AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Clean Water Act, as amended, (33 U.S.C. 1251 *et seq*., the "Act"),

Commonwealth Utilities Corporation
P.O. Box 1220
Saipan, MP 96950

is authorized to discharge treated wastewater from the Agingan Wastewater Treatment Plant through the Agingan Wastewater Treatment Plant Outfall (Discharge Serial No. 003), located off Agingan Point, Saipan, Commonwealth of the Northern Mariana Islands,

Latitude: 15° 7' 3" N
Longitude: 145° 41' 10" E

to Class A marine receiving waters named Tinian Channel of the Philippine Sea, in accordance with effluent limitations, monitoring requirements, and other conditions set forth herein, and in the attached USEPA Region 9 *Standard Federal NPDES Permit Conditions*, dated June 3, 2002.

This permit shall become effective on October 1, , 2009.

This permit and the authorization to discharge shall expire at midnight, September 30 , 2014.

Signed this _____ day of _____ , 2009.

For the Regional Administrator

---- Signed ----

_____
Alexis Strauss, Director
Water Division

TABLE OF CONTENTS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. Effluent limitations and monitoring requirements are based upon an average daily design flow of 0.13 m^3/sec (3.0 MGD). The permittee is authorized to discharge from Discharge Serial No. 003:

   a. Such discharge shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Maximum Discharge Limitations Unless Otherwise Noted						Monitoring Requirements	
	Average Monthly (lbs/day)	Average Weekly (lbs/day)	Maximum Daily (lbs/day)	Average Monthly	Average Weekly	Maximum Daily	Monitoring Frequency	Sample Type
Flow (m^3/day)	n/a [1]	n/a	n/a	[2]	[2]	[2]	Continuous	Continuous
Biochemical Oxygen Demand (5-day) [3]	751	1,126	n/a	30 mg/L	45 mg/L	n/a	3days/week	8 hr Composite
Total Suspended Solids [3]	751	1,126	n/a	30 mg/L	45 mg/L	n/a	3 days/week	8 hr Composite

1 n/a = not applicable.

2 Monitoring and reporting required. No limitation set at this time.

3 Discharge limitation is based on federal secondary treatment standards in accordance with 40 CFR 133.102. Mass emission rate limitation is calculated using an average daily design flow of 0.13 m^3/sec (3.0 MGD). Both the influent and the effluent shall be monitored. The arithmetic mean of the BOD_5 and TSS values, by concentration, for effluent samples collected over a calendar month shall not exceed 15 percent of the arithmetic mean, by concentration, for influent samples collected at approximately the same times during the same period.

Effluent Characteristic	Maximum Discharge Limitations Unless Otherwise Noted						Monitoring Requirements	
Oil and grease	[2]	n/a	[2]	[2]	n/a	[2]	Quarterly [4]	Discrete
Whole Effluent Toxicity (P) or (F) [5]		n/a		n/a	n/a	Pass [5]	Semi-Annually	24 hr Composite
Enterococci [6]		n/a		5,746 cfu/ 100mL	n/a	11,529 cfu/ 100 mL	Weekly	Discrete
Total Chlorine Residual [7]	0.30	n/a	0.30	n/a[12]	n/a	12.4 ug/L	3 days/week	Discrete
pH [8]	pH in the effluent should be with the range of 6-9 standard units						3 days/week	Discrete

[4] January - March; April - June; July - September; and October - December.

[5] See Part A.5 of this permit for explanation of requirements.

[6] Concentration limitation is based on applicable *CNMI Water Quality Standards* and 40 CFR 122.44(d).

[7] Upon initiation and throughout the duration of effluent chlorination, the permittee shall monitor total chlorine residual. Concentration limitation is based on best professional judgment, applicable CNMI water quality standards, USEPA water quality criteria, and 40 CFR 122.44(d), and is calculated in accordance with *Technical Support Document for Water Quality-based Toxics Control* (EPA/505/2-90-001, March 1991). Mass emission rate limitation is calculated using an average daily design flow of 0.13 m^3/sec (3.0 MGD). Contact time following chlorination and prior to effluent discharge shall not be less than 15 minutes.

Effluent Characteristic	Maximum Discharge Limitations Unless Otherwise Noted						Monitoring Requirements	
Nitrate-Nitrogen [9]	1,252 lbs /day	n/a	2,503 lbs /day	50 mg/L	n/a	100 mg/L	Monthly	24 hr Composite
Total Nitrogen [9]	1,878 lbs /day	n/a	3,768 lbs /day	75 mg/L	n/a	150.5 mg/L	Monthly	24 hr Composite
Orthophosphate [9]	125 lbs/day	n/a	250 lbs/day	5 mg/L	n/a	10 mg/L	Monthly	24 hr Composite
Total Phosphorous [9]	125 lbs/day	n/a	250 lbs/day	5 mg/L	n/a	10 mg/L	Monthly	24 hr Composite
Unionized Ammonia [9]	50 lbs/day	n/a	100 lbs/day	2 mg/L	n/a	4 mg/L	Monthly	24 hr Composite
Priority Toxic Pollutants (excluding asbestos) [10]	[2]	n/a	[2]	[2]	n/a	[2]	Oct 2009/ Oct 2012	[11]

8 Limitation is based on applicable *CNMI Water Quality Standards* and 40 CFR 122.44(d).

9 Concentration limitation is based on applicable *CNMI Water Quality Standards* and 40 CFR 122.44(d). Mass emission rate limitation is calculated using an average daily design flow of 0.13 m^3/sec (3.0 MGD).

10 Priority toxic pollutants (excluding asbestos) are listed in 40 CFR 131.36(b)(1). The permittee shall collect *24 hour composite samples* for metals, 2,3,7,8-TCDD (dioxin), pesticides, base-neutral extractables, and acid-extractables. The permittee shall collect *discrete samples* for cyanide, total phenolic compounds and volatile organics.

Effluent Characteristic	Maximum Discharge Limitations Unless Otherwise Noted						Monitoring Requirements	
Copper [11]	0.12	n/a	0.12	n/a[12]	n/a	4.8 ug/L	Quarterly	24 hr Composite
Lead [10]	0.33	n/a	0.33	n/a[12]	n/a	13.3 ug/L	Quarterly	24 hr Composite
Nickel [10]	0.35	n/a	0.35	n/a[12]	n/a	13.4 ug/L	Quarterly	24 hr Composite
Silver [10]	0.05	n/a	0.05	n/a[12]	n/a	1.9 ug/L	Quarterly	24 hr Composite
Zinc [10]	2.2	n/a	2.2	n/a[12]	n/a	90 ug/L	Quarterly	24 hr Composite

11 Concentration limitation is based on applicable *CNMI Water Quality Standards* and 40 CFR 122.44(d), and is calculated in accordance with *Technical Support Document for Water Quality-based Toxics Control* (EPA/505/2-90-001, March 1991). Mass emission rate limitation is calculated using an average daily design flow of 0.13 m^3/sec (3.0 MGD).

12 [illegible] 200.1 [illegible]

2. The discharge shall be free from:

   a. Materials that will settle to form objectionable sludge or bottom deposits.

   b. Floating debris, oil, grease, scum, or other floating materials.

   c. Substances in amounts sufficient to produce taste or odor in the water or detectable off flavor in the flesh of fish, or in amounts sufficient to produce objectionable odor, turbidity, or other conditions in the receiving waters.

   d. High temperatures; biocides; pathogenic organisms; toxic, corrosive, or other deleterious substances at levels or in combinations sufficient to be toxic or harmful to human health or aquatic life, or in amounts sufficient to interfere with any beneficial use of the water.

   e. Substances or conditions or combinations thereof in concentrations which produce undesirable aquatic life.

   f. Toxic pollutants in concentrations that are lethal to, or that produce detrimental physiological responses in human, plant, or animal life. Detrimental responses include, but are not limited to, decreased growth rate and decreased reproductive success of resident or indicator species and/or significant alterations in population or community ecology or receiving water biota.

3. The discharge shall not cause:

   a. The fecal coliform concentration in the receiving waters to exceed a geometric mean of 200 CFU/100 mL in not less than five samples equally spaced over a 30-day period, nor any single sample to exceed 400 CFU/100 mL at any time.

   b. The concentration of dissolved oxygen in the receiving waters to be less than 75% saturation.

   c. The concentrations of total filterable suspended solids in the receiving waters to be increased from ambient conditions at any time, or to exceed 40 mg/L except when due to natural conditions.

   d. The salinity of the receiving waters to be altered more than 10% of the ambient conditions, or more than that which would otherwise adversely affect the sedimentary patterns and indigenous biota, except when due to natural causes.

   e. The temperature of the receiving waters to vary by more than 1.0° C from ambient conditions.

f. The turbidity at any point in the receiving waters, as measured by nephelometric turbidity units (NTU), to exceed 1.0 NTU over ambient conditions except when due to natural conditions.

g. The concentration of suspended matter at any point in the receiving waters shall not be increased from ambient conditions at any time, and should not exceed 40mg/L except when due to natural conditions.

h. The health and life history characteristics of aquatic organisms in receiving waters affected by the discharge to differ substantially from those for the same receiving waters in areas unaffected by the discharge. Also, the discharge shall not cause a detrimental increase in concentrations of toxic substances found in bottom sediments or aquatic life in the receiving waters.

4. Discharge Prohibitions

a. The discharge of radioactive materials at any level to the receiving waters is strictly prohibited.

B. WHOLE EFFLUENT TOXICITY MONITORING

The permittee shall conduct semi-annual acute toxicity tests on composite effluent samples. Each year, the permittee shall conduct this routine toxicity testing at a different time of the year from the previous years. Samples shall be collected for each point of discharge at the designated NPDES sampling station for the effluent. During years, 1, 3, and 5 of the permit, a split of each sample shall be analyzed for all other monitored parameters at the minimum frequency of analysis specified by the effluent monitoring program.

1. Freshwater Species and Test Methods

The species and short-term test methods for estimating the acute toxicity of NPDES effluents are found in the fifth edition of *Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms* (EPA-821-R-02-012, October 2002; Table IA, 40 CFR Part 136) ("Acute Toxictiy TMM") Manual. The permittee shall conduct 48-hour static non-renewal toxicity tests with the freshwater amphipod *Daphnia magna* (Test Method 2021.0). Using the same effluent sample, the permittee shall also conduct toxicity tests using the freshwater amphipod *Hyalella Azteca* which is on the supplemental list of acute toxicity test species for freshwater (warm) found in Appendix B. of the Acute Toxicity TMM.

2. Acute Toxicity Effluent Limit

For this discharge, the acute toxicity effluent limit is: "No significant difference in survival in the 100% effluent concentration compared to survival in the control, at a significance level of 0.05." In accordance with Section 11.3 of the Acute Toxicity TMM, a single-concentration test result meeting this effluent limit is reported as "Pass" (or P) while a single-concentration test result not meeting this effluent limit is reported as "Fail" (of F). This permit requires immediate additional toxicity testing if the acute toxicity effluent limit is violated for both test species during a test on the same effluent sample.

3. Quality Assurance

a. Quality assurance, instructions, and other recommendations and requirements are found in the test methods manual previously referenced. Additional requirements are specified below.

b. The permittee shall attempt to ensure total holding time from collection of the last portion of the composite sample until arrival at the laboratory of not more than 36 hours. Should longer than a 36-hour holding time be anticipated, the permittee shall petition USEPA Region 9 (CED-6) for an extension of the holding time (see Section 8.5.4. of the Acute Toxicity TMM).

c. The acute instream waste concentration (IWC) for this discharge is 100% effluent. At minimum, a 100% effluent concentration and a control shall be tested. A minimum of 4 replicate chambers per concentration and 5 organisms per test chamber are required.

d. Effluent dilution water and control water should be standard synthetic dilution water, as described in the test methods manual. If the dilution water is different from test organism culture water, then a second control using culture water shall also be used.

e. If organisms are not cultured in-house, then concurrent testing with a reference toxicant shall be conducted. If organisms are cultured in-house, then monthly reference toxicant testing is sufficient. Reference toxicant tests and effluent toxicity tests shall be conducted using the same test conditions (e.g., same test duration, etc.)

f. If either the reference toxicant or effluent toxicity tests do not meet all the test acceptability criteria in the test methods manual, then the permittee must resample

and retest within 14 days.

g. If the discharged effluent is chlorinated, then chlorine shall not be removed from the effluent sample prior to toxicity testing without written approval by USEPA Region 9 (WTR-5).

h. Where total ammonia concentrations in the effluent are > or = 5mg/L, toxicity may be contributed by unionized ammonia. pH drift during the toxicity test may contribute to artificial toxicity when ammonia or other pH-dependent toxicants (e.g., metals) are present. Following data review and written approval by USEPA Region 9 (WTR-5), if sample toxicity is confirmed to be artificial and due to pH drift, then the permittee may use the approved procedures to control sample pH during the toxicity test.

i. The effluent shall be measured for salinity and conductivity during each toxicity test, and the values measured shall be reported with the results of the toxicity tests.

4. Initial Investigation Toxicity Reduction Evaluation (TRE) Workplan

Within 90 days of the permit effective date, the permittee shall prepare and submit an initial investigation toxicity reduction evaluation (TRE) workplan (approximately 1-2 pages) to USEPA Region 9 for review. This workplan shall describe steps which the permittee intends to follow in the event that toxicity (as defined above) is detected, and should include at minimum:

a. A description of the investigation and evaluation techniques that would be used to identify potential causes/sources of toxicity, effluent variability, treatment system efficiency;

b. A description of the facility's method of maximizing in-house treatment efficiency, good housekeeping practices, and a list of all chemicals used in operation of the facility;

c. If a toxicity identification evaluation (TIE) is necessary, who (*e.g.*, contract laboratory, *etc*.) will conduct the TIE.

5. Additional (Accelerated) Toxicity Testing and TRE/TIE Process

j. If the acute toxicity effluent limit as defined above in Section B.2. is exceeded and the source of toxicity is known (e.g., a temporary plant upset), then the permittee shall conduct one additional toxicity test using the same species and test method. This test shall begin within 14 days of receipt of the test results exceeding the acute toxicity effluent limit. If the additional toxicity test does not exceed the acute toxicity effluent limit, then the permittee may return to their regular testing frequency.

k. If the acute toxicity effluent limit is exceeded and the source of toxicity is not known, then the permittee shall conduct three additional toxicity tests using the same species and test method, approximately every two weeks, over a 6 week period. This testing shall begin within 14 days of receipt of test results exceeding the acute toxicity effluent limit. If none of the additional toxicity tests exceed the acute toxicity effluent limit, then the permittee may return to their regular testing frequency.

l. If one of the additional toxicity tests (in paragraphs e.(1) or e.(2)) exceeds the acute toxicity effluent limit, then, within 14 days of receipt of this result, the permittee shall initiate a TRE using the same species and test method and, as guidance, USEPA manual *Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants* (EPA 833-B-99-002, August 1999). In conjunction, the permittee shall develop and implement a Detailed TRE Workplan which shall include: further actions undertaken by the permittee to investigate, identify, and correct the causes of toxicity; actions the permittee will take to mitigate the impact of the discharge and prevent the recurrence of toxicity; and a schedule for these actions.

m. The permittee may institute a Toxicity Identification Evaluation (TIE) as part of a TRE to identify the causes of toxicity, using as guidance USEPA manuals: *Methods for Aquatic Toxicity Identification Evaluations, Phase I Toxicity Characterization Procedures* (EPA/600/6-91/003, February 1991); *Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity* (EPA/600/R-92/080, September 1993); and *Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting*

Acute and Chronic Toxicity (EPA/600/R-92/081, September 1993).

6. Reporting of Acute Toxicity Monitoring Results

a. A full laboratory report for all toxicity testing shall be submitted as an attachment to the DMR for the month in which the toxicity test was conducted and shall also include: the toxicity test results reported according to the test methods manual chapter on report preparation and test review; the dates of sample collection and initiation of each toxicity test; all results for effluent parameters monitored concurrently with toxicity test(s); and progress reports on TRE/TIE investigations.

b. The permittee shall notify USEPA Region 9 in writing within 14 days of failure on the acute toxicity tests for both *Daphnia* and *Hyalella*. This notification shall describe actions the permittee has taken or will take to investigate, identify, and correct the causes of toxicity; the status of actions required by this permit; and schedule for actions not yet completed; or reason(s) that no action has been taken.

c. Within 60 days following the second of the first two semi-annual toxicity tests under this permit, the permittee shall submit a report on the toxicity of the effluent to the two amphipod test species *Daphnia* and *Hyalella* to the USEPA Region 9 at the address provided in Part G.1. below. EPA will then review the data and determine what toxicity testing requirements should be imposed on the permittee in the future.

7. Toxicity Reopener

This permit may be modified in accordance with the requirements set forth at 40 CFR 122 and 124, to include appropriate conditions or limitations to address demonstrated effluent toxicity based on newly available information, or to implement any USEPA Region 9-approved new CNMI water quality standards applicable to effluent toxicity.

8. Sampling Location(s)

Samples taken in compliance with the effluent monitoring requirements specified above shall be taken at the following locations:

a. Influent samples shall be taken after the last addition to the collection system and

prior to any in-plant return flows and the first treatment process, where representative samples of the influent can be obtained.

b.. Effluent samples shall be taken after any in-plant return flows and the last treatment process and prior to mixing with the receiving waters, where representative samples of the effluent can be obtained.

C. PRETREATMENT REQUIREMENTS

1. Within 180 days of the effective date of this permit, the permittee shall submit for USEPA Region 9 and CNMI DEQ approval a description of the permittee's education programs designed to minimize the entrance of nonindustrial toxic pollutants/pesticides and hazardous industrial wastes into the Agingan WWTP. These programs shall be implemented by the permittee no later than 90 days following approval by USEPA Region 9 and CNMI DEQ. Copies of all education materials from the period covering the previous calendar year shall be submitted with the monthly DMRs by May 15th to USEPA Region 9 and CNMI DEQ.

2. Within 180 days of the effective date of this permit, the permittee shall develop and implement a source control program to identify and control industrial source discharges into the Agingan WWTP collection system and discharge. The programs shall include:

   a. A survey to identify industrial users/sources; and

   b. A schedule for the development and implementation of control programs and mechanisms based on the survey, to the extent practicable, for identified sources.

D. DEFINITONS

1. *Average monthly discharge limitation* means the highest allowable average of "daily discharges" over a calendar month, calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month. However, when the parameter is sampled quarterly this value could be represented by an *Average Running Annual* measured quarterly.

2. *Average weekly discharge limitation* means the highest allowable average of "daily discharges" over a calendar week, calculated as the sum of all "daily discharges" measured during a calendar week divided by the number of "daily discharges" measured during that week.

3. *8 hour Composite sample* means a combination of eight equal individual portions taken at

equal time intervals over any 8-hour period that reasonably represents the calendar day. The volume of each individual portion shall be directly proportional to the discharge flow rate at the time of sampling.

4. *24 hour Composite sample* means a combination of eight individual portions taken at equal time intervals over any 24-hour period that reasonably represents the calendar day. The volume of each individual portion shall be directly proportional to the discharge flow rate at the time of sampling.

5. *Daily discharge* means the "discharge of a pollutant" measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the "daily discharge" is calculated as the average measurement of the pollutant over the day.

6. *Discrete sample* means any individual sample collected in less than 15 minutes. The sampling period shall coincide with the period of maximum discharge flow.

7. *Maximum daily discharge limitation* means the highest allowable "daily discharge."

8. *Method Detection Limit (MDL)* is the minimum concentration of an analyte that can be detected with 99% confidence that the analyte concentration is greater than zero, as defined by the specific laboratory method listed in 40 CFR Part 136. The procedure for determination of a laboratory MDL is in 40 CFR Part 136, Appendix B.

9. *Minimum Level (ML)* is the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all of the method-specified sample weights, volumes, and processing steps have been followed (as defined in EPA's draft *National Guidance for the Permitting, Monitoring, and Enforcement of Water Quality-Based Effluent Limitations Set Below Analytical Detection/Quantitative Levels*, March 22, 1994). Published method-specific MLs are contained in 40 CFR Part 136, Appendix A, and must be utilized if available. If a published method-specific ML is not available, then an interim ML shall be calculated. The interim ML is equal to 3.18 times the published method specific MDL rounded to the nearest multiple of 1, 2, 5, 10, 20, 50, etc. (when neither an ML nor an MDL are available under 40 CFR Part

136, an interim ML should be calculated by multiplying the best estimate of detection by a factor of 3.18; when a range of detection is given, the lower end value of the range of detection should be used to calculate the ML.) At this point in the calculation, a different procedure is used for metals, than for non-metals:

a. For metals, due to laboratory calibration practices, calculated MLs may be rounded to the nearest whole number.

b. For non-metals, because analytical instruments are generally calibrated using the ML as the lowest calibration standard, the calculated ML is then rounded to the nearest multiple of (1, 2, or 5) x 10 to nth power, where n is zero or an integer. (For example if an MDL is 2.5 ug/L, then the calculated ML is 2.5 ug/L x 3.18 = 7.95 ug/L. The multiple of (1, 2, or 5) x 10 to nth power nearest to 7.95 is 1 x 10 to 1 = 10 ug/L, so the calculated ML, rounded to the nearest whole number is 10 ug/L.)

10. *NODI(Q)* means data are below the Minimum Level (or interim Minimum Level).

11. *NODI(B)* means data re below the Method Detection Limit.

E. SLUDGE/BIOSOLIDS LIMITATIONS AND MONITORING REQUIREMENTS

1. All biosolids [12] generated by the permittee shall be reused or disposed of in compliance with applicable portions of:

   a. 40 CFR 503: For biosolids that are land applied, placed on a surface disposal site (dedicated land disposal site or monofill), or incinerated;

   b. 40 CFR 258: For biosolids disposed in municipal solid waste landfills;

[12] Biosolids means stabilized, non-hazardous sewage sludge.

c. 40 CFR 257: For all biosolids use and disposal practices not covered in 40 CFR 258 or 503.

2. The permittee is responsible for assuring that all biosolids produced at the sewage treatment plant are used or disposed of in accordance with 40 CFR 257, 258, and 503, whether the permittee reuses or disposes of the biosolids directly or transfers the biosolids to another entity for further treatment, reuse, or disposal. The permittee is responsible for informing subsequent preparers, appliers, and disposers of the requirements which these entities must meet under 40 CFR 257, 258, and 503.

3. No biosolids shall be allowed to enter waters of the United States.

4. Biosolids treatment, storage, reuse, or disposal shall not contaminate groundwater.

5. Biosolids treatment, storage, reuse, or disposal shall be performed in a manner as to minimize nuisances such as objectionable odors or flies.

6. The permittee shall assure that haulers transporting biosolids for off-site treatment, reuse, or disposal take all necessary measures to keep the biosolids contained.

7. If biosolids are stored for over two years from the time they were generated, the permittee must ensure compliance with all requirements for surface disposal in 40 CFR 503 Subpart C, or must submit a written request for longer temporary storage, including information required in 40 CFR 503.20(b), to USEPA Region 9.

8. The permittee shall require any appliers of Class B biosolids and any surface disposal site operators to submit an annual biosolids report to the USEPA Region 9 Biosolids Coordinator by February 19th of each year, for the period covering the previous calendar year. The report shall include the information required by 40 CFR 503.18 and 503.28.

F. RECEIVING WATER AND BIOLOGICAL MONITORING REQUIREMENTS AND CONDITIONS

1. The permittee shall conduct the following receiving water monitoring program (*i.e.*, water column monitoring) in Class A marine receiving waters off Agingan Point. The permittee shall verify all station locations (latitude and longitude) and submit this information with a map showing locations of these stations in the first quarterly water monitoring report.

a. Water Column Monitoring Stations (see Attachment 3)

Station Name	Location	Region	Site	Comments

ZID-3	200 feet **seaward** from the terminus of the Agingan Ocean Outfall, on the axis of the outfall/diffuser system	1	n/a	n/a
ZID-4	200 feet **shoreward** from the terminus of the Agingan Ocean Outfall, on the axis of the outfall/diffuser system	1	n/a	n/a
Wharf E of outfall	90 m E of previous outfall	1	41	CUC Site 1

b. Water Column Monitoring

Receiving Water Characteristic	Units	Site	Monitoring Frequency#	Sample Type/ Sampling Depths *
Enterococci	CFU/100 mL	ZID-3. ZID-4, Wharf E. of outfall	Quarterly	Grab
pH	units	"	"	"
Total Nitrogen	mg/L	"	"	"
Total Phosphorous	mg/L	"	"	"
Dissolved Oxygen	mg/L	"	"	"
Turbidity	NTU	"	"	Nephelometer

* For grab samples, the sampling shall be at sea surface. Samples shall be collected and analyzed according to *Quality Assurance and Quality Control (QA/QC) for 301(h) Monitoring Programs: Guidance on Field and Laboratory Methods* (EPA 430/9-86-004), or as directed by CNMI DEQ.

2. The permittee shall submit quarterly water column monitoring reports to USEPA Region 9 and CNMI DEQ by the 15th of May, August, November, and February for each period covering the previous quarter. These reports shall include:

   a. A description of climatic and receiving water characteristics at the time of sampling (*e.g.*, weather observations, floating debris, discoloration, wind speed and direction, swell or wave action, time of sampling, tide height, *etc.*).

   b. A description of the sample collection and preservation procedures used in the

receiving water monitoring program.

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

d. An in-depth discussion of the results of the receiving water monitoring program with regard to compliance with this permit and Section 403(c) of the Clean Water Act. All tabulations and computations shall be explained.

3. The permittee may reduce the frequency of water column sampling to once per quarter, if monthly sampling during the first year after permit issuance, indicates that the mixing zone calculations herein are generally adequate to protect receiving water quality.

4. The permittee shall conduct the following biological monitoring program in the Class A marine waters off the Agingan Point to ensure no negative impacts to nearshore coral reef communities.

a. The permittee shall provide collection of replicated benthic coverage datasets that yield the average percent coverage estimates with sufficient statistical power to detect a pre-determined level of change over time.

b. The data shall be collected from two sites located just outside the zone of initial dilution as defined in table a. above. and at one reference site. The data shall be collected within 6 months of the effective date of the permit.

c. Samples at each monitoring site (2) and the reference site (1) shall be at depth of 90-100 feet and at 30-40 feet for a total of six individual surveys for the monitoring sites. The shallow site is desirable because the freshwater discharge is less dense than the oceanic waters it will discharge into, and may rise to the surface if inadequate mixing occurs.

d. The permittee shall provide to EPA a bio monitoring plan/method within 90 days of the effective date of the permit. One of the methods available to estimate benthic coverage is as follows: At each survey monitoring site 10 replicate 15 meter transacts will be video taped by a SCUBA diver yielding belt transects of 0.5 meter width. Fifteen evenly spaced JPEG frames should be extracted from each transect, one per meter. An observer should record the living benthos under each of 5 randomly placed dots, yielding a total of 75 analyzed data points for each transect.

Averages and standard deviations can be calculated for each benthos using the replicated transects as "samples" . The benthos categories should include corals (genus level), macroalgae (>2cm, genus level), turf algae (<2cm, genus level), crustose coralline algae, other coralline algae, and other invertebrates (grouped together).

e. If the 6 month study shows no significant changes in the reef assemblages outside the zone of initial dilution then the permittee shall conduct similar studies every 2 years during this permit cycle. If the study shows significant negative changes, the permittee shall investigate to determine the cause of the negative changes, and make all appropriate corrections. Another study of the biota must then be conducted with 6 months from the time the appropriate corrections have been implemented.

f. The Coral Reef Monitoring baseline Report for the Agingan Sewer Outfall: Pre-Discharge Characterization may be used to establish the baseline for the biological monitoring studies herein.

g. The results of all biological monitoring studies shall be provided to USEPA Region IX's Pacific Islands Office and CNMI DEQ at the address indicated in Section G. below, within 60 days of the completion of each such study.

G. GENERAL MONITORING AND REPORTING REQUIREMENTS

1. The results of all monitoring shall be submitted in such a format as to allow direct comparison with effluent limitations and permit requirements. Monitoring results shall be reported on monthly Discharge Monitoring Report (DMR) forms (EPA No. 3320-1), to the extent that the results reported may be entered on the forms. Monthly DMR forms shall be submitted quarterly on the 45 days following the previous quarterly reporting period; for example, the three monthly DMR forms for the reporting period January through March shall be submitted by May 15th. Duplicate signed copies of these, and all other reports required herein, shall be submitted to the USEPA Region 9 and the CNMI DEQ, at the following addresses:

USEPA Region 9
Pacific Islands Office (CED-6)
75 Hawthorne Street
San Francisco, CA 94105-3901

CNMI Division of Environmental Quality
P.O. Box 501304
Pangelinan Building, Gualo Rai
Saipan, MP 96950

Telephone: 415/972-3769 Telephone: 670/664-8500

2. For effluent analyses, the permittee shall utilize an analytical method with a published Method Detection Limit (MDL) (as defined in Section B. of this permit) that is lower than the effluent limitations (or lower than the applicable numeric water quality criteria in the CNMI water quality standards). If all published MDLs are higher than the effluent limitations or water quality criteria, then the permittee shall utilize the analytical method with the lowest published MDL. The permittee shall ensure that the laboratory utilizes a standard calibration where the lowest standard point is equal to or less than the minimum level (ML); (as defined in Section B. of this permit). Effluent analyses for metals shall measure "total recoverable metal", except as provided under 40 CFR 122.45(c).

3. For samples collected during each monthly reporting period, report on the monthly DMR form:

   a. The *maximum value*, if the maximum value is greater than the ML or *NODI (Q)*, if the maximum value is greater than or equal to the laboratory's MDL, but less than the ML or *NODI (B)*, if the maximum value is less than the laboratory's MDL, and

   b. The *average value* of all analytical results where 0 (zero) is substituted for *NODI (B)* and the laboratory's MDL is substituted for *NODI (Q)*, if more than one sample is collected during the monthly reporting period.

4. As an attachment to each monthly DMR form, the permittee shall report for all parameters with monitoring requirements specified under Section A of this permit the following: the analytical method number or title, preparation and analytical procedure utilized by the laboratory, published MDL, and ML; the laboratory's MDL, the standard deviation (S) from the laboratory's MDL study; and the number of replicate analyses (n) used to compute the laboratory's MDL.

5. The permittee shall develop a Quality Assurance (QA) Manual for the field collection and laboratory analysis of samples. The purpose of the QA Manual is to assist in planning for the collection and analysis of samples and explaining data anomalies if they occur. At a minimum, the QA Manual shall include the following:

a. Identification and description of project management including the roles and responsibilities of participants; purpose of sample collection; matrix to be sampled; the analytes or compounds being measured; applicable technical, regulatory, or program-specific action criteria; personnel qualification requirements for collecting samples;
b. Description of sample collection procedures; equipment used; the type and number of samples to be collected including QA/QC samples; preservatives and holding times for the samples and chain of custody procedures;

c. Identification of the laboratory used to analyze the samples; provisions for any proficiency demonstration that will be required by the laboratory before or after contract award such as passing a performance evaluation sample; analytical method to be used; MDL and ML to be reported; required QC results to be reported (e.g, matrix spike recoveries, duplicate relative percent differences, blank contamination, laboratory control sample recoveries, surrogate spike recoveries, etc.) and acceptance criteria; and corrective actions to be taken in response to problems identified during QC checks; and

d. Discussion of how the permittee will perform data review and reporting of results to USEPA Region 9 and CNMI DEQ, and how the permittee will resolve data quality issues and identify limits on use of the data.

6. Throughout all field collection and laboratory analyses of samples, the permittee shall use the QA/QC procedures documented in their QA Manual. If samples are tested by a contract laboratory, the permittee shall ensure that the laboratory has a QA Manual on file. A copy of the permittee's QA Manual shall be retained on the permittee's premises and available for review by USEPA Region 9 or CNMI DEQ upon request. The permittee shall review its QA Manual annually and revise it, as appropriate.

7. In addition to information requirements specified under 40 CFR 122.41(j)(3), records of monitoring information shall include: the laboratory which performed the analyses and any comment, case narrative, or summary of results produced by the laboratory. The records should identify and discuss QA/QC analyses performed concurrently during sample analyses and whether project and 40 CFR 136 requirements were met. The summary of results must include information on initial and continuing calibration, surrogate analyses, blanks, duplicates, laboratory control samples, matrix spike and matrix spike duplicate results, and sample receipt condition, holding

time, and preservation.

H. GENERAL REOPENER CLAUSE

At this time, there is no reasonable potential to establish any other water quality-based limits. Should any monitoring indicate that the discharge causes, has the reasonable potential to cause, or contributes to excursions above water quality criteria, the permit may be reopened for the imposition water quality based limits and/or whole effluent toxicity limits. The proposed permit may be modified, in accordance with the requirements set forth at 40 CFR 122 and 124, to include conditions or limits to address demonstrated effluent toxicity based on newly available information, or to implement any new EPA-approved CNMI water quality standards, address ESA-related issues, or new information concerning total residual chlorine.

I. TWENTY-FOUR HOUR REPORTING OF NONCOMPLIANCE

10. The permittee shall inform CNMI DEQ of all bypasses to the collection and treatment system, including all sanitary sewer overflows (SSOs), immediately (within one hour) upon knowledge of the bypass/SSO. Additionally the permittee shall provide a written report summarizing all bypasses/SSOs to CNMI DEQ and USEPA on or before the 15th day of each month, for the previous calendar month. This report shall include, the date, time, and location of all bypasses/SSOs, a brief description of the cause of each bypass/SSO, and corrective actions taken by the permittee.

11. In accordance with 40 CFR 122.41(1)(6), the permittee shall report any noncompliance which may endanger health or the environment. Any notification shall be provided orally, within 24 hours from the time the permittee becomes aware of the circumstances, to USEPA Region 9 and CNMI DEQ at the telephone numbers provided in Part G.1. above.

3. A written submission shall also be provided within five days of the time the permittee becomes aware of the circumstances to the USEPA and the CNMI DEQ at the addresses in Part G.1. above . The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance , including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate and prevent reoccurrence of the noncompliance.

Attachment 1:

LOCATION MAP

Attachment 2:

PROCESS DIAGRAMS

Attachment 3:

RECEIVING WATER MONITORING STATIONS

(provided during public comment period)

Attachment 4:

STANDARD NPDES PERMIT CONDITIONS