

**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM**  
**FACT SHEET**

Permittee and Mailing Address: Unitek Environmental-Guam  
P.O. Box 24607  
Barrigada, Guam 96921

Permitted Facility and Address: 1026 Cabras Highway  
Piti, Guam 96925

Contact Person: Mr. LeRoy Moore, President  
(671) 565-3151

NPDES Permit No.: GU0020346

**PART I - STATUS OF PERMIT**

Unitek Environmental-Guam (hereinafter, the “permittee”) has applied for renewal of its National Pollution Discharge Elimination System (“NPDES”) permit pursuant to U.S. Environmental Protection Agency (“EPA”) regulations set forth in Title 40, U.S. Code of Federal Regulations (“CFR”), Part 122.21, for the discharge of treated wastewater from its mobile treatment plant to Category M-3 marine waters of Apra Harbor. These regulations require any person(s) who discharges or proposes to discharge pollutants from a point source into waters of the U.S. to submit a complete application for a NPDES permit, including a renewal of a permit.

**PART II - DESCRIPTION OF FACILITY**

The mobile treatment plant is located at 1026 Cabras Highway on Cabras Island in Piti, Guam. The mobile treatment plant is used for the removal of oil in bilge and oily wastewaters and consists of a two inch diaphragm pump, a 100 gallon per minute oil/water separator, a 550 gallon oil storage tank, two dual sock filters (10 and 50 microns), and a 500 gallon activated carbon tank. Effluent discharges from the mobile treatment plant include treated bilge water from vessels that are cleaned during routine maintenance, repair, or decommissioning and facility wastewater contaminated by used oil. All discharges are treated by the mobile treatment plant prior to release to Apra Harbor. The mobile treatment plant is operated on an on-call basis at the Port of Guam and has an estimated design flow rate of 0.144 million gallons per day (“MGD”).

**PART III - DESCRIPTION OF RECEIVING WATER**

To protect the designated uses of surface waters of the U.S., the Territory of Guam (“Guam”) has adopted water quality criteria for marine waters depending on the level of protection required. Apra Harbor is a near-shore territorial water of Guam and is designated as a M-3 or “Fair” category marine water according to *Guam Water Quality Standards, 2001*

*Revision* (Public Law 26-113, June 18, 2002, Guam Environmental Protection Agency). Guam’s water quality standards state that “water in this category is intended for general, commercial and industrial use, while allowing for protection of aquatic life, aesthetic enjoyment and compatible recreation with limited body contact. Specific intended uses include the following: shipping, boating and berthing, industrial cooling water, and marinas.” During its operation, the mobile treatment plant discharges to Apra Harbor through the following discharge outfalls:

<b>Discharge Outfall No.</b>	<b>Latitude</b>	<b>Longitude</b>	<b>Outfall Description</b>
001	13°28'00" N	144°40'30" E	Port of Guam, Guam Regional Hazardous Waste Transfer Facility
002	13°27'30" N	144°40'00" E	Port of Guam, Foxtrot Wharf
003	13°27'45" N	144°39'00" E	Port of Guam, Hotel Wharf

**PART IV - DESCRIPTION OF DISCHARGE**

The permittee provides a service to vessel operators and various island facilities for the removal of oil in bilge and oily wastewaters, respectively. The mobile treatment plant receives the wastewater and discharges the treated effluent to Apra Harbor via the discharge points previously described. The reclaimed oil is processed for energy at the Cabras Island power plant. Table 1 provides a summary of discharge characteristics based on the Discharge Monitoring Report (“DMR”) forms from the period of July 1999 to June 2005 and the permittee’s NPDES permit application, EPA Form 3510-2C, dated August 13, 2004.

**PART V - DETERMINATION OF NUMERICAL EFFLUENT LIMITATIONS**

When determining effluent limitations, EPA must consider limitations based on the technology available to treat the pollutant(s) (i.e., technology-based limitations) and limitations that are protective of water quality standards (i.e., water quality-based limitations). In accordance with 40 CFR Parts 122.44 and 125.3 and Guam water quality standards, technology and water quality-based effluent limitations for the draft permit are proposed using daily maximum limits and are based on the mobile treatment plant’s design capacity of 0.144 MGD. Table 2 provides a summary of the proposed effluent limitations and monitoring requirements for the permit.

A. Technology-based Effluent Limitations

The permit contains a technology-based effluent limit for oil and grease since oil and grease are common components of oily wastewater. The

Table 1 - Comparison of effluent limitations from the previous permit period (1999-2005) and effluent data from the Discharge Monitoring Report forms and permit application.

<b>Pollutant/ Parameter</b>	<b>Daily Max. Allowable Effluent Limitation</b>	<b>Daily Max. Concentration from DMR Forms</b>	<b>Concentration from permit application</b>
Flow Rate (MGD)	NA <sup>1</sup>	----	20,000
pH (Std. Units)	7.0 - 9.0	6.67, 7.17 <sup>2</sup>	6.79
BOD (mg/l)	NA	NA	2.7
COD (mg/l)	NA	NA	<20.0 <sup>3</sup>
TSS (mg/l)	NA	NA	8.0
Ammonia (mg N/l)	NA	NA	<0.2
TOC (mg/l)	NA	NA	<1.0
Oil and Grease (mg/l)	15	10.0	4.0
Lead (mg/l)	0.210	<0.005	<0.005
Orthophosphate (mg/l)	0.10	<0.03	<0.02
BTEX (mg/l)	NA	NA	<0.001 <sup>4</sup>
Priority & Other Pollutants (mg/l)	NA	ND <sup>5</sup>	NA

MGD - million gallons per day; Std. Units - standard units; mg/l - milligrams per liter; mg N/l - milligrams of nitrogen per liter; BTEX - benzene, toluene, ethylbenzene and xylene; DMR - Discharge Monitoring Report

<sup>1</sup>A “NA” means not applicable as no numerical limits are established for the pollutant or parameter.

<sup>2</sup>pH concentration reported as the minimum and maximum values.

<sup>3</sup>A “<” means the concentration was below the laboratory’s practical quantitation level for the pollutant or parameter.

<sup>4</sup>Concentration for each component of BTEX.

<sup>5</sup>A “ND” means all priority and other pollutants were not detected based on the laboratory’s reporting limit.

effluent limit for oil and grease is based on EPA’s Best Professional Judgement (“BPJ”) as part of developing technology-based effluent limits since there are no applicable effluent limitation guidelines and performance standards for oil and grease. Section 402(a)(1) of the Act provides for the establishment of BPJ-based limits when specific national effluent guidelines are not available for a pollutant of concern. The proposed BPJ discharge limit for oil and grease is 15 mg/l. This limit is consistent with other similar plants or facilities that treat oily

wastewater in Guam. In addition to this technology-based numeric limit, the narrative water quality-based limit for oil and grease such as prohibiting visible

sheening are included in the draft permit.

**B. Water Quality-Based Effluent Limitations**

In accordance with 40 CFR 122.44(d), the draft permit proposes water quality-based effluent limits for the pollutants or parameters listed below because EPA has determined, based on effluent data provided by the permittee and the nature of the discharge, that the effluent from the mobile treatment plant causes, has the reasonable potential to cause, or contributes to an exceedance of Guam’s water quality standards. Section 402(o) of the Act and 40 CFR 122.44(l) require all reissued permits to be as stringent as the previous permit unless specific exceptions apply. Effluent limits were established without consideration of a mixing zone.

Table 2 - Effluent limitations and requirements for the pollutants or parameters in the permit.

Pollutant/Parameter	Daily Maximum Allowable Effluent Limitations		Monitoring Requirements <sup>1</sup>	
	Concentration Limit	Mass Limit	Monitoring Frequency	Sample Type
Flow Rate (MGD)	NA <sup>2</sup>	NA	Continuous	Metered
pH <sup>3</sup> (Std. Units)	6.5 - 8.5	NA	Once/Month	Grab
Oil and Grease	15 mg/l	8.176 kg/d	Once/Month	Grab
Lead <sup>4</sup>	0.210 mg/l	0.114 kg/d	Once/Month	Grab
Orthophosphate	0.10 mg/l	0.055 kg/d	Once/Month	Grab
BTEX (mg/l)	NA	NA	Once/year	Grab

MGD - million gallons per day; Std. Units - standard units; mg/l - milligrams per liter; BTEX - benzene, toluene, ethylbenzene and xylene.

<sup>1</sup>If there is no discharge from an outfall during any one month period, report “C” in the “No Discharge” box on the Discharge Monitoring Report for that month; 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.

<sup>2</sup>A “NA” means not applicable as no numerical limits are established for the pollutant or parameter.

<sup>3</sup>pH shall be measured at the time of sampling.

<sup>4</sup>Daily maximum effluent limitation for lead is based on total recoverable metal and on an acute discharge flow duration of less than or equal to 24 hours. For a chronic discharge flow duration greater than 24 hours, the permittee shall also meet the monthly effluent limitation for lead of 0.0081 mg/l using composite sampling methods, as defined in Part VII of the permit.

1. *pH* - The range of pH values is based on Guam’s water quality standards, which require that all marine waters maintain a pH range of 6.5 to 8.5.

For Category M-3 marine waters, the proposed pH range is 6.5 to 8.5. This range was changed from the 1999 permit limit of 7.0 to 9.0 to reflect Guam's 2002 revised marine water quality standards. Section 402(o) of the Act prohibits the establishment of less stringent water-quality based effluent limits unless allowed under section 303(d)(4) or under an exception in section 402(o)(2). EPA has concluded that the proposed permit pH range of 6.5 to 8.5 is consistent with section 303(d)(4)(B) of the Act, which refers to the attainment of water quality standards for waters such as Apra Harbor, and is protective of the designated uses of Apra Harbor.

2. *Lead* - Although effluent data show low lead concentrations, an effluent limit is proposed for lead since lead is commonly found in fuel oils and oily wastewaters. The proposed discharge limit for lead is based on Guam's water quality standards for aquatic life protection. The discharge limit for lead is 0.210 mg/l, which is defined as the Criteria Maximum Concentration for marine waters. The limit is based on total recoverable metal and on an acute discharge flow duration of less than or equal to 24 hours. For a chronic discharge flow duration greater than 24 hours, the draft permit requires the permittee to meet the monthly effluent limitation for lead of 0.0081 mg/l using composite sampling methods, as defined in the draft permit.
3. *Orthophosphate* - Although effluent data show low orthophosphate concentrations, an effluent limit is proposed since bilge wastewater can consist of a mixture of vessel wastewater and leakage from a variety of sources containing phosphorus. The proposed discharge limit for orthophosphate is based on Guam's water quality standards. Therefore, for Category M-3 marine waters, the effluent limit for orthophosphate is 0.10 mg/l.
4. *BTEX (Benzene, Toluene, Ethylbenzene, and Xylene)* - Monitoring requirements without numeric effluent limits are included for BTEX. BTEX are common components of refined oil products and solvents and are required to be monitored for in the draft permit since there remains a potential for these pollutants to occur in the effluent.

## **PART VI - DETERMINATION OF NARRATIVE WATER QUALITY STANDARDS**

Sections 5103 and 5104 of Guam's water quality standards contain narrative water quality standards that apply to Category M-3 marine waters and that are applicable to the discharge characterized herein. The permit contains the following narrative water quality-based effluent limits based on Guam's water quality standards.

- A. The discharge shall be free from substances, conditions, or combinations thereof that:
  - 1. cause visible floating materials, debris, oils, grease, scum, foam, or other floating matter which degrades water quality or use;
  - 2. produce visible turbidity, settle to form deposits or otherwise adversely affect aquatic life; produce objectionable color, odor or taste, directly or by a chemical or biological action;
  - 3. injure or are toxic or harmful to humans, animals, plants or aquatic life; or
  - 4. induce the growth of undesirable aquatic life.
- B. The discharge shall not cause the turbidity values in the receiving water to exceed 1.0 Nephthometric Turbidity Units over ambient conditions.
- C. The discharge shall not cause the temperature of the receiving water to be changed by more than 1.8°F (1.0°C) from ambient conditions.
- D. The discharge shall not contain concentrations of oil or petroleum products that:
  - 1. cause a visible film, or sheen, or result in visible discoloration of the surface with a corresponding oil or petroleum product odor;
  - 2. cause damage to fish, invertebrates, or objectionable degradation of drinking water quality; or
  - 3. form an oil deposit on the shores or bottom of the receiving body of water.
- E. The discharge shall be free of toxic substances in concentrations that produce detrimental physiological, acute or chronic responses in human, plant, animal or aquatic life.
- F. The discharge shall be free of toxic substances in concentrations that produce contamination in harvestable aquatic life to the extent that it causes detrimental

physiological, acute or chronic responses in humans or protected wildlife, when consumed.

- G. The survival of aquatic life in marine waters subjected to the discharge, or other controllable water quality factors, shall not be less than that for the same water body in areas unaffected by the waste discharge.
- H. The discharge, alone or in combination with other sources, shall not cause a violation of any applicable water quality standard.
- I. The discharge of pollutants at any point other than specifically described in this permit is prohibited, and constitutes a violation thereof.

## **PART VII - MONITORING AND REPORTING REQUIREMENTS**

The permit requires the permittee to continue to monitor for pollutants or parameters with technology-based effluent limits (i.e., oil and grease) and water quality-based effluent limits (i.e., pH, lead, and orthophosphate) in the effluent for the duration of the permit. Except for BTEX, pollutants or parameters with water quality-based effluent limits shall be monitored once per month with grab sampling methods. The permit requires BTEX to be monitored once per year. All monitoring, sampling, and analyses shall be performed as described in the most recent edition of 40 CFR 136, unless otherwise specified in the permit. All monitoring data shall be reported on DMR forms and submitted quarterly to EPA and the Guam Environmental Protection Agency (“Guam EPA”), as specified in the permit.

## **PART VIII - SPECIAL CONDITIONS**

In accordance with 40 CFR 122.44(k), the permit requires the permittee to develop and implement a Pollution Prevention Plan that includes Best Management Practices that are designed to prevent pollutants from entering Apra Harbor and other surface waters while maintaining, operating, transporting, and/or storing the mobile treatment plant.

## **PART IX - IMPACT ON 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 a 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. Apra Harbor is a near-shore water generally used for shipping, boating and berthing, industrial cooling water, and marinas. On November 10, 2005, EPA requested informal consultation with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service to identify any Federally listed, proposed and candidate endangered or threatened species and designated and proposed critical habitats that occur in Apra Harbor or in the vicinity of the discharge. In response, the U.S. Fish and Wildlife Service and National

Marine Fisheries Service provided the following list of endangered and threatened species under their jurisdiction that may be present in the vicinity of the effluent discharged to Apra Harbor.

- A. Threatened green sea turtle (*Chelonia mydas*)
- B. Endangered leatherback turtle (*Demochelys coriacea*)
- C. Endangered hawksbill turtle (*Eretmochelys imbricata*)

Although threatened and endangered turtles may occur in the vicinity of the effluent discharge, EPA has concluded that the effluent discharge will not affect listed species or critical habitat.

## **PART X - ADMINISTRATIVE INFORMATION**

### **A. Public Notice**

In accordance with 40 CFR 124.10, the EPA Director shall give public notice that a NPDES permit has been prepared under 40 CFR 124.6(d) 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. The public notice shall allow at least 30 days for public comment on the permit.

### **B. Public Comment Period**

In accordance with 40 CFR 124.11 and 12, during the public comment period, any interested person may submit written comments on the 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. All comments shall be considered in making the final decision and shall be answered as provided in 40 CFR 124.17. In accordance with 40 CFR 124.13, all persons must raise all reasonably ascertainable issues and submit all reasonably available arguments supporting their position by the close of the public comment period on March 19, 2006. Comments may be submitted either in person or mailed to:

Regional Administrator  
EPA - Region IX  
Pacific Islands Office  
75 Hawthorne Street  
San Francisco, California 94105

Administrator  
Guam EPA

P.O. Box 22439- GMF  
Barrigada, Guam 96921

Interested persons may obtain further information, including copies of the permit, fact sheet, and the permit application, by contacting Mr. Mike Lee at the EPA Region IX address listed above. Copies of the Administrative Record (other than those which EPA Region IX maintains as confidential) are available for public inspection between the hours of 8:00 a.m. and 4:30 p.m., Monday through Friday (excluding federal holidays).

C. Public Hearing

In accordance with 40 CFR 124.12, the EPA Director shall hold a public hearing whenever she finds, on the basis of requests, a significant degree of public interest in the permit. The EPA 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.

D. Territorial Certification

After the permit has been modified to include any relevant comments from the 30-day public comment period, the final permit is forwarded to Guam EPA for certification under section 401 of the Act and section 5106(b)(d) of Guam's water quality standards. This certification ensures that the permit complies with both federal Clean Water Act standards and Guam water quality standards. EPA will not issue the final permit until this certification has been received.

E. Contact Information

Persons wishing for additional information may write to the address(s) listed in Part B of this section or contact Mr. Mike Lee of EPA by telephone at (415) 972-3769 or electronic mail at [lee.michael@epa.gov](mailto:lee.michael@epa.gov), or Mr. Domingo Cabusao by telephone at (671) 475-1633 or electronic mail at [dcabusao@guamepa.govguam.net](mailto:dcabusao@guamepa.govguam.net). Copies of materials in the Administrative Record (other than those which EPA Region IX maintains as confidential) are available at EPA Region IX office for inspection and copying between the hours of 8:00 a.m. and 4:30 p.m., Monday through Friday (excluding federal holidays).