

US EPA ARCHIVE DOCUMENT

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

June 2013

FACT SHEET

Authorization to Discharge under the
National Pollutant Discharge Elimination System
for the
Managaha Island Wastewater Treatment Plant

NPDES Permit No. MP0020371

Applicant and Mailing Address: Tasi Tours and Transportation, Inc.
P.O. Box 501023
Beach Road, South Garapan
Saipan, MP 96950

Applicant Contact(s): Takashi Murakami, General Manager
(670) 235-9373

Permitted Facility Address: Managaha Island
Saipan, Northern Mariana Islands, MP 96950

Facility Owner Contact: Pedro Itibus, Acting Secretary
CNMI Dept. of Public Lands
(670) 234-3751

I. Summary

Tasi Tours and Transportation, Inc. (Tasi Tours) was issued a National Pollutant Discharge Elimination System (“NPDES”) Permit (No. MP0020371) on February 2, 2008, for Managaha Island – Saipan Wastewater Treatment Facility (“WWTF”), pursuant to EPA regulations set forth in Title 40, Code of Federal Regulations (“CFR”) Part 122.21. The permit became effective on February 2, 2008, through midnight, February 1, 2013. In response to EPA’s January 17, 2013 courtesy reminder to submit a renewal, Tasi Tours applied to U.S. EPA Region 9 for reissuance of the NPDES permit on January 30, 2013. This fact sheet is based on information provided by the applicant through its application and discharge data submittals, along with the appropriate laws and regulations.

Pursuant to Section 402 of the Clean Water Act (“CWA”), the U.S. EPA is proposing issuance of the NPDES permit renewal to MUA (“Permittee”) for the discharge of treated

domestic wastewater to a nearby leach field, located approximately 150 feet inward of the north shoreline of Managaha Island by the Tanapag Harbor. The leaching field distribution box discharges into the groundwater in an aquifer matrix comprised of beach sand with a direct, hydrological connection to the nearby lagoon waters by Tanapag Harbor of the Philippine Sea, to Class AA marine receiving waters surrounding Saipan, a water of the U.S.

II. Description of Facility

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

Based on information provided by Tasi Tours, the Managaha islet, a tourist day-use island, is owned by the Commonwealth of the Northern Mariana Islands and managed by the CNMI Department of Public Lands. Managaha Island offers a variety of water sports including scuba diving, snorkeling, parasailing, banana boating and fishing, as well as beaches, picnic spots, a food area, public restrooms and gift shops. A vast majority of the tourists visiting the island only stay for a few hours. The first passenger boat arrives at 9:30AM and the last passenger boat leaves before 4:00PM. Most tourists are gone by 2:30PM, with an average stay of five hours. All kitchen wastes are removed from the island. Cleaning of the public toilets involves a minimum of disinfectant products and is generally conducted by daily washdowns with reverse osmosis water. There is sufficient storage within the existing septic tanks to attenuate any harmful chemicals. Tasi Tours is awarded a concession contract until September 1, 2016.

Managaha Island had an old treatment facility in existence for over 22 years which underwent renovations and upgrades during 1990-1991 and again in 2002 without much success. In 2007, the facility underwent major construction with a new Japan-made FRP Johkasou treatment package plant, removal of old treatment units, and construction of refuse piping, sampling points and additional rainwater catchment capacity. The new Managaha Island WWTF serves a daily tourist population up to 1,050 and receives only domestic sewage with a design flow of 0.005 million gallons per day (MGD). Advanced treatment system consists of a membrane separation activated sludge process, flow equalization-denitrification, submerged type aerated activated sludge with flocculation, nitrification tank with membrane separation, settling, and ultraviolet disinfection of the treated effluent. The new plant provides secondary treatment, capable of achieving up to 95% removal efficiencies for biochemical oxygen demand (BOD₅) and total suspended solids (TSS). Tasi Tours had assumed full responsibility for the operation and maintenance of the plant.

Sludge is dewatered, thickened and stored for disposal at the Marpi Solid Waste Landfill, or for hauling off-site to the nearby Commonwealth Utilities Corporation's Sadog Tasi WWTP (NPDES Permit No. MP0020010). Approximately every three (3) months when the sludge

volume reaches a specified level, the sludge holding tank would be pumped and solids taken by boat to the Sadog Tasi WWTP.

III. Description of Discharge

During facility operations, the permitted discharge to the leach field hereby designated as Discharge No. 001 to Class AA receiving marine waters of Saipan, as follows:

Discharge No.	North Latitude	East Longitude	Description
001	15° 14' 31.1"	145° 42' 44.7"	Leach field distribution box discharges into the groundwater with a directly hydrological connection to the nearby lagoon waters by Tanapag Harbor of the Philippine Sea, to Class AA receiving marine waters of Tanapag Harbor of the Philippine Sea.

IV. Receiving Water Monitoring

The permittee will be required to develop and conduct a receiving water monitoring program in Class AA marine receiving waters in Tanapag Harbor of the Philippine Sea. The permittee shall verify all station locations (latitude and longitude) and submit this information with a map showing the locations of these stations in the first quarterly receiving water monitoring report. Any sampling and monitoring under the proposed permit shall be performed at the following receiving water monitoring stations, as well as the leaching field Discharge Serial No. 001.

Station ID(s)	Location
Station 1	At the western shoreline, a shallow monitoring well at a water depth of 12 inches, directly opposite from the leaching field distribution box. A permanent marker shall be established and maintained in a location far enough inland to be protected from erosion and storm damage, but visible enough to easily serve as the sampling location reference.
Station 2	Shoreline 75 feet west of Station 1, at the water depth of 12 inches.
Station 3	Shoreline 75 feet east of Station 1, at the water depth of 12 inches.

V. Administrative Process

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

- A. Submission of a timely and complete application by the permittee;
- B. Review of the application and analysis of discharge data to determine compliance with the Clean Water Act and supporting regulations, and preparation of a draft NPDES permit by USEPA Region 9 staff based on this review;
- C. Public notice of a draft NPDES permit by USEPA Region 9;
- D. Public hearings (if needed) to address public interest;
- E. CNMI DEQ concurrence in the issuance of a NPDES permit (through CWA Section 401 water quality certification), or denial by the CNMI DEQ;
- F. Processing of appeals, in accordance with 40 CFR 124, Subpart E, if an appeal is timely and appropriately filed.

VI. Basis of Proposed Permit Requirements

A. Applicable Technology-Based Effluent Limitations

Section 301 of the CWA established a required performance level, referred to as “secondary treatment,” that all POTWPs were required to meet by July 1, 1977. Federal secondary treatment effluent standards for POTWPs are contained in Section 301(b)(1)(B) of the CWA. Implementing regulations for Section 301(b)(1)(B) are found at 40 CFR Part 133. The CWA requires POTWPs to meet performance-based requirements based on available wastewater treatment technology. These technology-based effluent limits apply to all municipal wastewater treatment plants, and identify the minimum level of effluent quality attainable by secondary treatment in terms of Biochemical Oxygen Demand 5-day (BOD₅) and Total Suspended Solids (TSS). The requirements contained in the draft permit are necessary to prevent violations of applicable treatment standards.

B. Commonwealth of the Northern Mariana Islands (“CNMI”) Water Quality Standards

To protect the designated uses of surface waters of the U.S., the CNMI has adopted water quality criteria in January 1997 and amended in September 2004, for waters of the Commonwealth. Under the jurisdiction of the CNMI, Division of Environmental Quality (DEQ), Saipan has two classifications (AA and A) for marine waters. Class AA coastal and oceanic waters surrounding Saipan are protected for their natural pristine state as nearly as possible with an absolute minimum of pollution or alteration of waters quality from any human-related source or actions. Other uses are allowed as long as they are compatible the support and propagation of shellfish, and other

marine life, conservation of coral reefs and wilderness areas, oceanographic research, and aesthetic enjoyment and recreational use in and on these waters.

The CNMI WQS, amended and adopted on September 24, 2004, contain water quality standards (use classifications and criteria) for waters of the CNMI. The requirements contained in the draft permit are necessary to prevent violations of applicable water quality standards in Class AA coastal and oceanic waters surrounding Saipan. Class AA waters are protected for their recreational use and aesthetic enjoyment; other uses are allowed as long as they are compatible with the protection and propagation of fish, shellfish, and wildlife, and recreation in and on these waters.

VII. Determination of Effluent Limitations, Monitoring, and Reporting Requirements

A. Federal Secondary Treatment Effluent Discharge Limitations

The draft permit contains the following discharge limitations for biochemical oxygen demand and total suspended solids:

Discharge Limitations				
Discharge Parameter	Average Monthly	Average Weekly	Maximum Daily	Units
Flow ¹	-- ²	n/a	-- ²	GPD
BOD ₅ ³	30	45	n/a	mg/l
	1.3	1.9	n/a	lbs/day
TSS ³	30	45	n/a	mg/l
	1.3	1.9	n/a	lbs/day
Priority Pollutants ⁴	-- ²	--	-- ²	µg/l

Footnotes:

- The average daily flow is 0.005 MGD. No flow limit is proposed but the monthly and daily maximum flows must be monitored and reported. The monitoring frequency is once/month.
- Monitoring and reporting required. No limitation is set at this time.
- The arithmetic means of both BOD₅ and TSS values, by concentration, for effluent samples collected over a calendar month shall not exceed 15% of the arithmetic mean, by concentration, for influent samples collected at approximately the same times during the same period.
- Priority Pollutants: In the first year of the permit, the permittee shall monitor for the full list of priority pollutants in the Code of Federal Register (CFR) at 40 CFR Part 423, Appendix A. The permittee shall collect *24-hour composite samples* for metals, 2,3,7,8-TCDD (dioxin), pesticides, base-neutral extractables, and acid-extractables. The permittee shall collect *discrete samples* for cyanide, total phenolic compounds and volatile organics. No limit is set at this time. Should the results reveal levels below the EPA's National Water Quality Criteria for priority pollutants, monitoring will no longer be required for the remainder of the permit cycle.

The proposed monthly average and weekly average discharge limitations for BOD₅ and TSS (in mg/l and influent percent removal efficiency) are based on secondary treatment requirements contained in 40 CFR 133. The proposed discharge limitations for biochemical oxygen demand and total suspended solids (in lbs/day) are calculated using a plant design flow of 0.005 MGD and the following equation: $\text{lbs/day} = 8.34 \times \text{Ce} \times \text{Q}$. “Ce” is the discharge limitation in mg/l and “Q” is the flow rate in MGD (where 8.34 is the standard conversion factor for converting concentration limits to mass limits in the units provided). *U.S. EPA NPDES Permit Writers Manual*, (EPA-833-B-96-003, 1996).

B. Water Quality-Based Effluent Limitations

Water quality-based effluent limitations, or WQBELS, 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)].

EPA evaluated the reasonable potential to discharge toxic pollutants according to guidance provided in the *Technical Support Document for Water Quality-Based Toxics Control* (TSD) (Office of Water Enforcement and Permits, U.S. EPA, March 1991) and the *U.S. EPA NPDES Permit Writers Manual* (Office of Water, U.S. EPA, December 1996). These factors include:

1. Applicable standards, designated uses and impairments of receiving water
2. Dilution in the receiving water
3. Type of industry
4. History of compliance problems and toxic impacts
5. Existing data on toxic pollutants - Reasonable Potential analysis

1. **Applicable standards, designated uses and impairments of receiving water**

The 2004 CNMI WQS established water quality criteria for waters of the Commonwealth (Class AA coastal and oceanic waters surrounding Saipan) for protection of support and propagation of shellfish, and other marine life, conservation of coral reefs and wilderness areas, oceanographic research, and aesthetic enjoyment and compatible recreational use in and on these waters. (See page 8 of the 2004 CNMI WQS)

2. Dilution in the receiving water

The treatment facility discharges to Outfall 001, which is an existing leaching field into the groundwater in an aquifer matrix comprised of beach sand with a direct, hydrological connection to the nearby lagoon waters. There is no ocean outfall. The leach field is approximately 150 feet inward of the north shoreline of Managaha Island by the Tanapag Harbor. Because the facility is located in Class AA waters, and no mixing zones are allowed in Class AA waters under the CNMI standards, no dilution of the effluent has been considered in the development of water quality based effluent limits applicable to the discharge.

3. Type of industry

Typical pollutants of concern in untreated and treated domestic wastewater include ammonia, nitrate, oxygen demand, pathogens, temperature, pH, oil and grease, and solids.

4. History of compliance problems and toxic impacts

No violations of permit limitations were found during review of July 2009 to March 2013 DMRs data which reportedly indicated better than 85% and up to 99% removal efficiencies for BOD₅ and TSS. The July-September 2009 DMR data showed discrepancies in data entry that were rectified in resubmittals. The DMRs showed that facility did not test for total phosphorous nor unionized ammonia in receiving water.

5. Existing data on toxic pollutants

No existing data is available on toxic pollutants.

C. Rationale for WQBELs

In accordance with 40 CFR 122.44(d), the need for discharge limitations and monitoring requirements have been evaluated and established under the proposed permit to ensure the discharge will meet the applicable CNMI specific water quality criteria for Class AA marine waters surrounding Saipan. The permittee will be required to meet discharge limitations to be monitored in the receiving waters in accordance with a receiving water monitoring plan to be approved by the CNMI DEQ.

Effluent Characteristic	Concentration Limits (mg/l, unless otherwise noted)		Monitoring Frequency	Sampling Type
	Average Monthly	Maximum Daily		
<i>Enterococci</i>	35 #/100 mL	104 #/100 mL	Quarterly	Grab
TRC	7.5 µg/l	13 µg/l	"	"
pH	Not more than 0.5 from a value of 8.1		"	"
Nitrate-Nitrogen	0.2 mg/l	0.2 mg/l	"	"
Total Nitrogen	0.4 mg/l	0.4 mg/l	"	"
Orthophosphate	0.025 mg/l	0.025 mg/l	"	"
Total Phosphorous	0.025 mg/l	0.025 mg/l	"	"
NH ₃ (as unionized ammonia)	0.02 mg/l	0.02 mg/l	"	"

Footnotes:

- (1) Monitoring and reporting required. No limitation is proposed at this time.
- (2) Priority toxic pollutants (excluding asbestos) are listed in 40 CFR 131.36(b)(1). The permittee will be required to collect 8-hour composite samples metals, 2,3,7,8-TCDD (dioxin), pesticides, base-neutral extractables, and acid-extractables. The permittee shall collect discrete samples for cyanide, total phenolic compounds and volatile organics.

VIII. Threatened and Endangered Species and Critical Habitat

A. Background:

Section 7 of the Endangered Species Act (ESA) of 1973 requires Federal agencies such as EPA to ensure, in consultation with the U.S. Fish and Wildlife Service (FWS), that any actions authorized, funded or carried out by the Agency are not likely to jeopardize the continued existence of any Federally-listed endangered or threatened species or adversely modify or destroy critical habitat of such species.

Since the issuance of NPDES permits by EPA is a Federal action, consideration of a permitted discharge and its effect on any federally-listed species is appropriate. The proposed NPDES permit authorizes the discharge of treated domestic wastewater to a nearby leach field, with a direct, hydrological connection to the nearby lagoon waters by Tanapag Harbor of the Philippine Sea.

Based on information provided by the Services on March 8, 2013, FWS indicates that the federally endangered Micronesian megapode (*Megapodius laperouse*) has been observed in the vicinity of the project, and that the federally threatened green sea turtle (*Chelonia mydas*) and endangered Hawksbill turtle (*Eretmochelys imbricata*) may nest on

beaches near the project area. FWS also determines that no designated critical habitat occurs within the proposed project footprint.

B. EPA's Finding:

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

While EPA believes that discharge in compliance with this permit will have no effect on any Federally-listed threatened or endangered species or its critical habitat that may be present in the area, and is proposing to issue the permit at this time, EPA may decide that changes to the permit may be warranted based on receipt of new information. EPA is requesting comments from the USFWS and will consider their comments in making the final permit decision. EPA will initiate consultation should new information reveal impacts not previously considered, should the activities be modified in a manner beyond the scope of the original opinion of the Services, or should the activities affect a newly-listed species. Re-opener clauses have been included should new information become available to indicate that the requirements of the permit need to be changed.

IX. Monitoring and Reporting Program

The proposed permit requires discharge data obtained during the previous three months to be summarized on monthly discharge monitoring report (DMR) forms and reported quarterly. If there is no discharge for the month, report "C" in the No Discharge box on the DMR form for that month. These reports are due January 28, April 28, July 28, and October 28 of each year. Duplicate signed copies of these, and all other reports required herein, shall be submitted to the EPA Regional Administrator and the CNMI Division of Environmental Quality.

U. S. Environmental Protection Agency, Region 9
Enforcement Division
Information Management Section (ENF 4-1)
75 Hawthorne Street
San Francisco, CA 94105

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

X. Permit Reopener

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

XI. Information and Copying

The Administrative Record, which contains the draft NPDES permit, the fact sheet, comments received, and other relevant documents, is available for review and may be obtained by calling or writing to the above address.

All comments or objections received within thirty (30) days from the date of the Public Notice, will be retained and considered in the formulation of the final determination regarding the permit issuance.

XII. Administrative Information – Public Notice, Public Comments and Requests for Public Hearings

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

In accordance with 40 CFR 124.11 and 12, during the public comment period, any interested person may submit written comments on the draft permit, and may request a public hearing if no hearing has already been scheduled. A request for public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. In accordance with 40 CFR 124.13, all persons must raise all reasonably ascertainable issues and submit all reasonably available arguments supporting their position within thirty (30) days from the date of the Public Notice. Comments may be submitted either in person or mailed to both addresses below:

U.S. Environmental Protection Agency, Region 9
CWA Standards and Permits Office (WTR-5)
Attn: Linh Tran
75 Hawthorne Street
San Francisco, CA 94105
Telephone: (415) 972-3511

Division of Environmental Quality
Commonwealth of the Northern Mariana Islands
P.O. Box 501304
Gualo Rai Center
Saipan, MP 96950
Telephone: (670) 664-8500

Interested persons may obtain further information, including copies of the draft permit, fact sheet/statement of basis, and the permit application, by contacting Linh Tran (WTR-5) at the U.S. EPA address, above. Copies of the administrative record (other than those which U.S. EPA maintains as confidential) are available for public inspection between 8:00 a.m. and 4:30 p.m., Monday through Friday (excluding federal holidays).

In accordance with 40 CFR 124.12, the U.S. EPA Director shall hold a public hearing when she finds, on the basis of requests, a significant degree of public interest in the draft permit. The Director may also hold a public hearing when, for instance, such a hearing might clarify one or more issues involved in the permit decision. Public notice of such hearing shall be given as specified in 40 CFR 124.10.