U. S. Environmental Protection Agency
Region 9
75 Hawthorne Street
San Francisco, CA 94105-3901

AUGUST 2009

FACT SHEET

Authorization to Discharge under the
National Pollutant Discharge Elimination System
for the
Commonwealth Utilities Corporation
Agingan Wastewater Treatment Plant

NPDES Permit No. MP0020028

(Note: The NPDES permit number for this facility has been changed from NI0020028 to MP0020028. The two-letter prefix of the permit number is being replaced with MP for its State code to provide more efficient data management. The new MP prefix will be used in the EPA's database for all NPDES permits in the Commonwealth of the Northern Mariana Islands.)

These pages contain information concerning the National Pollutant Discharge Elimination System (NPDES) permit for the Agingan Wastewater Treatment Plant (WWTP) discharges.

I. SUMMARY

The discharge from this facility is regulated under NPDES Permit No. NI0020028, issued on November 1, 1999. This permit expired on October 31, 2004. On or about September 10, 2004, the permittee submitted an application for an NPDES permit for publicly owned treatment works (POTWs) subject to federal secondary treatment standards. USEPA Region 9 received this application on September 20, 2004. This fact sheet is based on the facts presented by the applicant in its application and all previous and subsequent discharge data submitted, along with the appropriate laws and regulations.

Pursuant to Section 402 of the Clean Water Act (CWA), the U. S. Environmental Protection Agency, Region 9 (USEPA Region 9) is proposing issuance of a renewed NPDES permit to the Commonwealth Utilities Corporation (permittee) for the Agingan WWTP discharges of secondary treated wastewater through the Agingan Ocean outfall to Class A marine receiving waters named Tinian Channel, a water of the U.S. which is that area of the Philippine Sea located between the islands of Tinian and Saipan.

The Agingan Ocean outfall discharges within territorial waters of the Commonwealth of the Northern Mariana Islands (CNMI). However, because the CNMI Division of Environmental Quality (DEQ) does not have primary regulatory responsibility for administering the NPDES permitting program, USEPA Region 9 has primary regulatory responsibility for the discharges. USEPA Region 9 is proposing to issue an NPDES permit incorporating both federal secondary treatment standards and CNMI water quality requirements.

The Agingan WWTP discharges of secondary treated wastewater do not comply with certain CNMI Water Quality Standards (WQS) implemented as water quality-based effluent limitations in the previous permit. Consequently, the permittee decided to construct a new Ocean outfall to address some of these compliance issues. This new Ocean outfall allows the permittee to obtain an approval for a zone of mixing for certain parameters from DEQ.

However, even with the construction of the Ocean outfall and approval of a zone of mixing there may still be certain parameters including copper, and others which do not comply with CNMI WQS. Therefore, USEPA Region 9 may issue an Administrative Order which will include: (1) a schedule of activities to ensure that the discharge will come into compliance with WQS during this permit term, and (2) interim discharge limitations based on the current wastewater treatment plant performance.

II. ADMINISTRATIVE PROCESS

The administrative processing of a NPDES application consists of the following actions:

A. Submission of a timely and complete application by the permittee;

B. Review of the application and analysis of discharge data to determine compliance with the Clean Water Act and supporting regulations, and preparation of a draft NPDES permit by USEPA Region 9 staff based on this review;

C. Public notice of a draft NPDES permit by USEPA Region 9;

D. Public hearings (if needed) to address public interest;

E. CNMI concurrence in the issuance of a NPDES permit (through CWA Section 401 water quality certification), or denial by the CNMI;

F. Processing of appeals, in accordance with 40 CFR 124, Subpart E, if an appeal is timely and appropriately filed.

III. FACILITY DESCRIPTION

The permittee presently operates the Agingan WWTP located on the southern end of the island of Saipan at Agingan Point. Agingan WWTP serves a population of approximately 18,400 people and receives mainly domestic wastewaters from a network of wastewater collection and transmission facilities known as the Southern System. The garment industry activities on Saipan was a significant contributor of wastewater to the Agingan collection system, now however, the garment industry is almost gone within the southern system, and there is actually a projected decline in the population in the service area. Commercial and/or industrial operations such as automobile repair shops, gasoline stations, and power generators, remain as potential sources of contaminants into the wastewater collection system.

In 1985, Agingan WWTP was permitted under Section 301(h) of the CWA to discharge primary treated effluent based on a treatment capacity of 1.0 million gallons per day (MGD); however, to achieve federal secondary treatment standards for POTWs and to accommodate population growth in the service area, the permittee upgraded and expanded the WWTP to 3.0 MGD. This upgraded and expanded WWTP began operation in 1993. Agingan WWTP is currently designed to treat 3.0 MGD of wastewater to secondary treated wastewater level using the physical and biological processes listed below:

Agingan WWTP	
Primary and Secondary Treatment	Solids Handling
Influent screening Grit removal Aerated biological treatment using activated sludge (waste activated sludge to aerobic digester) Clarification (scum to digester)	Screenings and grit (to municipal solid waste landfill) Sludge aerobically digested Digested sludge chemically conditioned and dewatered using belt filter press Sludge cake (to municipal solid waste landfill)

Based on data provided by the permittee, the treated wastewater discharge has the following characteristics for biochemical oxygen demand, total suspended solids, and pH:

Discharge Parameter	Units	Annual Average
Flow	MGD	2.9
Biochemical Oxygen Demand (BOD_5)	mg/l	2.0
	% removal	88
Total Suspended Solids (TSS) Monthly average[1]	mg/l	55
	% removal	N/A
pH (low and high values)	units	7.39 and 8.84

1. No TSS Annual Average data was presented in the 2004 application, therefore information from the DMR Data was used to determine an Annual Monthly Average for TSS.

Secondary treated wastewater is discharged from a newly constructed Ocean outfall into o a Class A receiving water named Tinian Channel, a water of the U.S., which is that area of the Philippine Sea located between the islands of Tinian and Saipan. The Ocean outfall, is 24-inch HDPE (High Density Poly Ethylene) pipe, with a discharge point at a depth of approximately 94 feet at a distance of 650 feet from the cliff line, which projects at about 30 degrees from horizontal off the sea floor, and approximately at 90 degrees to the ambient ocean current direction. The Ocean outfall has a diffuser in the form of a 24 inch tide-flex valve. The discharge point is described as follows:

Discharge Serial Number	North Latitude	East Longitude	Description
003	15° 7' 3"	145° 41' 10"	Primary discharge point 94 feet below sea level and 650 feet from cliff line into Tinian Channel, Philippine Sea, on the island of Saipan.

Aerobically digested sludge is dewatered and the sludge cake is usually stockpiled on-site for extended periods of time and is eventually hauled to and disposed of at Marpi municipal solid waste landfill.

IV. BASIS FOR REQUIREMENTS

Federal secondary treatment effluent standards for POTWs are contained in Section 301(b)(1)(B) of the CWA. Implementing regulations for Section 301(b)(1)(B) are found at 40 CFR Part 133. The requirements contained in the permit are necessary to prevent violations of applicable treatment standards.

The CNMI WQS, amended and adopted on September 24, 2004, contain water quality standards (use classifications and criteria) for waters of the CNMI. Under the jurisdiction of the CNMI, Division of Environmental Quality (DEQ), Saipan has two classifications (AA and A) for marine waters. The requirements contained in the permit are necessary to prevent violations of applicable water quality standards in Class A waters off Agingan Point. (Class A waters are protected for their recreational use and aesthetic enjoyment; other uses are allowed as long as they are compatible with the protection and propagation of fish, shellfish, and wildlife, and recreation in and on these waters.)

While the Agingan WWTP is not subject to pretreatment requirements contained in 40 CFR 403 ("General Pretreatment Regulations for Existing and New Sources of Pollution") as it falls outside the definition of facilities subject to the requirements, the permit contains conditions which require the permittee to develop and implement source control and education programs to

minimize the entrance of nonindustrial toxic pollutants/pesticides and hazardous industrial wastes into the Agingan WWTP. In addition, the permittee must identify industrial sources discharging hazardous wastes into the collection system, and develop control mechanisms for industrial users to the system. These requirements are necessary to assure proper operation of all facilities and systems of treatment and control that are installed or used by the permittee to achieve compliance with the conditions of this permit (40 CFR 122.41(e)).

V. DISCHARGE LIMITATIONS

Secondary Treatment Discharge Limitations

The permit contains the following discharge limitations for biochemical oxygen demand, total suspended solids, and priority toxic pollutants:

Discharge Limitations				
Discharge Parameter	Average Monthly	Average Weekly	Maximum Daily	Units
Flow[1]	–[2]	n/a	–[2]	GPD
Priority Toxic Pollutants (excluding asbestos)[4]	–[2]	n/a	–[2]	ug/l
Biochemical Oxygen Demand (5-day)	30 751	45 1,126	n/a	mg/l lbs/day
	The arithmetic mean of the BOD_5 values, by concentration, for effluent samples collected over a calendar month shall not exceed 15% of the arithmetic mean, by concentration, for influent samples collected at approximately the same times during the same period.			
Total Suspended Solids[3]	30 751	45 1,126	n/a	mg/l lbs/day
	The arithmetic mean of the TSS values, by concentration, for effluent samples collected over a calendar month shall not exceed 15% of the arithmetic mean, by concentration, for influent samples collected at approximately the same times during the same period.			

NOTES

1. The average daily flow is 2.9 MGD for 2004. No data after that was available. No flow limit is proposed but the monthly and daily maximum flows must be monitored and reported. The monitoring frequency is once per month

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

3. The arithmetic means of both BOD5 and TSS values, by concentration, for effluent samples collected over a calendar month shall not exceed 15% of the arithmetic mean, by concentration, for influent samples collected at approximately the same times during the same period.

4. 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.

The proposed monthly average and weekly average discharge limitations for biochemical oxygen demand and total suspended solids (in mg/l and influent percent removal efficiency) are based on secondary treatment requirements contained in 40 CFR 133. The proposed discharge limitations for biochemical oxygen demand and total suspended solids (in lbs/day) are calculated using a plant design flow of 3.0 MGD and the following equation: lbs/day = 8.34 x Ce x Q. "Ce" is the discharge limitation in mg/l and "Q" is the flow rate in MGD (where 8.34 is the standard conversion factor for converting concentration limits to mass limits in the units provided). *U.S. EPA NPDES Permit Writers Manual,* (EPA-833-B-96-003, 1996).

Determination of Reasonable Potential

In accordance with 40 CFR 122.44(d)(1), the need for effluent limits based on water quality criteria in applicable water quality standards must be evaluated. In a "reasonable potential" evaluation, projected receiving water values for pollutants– calculated based on dilution– are compared directly to applicable water quality criteria. If a projected receiving water value for a pollutant exceeds an applicable water quality criterion, then "reasonable potential" has been established and water quality based effluent limits (WQBELs) for that pollutant are required in the permit.

In accordance with applicable water quality standards, critical initial dilution is not considered in the reasonable potential evaluation and the projected receiving water values for pollutants are calculated using the following steady-state mass balance equation:

$C_r = C_e$ x *reasonable potential multiplier factor*

In this equation, "C_e" is the reported maximum effluent value (in mg/l, ug/l or TU) that can be adjusted for uncertainty, due to small sample size, using the statistical procedure outlined in Section 3.3.2 and Box 3.2 of the revised *Technical Support Document for Water Quality-based Toxics Control* (EPA/505/2-90-001, March 1991; TSD). When using this statistical procedure, EPA estimates that the CV of pollutants in the effluent is 0.6 and chooses reasonable potential multiplier factors based on the 99% confidence level and 99% probability basis shown in TSD Table 3-1. "C_r" is the projected receiving water value that is compared directly to the applicable water quality criterion.

EPA evaluated the 2000-2008 discharge monitoring reports (DMR) data for the Agingan WWTP. Additionally, in 1999 and 2004 the permittee conducted priority pollutant scans of the Agingan WWTP discharges as well as monitoring for non-conventional pollutants (e.g., whole effluent toxicity, nutrients, etc.). Additionally EPA reviewed whole effluent toxicity testing data for tests conducted in 2009. EPA concluded that concentrations either exceeded limits or had the "reasonable potential" to exceed limits for the following parameters: enterococci, total residual chlorine, nitrate-nitrogen, total nitrogen, orthophosphate, total phosphorus, unionized ammonia, turbidity, copper, lead, nickel, silver, and zinc. Therefore the proposed permit includes limits, either with or without a provision of a zone of mixing, depending on the type of pollutant, for all pollutants that were found to have reasonable potential.

Water Quality Based Effluent Limitations (WQBELs)

For pollutants in the effluent that are projected to exceed applicable water quality criteria, EPA uses the statistical calculations shown in TSD Tables 5-1, 5-2, and 5-3 to calculate water quality based effluent limits to protect water quality standards for aquatic life (acute criteria and chronic criteria) and human health, as described below and in TSD Section 5.4.

Because, Agingan WWTP discharge is through a submerged outfall and diffuser system, initial dilution of the discharge with receiving waters is primarily controlled by the momentum and buoyancy of the freshwater effluent plume (i.e., discharge-induced mixing). A critical initial dilution value of 200:1 (expressed as parts seawater per part wastewater) was calculated for the Tinian Channel Ocean outfall with an average flow of 3 MGD and a peak flow of 6.75 MGD. Pursuant to information provided by the discharger in a communication dated January 9, 2009, during this permit cycle the average flow from the Agingan WWTP is not expected to exceed 3 MGD and 6.75 MGD peak flow. For greater detail on how the mixing zone was calculated see the Mixing Zone Analysis which is part of the Administrative Record of this permit. The CNMI DEQ also completed its own review of the permittee's mixing zone application and issued an approval letter based on this review, which is also part of the Administrative Record of this permit. The zone of initial dilution (ZID) is 200 feet as a sea surface radius around the outfall/diffuser structure. The permittee has submitted a request for a mixing zone approval, as required pursuant to Section 9.3 of the CNMI WQS. To date, the mixing zone has not yet been granted by DEQ; however, EPA anticipates the DEQ approval prior to, or concurrent with issuance of the final permit.

WQBEL Calculations for Pollutants Granted a Zone of Mixing

Because mixing zones for effluent enterococci, nitrate-nitrogen, total nitrogen, orthophosphate, total phosphorous, and unionized ammonia, are expected to be authorized by the CNMI DEQ at the time the final permit is certified under CWA section 401 by DEQ, water quality-based effluent limits incorporating critical initial dilution via mixing zones are calculated for these

pollutants. Acute, chronic and human health wasteload allocations (WLAs) are calculated based on applicable CNMI water quality standards, using steady-state mass balance equation:

For pollutants that are subject to the critical initial dilution provided by a zone of mixing the equation is:

$C_e = C_r + D_c (C_r - C_b)$
$= WLA$

"C_r" is the water quality criterion (in ug/l, mg/l, CFU per 100 mL or TU). "D_c" is the critical initial dilution value of 200:1 or (200) and "C_b" is the background seawater concentration of the pollutant in question (assumed to be 0).

Using the September 2004 CNMI WQS for the various parameters chronic, acute and human health (if applicable) WLAs are calculated. Then following TSD Table 5-1 for acute water quality criteria protecting aquatic life, a value of 0.321 is used as the statistical multiplier for back-calculating the acute long-term average (LTA) when the wasteload allocation is established at the 99th percentile occurrence probability. Similarly, for chronic water quality criteria protecting aquatic life, a value of 0.527 is used as the statistical multiplier for back-calculating the chronic long-term average when the chronic wasteload allocation is established at the 99th percentile occurrence probability. EPA estimates the Coefficient of Variation (CV) of the pollutant is 0.6.

Following TSD Section 5.4 the lowest of the acute or chronic long-term average (LTA) is selected based on which one is lower, and is then used to calculate maximum daily and average monthly WQBELs using Table 5-2 of the TSD. In this procedure, EPA estimates the CV of the pollutant in the effluent is 0.6 and chooses the statistical multiplier factor of 3.11 to calculate a maximum daily water quality based effluent limit established at the 99th percentile occurrence probability. Continuing with this procedure, EPA then estimates that the CV of pollutants in the effluent is 0.6, assumes that the minimum number of effluent samples per month is four, and chooses the statistical multiplier factor of "1.55" to calculate an average monthly water quality based effluent limit established at the 95th percentile occurrence probability.

The following Table 1. summarizes this process for the various pollutants that are subject to the critical initial dilution provided by a zone of mixing.

Table 1.

Cb =background seawater conc. =0 Dc = critical initial dilution = 125	Nitrate-Nitrogen (Cr =0.5 mg/L)	Total Nitrogen (Cr =0.75 mg/L)	Orthophosphate (Cr = 0.05 mg/L)	Total Phosphorous (Cr = 0.05 mg/L)	Un-ionized Ammonia (Cr = 0.02 mg/L)

Ce =Cr + Dc (Cr - Cb)	0.5+ 200(0.5)= 100.5	0.75 + 200(0.75)= 150.75	0.05 +200(0.05) = 10.05	0.05 +200(0.05) = 10.05	0.02 + 200(0.02) = 4.02
Acute LTA = WLA x 0.321	100.5 x 0.321 = 32.26	150.75 x 0.321 =48.39	10.05 x 0.321 = 3.23	10.05 x 0.321 = 3.23	4.02 x 0.321 = 1.29
Chronic LTA = WLA x 0.527	100.5 x 0.527 =52.96	150.75 x 0.527 =79.44	10.05 x 0.527 = 5.30	10.05 x .527 = 5.30	4.02 x 0.527 =2.12
Minimum LTA = lowest value	32.26	48.39	3.23	3.23	1.29
Max Daily WQBEL = LTA x 3.11	32.26 x 3.11 = 100	48.39 x 3.11 = 150.5	3.23x 3.11 =10	3.23 x 3.11 = 10	1.29 x 3.11 = 4
Avge WQBEL = LTA x 1.55	32.26 x 1.55 = 50	30.3 x 1.55 = 75	3.23x 1.55 = 5	3.23 x 1.55 = 5	1.29 x 1.55 = 2

WQBEL Calculation for Enterococci

Pursuant to the 2004 CNMI standards the 30-day geometric (Cr chronic) mean for Enterococci is 35 CFU/100mL and daily maximum (Cr acute) is 276 CFU/100mL. The Acute WLA = 276 + 200(276) = 55,476 CFU/mL. The Chronic WLA = 35 + 200(35) =7,035 CFU/100mL. The Acute LTA = 55,476 x 0.321 = 17,808 CFU/100ml. The Chronic LTA = 7,035 x 0.527 = 3,707 CFU/100ml. The Minimum LTA = 3,707 CFU/100mL.

Therefore,

The Maximum daily WQBEL = 3,707 x 3.11 = 11,529 CFU/100mL

The Average monthly WQBEL = 3,707 x 1.55 = 5,746 CFU/100mL

WQBEL Calculations for Pollutants With No Zone of Mixing

Under the CNMI WQS, EPA determined that no mixing zone would be authorized for acute toxicity from toxic pollutants including metals such as copper, nickel, silver, zinc and total residual chlorine (when chlorine is used for disinfection) and therefore the following steady-state equation would apply:

$C_e = C_r$
$= WLA$

Where "C_r" is the water quality criterion in (ug/l, mg/l, or TU)

However, the CNMI WQS pursuant to Section 9.5 does not preclude the authorization of a zone of mixing for chronic effects from toxic pollutants according to communication from CNMI DEQ. Therefore the most stringent limit would be the daily maximum for acute toxicity which applies without a mixing zone.

Using the September 2004 CNMI WQS for the various parameters chronic, acute and human health (if applicable) WLAs are calculated. Then following TSD Table 5-1 for acute water quality criteria protecting aquatic life, a value of 0.321 is used as the statistical multiplier for back-calculating the acute long-term average (LTA) when the wasteload allocation is established at the 99th percentile occurrence probability. Similarly, for chronic water quality criteria protecting aquatic life, a value of 0.527 is used as the statistical multiplier for back-calculating the chronic long-term average when the chronic wasteload allocation is established at the 99th percentile occurrence probability. EPA estimates the Coefficient of Variation (CV) of the pollutant is 0.6.

Following TSD Section 5.4 the lowest of the acute or chronic long-term average (LTA) is selected based on which one is lower, and is then used to calculate maximum daily and average monthly WQBELs using Table 5-2 of the TSD. In this procedure, EPA estimates the CV of the pollutant in the effluent is 0.6 and chooses the statistical multiplier factor of 3.11 to calculate a maximum daily water quality based effluent limit established at the 99th percentile occurrence probability. Continuing with this procedure, EPA then estimates that the CV of pollutants in the effluent is 0.6, assumes that the minimum number of effluent samples per month is four, and chooses the statistical multiplier factor of "1.55" to calculate an average monthly water quality based effluent limit established at the 95th percentile occurrence probability.

The following table summarizes this process for the various pollutants that do not have a mixing zone authorized.

Ce = Cr WLA	Copper (ug/L) Cr = 4.8(acute) Cr= 3.1 (chron)	Lead (ug/L) Cr = 210(acute) Cr= 8.1 (chron)	Nickel (ug/L) Cr = 74 (acute) Cr = 8.2 (chron)	Silver (ug/L) Cr = 1.9 (acute) Cr = n/a (chron)	Zinc (ug/L) Cr = 90 (acute) Cr = 81(chron)
Acute LTA = WLA x 0.321	4.8 x 0.321 = 1.54	210x0.321 = 67.41	74 x 0.321 =23.8	1.9 x 0.321 = 0.61	90 x 0.321 = 28.9
Chronic LTA = WLA x 0.527	3.1 x 0.527 = 1.63	8.1 x 0.527 = 4.27	8.2 x 0.527 = 4.32	n/a	81 x 0.527 = 42.3
Minimum LTA = lowest value	1.54	4.27	4.32	0.61	28.9
Max Daily WQBEL = LTA x 3.11	1.54 x 3.11 = 4.8	4.27 x 3.11 = 13.3	4.32 x 3.11 = 13.4	0.61 x 3.11 =1.9	28.9 x 3.11 = 90

Discharge limitations for non-conventional pollutants (in lbs/day) are calculated using a plant design flow of 3.0 MGD and the following equation: lbs/day = 8.34 x Ce x Q. "Ce" is the discharge limitation in mg/l and "Q" is the flow rate in MGD. Discharge limitations for total chlorine residual and metals (in ug/l) are calculated using the statistical procedure outlined in Chapter 5 of the TSD; discharge limitations for total chlorine residual and metals (in lbs/day) are calculated using a plant design flow of 3.0 MGD and the following equation: lbs/day = 0.00834 x Ce x Q. "Ce" is the discharge limitation in ug/l and "Q" is the flow rate in MGD.

WQBEL Calculation for Total Residual Chlorine

Pursuant to the 2004 CNMI standards the 30-day geometric (Cr chronic) mean for Total Residual Chlorine (TRC) is 7.5 ug/L and daily maximum (Cr acute) is 13 ug/L. The Acute LTA = 13 x 0.321 = 4.17 ug/L. The Chronic LTA = 7.5 x 0.527 = 3.95 ug/L. The Minimum LTA = 3.95 ug/L.

Therefore,

The Maximum daily WQBEL = 3.95 x 12.4 ug/L

VI. ANTI-BACKSLIDING REQUIREMENT

Sections 402(o) and 303(d)(4) of the CWA and federal regulations at 40 CFR Section 122.44(l) require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. The previous 1999 permit did not apply mixing zones in the WQBEL calculations as the permittee had not yet built an Ocean outfall. Effluent limitations in this proposed permit have been recalculated to apply the appropriate mixing zone critical initial dilutions for certain pollutants and parameters. As a result the limits for Enterococci, Nitrate-Nitrogen, Total Nitrogen, Orthophosphate, Total Phosphorous, Un-ionized Ammonia are less stringent than in the previous permit.

VII. TOXICITY TESTING REQUIREMENT

The permit proposes a "no acute toxicity" discharge limitation in 100 percent effluent where compliance is evaluated using a single-concentration toxicity test result (reported as pass/fail), rather than a multi-concentration test result (reported as a point estimate, e.g., LC_{50}). While this approach does not yield information regarding the level of toxicity present in the diluted effluent, USEPA Region 9 believes that this approach provides a reasonable balance between the need for frequent compliance monitoring and cost savings resulting from the use of single-concentration rather than multi-concentration testing considering the fact that the approved testing facility may be located in Hawaii or even farther away. If toxicity (as defined below) is detected, then additional multi-concentration testing may be recommended by USEPA Region 9. Data from the previous permit cycle suggests that the invertebrate *Daphnia magna* is sensitive to the salinity levels of the effluent and therefore is not the most accurate species in determining the toxicity of the effluent. Therefore for the first two semi-annual tests following issuance of this permit toxicity testing shall be conducted using both *Daphnia Magna* and *Hyalella Azteca*. The *Daphnia Magna* test is the preferred test as it is on the list of approved biological methods pursuant to 40 CFR Part 136. However in EPA's guidance document on toxicity testing, *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and*

Marine Organisms, EPA-821-R-02-012, *Hyalella Azteca* is on the supplemental list of acute toxicity test species found in Appendix B. that may be used instead of the approved test species. Addtionally, the testing laboratory must measure and report salinity and conductivity as well as pH and temperature of each toxicity test. Toxicity exists when BOTH species fail a particular test. In that case the permittee must follow the TIE/TRE requirements outlined in the permit and immediately undertake the steps to determine the source of the toxicity and outline the steps that will be taken to mitigate such toxicity.

The results of the toxicity testing from the first two semi-annual tests following permit issuance shall be submitted in the form of a report to USEPA Region 9 within 60 days of the second semi-annual test. The report must include a full set of laboratory results. USEPA Region 9 will evaluate the data and determine if toxicity testing should be limited to *Hyalella Azteca* during the remainder of the permit cycle. The permit includes a re-opener clause that would allow such modification to the permit.

VIII. BIOLOGICAL MONITORING

Pursuant to the General Conditions requirements of the CNMI Water Quality Standards Section 8.12 (d) which states that "the health and life history characteristics of aquatic organisms in waters affected by controllable water quality factors shall not differ substantially from those for the same waters in areas unaffected by controllable water quality factors" this permit includes requirements that the permittee conduct biological monitoring to assess the health and life history of the relevant biota at the boundary of the mixing zone as out lined in the permit itself. The permit requires corrective measures to be implemented if the bio-criteria monitoring indicates that the mixing zone may not be functioning as designed.

IX. AMBIENT MONITORING

Pursuant to the General Conditions requirements of the CNMI Water Quality Standards Section 8.12 (b) which states that "pollutant discharges shall be regulated so as to protect not only the receiving waters but also the surrounding Commonwealth waters and marine life which are affected indirectly through pollutant discharges" this permit includes requirements for quarterly water column monitoring for pH, Total Nitrogen, Total Phosphorous, Dissolved Oxygen and Turbidity.

X. BIOSOLIDS REQUIREMENTS

On February 19, 1993, the USEPA issued final regulations for the use and disposal of sewage biosolids (40 CFR 503). These regulations require that producers of sewage biosolids comply

with certain reporting, handling, and disposal requirements. The CNMI has not been approved to implement this program. Therefore, USEPA Region 9 is the implementing agency. The permit contains biosolids/sludge management requirements consistent with 40 CFR 503.

The permittee shall submit a report to the EPA Biosolids Coordinator 60 days prior to disposal of biosolids. The report shall discuss the quantity of biosolids produced, the treatment applied to biosolids including process parameters, disposal methods, and, if land applied, analyses for Arsenic, Cadmium, Chromium, Copper, Lead, Mercury, Molybdenum, Nickel, Zinc, and Selenium, and organic-N, ammonium-N, and nitrate-N, all expressed in mg/kg biosolids on a 100% dry weight basis. The permittee shall comply with all standards for biosolids use and disposal at Section 405(d) of the CWA, and 40 CFR Parts 257, 258 and 503.

XI. THREATENED AND ENDANGERED SPECIES AND CRITICAL HABITAT

Background:

The Endangered Species Act of 1973 (ESA) allocates authority to and administers requirements upon Federal agencies regarding threatened or endangered species of fish, wildlife, or plants and habitat of such species that have been designated as critical. Its implementing regulations at 50 CFR Part 402 require Federal agencies such as USEPA to ensure, in consultation with the U.S. Fish and Wildlife Service ("USFWS") and/or the National Marine Fisheries Service ("NMFS")(collectively "Services"), that any action authorized, funded or carried out by USEPA is not likely to jeopardize the continued existence of any Federally-listed threatened or endangered species or adversely affect critical habitat of such species, 40 CFR 122.49(c). Since the issuance of an NPDES permit by USEPA is a Federal action, consideration of a permitted discharge and its effect on any listed species is appropriate.

Implementing regulations for the ESA establish a process by which Federal agencies consult with one another to ensure that the concerns of the Services are addressed. From the USFWS's Threatened and Endangered Species database, USEPA found there currently fourteen (14) federally-listed threatened (T) or endangered (E) species either found or listed in the Northern Mariana Islands.

Status	***Species listed in this state and that occur in this state***
T	Bat, Mariana fruit (= Mariana flying fox) (*Pteropus mariannus mariannus*)
E	Megapode, Micronesian (*Megapodius laperouse*)

E	Sea turtle, green (*Chelonia mydas*)
E	Sea turtle, hawksbill (*Eretmochelys imbricata*)
E	Sea turtle, leatherback (*Dermochelys coriacea*)
T	Sea turtle, loggerhead (*Caretta caretta*)
E	Warbler, nightingale reed (old world warbler) (*Acrocephalus luscinia*)
E	White-eye, Rota bridled (*Zosterops rotensis*)
E	Iagu, Hayun (= (Guam), Tronkon guafi (Rota) (*Serianthes nelsonii*)
Status	***Species listed in this state that do not occur in this state***
E	*Nesogenes rotensis* (No common name)
E	*Osmoxylon mariannense* (No common name)
Status	***Listed species occurring in this state that are not listed in this state***
E	Crow, Mariana (=aga) (*Corvus kubaryi*)
E	Moorhen, Mariana common (*Gallinula chloropus guami*)
E	Swiftlet, Mariana gray (*Aerodramus vanikorensis bartschi*)

USEPA's Finding:

The proposed NPDES permit authorizes the discharge of treated wastewater in conformance with the federal secondary treatment regulations and contains provisions for monitoring coventional, toxic chemicals, and non-conventional pollutants in compliance with CNMI WQS, to ensure an appropriate level of quality of water discharged by the facility. These standards are applied in the permit both as numeric and narrative limits. Therefore, since the standards themselves are designed to protect aquatic species, including threatened and endangered species, any discharge in compliance with these standards should not adversely impact any threatened and endangered species.

While USEPA believes that discharge in compliance with this permit will have no effect on threatened or endangered species, and is proposing to issue the permit at this time, USEPA may decide that changes to the permit may be warranted based on receipt of new information. USEPA is requesting comments from the Services and will consider their comments in making the final permit decision. EPA will initiate consultation should new information reveal impacts not previously considered, should the activities be modified in a manner beyond the scope of the original opinion of the Services, or should the activities affect a newly-listed species. A re-

opener clause has been included should new information become available to indicate that the requirements of the permit need to be modified.

XI. MAGNUSON STEVENS FISHERY CONSERVATION AND MANAGEMENT ACT

Background:

The Magnuson-Stevens Fishery Conservation and Management Act ("MSA") is the primary law governing marine fisheries management in the United States federal waters. The Act was first enacted in 1976 and amended in 1996. Most notably, the MSA aided in the development of the domestic fishing industry by phasing out foreign fishing. To manage the fisheries and promote conservation, MSA created eight regional fishery councils. The 1996 amendments focused rebuilding overfished fisheries, protecting essential fish habitat, and reducing bycatch.

The 1996 amendments to the MSA set forth a number of new mandates for NMFS, regional fishery management councils and other federal agencies to identify and protect important marine and anadromous fish habitat. Such action items include: Western Pacific Regional Fishery Management Council ("Council") and its staff; administration of Southwest Region's western Pacific fishing permits program; daily coordination with NMFS Enforcement and the Pacific Islands Fisheries Science Center in monitoring fish catch and effort data reporting requirements; and participation in the Western Pacific Fishery Information Network. USEPA, the agency for the proposed action, must make a determination on the effects of the proposed action that may adversely impact essential fish habitat ("EFH")

USEPA's Finding:

USEPA requested input about proposed or listed species, critical habitat, or essential fish habitat from NMFS. The renewed permit authorizes the discharge of treated effluent via an ocean outfall at a depth of about 100 feet and at a distance of about 1000 feet from the shoreline instead of at via an outfall at the surfline as was the case in during the previous permit cycle. This upgrade to the facility, will result in greater mixing and dilution of the effluent, resulting in better water quality. The USEPA believes that the discharge in compliance with this permit will therefore have no effect on threatened or endangered species, and is proposing to issue the permit at this time. USEPA may decide that changes to the permit may be warranted based on receipt of new information that is provided to it by any persons including the Services during the public notification process, and will consider their comments in making the final permit decision. A re-opener clause has been included in the permit should new information become available to indicate that the requirements of the permit need to be modified.

XII. COASTAL ZONE MANAGEMENT ACT

Background:

On January 5, 2006, the National Oceanic and Atmospheric Administration ("NOAA") published in the Federal Register the Final Rule revising certain sections of NOAA's Coastal Zone Management Act ("CZMA") federal consistency regulations, 71 Fed. Reg. 787-831 (Jan 5, 2006)

Federal consistency is the CZMA requirement (Section 307 of the CZMA) that federal agency activities that have reasonably forseeable effects on any land or water use or natural resoucrce of the coastal zone (also referred to as coastal uses or resources and coastal effects) must be consistent to the maximum extent practicable with the enforceable policies of a coastal state's federally approved coastal management program. Federal agency activities are activities and development projects performed by a federal agency, or a contractor for the benefit of a federal agency, including the issuance of permits, such as this NPDES permit.

In accordance with 15 CFR 930.33(a), federal agencies are required to determine which of their activities may affect any coastal use or resource of States with approved management programs. The lead state agency performs federal consistency reviews (usually the same agency that implements or coordinates CNMI's federally approved coastal management program.) In CNMI the lead agency is the Coastal Resource Management Office (CRMO).

According to the CRMO's consistency procedures, an applicant that seeks a Federal permit or license must submit the consistency certification to the CRMO. For more information, please refer to Section III of the *"Procedures Guide for Achieving Federal Consistency with the CNMI Coastal Resources Management Program"* (1987). If the CRMO objects to the consistency certification, the Federal agency (in this case, USEPA) cannot issue the license or permit. On March 6, 2007 USEPA informed CUC, the applicant for this NPDES permit, that it must work with the CRMO to develop and submit a consistency certification in order to gain coverage under the proposed permit.

XIII. MONITORING AND REPORTING PROGRAM

The monitoring program in the permit requires effluent monitoring for conventional, non-conventional, and priority toxic pollutants. The proposed permit requires discharge data obtained during the previous three months to be summarized on monthly discharge monitoring report (DMR) forms and reported quarterly. If there is no discharge for the month, report "C" in the No Discharge box on the DMR form for that month. These reports are due at the end of the month of January, April, July and October of each year. Duplicate signed copies of these, and all other reports required herein shall be submitted to the offices of USEPA Region 9 and the CNMI Division of of Environmental Quality as follows:

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

and

Division of Environmental Quality
Commonwealth of the Northern Mariana Islands
P.O. Box 501304
Gualo Rai Center
Saipan, MP 96950.

XIV. PERMIT RE-OPENER

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.

XV. ADMINISTRATIVE INFORMATION - PUBLIC NOTICE, PUBLIC COMMENTS AND REQUESTS FOR PUBLIC HEARINGS, ETC.

In accordance with 40 CFR 124.10, public notice shall be given by the USEPA Region 9 that a draft NPDES permit has been prepared by mailing a copy of the mailing a copy of the notice to the permit applicant and other Federal and State agencies, and through the publication of a notice in a daily or weekly newspaper within the area affected by the facility. A copy of this public notice will be available on the USEPA Region 9 website at: http://www.epa.gov/region09/water/npdes/pubnotices.html. The public notice shall allow at least thirty (30) days for public comment on the draft permit.

In accordance with 40 CFR 124.11 and 124.12, during the public comment period, any interested persons may submit written comments on the draft permit, and may request a public hearing if no hearing has already been scheduled. A request for public hearing shall be in writing and shall

state the nature of the issues proposed to be raised in the hearing. In accordance with 40 CFR 124.13, all persons must raise all reasonably ascertainable issues and submit all reasonably available arguments supporting their position within thirty (30) days from the date of the Public Notice. Comments may be submitted either in person or mailed to attention of Gary Sheth at USEPA Region 9

U. S. Environmental Protection Agency, Region 9
NPDES Permits Office (WTR-5)
Attn: Gary Sheth
75 Hawthorne Street
San Francisco, CA 94105

The Administrative Record, which contains the draft NPDES permit, the fact sheet, comments received, and other relevant documents, is available for review and may be obtained by calling Gary Sheth at (415) 972-3516 or by writing to the address above.