection logs);
- Spill Prevention Control and Countermeasure (SPCC) Plan (active plan was dated March 2006);
- Initial Investigation Toxicity Reduction Evaluation (TRE) Workplan;
- On-site spill records for last year (no recent spills);
- Latest annual summary of chemical additives;
- 316(b) Phase I Screening Analysis (dated March 2005)
- Progress report for fluoride (Part 3 of NPDES Permit No. GU0000027);
- pH calibration records;
- Pump run times used for the calculation of flow from Outfall Serial No. 001; and a
- Site diagram.

Not all of the requested documents were available for review. These findings are summarized in the 'Major Findings' portion of this report.

Discharge monitoring reports (DMRs) for Calendar Year 2009 were reviewed as a component of this inspection. The review included a comparison of reported monitoring results versus requirements and limitations contained within the permit. Permit limit exceedances were identified. The DMR evaluation also included a spot check comparison of data points reported in the DMR submitted to USEPA against the laboratory bench sheets documenting the actual analytical results. Inconsistencies were identified and are summarized in the 'Major Findings' portion of this report.

Site Review

A site review was conducted during the inspection. Site reviews are conducted to identify the following:

- Process/production modifications that may be pertinent to the NPDES permit;
- Treatment and collection systems to ensure they are properly maintained and in good operational order;
- Discharge locations, monitoring locations, waste streams, and on-site operations that are inconsistent with the NPDES permit, or irregularities that may be pertinent to the NPDES permit;
- Monitoring locations and methods to ensure they are representative of influent and effluent streams;
- General housekeeping procedures to ensure that they are adequate to prevent/reduce the release of pollutants to the environment (i.e., proper implementation of a BMP Plan);
- Major on-site safety concerns that may interfere with the proper operation and maintenance of the Facility; and
- Any additional information that may be pertinent for determining compliance with NPDES permit requirements or may be pertinent for future NPDES permit renewals.

Three above ground storage tanks are located on-site, consisting of two 420,000 gallon fuel tanks, and one 9,450 gallon diesel tank.

Secondary containment appeared to be utilized where appropriate, and general housekeeping appeared to be adequate with a couple exceptions. Two broken bags of sandblasting grit were observed on-site, with the grit spilling onto the ground. In addition, used tires were observed stored on-site adjacent to a storage shed. Because the Discharger does not discharge storm water to a receiving water, neither of these findings are included as 'Major Findings'.

A ground water remediation project was observed on-site; however, the project was outside the scope of the inspection and was therefore not reviewed.

Major Findings

1) Part 1 and Part 2 of NPDES Permit No. GU0000027, require the Discharger to conduct continuous monitoring of the effluent flow from Outfall Serial Nos. 001, 001A, and 001B.

   No flow measurement devices appeared to be located on Outfall Serial Nos. 001, 001A, and 001B to continuously monitor effluent flow. However, the Discharger does appear to calculate effluent flow through Outfall Serial No. 001 based on pump run times and pump capacity.

Although effluent flow through Outfall Serial No. 001A is not monitored, and the Discharger reports the same effluent flow on their DMRs for each month without taking actual measurements.

Outfall Serial No. 001B is not equipped with a flow meter. In the event that flow is discharged through Outfall Serial No. 001B, it is unclear to the inspector how the Discharger would determine effluent flow.

2) Parts 1, 2, and 3 of NPDES Permit No. GU0000027 established effluent limitations and monitoring requirements for Outfall Serial Nos. 001, 001A, and 001B. The following inconsistencies with Parts 1, 2, and 3 of the Permit were identified:

   a. Part 1 of NPDES Permit No. GU0000027 establishes flow monitoring and reporting for Outfall Serial No. 001.

      A review of the Discharger's September 2009 DMR indicates that the Discharger had a monthly average flow of 65.64 mgd and a daily maximum of 34.68 mgd. The reported monthly average flow is greater than the reported daily maximum flow, indicating that the Discharger has either calculated their flows incorrectly reversed the two values on the DMR.

   b. Part 1 of NPDES Permit No. GU0000027 established pH monitoring and reporting for pH. The Discharger reported a maximum pH value at Outfall Serial No. 001 of 8.73 s.u in their January 2009 DMR. A review of the available pH data indicates that the actual maximum pH value for January 2009 was 8.71. The reported maximum pH value does not appear representative of the actual data.

   c. Part 1 of NPDES Permit No. GU0000027 established pH monitoring and reporting requirements for pH at Outfall Serial No. 001. In January 2009, the Discharger did not fill out the minimum pH value on the DMR.

   d. Part 1 of NPDES Permit No. GU0000027 requires the Discharger to monitor influent temperature. The Discharger did not report influent temperature for February through December 2009 on their DMRs.

   e. Part 1 of NPDES Permit No. GU0000027 established a daily maximum effluent limitation for total ammonia nitrogen of 74.2 kg/day at Outfall Serial No. 001. The Discharger reported a daily maximum effluent value of 118.2 kg/day for nitrogen in September 2009, exceeding the effluent limitation. The Discharger reported a daily maximum effluent value of 460 kg/day in December 2009, exceeding the effluent limitation.

f. Part 2 of NPDES Permit No. GU0000027 established effluent limitations for total ammonia nitrogen. In January 2009, the Discharger reported a daily maximum effluent result for Outfall Serial No. 001A of 0.380 mg/L for total ammonia nitrogen. The reported value exceeds the effluent limitation of 0.2 mg/L for total ammonia nitrogen, established in Part 2 of NPDES Permit No. GU0000027.

   In January 2009, the Discharger reported a daily maximum effluent result for Outfall Serial No. 001A of 0.025 kg/day for total ammonia nitrogen. The reported value exceeds the effluent limitation of 0.013 kg/day for total ammonia nitrogen, established in Part 2 of NPDES Permit No. GU0000027.

g. Part 2 of NPDES Permit No. GU0000027 established daily maximum and average monthly effluent limitations at Outfall Serial No. 001A for iron of 0.05 mg/L and 0.003 kg/day, respectively. The Discharger reported a daily maximum and monthly average of 0.072 mg/L in May 2009 and a daily maximum and monthly average of 0.004 kg/day for the same time frame in May 2009 (for a total of four effluent limitation exceedances). It should be noted that the daily maximum and monthly average effluent limitation are the same value resulting in two effluent limitation exceedances for each single exceedance of the value. The reported values on the DMRs were identified as J-flags (detected, but not quantifiable).

h. Part 2 of NPDES Permit No. GU0000027 established daily maximum and average monthly effluent limitations at Outfall Serial No. 001A for copper of 0.02 mg/L. The Discharger reported a daily maximum and monthly average of 0.026 mg/L in July 2009 resulting in two effluent limitation exceedances. The reported values on the DMRs were identified as J-flags. In addition, the Discharger reported a daily maximum and monthly average of 0.036 mg/L for December 2009, resulting in two effluent limitation exceedances. It should be noted that the daily maximum and monthly average effluent limitation are the same value resulting in two effluent limitation exceedances for each single exceedance of the value.

i. Part 5 of NPDES Permit No. GU0000027 requires the Discharger to conduct quarterly monitoring of the combined effluent of Outfall Serial Nos. 001 and 001A for toxicity. A review of January through December 2009 DMRs indicates that the Discharger did not report toxicity results on the DMRs as required during 2009. It is unclear to the inspector if toxicity results were submitted separately from the DMRs; however no documentation of a separate submittal were provided.

3) Part 1 and 2 of NPDES Permit No. GU0000027 established separate monitoring requirements for Outfall Serial Nos. 001 and 001A.

The location for monitoring Outfall Serial No. 001 appears to include commingled flow from Outfall Serial No. 001A. It is uncertain to what extent this additional flow affects the monitoring results for Outfall Serial No. 001; however, the Discharger is able to monitor closer to the outfall to prevent flow from Outfall Serial No. 001A from commingling with samples collected for Outfall Serial No. 001. It should be noted that the current monitoring location appears to be appropriate for toxicity monitoring as the monitoring requirements for toxicity are for the commingled 001 and 001A effluents.

4) Part 5.c of NPDES Permit No. GU0000027 requires the Discharger to provide a Toxicity Reduction Evaluation Workplan (TRE) Work Plan within 90 days of the effective date of the permit.

   A copy of the TRE Workplan, or evidence that the workplan was provided within 90 days of the effective date of the permit, were not available for review.

5) Standard Provisions to NPDES Permit No. GU0000027 require the Discharger to maintain records of monitoring information, including the date and time of sampling or measurements, and the results of such analyses.

   The Discharger was unable to provide supporting field data (i.e., time or date of sample collection or analysis) or calibration records for the effluent pH values reported on the 2009 DMRs.

6) Part 9 of NPDES Permit No. GU0000027 requires the Discharger to maintain a storm water BMP Plan.

   a. Part 9.a of the Permit requires the BMP Plan to identify a pollution prevention committee. The pollution prevention committee was not reflective of the current personnel at the Facility and needed to be updated.

   b. Part 9.f of the Permit requires the Discharger to include employee training as part of the BMP Plan. Part 3.2 of the Discharger's BMP plan required semi-annual training; however, employee training records were not available for review.

   c. Part 9.g of the Permit requires the Discharger to include weekly visual inspections of the Facility as part of the BMP Plan. Part 4.2 of the Discharger's BMP Plan establishes weekly inspections; however, records of the weekly inspections were not available for review.

Photo 1: Overview of the Tanguisson Power Plant from Google Maps.

Photo 2: Overview of the Tanguisson Power Plant from Google Maps, with intake canal, outfall canal, and Units 1 and 2 identified.

Photo 3: Intake structure, located below water level. Note blue intake pumps in the background.

Photo 4: Intake canal, leading to intake structure, which is located below water level.

Photo 5: Outfall Serial No. 001.

Photo 6: Outfall Serial No. 001A, located adjacent to Outfall Serial No. 001.

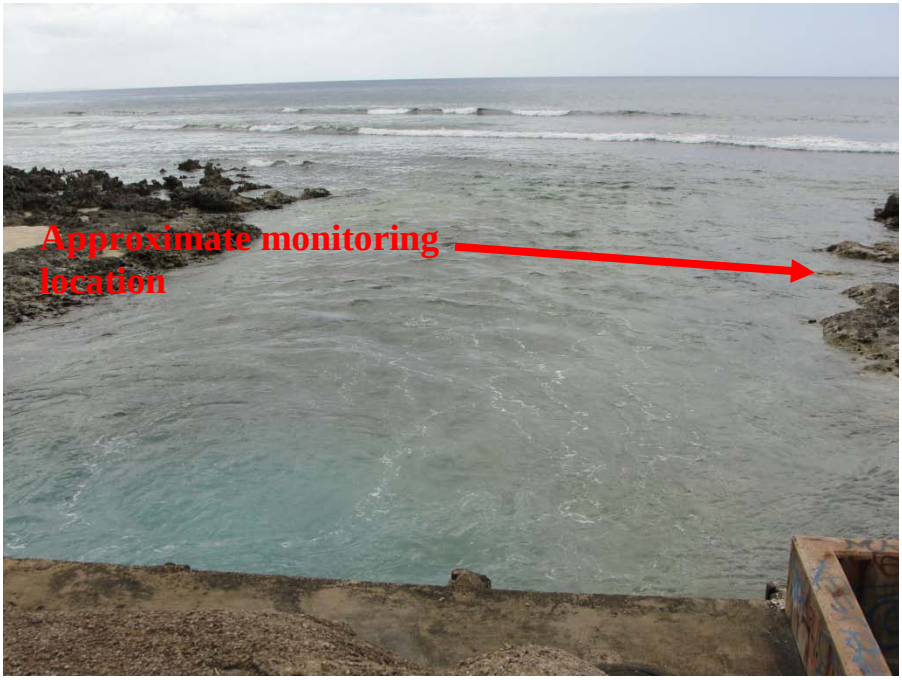

Photo 7: Overview of the discharge canal for Outfall Serial No. 001 and 001A. Effluent monitoring for Outfall Serial No. 001 is taken at the point indicated above, which includes commingled effluent from Outfall Serial No. 001A.

Photo 8: Outfall Serial No. 001B. Note that the outfall is clogged with sand and is not being utilized.

Photo 9: Low volume waste treatment system.

Photo 10: Low volume waste final pH adjustment basin. Effluent flows through the openings on the left, down a channel, and is then discharged out through Outfall Serial No. 001A.

Photo 11: Material storage within secondary containment.

Photo 12: Spilled sandblasting grit was observed on the ground during the inspection.

Photo 13: On-site ground water remediation project. Unrelated to NPDES Permit No. GU0000027.

Photo 14: Secondary containment for above ground storage tanks.

EXISTING UNIT 1 | UNIT 2

EXISTING UNIT 1 | UNIT 2

SECTION 14 — SCALE 3/8"=1'-0"

SECTION 4 — SCALE: 3/8"=1'-0"

SECTION 17 — SCALE: 3/4"=1'-0"

SECTION 3 — SCALE: 3/8"=1'-0"

SECTION 7 — SCALE 3/8"=1'-0"

TYPICAL SHEAR KEY

TYPICAL CORNER-VERTICAL UP

TYPICAL CORNER-VERTICAL DOWN

SECTION 11 — SCALE: 1 1/2"=1'-0"

DETAIL D — SCALE: 1 1/2"=1'-0"

DETAIL C — SCALE: 1 1/2"=1'-0"

TYPICAL CORNER-HORIZ.

SECTION 10 — SCALE: 1 1/2"=1'-0"

SECTION 20 — NOT TO SCALE

TYPICAL HORIZ. TEE"

PARTIAL PLAN - CHLORINATION FACILITY - EL. 16'-0"
SCALE 3/8"=1'-0"

TRASH RACK
SCALE: 3/8"=1'-0"

SECTION 16 — SCALE: 3/8"=1'-0"

SECTION 1 — SCALE: 3/8"=1'-0"

DETAIL 6 — NO SCALE

SECTION 21 — NO SCALE

SECTION 22 — SCALE: 3/8"=1'-0"

C.W. PUMP HOUSING SUPPORT GUIDE (6 REQUIRED)

DETAIL 12 — SCALE 1 1/2"=1'-0"

SECTION 13 — SCALE 1 1/2"=1'-0"

SECTION 5 — SCALE: 3/8"=1'-0"

RECORD DRAWING

SYM		PREP'D BY	DATE	APPROVED
3	REVISED TO SHOW AS-BUILT CONDITIONS	GFP	8-10-73	
2	ADDED 10"x10" BOXOUT	GFP	2-1-72	

REVISIONS

BLACK & VEATCH
KANSAS CITY, MISSOURI
ARCHITECTS — ENGINEERS

DES GFP | DR DFW | CHK GFP
DEPT. HEAD CLM | PROJ. ENGR.
SUBMITTED BY — DATE 12/14/67
R. D. WOODSON - PARTNER
OICC
MGR
SATISFACTORY TO — DATE
COMMANDING OFFICER USN PWC GUAM
APPROVED FOR COMMAND — DATE 4/27/70
OIC FOR COMMANDER NAVFAC

DEPARTMENT OF THE NAVY — NAVAL FACILITIES ENGINEERING COMMAND
OFFICER IN CHARGE OF CONSTRUCTION
NAVAL FACILITIES ENGINEERING COMMAND CONTRACTS, MARIANAS
GUAM, M. I.

TANGUISSON POINT STEAM POWER PLANT UNIT NO. 2

INTAKE STRUCTURE SECTIONS AND DETAILS

SIZE	CODE IDENT NO.	NAVFAC DRAWING NO.
F	80091	1102213
SCALE AS NOTED	SPEC 41-69-0129	SHEET 14 OF 175

CONSTR CONTR NO.