GUAM WATERWORKS AUTHORITY

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688 Route 15
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Phone: (671) 300-6885 Fax: (671) 648-3290

May 13, 2015

William M. Castro
Acting Director
Bureau of Statistics and Plans
Guam Costal Management Program
P. O. Box 2950
Hagåtña, GU 96932

VIA HAND DELIVERY AND ELECTRONIC MAIL

Subject: Federal Consistency Certification Application:
Umatac-Merizo Wastewater Treatment Plant NPDES Permit Renewal for discharge to Toguan River, Guam. NPDES PERMIT NO. GU0020273.

Bueñas yan saluda Mr. Castro,

Under Section 307 of the Coastal Management Act (CZMA), non-federal activities that are conducted under Federal licenses or permits are subject to review by the Government of Guam to insure consistency with CZMA. A proposal to renew a National Pollution Discharge Elimination System ('NPDES") permit for Guam Waterworks Authority (GWA) for the Umatac-Merizo Treatment Plant has been forwarded to Guam EPA for review and approval.

By this letter GWA requests certification that the proposed activity complies with the Guam Costal Management Program (GCMP) and will be conducted in a manner consistent with such program. A project description summary is enclosed with this letter. Also a set of findings documenting that the proposed activity is consistent with the GCMP is attached.

We understand that your office may circulate this consistency certification among local government agencies that may be affected by the proposed activity. A timely response to this request for certification of compliance would be appreciated.

This request is submitted by GWA (the Applicant) in its own behalf. Please contact this writer by phone at (671)300-6885, or by e-mail at paulkemp@guamwaterworks.org if you have any questions.

Senseremente,

Paul J. Kemp
Assistant General Manager for Compliance and Safety Date May 13, 2015

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

AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

NPDES PERMIT NO. GU0020273

In compliance with the provisions of the Clean Water Act ("CWA") (Public Law 92-500, as amended, 33 U.S.C. 1251 et seq.), the following discharger is authorized to discharge from the identified facility at the outfall location(s) specified below, in accordance with the effluent limits, monitoring requirements, and other conditions set forth in this permit:

Discharger Name	Guam Waterworks Authority
Discharger Address	P.O. Box 3010 Hagåtña, GU 96910
Facility Name	Umatac-Merizo Wastewater Treatment Plant
Facility Location Address	Route 2 Merizo, GU 96915
Facility Rating	Minor

Outfall Number	General Type of Waste Discharged	Outfall Latitude	Outfall Longitude	Receiving Water
001	Secondary Treated Domestic Wastewater	13˚ 17' 8.5" N	144˚ 39' 57.5" E	Toguan River

This permit was issued on:	
This permit shall become effective on:	
This permit shall expire at midnight on:	

In accordance with 40 CFR 122.21(d), the discharger shall submit a new application for a permit at least 180 days before the expiration date of this permit, unless permission for a date no later than the permit expiration date has been granted by the Director.

Signed this _____ day of _____, <2015>, for the Regional Administrator.

_____
Jane Diamond, Director
Water Division

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Part I. EFFLUENT LIMITS AND MONITORING REQUIREMENTS

A. Effluent Limits and Monitoring Requirements

1. Effluent Limits – Outfall Number 001
   The discharger is authorized to discharge secondary treated domestic wastewater in compliance with the effluent limits and monitoring requirements specified in Table 1.

2. The discharge of pollutants at any point other than the outfall specifically authorized in this permit is prohibited.

3. The discharge of toxic substances, including, but not limited to, pesticides, herbicides, heavy metals, and organic chemicals, in toxic amounts is prohibited.

4. Except as authorized in Table 1 of this permit, the discharge shall not cause the following conditions in the receiving water:

   a. Visible floating materials, grease, oil, scum, foam and other floating material which degrades water quality or use;

   b. Visible turbidity, deposits, or otherwise adversely affected aquatic life;

   c. Objectionable color, odor or taste;

   d. Conditions that are toxic or harmful to humans, animals, plants, or aquatic life;

   e. Growth of undesirable aquatic life;

   f. Temperature to deviate more than 1.0 degree Centigrade from ambient conditions;

   g. Turbidity to exceed 1.0 NTU over ambient conditions;

   h. Concentration of dissolved oxygen to be less than 75% of saturation.

5. The discharge of any radioactive wastes and contaminated radioactive materials is strictly prohibited.

B. Effluent Limits and Monitoring Requirements – Outfall Number 001

Table 1

Parameter	Maximum Allowable Discharge Limits Concentration and Loading				Monitoring Requirements	
	Average Monthly	Average Weekly	Maximum Daily	Units	Frequency	Sample Type
Flow rate	.39	—	(1)	MGD	Continuous	Metered
Temperature	—	—	(1)	°C	Weekly	Discrete
Biochemical oxygen demand (5-day)	30	45	—	mg/L	Weekly	8-hr Composite(3)
	98	147	—	lbs/day		
	Average monthly shall not be less than 85 percent removal. (2)			%		
Total suspended solids	30	45	—	mg/L	Weekly	8-hr Composite(3)
	98	147	—	lbs/day		
	Average monthly shall not be less than 85 percent removal. (2)			%		
pH	Within 6.5 and 8.5 at all times.			S.U.	Weekly	Discrete
Chlorine, Total Residual(4)	6.1	—	12	µg/L	Weekly(4)	Discrete
Dissolved Oxygen	—	—	(1)	mg/L	Monthly	Discrete
Enterococcus(5)	33	—	108	CFU/ 100mL	Monthly	Discrete
Oil and grease, total recoverable	10	—	15	mg/L	Quarterly	Discrete
Ammonia (as N)	(1)	—	(1)	mg/L	Quarterly	8-hr Composite
Ammonia Impact Ratio(6)	1.0	—	—	Ratio	Quarterly	8-hr Composite
Nitrate-nitrogen (as N)	0.5	—	—	mg/L	Quarterly	8-hr Composite
Orthophosphate	0.1	—	—	mg/L	Quarterly	8-hr Composite
Chronic Toxicity	—(7)			Pass/ Fail	Once/permit term(8)	8-hr Composite(3)
Priority Pollutant Scan(9)	—	—	(1)	µg/L	Once/permit term(8)	8-hr Composite(3)

(1) No effluent limits are set at this time, but monitoring and reporting is required.

(2) Both the influent and the effluent shall be monitored. The average monthly effluent concentration of Biochemical Oxygen Demand (5-day) and Total Suspended Solids shall not exceed 15 percent of the average monthly influent concentration collected at the same time.

(3) Composites shall be taken over the course of a single discharge. If the discharge is less than 8 hours, composite samples shall be taken at regular intervals for the duration of the discharge.

(4) Total Residual Chlorine effluent limitation and effluent monitoring requirement is effective upon implementation of a disinfection system using chlorination; the permittee is required to notify EPA and Guam EPA 30 days prior to operation of a disinfection system

(5) For enterococcus, average monthly values shall be calculated as a geometric mean.

(6) The Ammonia Impact Ratio (AIR) is calculated as the ratio of the ammonia value in the effluent and the calculated ammonia standard as determined by using pH data to derive an appropriate value from the ammonia criteria table in Attachment E. See Attachment F. for a sample log to help calculate and record the AIR values. The AIR is the ammonia effluent limit and must be reported in the DMRs in addition to ammonia effluent values.

(7) See section III.C. for specific whole effluent toxicity requirements.

(8) Toxicity testing and priority pollutant scan shall be conducted once during the fourth year of the five year permit cycle. Testing shall be conducted concurrent with testing for all other parameters.

(9) For a listing of all priority toxic pollutants see 40 CFR 131.36.

C. Sampling

1. Samples and measurements shall be representative of the volume and nature of the monitored discharge.

2. Samples shall be taken at the following locations:

   a. Influent samples shall be taken after the last addition to the collection system and prior to inplant return flow and the first treatment process.

   b. Effluent samples shall be taken after inplant return flows and the last treatment process and prior to mixing with the receiving water.

3. If the discharge is intermittent rather than continuous, then on the first day of each such intermittent discharge, the permittee shall monitor and record data for all the parameters listed in the monitoring requirements, after which the frequencies of analysis listed in the monitoring requirements shall apply for the duration of each such intermittent discharge. The permittee is not required to take effluent samples when there is no discharge.

D. General Monitoring and Reporting

1. All monitoring shall be conducted in accordance with 40 CFR 136 test methods, unless otherwise specified in this permit. For influent and effluent analyses required in this permit, the permittee shall utilize 40 CFR 136 test methods with Method Detection Levels (MDLs) and Minimum Reporting Levels (MRLs) that are lower than the effluent limits in this permit and the water quality criteria concentrations in the National Recommended Water Quality Criteria. If all MDLs or MRLs are higher

than these effluent limits or criteria concentrations, then the permittee shall utilize the test method with the lowest MDL or MRL. In this context, the permittee shall ensure that the laboratory utilizes a standard calibration where the lowest standard point is equal to or less than the MRL. Influent and effluent analyses for metals shall measure "total recoverable metal", except as provided under 40 CFR 122.45(c).

2. As an attachment to the first DMR, the permittee shall submit, for all parameters with monitoring requirements specified in this permit:

   a. The test method number or title and published MDL or MRL,

   b. The preparation procedure used by the laboratory,

   c. The laboratory's MDL for the test method computed in accordance with Appendix B of 40 CFR 136,

   d. The standard deviation (S) from the laboratory's MDL study,

   e. The number of replicate analyses (n) used to compute the laboratory's MDL, and

   f. The laboratory's lowest calibration standard.

   As part of each DMR submittal, the permittee shall certify that there are no changes to the laboratory's test methods, MDLs, MRLs, or calibration standards. If there are any changes to the laboratory's test methods, MDLs, MRLs, or calibration standards, these changes shall be summarized in an attachment to the subsequent DMR submittal.

3. 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 of project management and a description of the roles and responsibilities of the 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/Quality Control ("QC") samples; preservatives and holding times for the samples (see 40 CFR 136.3); 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 MRL 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, report results, and resolve data quality issues and identify limits on the use of data.

4. 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 regulatory authorities upon request. The permittee shall review its QA Manual annually and revise it, as appropriate.

5. Samples collected during each month of the reporting period must be reported on Discharge Monitoring Report forms, as follows:

   a. For a *maximum daily* permit limit or monitoring requirement when one or more samples are collected during the month, report either:

      The *maximum value*, if the maximum value of all analytical results is greater than or equal to the MRL; or
      NODI (Q), if the maximum value of all analytical results is greater than or equal to the laboratory's MDL, but less than the MRL; or
      NODI (B), if the maximum value of all analytical results is less than the laboratory's MDL.

   b. For an *average weekly* or *average monthly* permit limit or monitoring requirement when only one sample is collected during the week or month, report either:

      The *maximum value*, if the maximum value of all analytical results is greater than or equal to the MRL; or
      NODI (Q), if the maximum value of all analytical results is greater than or equal to the laboratory's MDL, but less than the MRL; or
      NODI (B), if the maximum value of all analytical results is less than the laboratory's MDL.

   c. For an *average weekly* or *average monthly* permit limit or monitoring requirement when more than one sample is collected during the week or month, report:

      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)*.

6. 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 condition upon receipt, holding time, and preservation.

7. The results of all monitoring required by this permit shall be submitted in such a format as to allow direct comparison with effluent limitations and permit requirements. Beginning the effective date of the permit, the permittee shall submit discharge monitoring reports (DMRs) (EPA Form 3320-1) to EPA no later than the 28th day of the month following the completed quarterly reporting period. For example, the three DMR forms for January, February, and March are due on April 28th. Monitoring and reporting schedules are as follows:

Table 2

Sampling Frequency	Monitoring Period Begins On	Monitoring Period	DMR Due Date
Continuous	Permit effective date	Continuous	28th day of the month following calendar quarter
Once/Day	Permit effective date	Midnight through 11:59 p.m.	28th day of the month following calendar quarter
Once/Week	Permit effective date	Sunday through Saturday	28th day of the month following calendar quarter
Once/Month	Permit effective date	First day of the calendar month through last day of the calendar month	28th day of the month following calendar quarter
Once/Quarter	Closest of January 1, April 1, July 1, or October 1 following (or on) permit effective date	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31	28th day of the month following calendar quarter
Once/Year	January 1 following permit effective date	January 1 through December 31	January 28, each year

8. For a period of six months from the effective date of the permit, the permittee may submit the DMRs to EPA in hard copy form or in DMRs electronically submitted using NetDMR. A DMR form must be submitted for the reporting period even if there was not any discharge. If there is no discharge from the facility during the

reporting period, the permittee shall submit a DMR indicating no discharge as required.

Duplicate signed copies of hard copy forms, and all other reports required herein, must be submitted to EPA and Guam EPA at the following addresses:

NPDES Data Team (ENF-4-1)
EPA Region IX
75 Hawthorne Street
San Francisco, CA 94105

Administrator
Guam EPA
P.O. Box 22439 GMF
Barrigada, GU 96921

Beginning no later than six months after the effective date of the permit, the permittee shall begin reporting quarterly using NetDMR, unless the facility is able to demonstrate a reasonable basis, such as technical or administrative infeasibility, that precludes the use of NetDMR for submitting DMRs. NetDMR is a web-based tool that allows permittees to electronically submit DMRs and other required reports via a secure internet connection. NetDMR is accessed from: http://www.epa.gov/netdmr. The permittee shall continue to use the NetDMR tool for reporting all discharge monitoring data. By using NetDMR, the permittee will no longer be required to submit hard copies of DMRs to EPA under 40 CFR 122.41 and 403.12.

After the permittee begins submitting DMR reports to EPA electronically using NetDMR, the permittee shall electronically submit all reports to EPA as NetDMR attachments rather than as hard copies, unless otherwise specified in this permit. A report submitted electronically as a NetDMR attachment shall be submitted to EPA by the 28th day of the month following the calendar quarter it was due.

E. Receiving Water Monitoring and Mixing Zone Study

1. The discharger shall conduct quarterly receiving water quality monitoring for nitrate, orthophosphate, and ammonia.

2. Upstream, downstream, and effluent samples shall be collected as immediate in time to each other as possible.

3. The upstream sample point shall be the closest point upstream of the discharge that is not influenced or affected by the discharge. The downstream sample point shall be no further downstream than five times the natural width of the Toguan River at the point where the effluent meets the river.

4. All individual measurement values shall be reported as an attachment to the DMR form.

5. The permittee shall also record or gather flow data for the receiving water including low flow conditions concurrent with discharge events. The permittee shall use the data to conduct a mixing zone study to be submitted no later than concurrent with the next permit application. The mixing zone study shall be consistent with Section 5104.D.1. of the Guam WQS (Mixing Zones for Non-Thermal Discharges into Streams and Rivers) by ensuring the proposed mixing zone:

    a. Is limited to 25% of the cross sectional area of the Toguan River at the point of discharge during minimum flow conditions at times of discharge;

    b. Is no longer than five times the natural width of the stream at the point of discharge during minimum flow conditions at times of discharge;

    c. Meets applicable nutrient water quality standards at the edge of the mixing zone; and

    d. Located in a flowing portion of the Toguan River.

PART II. STANDARD CONDITIONS

The permittee shall comply with all EPA Region 9 Standard Conditions included in an attachment to this permit (see Attachment A).

PART III. SPECIAL CONDITIONS

A. Permit Reopener(s)

1. In accordance with 40 CFR 122 and 124, this permit may be modified by EPA to include effluent limits, monitoring, or other conditions to implement new regulations, including EPA-approved water quality standards; or to address new information indicating the presence of effluent toxicity or the reasonable potential for the discharge to cause or contribute to exceedances of water quality standards. EPA may also make permit modifications in response to new information presented by the permittee, if appropriate.

2. In accordance with 40 CFR 122.44(c), EPA may promptly modify or revoke and reissue any permit issued to a treatment works treating domestic sewage (including "sludge only facilities") to incorporate any applicable standard for sewage sludge use or disposal promulgated under section 405(d) of the CWA, if the standard for sewage sludge use or disposal is more stringent than any requirements for sludge use or disposal in the permit, or controls a pollutant or practice not limited in the permit.

B. Twenty-four Hour Reporting of Noncompliance

1. The permittee shall report any noncompliance which may endanger human health or the environment. The permittee is required to provide an oral report by directly speaking with an EPA and Guam EPA staff person within 24 hours from the time the permittee becomes aware of non-compliance. If the permittee is unsuccessful in reaching a staff person, the permittee shall provide notification by 9 a.m. on the first business day following the noncompliance. The permittee shall notify EPA and Guam EPA at the following telephone numbers:

U.S. Environmental Protection Agency
Water Section I
Enforcement Division
(415) 972-3577

Guam Environmental Protection Agency
Administrator
(671) 475-1658

The permittee shall follow up with a written submission within five days of the time the permittee becomes aware of the circumstances. 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.

The following shall be included as information which must be reported within 24 hours under this paragraph.

a. Any unanticipated bypass which exceeds any effluent limit in the permit (see 40 CFR 122.44(g)).

b. Any upset which exceeds any effluent limit in the permit.

2. EPA may waive the written report on a case-by-case basis for reports required under paragraph B.1, if the oral report has been received within 24 hours.

C. Chronic Whole Effluent Toxicity (WET) Requirements

1. Monitoring Frequency

The permittee shall conduct one chronic toxicity tests on 8-hour composite effluent samples. The permittee shall split a 8-hour composite effluent sample and concurrently conduct three toxicity tests using a fish, an invertebrate, and an alga species. Chronic toxicity test samples shall be collected from Outfall 001 and consist of 100% effluent.

2. Freshwater Species and Test Methods

Species and short-term test methods for estimating the chronic toxicity of NPDES effluents are found in the fourth edition of *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (EPA/821/R-02/013, 2002; Table IA, 40 CFR Part 136).

The permittee shall conduct static renewal toxicity tests with the fathead minnow, *Pimephales promelas* (Larval Survival and Growth Test Method 1000.0); the daphnid, *Ceriodaphnia dubia* (Survival and Reproduction Test Method 1002.01); and the green alga, *Selenastrum capricornutum* (also named *Raphidocelis subcapitata*) (Growth Test Method 1003.0).

3. Chronic WET Permit Trigger

There is no chronic toxicity effluent limit for this discharge because there is no reasonable potential for the discharge to exceed the Guam WQS for

chronic toxicity. For this discharge, the determination of "Pass" or "Fail" from a single-effluent concentration chronic toxicity test at the IWC of 100 percent effluent is determined using the Test of Significant Toxicity (TST) approach described in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010). For any one chronic toxicity test, the chronic WET permit trigger that must be achieved is rejection of the null hypothesis (H_o):

IWC (100 percent effluent) mean response $\leq 0.75 \times$ Control mean response.

A test result that rejects this null hypothesis is reported as "Pass" on the DMR form. A test result that does not reject this null hypothesis is reported as "Fail" on the DMR form. To calculate either "Pass" or "Fail", the permittee shall follow the instructions in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document*, Appendix A. If a test result is reported as "Fail", then the permittee shall follow Section 6 (Accelerated Toxicity Testing and TRE/TIE Process) of this permit.

4. Quality Assurance

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

b. This discharge is subject to a determination of "Pass" or "Fail" from a single-effluent concentration chronic toxicity test at the IWC (for statistical flowchart and procedures, see *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document*, Appendix A, Figure A-1). The chronic IWC for this discharge is 100 percent effluent.

c. 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.).

d. All multi-concentration reference toxicant test results must be reviewed and reported according to EPA guidance on the evaluation of concentration-response relationships found in *Method Guidance and Recommendations for Whole Effluent Toxicity (WET) Testing (40 CFR 136)* (EPA 821-B-00-004, 2000).

e. If either the reference toxicant or effluent toxicity tests do not meet all test acceptability criteria in the test methods manual, then the permittee shall resample and retest within 14 days.

f. If the discharged effluent is chlorinated, then chlorine shall not be removed from the effluent sample prior to toxicity testing without written approval by EPA.

g. pH drift during a toxicity test may contribute to artifactual toxicity when pH-dependent toxicants (e.g., ammonia, metals) are present in the effluent. To determine whether or not pH drift is contributing to artifactual toxicity, the permittee shall conduct three sets of side-by-side toxicity tests in which the pH of one treatment is controlled at the pH of the effluent while the pH of the other treatment is not controlled, as described in Section 11.3.6.1 of *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (EPA/821/R-02/013, 2002). Toxicity is confirmed to be artifactual and due to pH drift when no toxicity above the chronic WET permit limit or trigger is observed in the treatments controlled at the pH of the effluent. Upon this confirmation and following written approval by EPA, the permittee may use the procedures outlined in Section 11.3.6.2 of the chronic freshwater test methods manual to control effluent sample pH during the toxicity test.

5. Initial Investigation TRE Work Plan

Within 90 days of the permit effective date, the permittee shall prepare an Initial Investigation Toxicity Reduction Evaluation (TRE) Work Plan (1-2 pages). This plan shall include steps the permittee intends to follow if toxicity is measured above the chronic WET permit limit or trigger and should include the following, at minimum:

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

b. A description of methods for maximizing in-house treatment system efficiency, good housekeeping practices, and a list of all chemicals used in operations at the facility.

c. If a Toxicity Identification Evaluation (TIE) is necessary, an indication of who would conduct the TIEs (i.e., an in-house expert or outside contractor).

6. Accelerated Toxicity Testing and TRE/TIE Process

a. If the chronic WET permit limit or trigger 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 toxicity test shall begin within 14 days of receipt of a test result exceeding the chronic WET permit limit or trigger. If the additional toxicity test does not exceed the chronic WET permit limit or trigger, then the permittee may return to the regular testing frequency.

b. If the chronic WET permit limit or trigger is exceeded and the source of toxicity is not known, then the permittee shall conduct six additional toxicity tests using the same species and test method, approximately every two weeks, over a 12-week period. This testing shall begin within 14 days of receipt of a test result exceeding the chronic WET permit limit or trigger. If none of the additional toxicity tests exceed the chronic WET permit limit or trigger, then the permittee may return to the regular testing frequency.

c. If one of the additional toxicity tests (in paragraphs 6.a or 6.b) exceeds the chronic WET permit limit or trigger, then, within 14 days of receipt of this test result, the permittee shall initiate a TRE using, according to the type of treatment facility, EPA manual *Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants* (EPA/833/B-99/002, 1999) or EPA manual *Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations* (EPA/600/2-88/070, 1989). In conjunction, the permittee shall develop and implement a Detailed TRE Work Plan which shall include the following: further actions undertaken by the permittee to investigate, identify, and correct the causes of toxicity; actions the permittee will take to mitigate the effects of the discharge and prevent the recurrence of toxicity; and a schedule for these actions.

d. The permittee may initiate a TIE as part of a TRE to identify the causes of toxicity using the same species and test method and, as guidance, EPA manuals: *Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures* (EPA/600/6-91/003, 1991); *Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/080, 1993); *Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/081, 1993); and *Marine Toxicity Identification Evaluation (TIE): Phase I Guidance Document* (EPA/600/R-96-054, 1996).

7. Reporting of Chronic Toxicity Monitoring Results

a. The permittee shall report on the DMR for the month in which the toxicity test was conducted: "Pass" or "Fail" (based on the Welch's t-test result) and the calculated "percent mean response at IWC", where:

percent mean response at IWC = ((Control mean response – IWC mean response) ÷ Control mean response)) × 100

b. The permittee shall submit a full laboratory report for all toxicity testing as an attachment to the DMR for the month in which the toxicity test was conducted. The laboratory report shall contain: the toxicity test results; the dates of sample collection and initiation of each toxicity test; all results for

effluent parameters monitored concurrently with the toxicity test(s); and progress reports on TRE/TIE investigations.

c. The permittee shall notify EPA and Guam EPA in writing within 14 days of becoming aware of an exceedance of the chronic WET permit limit or trigger. 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.

8. Permit Reopener for Chronic Toxicity

In accordance with 40 CFR Parts 122 and 124, this permit may be modified to include effluent limitations or permit conditions to address chronic toxicity in the effluent or receiving waterbody, as a result of the discharge; or to implement new, revised, or newly interpreted water quality standards applicable to chronic toxicity.

D. Biosolids

"Biosolids" means non-hazardous sewage sludge, as defined in 40 CFR 503.9. Sewage sludge that is hazardous, as defined in 40 CFR 261, must be disposed of in accordance with the Resource Conservation and Recovery Act.

1. General Requirements

a. All biosolids generated by the permittee shall be used or disposed of in compliance with the applicable portions of:

(1) 40 CFR 503 - for biosolids that are land applied, placed in a surface disposal site (dedicated land disposal site, monofill, or sludge-only parcel at a municipal landfill), or incinerated;

(2) 40 CFR 258 - for biosolids disposed of in a municipal solid waste landfill (with other material);

(3) 40 CFR 257 - for all biosolids use and disposal practices not covered under 40 CFR 258 or 503.

40 CFR 503, Subpart B (land application) sets requirements for biosolids that are applied for the purpose of enhancing plant growth or for land reclamation. 40 CFR 503, Subpart C (surface disposal) sets requirements for biosolids that are placed on the land for the purpose of disposal.

The permittee is responsible for assuring that all biosolids produced at its facility are used or disposed of in accordance with these rules, whether the permittee uses or disposes of the biosolids, itself, or transfers the biosolids to another party for further treatment, use, or disposal. The permittee is responsible for informing subsequent preparers, appliers, and disposers of the requirements that they must meet under these rules.

b. Duty to mitigate: The permittee shall take all reasonable steps to prevent or minimize any biosolids use or disposal which has a likelihood of adversely affecting human health or the environment.

c. No biosolids shall be allowed to enter wetlands or other waters of the United States.

d. Biosolids treatment, storage, use, or disposal shall not contaminate groundwater.

e. Biosolids treatment, storage, use, or disposal shall not create a nuisance such as objectionable odors or flies.

f. The permittee shall assure that haulers transporting biosolids off site for treatment, storage, use, or disposal take all necessary measures to keep the biosolids contained. All haulers must have spill clean-up procedures. Trucks hauling biosolids that are not classified as Class A, as defined at 40 CFR 503.32(a), shall be cleaned as necessary after loading and after unloading so as to have no biosolids on the exterior of the truck body or wheels. Open bed trucks hauling biosolids that are not Class A shall be tarped. Trucks hauling biosolids that are not Class A may not be used for hauling food or feed crops after unloading the biosolids, unless the permittee submits, for EPA approval, a hauling description of how trucks will be thoroughly cleaned prior to adding food or feed.

g. If biosolids are stored over two years from the time they are generated, then the permittee must ensure compliance with all surface disposal requirements under 40 CFR 503, Subpart C, or must submit a written notification to EPA and Guam EPA with the information under 40 CFR 503.20(b) demonstrating the need for longer temporary storage. During temporary storage (of any length of time) for biosolids that are not Class A, whether on the facility site or off-site, adequate procedures must be taken to restrict public access and access by domestic animals.

h. Any biosolids treatment, disposal, or storage site shall have facilities adequate to: divert surface runoff from adjacent areas, protect the site boundaries from erosion, and prevent any conditions that would cause drainage from the materials at the site to escape from the site. Adequate protection is defined as protection from at least a 100-year storm event and from the highest tidal stage that may occur.

2. Inspection and Entry

The EPA, Guam EPA, or an authorized representative thereof, upon presentation of credentials, shall be allowed by the permittee, directly or through contractual arrangements with their biosolids management contractors, to:

a. Enter upon all premises where biosolids produced by the permittee are treated, stored, used, or disposed of, either by the permittee or another party to whom the permittee transfers the biosolids for treatment, storage, use, or disposal;

b. Have access to and copy any records that must be kept under the conditions of this permit or 40 CFR 503, by the permittee or another party to whom the permittee transfers the biosolids for further treatment, storage, use, or disposal; and

c. Inspect any facilities, equipment (including monitoring and control equipment), practices, or operations used in biosolids treatment, storage, use, or disposal by the permittee or another party to whom the permittee transfers the biosolids for treatment, use, or disposal.

3. Monitoring

a. Biosolids shall be monitored for the following constituents, at the frequency specified in paragraph 3.b: arsenic, cadmium, chromium, copper, lead, mercury, molybdenum, nickel, selenium, zinc, organic nitrogen, ammonia-nitrogen, and total solids. This monitoring shall be conducted using the methods in Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (EPA publication SW-846), as required in 40 CFR 503.8(b)(4). All results must be reported on a 100% dry weight basis.

b. The constituents in paragraph 3.a shall be monitored at the following frequency, based on the volume of sewage solids generated per year:

Volume Generated (dry metric tons per year)	Monitoring Frequency *
>0 - <290	Once per year
290 - <1,500	Four times per year
1,500 - <15,000	Six times per year
≥15,000	12 times per year

* If biosolids are removed for use or disposal on a routine basis, then monitoring should be scheduled at regular intervals throughout the year. If biosolids are stored for an extended period of time prior to use or disposal, then monitoring

may occur either at regular intervals, or prior to use or disposal corresponding to tonnage accumulated during the period of storage. If biosolids are removed at a frequency less than that specified in the chart, monitoring shall occur prior to each incidence of use or disposal.

4. Pathogen and Vector Control

If biosolids are land applied, the permittee shall demonstrate that biosolids meet Class A or Class B pathogen reduction levels using one of the alternatives listed under 40 CFR 503.32 prior to land application.

a. Prior to disposal in a surface disposal site, the permittee shall demonstrate that the biosolids meet Class B pathogen reduction levels or shall ensure that the site is covered at the end of each operating day. If pathogen reduction is demonstrated using a Process to Significantly/Further Reduce Pathogens, then the permittee shall maintain daily records of the operating parameters used to achieve this reduction.

   If pathogen reduction is demonstrated by testing for fecal coliform and/or other pathogens, then samples must be drawn at the frequency described in paragraph 3.b, above. If Class B pathogen reduction levels are demonstrated using fecal coliform, then at least seven grab samples must be drawn during each sampling event and a geometric mean calculated from these seven samples.

   The following sample holding times between sample collection and sample analysis shall not be exceeded: fecal coliform - 24 hours when cooled to 4 ˚C if composted, mesophillically digested, or aerobically digested, 6 hours otherwise; Salmonella sp. - 24 hours when cooled to 4 ˚C; enteric viruses - 2 weeks when frozen; helminth ova - one month when cooled to 4 ˚C.

b. For biosolids that are land applied or placed in a surface disposal site, the permittee shall track and keep records of the operational parameters used to achieve the Vector Attraction Reduction requirements in 40 CFR 503.33(b).

5. Surface Disposal

   If biosolids are placed in a surface disposal site (dedicated land disposal site or monofill), then a qualified groundwater scientist shall develop a groundwater monitoring program for the site, or shall certify that the placement of biosolids on the site will not contaminate an aquifer.

6. Landfill Disposal

   Biosolids placed in a municipal landfill shall be tested by the Paint Filter Liquids Test (Method Number 9095 in SW-846) at the frequency indicated in paragraph 3.b, above, or more often if necessary, to demonstrate that there are no free liquids.

7. Notification and Reporting

   a. The permittee, either directly or through contractual arrangements with their biosolids management contractors, shall comply with the following notification requirements:

      (1) Notification of noncompliance: The permittee shall notify EPA and Guam EPA of any noncompliance within 24 hours, if the noncompliance may seriously endanger health or the environment. For other instances of noncompliance, the permittee shall notify EPA and Guam EPA, in writing, within five working days of becoming aware of the non-compliance. The permittee shall require their biosolids management contractors to notify EPA and Guam EPA of any noncompliance within these same timeframes.

      (2) Interstate notification: If biosolids are shipped to another State, Tribal Lands, or Territory, then the permittee shall send a 60-day prior notice of the shipment to permitting authorities in the receiving State, Tribal Lands, or Territory, and EPA Regional Office.

   b. The permittee shall submit an annual biosolids report to the EPA Region 9 Biosolids Coordinator and Guam EPA by February 19 of each year for the period covering the previous calendar year. This report shall include:

      (1) The amount of biosolids generated that year and the amount of biosolids accumulated from previous years, in dry metric tons.

      (2) Results of all pollutant monitoring required in the Monitoring section, above, reported on a 100% dry weight basis.

      (3) Demonstrations and certifications of pathogen reduction methods and vector attraction reduction methods, as required in 40 CFR 503.17 and 503.27.

      (4) Names, mailing addresses, and street addresses of persons who received biosolids for storage, further treatment, or disposal in a municipal waste landfill, or for other use or disposal methods not covered above, and the tonnages delivered to each.

      (5) For land application sites, the following information must be submitted by the permittee, unless the permittee requires its biosolids management contractors to report this information directly to the EPA Region 9 Biosolids Coordinator:

      The locations of land application sites used that calendar year (with field names and numbers), size of each field applied to, applier, and site owner; the volumes applied to each field (in wet tons and dry metric tons), nitrogen applied, and calculated plant available nitrogen; the crop planted, date of planting, and date of harvesting; for biosolids exceeding 40 CFR 503.13 Table 3 pollutant concentrations, the locations of sites where applied and cumulative

metals loading at that site to date; certifications of management practices in 40 CFR 503.14 and certifications of site restrictions in 40 CFR 503.17(b)(6).

(6) All reports shall be submitted to:

Regional Biosolids Coordinator
U.S. Environmental Protection Agency
Region 9
NPDES Permits Section (WTR-2-3)
75 Hawthorne Street
San Francisco, CA 94105-3901

Administrator
Guam Environmental Protection Agency
P.O. Box 22439 GMF
Barrigada, GU 96921

E. Sanitary Sewer Overflows

1. A Sanitary Sewer Overflow (SSO) is an overflow, spill, release, or diversion of wastewater from a sanitary sewer collection system designed to carry only sewage and prior to reaching the treatment plant. Sanitary sewer overflows include a) overflows or releases of wastewater that reach waters of the US, b) overflows or releases of wastewater that do not reach waters of the US, and c) wastewater backups into buildings that are caused by blockages or flow conditions in a sanitary sewer other a building lateral. SSOs are generally caused by high volumes of infiltration and inflow (I/I), pipe blockages, pipe breaks, power failure, and insufficient system capacity.

2. Sanitary Sewer Overflow identification: The permittee shall identify all wastewater discharges, at locations not authorized as permitted outfalls, that occur prior to the headworks of the wastewater treatment plant covered by this permit. The permittee shall submit, with the scheduled DMR Form, the following information for each discharge event at each source that occurs during the reporting period covered by the DMR Form:

   a. The cause of the discharge;

   b. Duration and volume (estimate, if unknown);

   c. Description of the source (e.g., manhole cover, pump station, etc.);

   d. Type of collection system that overflowed (i.e., combined or separate);

   e. Location by street address, or any other appropriate method;

f. Date(s) and time(s) of event;

g. The ultimate destination of the flow, e.g., surface water body, land use location, via municipal separate storm sewer system to a surface water body (show location on a USGS map or copy thereof); and

h. Corrective action taken and steps taken or planned to eliminate reoccurrence of discharge.

The permittee shall refer to Part III.B of this permit which contains information about reporting unpermitted discharge events. Submittal or reporting of any of this information does not provide relief from any subsequent enforcement actions for unpermitted discharges to waters of the United States.

PART IV. ATTACHMENTS

Attachment A: Standard Permit Conditions

A. All NPDES Permits

In accordance with 40 CFR 122.41, the following conditions apply to all NPDES permits and are expressly incorporated into this permit.

a. Duty to comply; at 40 CFR 122.41(a).

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the CWA and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

(1) The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the CWA for toxic pollutants and with standards for sewage sludge use or disposal established under 405(d) of the CWA within the time provided in the regulations that established these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.

(2) The CWA provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed $25,000 per day for each violation. The CWA provides that any person who *negligently* violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, or any requirement imposed in a pretreatment program approved under 402(a)(3) or

402(b)(8) of the Act, is subject to criminal penalties of $2,500 to $25,000 per day of violation, or imprisonment of not more than 1 year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than $50,000 per day of violation, or by imprisonment of not more than 2 years, or both. Any person who *knowingly* violates such sections, or such conditions or limitations is subject to criminal penalties of $5,000 to $50,000 per day of violation, or imprisonment for not more than 3 years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than $100,000 per day of violation, or imprisonment of not more than 6 years, or both. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of note more than $250,000 or imprisonment of not more than 15 years, or both. In the case of second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than $500,000 or by imprisonment of not more than 30 years, or both. An organization, such as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than $1,000,000 and can be fined up to $2,000,000 for second or subsequent convictions.

(3) Any person may be assessed an administrative penalty by the Administrator for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed $10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed $25,000. Penalties for Class II violations are not to exceed $10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed $125,000.

b. Duty to reapply; at 40 CFR 122.41(b).

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.

c. Need to halt or reduce activity not a defense; at 40 CFR 122.41(c).

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

d. Duty to mitigate; at 40 CFR 122.41(d).

The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

e. Proper operation and maintenance; at 40 CFR 122.41(e).

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

f. Permit actions; at 40 CFR 122.41(f).

This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

g. Property rights; at 40 CFR 122.41(g).

This permit does not convey any property rights of any sort, or any exclusive privilege.

h. Duty to provide information; at 40 CFR 122.41(h).

The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Director upon request, copies of records required to be kept by this permit.

i. Inspection and entry; at 40 CFR 122.41(i).

The permittee shall allow the Director, or an authorized representative (including an authorized contractor acting as a representative of the Administrator), upon presentation of credentials and other documents as may be required by law, to:

(1) Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

(2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

(3) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

(4) Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the CWA, any substances or parameters at any location.

j. Monitoring and records; at 40 CFR 122.41(j).

(1) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

(2) Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR part 503), the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample measurement, report or application. This period may be extended by request of the Director at any time.

(3) Records of monitoring information shall include:

(i) The date, exact place, and time of sampling or measurements;

(ii) The individual(s) who performed the sampling or measurements;

(iii)The date(s) analyses were performed

(iv)The individuals(s) who performed the analyses;

(v) The analytical techniques or methods used; and

(vi)The results of such analyses.

(4) Monitoring must be conducted according to test procedures approved under 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR part 503, unless other test procedures have been specified in the permit.

(5) The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under

this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than 4 years, or both.

k. Signatory requirement; at 40 CFR 122.41(k).

(1) All applications, reports, or information submitted to the Director shall be signed and certified. (See 40 CFR 122.22.)

(2) The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.

l. Reporting requirements; at 40 CFR 122.41(l).

(1) Planned changes. The permittee shall give notice to the Director as soon as possible of any planned physical alternations or additions to the permitted facility. Notice is required only when:

(i) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or

(ii) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.42(a)(1).

(iii)The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, an such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan;

(2) Anticipated noncompliance. The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

(3) Transfers. This permit is not transferable to any person except after notice to the Director. The Director may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the CWA. (See 40 CFR 122.61; in some cases, modification or revocation and reissuance is mandatory.)

(4) Monitoring reports. Monitoring results shall be reported at the intervals specified elsewhere in this permit.

(i) Monitoring results must be reported on a Discharge Monitoring Report (DMR) or forms provided or specified by the Director for reporting results of monitoring of sludge use or disposal practices.

(ii) If the permittee monitors any pollutant more frequently than required by the permit using test procedures approved under 40 CFR part 136 or, in the case of sludge use or disposal, approved under 40 CFR part 503, or as specified in the permit, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Director.

(iii) Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Director in the permit.

(5) Compliance schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

(6) Twenty-four hour reporting.

(i) The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. 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 the steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

(ii) The following shall be included as information which must be reported within 24 hours under this paragraph.

(A) Any unanticipated bypass which exceeds any effluent limitation in the permit. (See 40 CFR 122.41(g).)

(B) Any upset which exceeds any effluent limitation in the permit.

(C) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Director in the permit to be reported within 24 hours. (See 40 CFR 122.44(g).)

(iii)The Director may waive the written report on a case-by-case basis for reports under 40 CFR 122.41(l)(6)(ii) of this section if the oral report has been received within 24 hours.

(7) Other noncompliance. The permittee shall report all instances of noncompliance not reported under 40 CFR 122.41(l)(4), (5), and (6) of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph (l)(6) of this section.

(8) Other information. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information.

m. Bypass; at 40 CFR 122.41(m).

(1) Definitions.

(i) "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.

(ii) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

(2) Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs 40 CFR 122.41(m)(3) and (m)(4) of this section.

(3) Notice.

(i) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass.

(ii) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in paragraph (l)(6) of this section (24-hour notice).

(4) Prohibition of bypass.

(i) Bypass is prohibited, and the Director may take enforcement action against a permittee for bypass, unless:

(A) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

(B) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance; and

(C) The permittee submitted notices as required under paragraph (m)(3) of this section.

(ii) The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed above in paragraph (m)(4)(i) of this section.

n. Upset; at 40 CFR 122.41(n).

(1) Definition. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent cause by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or careless or improper operation.

(2) Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph (n)(3) of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

(3) Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

(i) An upset occurred and that the permittee can identify the cause(s) of the upset;

(ii) The permitted facility was at the time being properly operated; and

(iii) The permittee submitted notice of the upset as required in paragraph (l)(6)(ii)(B) of this section (24 hour notice).

(iv) The permittee complied with any remedial measures required under paragraph (d) of this section.

(4) Burden of proof. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

B. Specific Categories of NPDES Permits

In accordance with 40 CFR 122.42, the following conditions, in addition to those set forth at 40 CFR 122.41, apply to all NPDES permits within the category specified below and are expressly incorporated into this permit.

a. Publicly owned treatment works; at 40 CFR 122.42(b).

(1) All POTWs must provide adequate notice to the Director of the following:

(1) Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to section 301 and 306 of the CWA if it were directly discharging those pollutants; and

(2) Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.

(3) For purposes of this paragraph, adequate notice shall include information on (i) the quality and quantity of effluent introduced into the POTW, and (ii) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

(2) The following condition has been established by EPA Region 9 to enforce applicable requirements of the Resource Conservation and Recovery Act. Publicly owned treatment works may not receive hazardous waste by truck, rail, or dedicated pipe except as provided under 40 CFR 270. Hazardous wastes are defined at 40 CFR 261 and include any mixture containing any waste listed under 40 CFR 261.31 through 261-33. The Domestic Sewage Exclusion (40 CFR 261.4) applies only to wastes mixed with domestic sewage in a sewer leading to a publicly owned treatment works and not to mixtures of hazardous wastes and sewage or septage delivered to the treatment plant by truck.

C. Standard Conditions Established by EPA Region 9 for All NPDES Permits

1. Duty to reapply; at 40 CFR 122.21(d).

a. Any POTW with a currently effective permit shall submit a new application at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Director. (The Director shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)

b. All other permittees with currently effective permits shall submit a new application 180 days before the existing permit expires, except that:

(1) the Regional Administrator may grant permission to submit an application later than the deadline for submission otherwise applicable, but no later than the permit expiration date.

2. Signatories to permit applications and reports; at 40 CFR 122.22.

a. Applications. All permit applications shall be signed as follows:

(1) For a corporation. By a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

Note: EPA does not require specific assignments or delegations of authority to responsible corporate officers identified in 40 CFR 122.22(a)(1)(i). The Agency will presume that these responsible corporate officers have the requisite authority to sign permit applications unless the corporation has notified the Director to the contrary. Corporate procedures governing authority to sign permit applications may provide for assignment or delegation to applicable corporate positions under 40 CFR 122.22(a)(1)(ii) rather than to specific individuals.

(2) For a partnership or sole proprietorship. By a general partner or the proprietor, respectively; or

(3) For a municipality, State, Federal, or other public agency. By either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes: (i) The chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).

b. All reports required by permits, and other information requested by the Director shall be signed by a person described in paragraph (a) of this section, or by a duly

authorized representative of that person. A person is a duly authorized representative only if:

(1) The authorization is made in writing by a person described in paragraph (a) of this section;

(2) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters of the company, (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) and,

(3) The written authorization is submitted to the Director.

c. Changes to authorization. If an authorization under paragraph (b) of this section is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph (b) of this section must be submitted to the Director prior to or together with any reports, information, or applications to be signed by an authorized representative.

d. Certification. Any person signing a document under paragraph (a) or (b) of this section shall make the following certification:

"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, 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."

3. Reopener Clause; at 40 CFR 122.44(c).

For any permit issued to a treatment works treating domestic sewage (including "sludge-only facilities"), the Director shall include a reopener clause to incorporate any applicable standard for sewage sludge use or disposal promulgated under section 405(d) of the CWA. The Director may promptly modify or revoke and reissue any permit containing the reopener clause required by this paragraph if the standard for sewage sludge use or disposal is more stringent than any requirements for sludge use or disposal in the permit, or controls a pollutant or practice not limited in the permit.

4. Transfer of permits; at 40 CFR 122.61.

a. Transfers by modification. Except as provided in paragraph (b) of this section, a permit may be transferred by the permittee to a new owner or operator only if the permit has been modified or revoked and reissued (under 40 CFR 122.62(b)(2)), or a minor modification made (under 40 CFR 122.63(d)), to identify the new permittee and incorporate such other requirements as may be necessary under CWA.

b. Automatic transfers. As an alternative to transfers under paragraph (a) of this section, any NPDES permit may be automatically transferred to a new permittee if:

(1) The current permittee notifies the Director at least 30 days in advance of the proposed transfer date in paragraph (b)(2) of this section;

(2) The notice includes a written agreement between the existing and new permittees containing a specific date for transfer of permit responsibility, coverage, and liability between them; and

(3) The Director does not notify the existing permittee and the proposed new permittee of his or her intent to modify or revoke and reissue the permit. A modification under this subparagraph may also be a minor modification under 40 CFR 122.63. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in paragraph (b)(2) of this section.

5. Minor modifications of permits; at 40 CFR 122.63.

Upon the consent of the permittee, the Director may modify a permit to make the corrections or allowances for changes in the permitted activity listed in this section, without following the procedures of 40 CFR 124. Any permit modification not processed as a minor modification under this section must be made for cause and with 40 CFR 124 draft permit and public notice as required in 40 CFR 122.62. Minor modifications may only:

a. Correct typographical errors;

b. Require more frequent monitoring or reporting by the permittee;

c. Change an interim compliance date in a schedule of compliance, provided the new date is not more than 120 days after the date specified in the existing permit and does not interfere with attainment of the final compliance date requirement; or

d. Allow for a change in ownership or operational control of a facility where the Director determines that no other change in the permit is necessary, provided that a written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new permittees has been submitted to the Director.

e. (1) Change the construction schedule for a discharger which is a new source. No such change shall affect a discharger's obligation to have all pollution control equipment installed and in operation prior to discharge under 40 CFR 122.29.

(2) Delete a point source outfall when the discharge from that outfall is terminated and does not result in discharge of pollutants from other outfalls except in accordance with permit limits.

f. [Reserved]

g. Incorporate conditions of a POTW pretreatment program that has been approved in accordance with the procedures in 40 CFR 403.11 (or a modification thereto that has been approved in accordance with the procedures in 40 CFR 403.18) as enforceable conditions of the POTW's permits.

6. Termination of permits; at 40 CFR 122.64.

a. The following are causes for terminating a permit during its term, or for denying a permit renewal application:

(1) Noncompliance by the permittee with any conditions of the permit;

(2) The permittee's failure in the application or during the permit issuance process to disclose fully all relevant facts, or the permittee's misrepresentation of any relevant facts at any time;

(3) A determination that the permitted activity endangers human health or the environment and can only be regulated to acceptable levels by permit modification or termination; or

(4) A change in any condition that requires either a temporary or permanent reduction or elimination of any discharge or sludge use or disposal practice controlled by the permit (for example, plant closure or termination of discharge by connection to a POTW).

b. The Director shall follow the applicable procedures in 40 CFR 124 or 40 CFR 122.22, as appropriate (or State procedures equivalent to 40 CFR 124) in terminating any NPDES permit under this section, except that if the entire discharge is permanently terminated by elimination of the flow or by connection to a POTW (but not by land application or disposal into a well), the Director may terminate the permit by notice to the permittee. Termination by notice shall be effective 30 days after notice is sent, unless the permittee objects within that time. If the permittee objects during that period, the Director shall follow 40 CFR 124 or applicable State procedures for termination. Expedited permit termination procedures are not available to permittees that are subject to pending State and/or Federal enforcement actions including citizen suits brought under State or Federal law. If requesting expedited permit termination procedures, a permittee must certify that it is not subject to any pending State or Federal enforcement actions including citizen suits brought under State or Federal law. State-authorized NPDES programs are not required to use part 22 of this chapter's procedures for NPDES permit terminations.

7. Availability of Reports; pursuant to CWA section 308

Except for data determined to be confidential under 40 CFR 2, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Regional Administrator. As required by the CWA, permit applications, permits, and effluent data shall not be considered confidential.

8. Removed Substances; pursuant to CWA section 301

   Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in a manner such as to prevent any pollutant from such materials entering waters of the U.S.

9. Severability; pursuant to CWA section 512

   The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and remainder of this permit, shall not be affected thereby.

10. Civil and Criminal Liability; pursuant to CWA section 309

    Except as provided in permit conditions on "Bypass" and "Upset", nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance.

11. Oil and Hazardous Substances Liability; pursuant to CWA section 311

    Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the CWA.

12. State, Tribe, or Territory Law; pursuant to CWA section 510

    Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the operator from any responsibilities, liabilities, or penalties established pursuant to any applicable State, Tribe, or Territory law or regulation under authorities preserved by CWA section 510.

Attachment B: Definitions

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.

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. "Best Management Practices" or "BMPs" are schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural, and/or managerial practices to prevent or reduce the pollution of waters of the U.S. BMPs include treatment systems, operating procedures, and practices to control: plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. BMPs may further be characterized as operational, source control, erosion and sediment control, and treatment BMPs.

4. A "composite" sample means a time-proportioned mixture of not less than eight discrete aliquots obtained at equal time intervals (e.g., 24-hour composite means a minimum of eight samples collected every three hours). The volume of each aliquot shall be directly proportional to the discharge flow rate at the time of sampling, but not less than 100 ml. Sample collection, preservation, and handling shall be performed as described in the most recent edition of 40 CFR 136.3, Table II. Where collection, preservation, and handling procedures are not outlined in 40 CFR 136.3, procedures outlined in the 18th edition of Standard Methods for the Examination of Water and Wastewater shall be used.

5. A "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. A "daily maximum allowable effluent limitation" means the highest allowable "daily discharge."

7. A "DMR" is a "Discharge Monitoring Report" that is an EPA uniform national form, including any subsequent additions, revisions, or modifications for reporting of self-monitoring results by the permittee.

8. A "grab" sample is a single sample collected at a particular time and place that represents the composition of the discharge only at that time and place. Sample collection, preservation, and handling shall be performed as described in the most recent edition of 40 CFR 136.3, Table II. Where collection, preservation, and handling procedures are not

outlined in 40 CFR 136.3, procedures outlined in the 18th edition of Standard Methods for the Examination of Water and Wastewater shall be used.

9. The "method detection limit" or "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 a specific laboratory method in 40 CFR 136. The procedure for determination of a laboratory MDL is in 40 CFR 136, Appendix B.

10. The "minimum reporting level" or "MRL" is the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The MRL is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed in a specific analytical procedure, assuming that all the method-specific 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). If a published method-specific MRL is not available, then an interim MRL shall be calculated. The interim MRL 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 MRL nor MDL are available under 40 CFR 136, an interim MRL 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 MRL.) At this point in the calculation, a different procedure is used for metals, than non-metals:

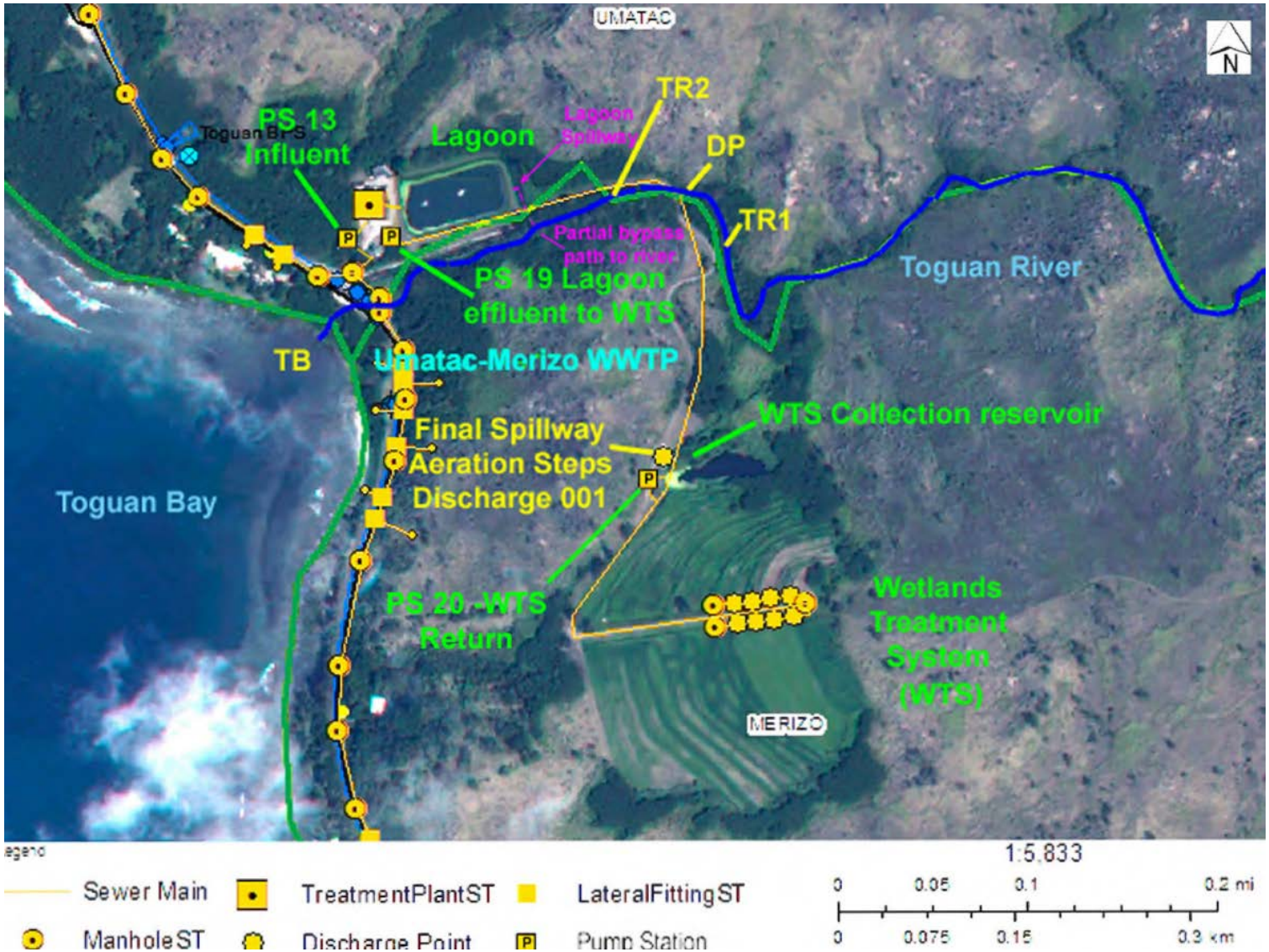
    a. For metals, due to laboratory calibration practices, calculated MRLs may be rounded to the nearest whole number.

    b. For non-metals, because analytical instruments are generally calibrated using the MRL as the lowest calibration standard, the calculated MRL is then rounded to the nearest multiple of (1, 2, or 5) x 10n, where n is zero or an integer. (For example, if an MDL is 2.5 µg/l, then the calculated MRL is: 2.5 µg/l x 3.18 = 7.95 µg/l. The multiple of (1, 2, or 5) x 10n nearest to 7.95 is 1 x 101 = 10 µg/l, so the calculated MRL, rounded to the nearest whole number, is 10 µg/l.)

11. A "NODI(B)" means that the concentration of the pollutant in a sample is not detected. NODI(B) is reported when a sample result is less than the laboratory's MDL.

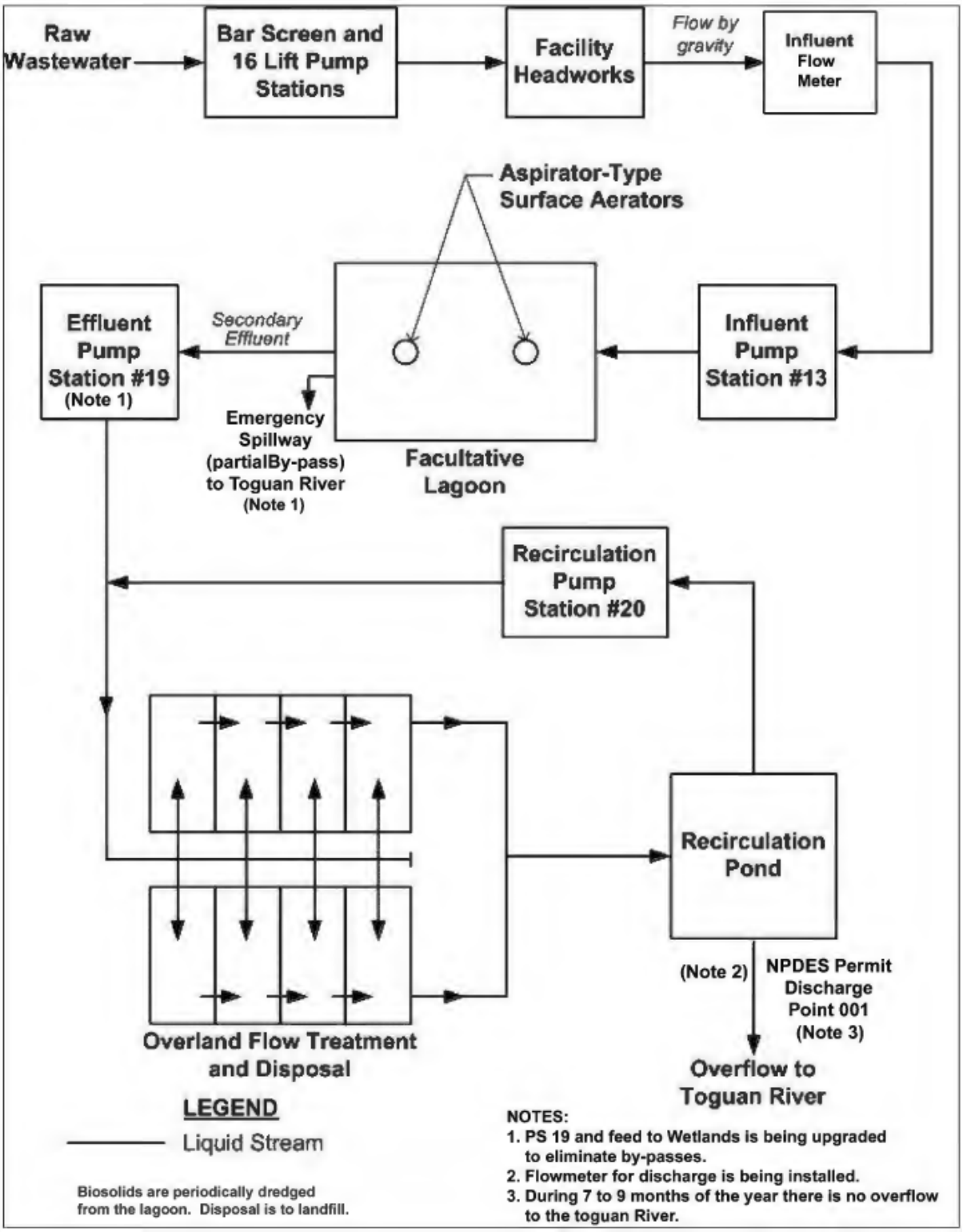
12. A "NODI(Q)" means that the concentration of the pollutant in a sample is detected but not quantified. NODI(Q) is reported when a sample result is greater than or equal to the laboratory's MDL, but less than the MRL.

Attachment C: Location Map



Attachment D: Wastewater Flow Schematic

Figure 5-48 – Umatac-Merizo STP Schematic Flow Diagram



ATTACHMENT E: Ammonia Criteria Table

pH	Ammonia Criterion (mg N/l)	pH	Ammonia Criterion (mg N/l)
6.5	3.48	8	1.27
6.6	3.43	8.1	1.09
6.7	3.36	8.2	0.94
6.8	3.29	8.3	0.80
6.9	3.19	8.4	0.67
7	3.08	8.5	0.57
7.1	2.96	8.6	0.48
7.2	2.81	8.7	0.41
7.3	2.65	8.8	0.35
7.4	2.47	8.9	0.29
7.5	2.28	9	0.25
7.6	2.08		
7.7	1.87		
7.8	1.66		
7.9	1.46		

A	B	C	D	E
Date of Sample	Ammonia Concentration In Effluent (mg/L N)	Effluent pH	Ammonia Standard as Determined from Ammonia Criteria Tables (Attachment E)	Ammonia Toxicity **(Column B / Column D)**

ATTACHMENT F: Ammonia Data Log

Please copy and complete for each month of each year for permit term. Permittee may sample more frequently and record any additional results. Attach any additional pages as necessary.

Signature of Authorized Representative: _____

cc: Michael J. Lee
US EPA
Pacific Islands Office (CMD-6)
75 Hawthorne St.
San Francisco, CA 94610

Susanne Perkins
EPA Clean Water Enforcement Section
U. S. Environmental Protection Agency, Region 9
75 Hawthorne Street
San Francisco, CA 94105

Encl,: [1] Assessment Forms
[2] Project Description
[3] Summary of findings.
[4] Draft of NPDES permit.
[5] Draft of NPDES fact sheet.

GUAM COASTAL MANAGEMENT PROGRAM ASSESSMENT FORM

Date of Application: **May 12, 2015**

Name of Applicant: Guam Waterworks Authority

Address: Gloria B. Nelson Public Service Building
688 Route 15
Mangilao, GU 96913

Telephone No.: (671) 300-6885

Title of Proposed Project:
NPDES Permit Renewal : Umatac-Merizo Wastewater Treatment Plant

Other applicable area(s) affected, if appropriate:
N/A

Est. Start Date: Ongoing Est. Duration: Ongoing

AGENCY REPRESENTATIVE INFORMATION

Name & Title: James Paul Marincola, Permit Writer

Agency/Organization: United States Environmental Protection Agency

Address: EPA, Region IX
Permits Branch (E-4)
75 Hawthorne St.
San Francisco, CA 94105

Telephone No. during business hours:
(415) 947-8000
Fax (415) 947- 3553
Email: Marincola.JamesPaul@epa.gov

CATEGORY OF APPLICATION (check one only)
( ) I Federal Agency Activity
(**X**) II Permit or License
( ) III Grants & Assistance

TYPE OF STATEMENT (check one only)
(**X**) Consistency
( ) General Consistency (Category I only)
( ) Negative Determination (Category I only)
( ) Non-Consistency (Category I only)

FEDERAL AUTHORITY FOR ACTIVITY
40 CFR 122.21

OTHER TERRITORIAL APPROVALS REQUIRED

Agency	Type of Approval	Application Date	Status
Guam EPA	401 Certification	04/09/15	Expected June 2015

COMPLETE FOLLOWING PAGES FOR BUREAU OF STATICS AND PLANS ONLY:

DATE APPLICATION RECEIVED:
_____

OCRM NOTIFIED: _____ LC. AGENCY NOTIFIED:_____

APPLICANT NOTIFIED: _____PUBLIC NOTICE

GIVEN:_____

OTHER AGENCY REVIEW REQUESTED:
_____

DETERMINATION: ( ) CONSISTENT ( ) NON-CONSISTENT ( ) FURTHER INFORMATION REQUESTED

OCRM NOTIFIED: _____ LIC. AGENCY NOTIFIED: _____
APPLICANT NOTIFIED: _____

ACTION LOG: 1._____
2._____
3._____
4._____
5._____
6._____

DATE REVIEW COMPLETED:
_____

Project Description

The Guam Waterworks Authority (the "permittee") has applied for a National Pollutant Discharge Elimination System (NPDES) permit to authorize the discharge of treated effluent from Umatac-Merizo Wastewater Treatment Plant to the Toguan River, between the villages of Umatac and Merizo in Guam. A complete application was submitted on April 9, 2014. EPA Region IX has developed this permit and fact sheet pursuant to Section 402 of the Clean Water Act, which requires point source dischargers to control the amount of pollutants that are discharged to waters of the United States through obtaining a NPDES permit.

The permittee was previously discharging under NPDES permit GU0020273 issued on January 13, 2009 and effective March 1, 2009.

This permittee has been classified as a minor discharger.

The permittee owns and operates a waste water treatment facility (the "facility") that is located in the village of Merizo, Guam. The facility intermittently discharges treated domestic wastewater from the facility to the Toguan River, which flows into the Toguan Bay. The facility discharges to a Wetlands Treatment System (WTS) and when the weather is very wet, the overflow off the WTS discharges to an open channel from concrete spillway at outfall 001. The discharge in the open channel eventually reaches the Toguan river at a point designated "DP" where it then comingles with the Toguan River for less than half a mile before flowing into the Toguan Bay in the Pacific Ocean.

The facility was built in 1981 and is a Class II wastewater treatment facility as defined by the Guam Environmental Protection Agency ("GEPA") and was designed to serve approximate 4,000 residents. The facility has a Waste Stabilization Pond Treatment System (a mechanically aerated, facultative treatment lagoon) and Wetlands Treatment System. The WTS consists of six constructed wetland zones where evapotranspiration and percolation treat effluent from the stabilization pond. The facility does not disinfect its effluent.

Design flow for the facility is 0.39 million gallons per day ("MGD"). Although the average daily flow rate in recent years has been approximately 0.35 MGD, peak flow has been as high as 1.66 MGD. The facility discharges only in the rainy season (September through January), at a rate of about 0.04 MGD.

The Guam Water Quality Standards ("WQS"), last revised in 2001, classify the Toguan River in the vicinity of the discharge as "Category S-3 Low." Surface water in this category is primarily used for commercial, agricultural, and industrial activities.

During this permit period, the permittee will complete tasks to address EPA's Order for Preliminary Relief under an ongoing 2011 Court Order (Civil Case No. 02-00035) with the Government of Guam and GWA. On April 9, 2015, GWA provided an informal updated timeline reflected here.

-**Interim improvements** (Estimated completion date by GWA: 04/20/2016). Includes new pumps, pipeline, and monitoring equipment, overhauling the flow terraces, and disinfection.

-**WWTP upgrade complete** (06/29/2018). Includes pump station rehabilitation, new headworks, aerated lagoon improvements, yard piping, overland flow improvements, and electrical system replacement.

-**Collection system improvements** (12/31/2018). Targeting reduction of Inflow and Infiltration (I/I) into the collection system by 50%.

-**Attain nutrient discharge requirements** (12/31/2018). Work with EPA and Guam EPA to develop a strategy of compliance with nutrient objectives.

-**Implementation plan complete** (12/31/2018). Must be completed by this date per the 2011 Court Order.

Summary of Findings

This facility is subject to Guam review for consistency with the Costal Zone Management Act. The applicant has reviewed Guam Coastal Management policies; discussion for each policy may be found below:

DEVELOPMENT POLICIES (DP):

DP1. Shore Area Development

Intent: To insure environmental and aesthetic compatibility of shore area land uses.

Policy: Only those uses shall be located within the Seashore Reserve which:

- enhance, are compatible with or do not generally detract from the surrounding coastal area's aesthetic and environmental quality and beach accessibility; or
- can demonstrate dependence on such a location and the lack of feasible alternative sites.

Discussion:
The facility is not located within the Seashore Reserve.

DP2. Urban Development

Intent: To cluster high impact uses such that coherent community design, function, infrastructure support and environmental compatibility are assured.

Policy: Commercial, multi-family, industrial and resort-hotel zone uses and uses requiring high levels of support facilities shall be concentrated within urban districts as outlined on the Land Use Districting Map.

Discussion:
The facility is not in an urban district however the infrastructure support network for the facility has already been developed and is in place.

DP3. Rural Development

Intent: To provide a development pattern compatible with environmental and infrastructure support suitability and which can permit traditional lifestyle patterns to continue to the extent practicable.

Policy: Rural districts shall be designated in which only low density residential and agricultural uses will be acceptable. Minimum lot size for these uses should be one-half acre until adequate infrastructure including functional sewering is provided.

Discussion:
The facility does not interfere with rural districts where low density residential and agricultural uses are prevalent.

DP4. Major Facility Siting

Intent: To include the national interest in analyzing the siting proposals for major utilities, fuel, and transport facilities.

Policy: In evaluating the consistency of proposed major facilities with the goals, policies, and standards of the Comprehensive Development and Coastal Management Plans, the Territory shall recognize the national interest in the siting of such facilities including those associated with electric power production and transmission, petroleum refining and transmission, port and air installations, solid waste disposal, sewage treatment and major reservoir sites.

Discussion:
The facility has already been sited. The facility was built in 1981 and is a Class II wastewater treatment plant as defined by the Guam Environmental Protection Agency ("GEPA") and was designed to serve approximately 4,000 residents.

DP5. Hazardous Areas

Intent: Development in hazardous areas will be governed by the degree of hazard and the land use regulations.

Policy: Identified hazardous lands, including flood plains, erosion-prone areas, air installations, crash and sound zones and major fault lines shall be developed only to the extent that such development does not pose unreasonable risks to the health, safety or welfare of the people of Guam, and complies with the land use regulations.

Discussion:
The facility is not located in a hazardous area.

DP6. Housing

Intent: To promote efficient community design placed where the resources can support it.

Policy: The government shall encourage efficient design of residential areas, restrict such development in areas highly susceptible to natural and manmade hazards, and recognize the limitations of the island's resources to support historical patterns of residential development.

Discussion:
The facility does not include or directly affect local housing.

DP7. Transportation

Intent: To provide transportation system while protecting potentially impacted resources.

Policy: The Territory shall develop an efficient and safe transportation system, while limiting adverse environmental impacts on primary aquifers, beaches, estuaries and other coastal resources.

Discussion:
The facility does not provide transportation for the Territory.

DP8. Erosion and Siltation

Intent: To control development where erosion and siltation damage is likely to occur.

Policy: Development shall be limited in areas of 15% or greater slope by requiring strict compliance with erosion, sedimentation, and land use districting guidelines, as well as other related land use standards for such areas.

Discussion:
The facility is not located on an area with a slope of 15% or greater.

RESOURCES POLICIES (RP):

RP1. Air Quality

Intent: To control activities to insure good air quality.

Policy: All activities and uses shall comply with all local air pollution regulations and all appropriate Federal air quality standards in order to ensure the maintenance of Guam's relatively high air quality.

Discussion:
No significant air pollution will be released by this facility.

RP2. Water Quality

Intent: To control activities that may degrade Guam's drinking, recreational, and ecologically sensitive waters.

Policy: Safe drinking water shall be assured and aquatic recreation sites shall be protected through the regulation of uses and discharges that pose a pollution threat to Guam's waters, particularly in estuaries, reef, and aquifer areas.

Discussion:
The facility discharges treated wastewater into the Toguan River, Guam. This discharge is permitted under the NPDES program by U.S. EPA Region 9 and is required to meet permit conditions such that the effluent from the facility will meet applicable Guam Water Quality Standards.

For further assessment of effluent impacts and determination of permit conditions and limits by EPA, please reference proposed NPDES permit and fact sheets (attached).

RP3. Fragile Areas

Intent: To protect significant cultural areas, and natural marine and terrestrial wildlife and plant habitats.

Policy: Development in the following types of fragile areas shall be regulated to protect their unique character:

- historical and archeological sites
- wildlife habitats
- pristine marine and terrestrial communities
- limestone forests
- mangrove stands and other wetlands

Discussion:
The facility does not interfere with any of the above areas.

Effluent from the facility is discharged to Toguan River and flows into Toguan Bay. The discharge is expected to have no effect on species beyond the outlet of the River into the Bay. Mariana common moorhen is known to use wetland and river habitats in the Toguan River and Bay areas.

Moorhens feed on both plants and animals in and near floodplains and wetlands. Although the Toguan River contributes to nearby wetlands, it is one of many contributors including the Pacific Ocean. Because the facility's discharge is a very small proportion of the Toguan River's flow and the river's flow is further diluted once reaching nearby wetlands, the facility's contribution to the wetlands may be considered *de minimis*. Additionally, this permit was written to protect the beneficial uses of the river which include propagation and preservation of aquatic wildlife. This permit incorporates effluent limitations and narrative conditions to ensure that the discharge meets Guam WQS without any additional mixing zones.

EPA believed that the proposed discharge is not likely to affect endangered species in Guam.

RP4. Living Marine Resources

Intent: To protect marine resources in Guam's waters.

Policy: All living resources within the territorial waters of Guam, particularly corals and fish, shall be protected from over harvesting and, in the case of marine mammals, from any taking whatsoever.

Discussion:
The facility does not harvest or take any aquatic species.

The proposed permit contains technology-based effluent limits and numerical and narrative water quality-based effluent limits as necessary for the protection of applicable aquatic life uses. The proposed permit does not directly discharge to areas of essential fish habitat. EPA has determined that the proposed permit will not adversely affect essential fish habitat.

RP5. Visual Quality

Intent: To protect the quality of Guam's natural scenic beauty.

Policy: Preservation and enhancement of, and respect for the island's scenic resources shall be encouraged through increased enforcement of and compliance with sign, litter, zoning, subdivision, building and related land-use laws. Visually objectionable uses shall be located to the maximum extent practicable so as not to degrade significant views from scenic overlooks, highways and trails.

Discussion:
The facility does not visually interfere with scenic overlooks, highways or trails.

RP6. Recreation Areas

Intent: To encourage environmentally compatible recreational development.

Policy: The Government of Guam shall encourage development of varied types of recreational facilities located and maintained so as to be compatible with the surrounding environment and land uses, adequately serve community centers and urban areas and protect beaches and such passive

recreational areas as wildlife and marine conservation areas, scenic overlooks, parks and historical sites.

Discussion:
The facility is not located on and does not interfere with Territorial recreational facilities.

RP7. Public Access

Intent: To ensure the right of public access.

Policy: The public's right of unrestricted access shall be ensured to all non-federally owned beach areas and all Territorial recreation areas, parks, scenic overlooks, designated conservation areas and their public lands; and agreements shall be encouraged with the owners of private and federal property for the provision of releasable access to and use of resources of public nature located on such land.

Discussion:
The facility is not located on a beach area or Territorial recreational area, park, scenic overlook, designated conservation area or otherwise public land. The facility does not hinder access to recreational areas, parks or public lands. Access to the facility itself is restricted to qualified personnel to ensure public safety.

RP8. Agricultural Lands

Intent: To stop urban types of development on agricultural land.

Policy: Critical agricultural land shall be preserved and maintained for agricultural use.

Discussion:
The facility is not located on and does not interfere with agricultural land.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
PROPOSED PERMIT FACT SHEET
May 13, 2015

Permittee Name:	Guam Waterworks Authority
Mailing Address:	P.O. Box 3010 Hagåtña, GU 96910
Facility Location:	Route 2 Merizo, GU 96915
Contact Person(s):	Paul Kemp, Assistant General Manager for Compliance and Safety Vangie Lujan, Senior Regulatory Analyst
NPDES Permit No.:	GU0020273

I. STATUS OF PERMIT

The Guam Waterworks Authority (the "permittee") has applied for a National Pollutant Discharge Elimination System (NPDES) permit to authorize the discharge of treated effluent from Umatac-Merizo Wastewater Treatment Plant to the Toguan River, the division between the villages of Umatac and Merizo in Guam. A complete application was submitted on April 9, 2014. EPA Region IX has developed this permit and fact sheet pursuant to Section 402 of the Clean Water Act, which requires point source dischargers to control the amount of pollutants that are discharged to waters of the United States through obtaining a NPDES permit.

The permittee was previously discharging under NPDES permit GU0020273 issued on January 13, 2009 and effective March 1, 2009.

This permittee has been classified as a minor discharger.

II. GENERAL DESCRIPTION OF FACILITY

The permittee owns and operates a waste water treatment facility (the "facility") that is located in the town of Merizo, Guam. The facility discharges treated domestic wastewater from the facility to the Toguan River, which flows into the Toguan Bay, a part of the Pacific Ocean.

. The facility has a Waste Stabilization Pond Treatment System (a mechanically aerated, facultative treatment lagoon) and Wetlands Treatment System ("WTS"). The WTS consists of six constructed wetland ponds where evapotranspiration and percolation treat effluent from the stabilization pond. The facility does not disinfect its effluent.

Design flow for the facility is .39 million gallons per day ("MGD"). Although the average daily flow rate in recent years has been approximately .35 MGD, peak flow has been as high as

1.66 MGD. The facility discharges only in the rainy season (September through January), at a rate of about .04 MGD.

On June 5, 2014, the permittee submitted a plan and schedule to address EPA's Order for Preliminary Relief under an ongoing Stipulated Order (Civil Case No. 02-00035) with GWA. On April 9, 2015, GWA provided an informal updated timeline reflected below.

-**Interim improvements** (Estimated completion date by GWA: 4/20/16). Includes new pumps, pipeline, and monitoring equipment, overhauling the flow terraces, and disinfection.

-**WWTP upgrade complete** (6/29/18). Includes pump station rehabilitation, new headworks, aerated lagoon improvements, yard piping, overland flow improvements, and electrical system replacement.

-**Collection system improvements** (12/31/18). Targeted reduction of I/I by 50%.

-**Attain nutrient discharge requirements** (12/31/18). Work with EPA and Guam EPA to develop a strategy of compliance with nutrient objectives.

-**Implementation plan complete** (12/31/18). Must be completed by this date per 2011 court order deadline.

III. DESCRIPTION OF RECEIVING WATER

The facility discharges to the Toguan River via a spillway downstream of the Wetland Treatment System and outfall 001. The discharge comingles with the Toguan River for less than half a mile before flowing into the Toguan Bay in the Pacific Ocean.

The Guam Water Quality Standards ("WQS"), last revised in 2001, classify the Toguan River in the vicinity of the discharge as "Category S-3 Low." Surface water in this category is primarily used for commercial, agricultural, and industrial activities.

The Guam 2010 Integrated Report identified the Toguan River as not assessed for water quality impairments, while Toguan Bay is listed as impaired for Enterococcus. No TMDL has been established for bacteria for Guam's southern watersheds.

IV. DESCRIPTION OF DISCHARGE

A. Application Discharge Data

As part of the application for permit renewal, the permittee provided data from an analysis of the facility's treated wastewater discharge:

Table 1. Application Discharge Data.

Parameter	Units	Discharge Data[(1)]	
		Max Daily	Average
Flow	MGD	1.66	0.35

Parameter	Units	Discharge Data[1]	
		Max Daily	Average
pH	Standard Units	5.47-5.73 (min-max)	
Biochemical Oxygen Demand, 5-day (BOD_5)	mg/L	7.0	4.1
Total Suspended Solids (TSS)	mg/L	26.8	12.0
Temperature	°C	10.9-29.4 (min-max)	
Fecal Coliform	Cfu/ 100mL	4,950	2,540
Ammonia (as N)	mg/L	28.5	1.2
Dissolved Oxygen	mg/L	N/A	4.35
Total Kjeldahl Nitrogen	mg/L	19.8	3.19
Nitrate plus Nitrite	lb/day	1.9	0.20
Phosphorus	mg/L	1.8	0.44

[1] Based on permittee's NPDES renewal application.

B. Recent Discharge Monitoring Report (DMR) Data (2011-2014)

Table 2 provides a summary of effluent limitations and monitoring data based on the facility's most recent 3 years of DMRs as reported into EPA's ICIS database.

Table 2. Discharge Monitoring Report Data for years 2011-2014.

Parameter	Units	Previous Permit Effluent Limitations			Discharge Monitoring Data
		Average Monthly	Average Weekly	Maximum Daily	Highest Reported Value
Flow Rate	MGD	Monitoring Only	--	Monitoring Only	.753
Biochemical Oxygen Demand (5-day)	mg/L	30	45	--	67
	Percent Removal	85%			67% (min)
Temperature	°C	--	--	Monitoring Only	24.8 - 34.7
pH	Standard Units	6.5-8.5			7.2 - 8.8
Total Suspended Solids	mg/L	30	45	--	947
	Percent Removal	85%			-132% (min)
E. coli	CFU/ 100mL	126	--	406	86,640
Fecal Coliform	CFU/ 100mL	200	400	--	31,700
Enterococcus	CFU/ 100mL	Monitoring Only		Monitoring Only	101,110
Total Chlorine Residual	ug/L	6.1	--	12	N/A[1]
Orthophosphate	mg/L	0.08	--	0.16	8.06
Nitrate-Nitrogen	mg/L	0.41	--	0.82	12.3
Ammonia	mg/L	0.31	--	0.61	28.3

Oil & Grease	mg/L	10	--	15	NR(2)

(1) Discharger did not use chlorine for disinfection, therefore chlorine monitoring was not required.
(2) Oil & Grease data not reported into ICI

V. SIGNIFICANT CHANGES TO PREVIOUS PERMIT

- Limits established for flow, settleable solids, and enterococcus.
- Mass limits removed for all pollutants except BOD and TSS.
- Fecal coliform limit removed; new limits for ammonia, nitrate, and orthophosphate.
- New mechanism for calculating compliance with ammonia limit (Ammonia Impact Ratio).
- Increased monitoring for oil & grease.
- Reduced monitoring frequency for E. coli, enterococcus, ammonia, nitrate, orthophosphate, heavy metals, pesticides and toxicity.
- Removal of monitoring requirement for hardness.
- Revised receiving water monitoring requirements including mixing zone study.
- Switch to electronic reporting.

VI. DETERMINATION OF NUMERICAL EFFLUENT LIMITATIONS

EPA has developed effluent limitations and monitoring requirements in the permit based on an evaluation of the technology used to treat the pollutant (e.g., "technology-based effluent limits") and the water quality standards applicable to the receiving water (e.g., "water quality-based effluent limits"). EPA has established the most stringent of applicable technology-based or water quality-based standards in the proposed permit, as described below.

A. Applicable Technology-Based Effluent Limitations

EPA developed technology-based treatment standards for municipal wastewater treatment plants in accordance with Section 301(b)(1)(B) of the Clean Water Act. The minimum levels of effluent quality attainable by secondary treatment for Biochemical Oxygen Demand (BOD_5), Total Suspended Solids (TSS), and pH, as defined in 40 CFR 133.102, are listed below. Mass limits, as required by 40 CFR 122.45(f), are included for BOD_5 and TSS.

BOD_5 and TSS

Concentration-based Limits

30-day average – 30 mg/L
7-day average – 45 mg/L
Removal Efficiency – minimum of 85%

Mass-based Limits

30-day average – (30 mg/L)(0.39 MGD)(8.345 conversion factor) = 97.6 lbs/day
7-day average – (45 mg/L)(0.39 MGD)(8.345 conversion factor) = 146 lbs/day

pH

Instantaneous Measurement: 6.0 – 9.0 standard units (S.U.)

Technology-based treatment requirements may be imposed on a case by case basis under Section 402(a)(1) of the Act, to the extent that EPA promulgated effluent limitations are inapplicable (i.e., the regulation allows the permit writer to consider the appropriate technology for the category or class of point sources and any unique factors relating to the applicant) (40 CFR 125.3(c)(2)).

Therefore, effluent limits for BOD_5 and TSS are established in the permit as stated above.

B. Water Quality-Based Effluent Limitations

Water quality-based effluent limitations are required in NPDES permits when the permitting authority determines that a discharge causes, has the reasonable potential to cause, or contributes to an excursion above any water quality standard (40 CFR 122.44(d)(1)).

When determining whether an effluent discharge causes, has the reasonable potential to cause, or contributes to an excursion above narrative or numeric criteria, the permitting authority shall use procedures which account for existing controls on point and non-point sources of pollution, the variability of the pollutant or pollutant parameter in the effluent, the sensitivity of the species to toxicity testing (when evaluating whole effluent toxicity) and where appropriate, the dilution of the effluent in the receiving water (40 CFR 122.44(d)(1)(ii)).

1. Applicable Standards, Designated Uses and Impairments of Receiving Water

The Guam WQS establish water quality criteria for "Category S-3 Low" surface waters which for the protection of designated beneficial uses.

The Toguan River is not listed as impaired according to the CWA Section 303(d) List of Water Quality Limited Segments.

2. Dilution in the Receiving Water

The applicant has not applied for a zone of mixing from GEPA. Therefore, no dilution of the effluent has been considered in the development of water quality-based effluent limits applicable to the discharge.

The permit requires the applicant to conduct monitoring and a mixing zone study in order to justify receiving dilution in subsequent permits.

3. Existing Data on Toxic Pollutants

For pollutants with effluent data available, EPA has conducted a reasonable potential analysis based on statistical procedures outlined in EPA's *Technical Support Document for Water Quality-based Toxics Control* herein after referred to as EPA's TSD (EPA 1991). These statistical procedures result in the calculation of the projected maximum effluent concentration based on monitoring data to account for effluent variability and a limited data set. The projected maximum effluent concentrations were estimated assuming a coefficient of variation of 0.6 and the 99 percent confidence interval of the 99^{th} percentile based on an assumed lognormal distribution of daily effluent values (sections 3.3.2 and 5.5.2 of EPA's TSD). EPA calculated the projected maximum effluent concentration for each pollutant using the following equation:

Projected maximum concentration = C_e × *reasonable potential multiplier factor.*

Where, "C_e" is the reported maximum effluent value and the multiplier factor is obtained from Table 3-1 of the TSD.

Summary of Reasonable Potential Statistical Analysis:

Parameter[(1)]	**Maximum Observed Concentration**	***n***	**RP Multiplier**	**Projected Maximum Effluent Concentration**	**Most Stringent Water Quality Criterion**	**Statistical Reasonable Potential?**
E. coli	86,600 CFU/100mL	>20	2.3	199,000	126 CFU/100mL	Y
Enterococcus	101,000 CFU/100mL	>20	2.3	232,000	33 CFU/100mL	Y
Orthophosphate	8.06 mg/L	>20	2.3	18.5	0.1 mg/L	Y
Nitrate-Nitrogen	12.3 mg/L	>20	2.3	28.3	0.5 mg/L	Y
Ammonia	28.3 mg/L	>20	2.3	65.1	~0.57 mg/L	Y

[(1)] For purposes of RP analysis, parameters measured as Non-Detect are considered to be zeroes. Only parameters with Maximum Observed Concentration >0 are included in this analysis.

C. Rationale for Numeric Effluent Limits and Monitoring

EPA evaluated the typical pollutants expected to be present in the effluent and selected the most stringent of applicable technology-based standards or water quality-based effluent limitations. Where effluent concentrations of toxic parameters are unknown or are not reasonably expected to be discharged in concentration that have the reasonable potential to cause or contribute to water quality violations, EPA may establish monitoring requirements in the permit. Where monitoring is required, data will be re-evaluated and the permit may be re-opened to incorporate effluent limitations as necessary.

Flow

40 CFR 122.41(e) states that a permittee shall at all times properly operate and maintain all facilities and systems of treatment and control which are installed or used by a permittee to achieve compliance with the conditions of a permit. Operating at design capacity is critical to ensuring that a treatment system functions properly. As stated in the application, the design capacity for Umatac is .39 MGD. Limits have been established for flow consistent with the design capacity of the facility.

BOD_5 and TSS

Limits for BOD_5 and TSS are established for POTWs as described in section A above and are incorporated into the permit. Under 40 CFR Section 122.45(f), mass limits are also required for BOD_5 and TSS. Based on the design flow, the mass-based limits are included in the proposed permit.

pH

Technology-based standards for POTWs require pH limits between 6.0 and 9.0 Standard Units. Guam WQS for S-3 waters limit pH to a range of 6.5 to 9.0, while current limits and performance dictate a range of 6.5 to 8.5. In accordance with anti-backsliding provisions in Section D below, a pH instantaneous minimum limitation of 6.5 and maximum of 8.5 have been retained in the permit.

Chlorine

The discharger do not currently disinfect their discharge, therefore they do not have a reasonable potential to exceed water quality standards for chlorine. However, once the facility does begin to disinfect, they will be required to meet applicable chlorine criteria. The permit has carried over previous limitations for chlorine effective upon initiation of disinfection.

Oil & Grease

EPA considers Oil & Grease as a conventional pollutant pursuant to 304(a)(4) of the CWA and 40 CFR 401.16. The Guam WQS indicates that waters shall not contain detectable as a visible film, or sheen of oil or petroleum. No effluent data was collected for Oil & Grease in the previous permit term. Therefore, EPA is carrying over effluent limitations of 15 mg/l maximum daily and 10 mg/l average monthly from the previous permit.

Ammonia

Data shows that the discharger has the ability to exceed applicable ammonia standards. The Guam WQS contain ammonia criteria which are pH-dependent.

The Guam WQS include a Criteria Maximum Concentration ("CMC") and a Criteria Chronic Concentration ("CCC"). Since both are necessary to protect beneficial uses and the CCC is more stringent, effluent limitations have been set using CCC criteria.

Because ammonia criteria are pH-dependent, the permittee is required to calculate an Ammonia Impact Ratio ("AIR"). The AIR is calculated as the ratio of the ammonia value in the effluent and the applicable ammonia standards as determined by using pH data to derive an appropriate value from the ammonia criteria table in Attachment E of the permit. The AIR limitation has been established as a monthly average of 1.0, equivalent to the standard.

The permittee is required to report maximum daily and average monthly ammonia (as N) concentrations in addition to an average monthly AIR.

Nitrate and Orthophosphate

The Guam WQS establish criteria for S-3 waters for nitrate-nitrogen and orthophosphate. Nutrient are not acutely toxic to wildlife and therefore criteria can be met over chronic averaging periods. Therefore, limitations have been established consistent with the standards on an average monthly basis.

Enterococcus

The Guam WQS establish criteria for S-3 waters for E.coli and enterococcus. The standards state that, for all surface waters, microbiological analysis may include the use of E.coli indicator and/or enterococci indicator. The reasonable potential analysis demonstrated a potential to exceed water quality standards for both these bacteria. Additionally, downstream Toguan Bay is

listed as impaired for enterococcus. Therefore, limitations have been established consistent with water quality objectives for enterococcus as the representative indicator pathogen.

D. Anti-Backsliding

Section 402(o) of the CWA prohibits the renewal or reissuance of an NPDES permit that contains effluent limits less stringent than those established in the previous permit, except as provided in the statute.

The permit removes mass-based limitation for most pollutants by incorporating a flow limit. The flow limit effectively replaces the loading requirements since, in combination with concentration-based limits, ensures equal stringency. Additionally, this permit establishes less stringent effluent limitations for orthophosphate, nitrate, and ammonia. 40 CFR 122.44(l)(1) allows for backsliding in cases where limits were not previously established appropriately or where new information is available to support a separate limit derivation. New limits have been calculated using a different methodology and updated information to assure effluent limitations are consistent with the intent of the Guam WQS. A limit for fecal coliform has also been removed since Guam WQS do not include criteria for fecal coliform in the vicinity of discharge. Alternatively, appropriate enterococcus limitations have been established.

E. Antidegradation Policy

EPA's antidegradation policy at 40 CFR 131.12 and Guam WQS Section 5101.B. require that existing water uses and the level of water quality necessary to protect the existing uses be maintained.

As described in this document, the permit establishes effluent limits and monitoring requirements to ensure that all applicable water quality standards are met. The permit does not include a mixing zone, therefore these limits will apply at the end of pipe without consideration of dilution in the receiving water.

Therefore, due to the low levels of toxic pollutants present in the effluent and water quality-based effluent limitations, the discharge is not expected to adversely affect receiving water bodies or result in any degradation of water quality.

VII. NARRATIVE WATER QUALITY-BASED EFFLUENT LIMITS

The Guam WQS contains narrative water quality standards applicable to the receiving water. Therefore, the permit incorporates applicable narrative water quality standards.

VIII. MONITORING AND REPORTING REQUIREMENTS

The permit requires the permittee to conduct monitoring for all pollutants or parameters where effluent limits have been established, at the minimum frequency specified. Additionally, where effluent concentrations of toxic parameters are unknown or where data are insufficient to determine reasonable potential, monitoring may be required for pollutants or parameters where effluent limits have not been established.

A. Effluent Monitoring and Reporting

The permittee shall conduct effluent monitoring to evaluate compliance with the proposed permit conditions. The permittee shall perform all monitoring, sampling and analyses in accordance with the methods described in the most recent edition of 40 CFR 136, unless otherwise specified in the proposed permit. All monitoring data shall be reported on monthly DMR forms and submitted quarterly as specified in the proposed permit.

Due to the intermittent nature of the discharge, the permit incorporates 8-hour composite samples instead of 24-hour composites.

B. Priority Toxic Pollutants Scan

A Priority Toxic Pollutants scan shall be conducted during the fourth year of the five-year permit term to ensure that the discharge does not contain toxic pollutants in concentrations that may cause a violation of water quality standards. The permittee shall perform all effluent sampling and analyses for the priority pollutants scan in accordance with the methods described in the most recent edition of 40 CFR 136, unless otherwise specified in the proposed permit or by EPA. 40 CFR 131.36 provides a complete list of Priority Toxic Pollutants.

C. Whole Effluent Toxicity Testing

The permit establishes tests for chronic toxicity. Chronic toxicity testing evaluates reduced growth/reproduction at 100 percent effluent. Chronic toxicity is to be reported based on the Test of Significant Toxicity ("TST").

D. Receiving Water Monitoring and Mixing Zone Study

The permit incorporates receiving water monitoring requirements for nutrients as well as the development of a mixing zone study. The discharger can use data gathered during the permit term to request a mixing zone from Guam EPA prior to requesting a permit revision or applying for their next permit.

IX. SPECIAL CONDITIONS

A. Biosolids

Standard requirements for the monitoring, reporting, recordkeeping, and handling of biosolids in accordance with 40 CFR Part 503 are incorporated into the permit.

B. Pretreatment

As described above, there are no industrial facilities discharging to the facility. Therefore, there are no pretreatment requirements in this permit.

X. OTHER CONSIDERATIONS UNDER FEDERAL LAW

A. Impact to Threatened and Endangered Species

Section 7 of the Endangered Species Act of 1973 (16 U.S.C. § 1536) requires federal agencies to ensure that any action authorized, funded, or carried out by the federal agency does not jeopardize the continued existence of a listed or candidate species, or result in the destruction or adverse modification of its habitat.

The following species are listed as endangered or threatened in Guam by the Pacific Islands Fish and Wildlife Services ("FWS") Office:

Mammals:
-Little Mariana Fruit Bat (*Pteropus tokudae*)
-Mariana Fruit Bat (*Pteropus mariannus*)

Birds:
-Mariana Crow (aga) (Corvus kubaryi)
-Guam Micronesian Kingfisher (*Halcyon cinnamomina cinnamomina*)
-Mariana Common Moorhen (*Gallinula chloropus guami*)
-Rail, Guam except Rota (*Rallus owstoni*)
-Mariana Gray Swiftlet (*Aerodramus vanikornsis bartschi*)
-Birdled White-eye (*Zosterops conspicillatus conspicillatus*)
-Micronesian Megapode (*Megapodius laperouse*)
-Nightingale Reed Warbler (*Acrocephalus luscinia*)

Sea Turtles:
-Green Sea Turtle (*Chelonia mydas*)
-Hawksbill Sea Turtle (*Eretmochelys imbricata*)

Plants:
-Iagu, Hayun (*Serianthes nelsonii*)

In addition, the National Marine Fisheries Service ("NMFS") provided a list of threatened and endangered species in Guam as of January 2015. The list includes:

Marine Mammals:
-Blue Whale (*Balaenoptera musculus*)
-Fin Whale (*Balaenoptera physcalus*)
-Humpback Whale (*Megaptera novaeangliae*)
-Sei Whale (*Balaenoptera borealis*)
-Sperm Whale (*Physeter macrocephalus*)
-Dugong (*Dugong dugon*)

Sea Turtles:
-Green Turtle (*Chelonia mydas*)
-Hawksbill Turtle (*Eretmochelys imbricata*)
-Leatherback Turtle (*Caretta caretta*)
-Olive Ridley Turtle (*Lepidochelys olivacea*)

Fish:
-Scalloped Hammerhead Shark (*Sphyrna lewini*)

Corals:
-*Seriatopora aculeate*
-*Acropora globiceps*
-*Acropora retusa*

Effluent from the facility is discharged to Toguan River and flows into Toguan Bay. The discharge is expected to have no effect on species beyond the outlet of the River into the Bay. Of the species listed above, only Mariana common moorhen is known to use wetland and river habitats in the Toguan River and Bay areas.

The effluent discharged from this facility is characterized as secondary-treated sanitary wastewater. The permittee is considered a minor discharger that discharges less than 0.4 MGD into the Toguan River approximately 1,100 feet upstream of the Toguan Bay estuary. There are no known industrial discharges to the treatment plant.

Moorhens feed on both plants and animals in and near floodplains and wetlands. Although the Toguan River contributes to nearby wetlands, it is one of many contributors including the Pacific Ocean. Because the facility's discharge is a very small proportion of the Toguan River's flow and the river's flow is further diluted once reaching nearby wetlands, the facility's contribution to the wetlands may be considered *de minimis*. Additionally, this permit was written to protect the beneficial uses of the river which include propagation and preservation of aquatic wildlife. This permit incorporates effluent limitations and narrative conditions to ensure that the discharge meets Guam WQS without any additional mixing zones.

In consideration of the above, EPA believed that the proposed discharge is not likely to affect endangered species in Guam.

EPA provided FWS and NMFS with copies of this fact sheet and the draft permit for review.

B. Impact to Coastal Zones

The Coastal Zone Management Act (CZMA) requires that Federal activities and licenses, including Federally permitted activities, must be consistent with an approved state Coastal Management Plan (CZMA Sections 307(c)(1) through (3)). Section 307(c) of the CZMA and implementing regulations at 40 CFR 930 prohibit EPA from issuing a permit for an activity affecting land or water use in the coastal zone until the applicant certifies that the proposed activity complies with the State (or Territory) Coastal Zone Management program, and the State (or Territory) or its designated agency concurs with the certification.

The applicant will submit to the Guam Coastal Management Program for approval a consistency determination.

C. Impact to Essential Fish Habitat

The 1996 amendments to the Magnuson-Stevens Fishery Management and Conservation Act (MSA) set forth a number of new mandates for the National Marine Fisheries Service, regional fishery management councils and other federal agencies to identify and protect important marine and anadromous fish species and habitat. The MSA requires Federal agencies to make a determination on Federal actions that may adversely impact Essential Fish Habitat (EFH).

The proposed permit contains technology-based effluent limits and numerical and narrative water quality-based effluent limits as necessary for the protection of applicable aquatic life uses. The proposed permit does not directly discharge to areas of essential fish habitat. Therefore, EPA has determined that the proposed permit will not adversely affect essential fish habitat.

A copy of the draft permit was sent to the National Marine Fisheries Service for review.

D. Impact to National Historic Properties

Section 106 of the National Historic Preservation Act (NHPA) requires federal agencies to consider the effect of their undertakings on historic properties that are either listed on, or eligible for listing on, the National Register of Historic Places. Pursuant to the NHPA and 36 CFR §800.3(a)(1), EPA is making a determination that issuing this proposed NPDES permit does not have the potential to affect any historic properties or cultural properties. As a result, Section 106 does not require EPA to undertake additional consulting on this permit issuance.

XI. STANDARD CONDITIONS

A. Reopener Provision

In accordance with 40 CFR 122 and 124, this permit may be modified by EPA to include effluent limits, monitoring, or other conditions to implement new regulations, including EPA-approved water quality standards; or to address new information indicating the presence of effluent toxicity or the reasonable potential for the discharge to cause or contribute to exceedances of water quality standards.

B. Standard Provisions

The permit requires the permittee to comply with EPA Region IX Standard Federal NPDES Permit Conditions, dated July 1, 2001.

XII. ADMINISTRATIVE INFORMATION

A. Public Notice (40 CFR 124.10)

The public notice is the vehicle for informing all interested parties and members of the general public of the contents of a draft NPDES permit or other significant action with respect to an NPDES permit or application.

B. Public Comment Period (40 CFR 124.10)

Notice of the draft permit will be placed in a daily or weekly newspaper within the area affected by the facility or activity, with a minimum of 30 days provided for interested parties to respond in writing to EPA. After the closing of the public comment period, EPA is required to respond to all significant comments at the time a final permit decision is reached or at the same time a final permit is actually issued.

C. Public Hearing (40 CFR 124.12(c))

A public hearing may be requested in writing by any interested party. The request should state the nature of the issues proposed to be raised during the hearing. A public hearing will be held if EPA determines there is a significant amount of interest expressed during the 30-day public comment period or when it is necessary to clarify the issues involved in the permit decision.

D. Water Quality Certification Requirements (40 CFR 124.53 and 124.54)

For States, Territories, or Tribes with EPA approved water quality standards, EPA is requesting certification from the affected State, Territory, or Tribe that the proposed permit will meet all applicable water quality standards. Certification under section 401 of the CWA shall be in writing and shall include the conditions necessary to assure compliance with referenced applicable provisions of sections 208(e), 301, 302, 303, 306, and 307 of the CWA and appropriate requirements of Territory law.

XIII. CONTACT INFORMATION

Comments, submittals, and additional information relating to this proposal may be directed to:

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EPA Region IX
75 Hawthorne Street (WTR-5)
San Francisco, California 94105

XIV. REFERENCES

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