

US EPA ARCHIVE DOCUMENT

**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. GU0020389

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	U.S. Navy, Naval Base Guam
Discharger Address	Naval Fac. Engineering Command, Marianas
	PSC 455 Box 195
	FPO AP, Guam 96540
Facility Name	U.S. Navy Water Treatment Plant
Facility Location Address	U.S. Navy Water Treatment Plant
	Bldg. 585, Route 2A
	Santa Rita, Guam 96915
Facility Rating	Minor

Outfall Number	General Type of Waste Discharged	Outfall Latitude	Outfall Longitude	Receiving Water
002	Emergency Discharge Filter Backwash and/or Clarifier Overflows	13° 22' 38" N	144° 40' 51" E	Namo River

This permit was issued on:	February 23, 2011
This permit shall become effective on:	March 1, 2011
This permit shall expire at midnight on:	February 29, 2016
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 23rd day of February , 2011, for the Regional Administrator.

//s/
Alexis Strauss, Director
Water Division

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Part I. EFFLUENT LIMITATIONS

A. Effluent Limit Requirements

1. Effluent Limits – Outfall Number 002
During the period beginning on the effective date of this permit and ending on the expiration date of this permit, the U.S. Navy (“the permittee”) is authorized to discharge Emergency Discharge Filter Backwash and/or Clarifier Overflows in compliance with the effluent limits and monitoring requirements specified in Table 1. Compliance with these requirements is monitored at Monitoring Location 002, at 13° 22’ 38” N, 144° 40’ 51” E. If there is no discharge at this outfall during any one month period, then report “C” in the “No Discharge” box on the DMR form for that month.
2. The discharge of pollutants at any point other than the outfall specifically authorized in this permit is prohibited, and constitutes a violation thereof.
3. Except as authorized in Table 1 below, the discharge from outfall No. 002 shall:
 - a. Be free from substances, conditions or combinations that cause visible floating materials, debris, oil, grease, scum, foam, and other floating material which degrade water quality or use;
 - b. Be free from substances, conditions or combinations that produce visible turbidity, settle to form deposits or otherwise adversely affect aquatic life;
 - c. Be free from substances, conditions or combinations that produce objectionable color, odor, or taste, directly, or by chemical or biological action;
 - d. Be free from substances, conditions or combinations that injure or are toxic or harmful to humans, animals, plants or aquatic life;
 - e. Be free from substances, conditions or combinations that induce the growth of undesirable aquatic life;
 - f. Not cause the pH in the receiving water to be outside the range of 6.5 to 9.0 standard units;
 - g. Not cause orthophosphate concentrations in the receiving water to exceed 0.05 mg/L;
 - h. Not cause nitrate-nitrogen concentrations to exceed 0.2 mg/L;
 - i. Not cause ammonia concentration to exceed 0.02 mg/L;
 - j. Not cause the concentration of dissolved oxygen in the receiving water to be less than 75% of saturation;

- k. Not cause alterations of the marine environment that would alter the salinity of marine waters of Guam more than +10% of the ambient conditions, except when due to natural conditions;
- l. Not cause total non-filterable suspended matter at any point to be increased more than 10% from ambient at any time, and the total concentration should not exceed 20 mg/L, except when due to natural conditions;
- m. Not contain any radioactive waste or contaminated radioactive materials from research facilities;
- n. Not cause the temperature in the receiving water to deviate more than 1.0 degree Centigrade (1.8 degree Fahrenheit) from ambient conditions;
- o. Not cause the concentration of oil or petroleum products in the receiving waters to cause a visible film, or sheen, or result in visible discoloration of the surface with a corresponding oil or petroleum product odor, damage to fish or invertebrates, or an oil deposit on the shore or bottom;
- p. Not cause concentrations of toxic substances in the receiving water that produce detrimental physiological, acute, or chronic responses in human, plant, animal or aquatic life;
- q. Not cause concentrations of toxic substances in the receiving waters 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;
- r. Not cause concentrations of toxic substances in the receiving waters that result in the survival of aquatic life subject to the discharge to be less than that for the same water body in areas unaffected by the discharge; and
- s. Be maintained free of toxic substances in concentrations that produce contamination in harvestable aquatic life to the extent it causes detrimental physiological, acute or chronic responses in humans or protected wildlife, when consumed.

Whenever natural concentrations of any toxic substance occurs and exceeds the limits established in Part I.A.3., this greater concentration shall constitute the limit, provided that this natural concentration was not directly affected by human-induced causes.

- 4. Samples taken in compliance with the effluent monitoring requirements specified in Part I of this permit shall be taken after the last treatment process and prior to mixing with the receiving water or stormwater, where representative samples can be obtained. In the case of outfall 002, samples shall be taken at the top of the backwash settling tank during an overflow event.

B. Table 1. Effluent Limits and Monitoring Requirements – Outfall 002

Parameter	Maximum Discharge Limits		Monitoring Requirements	
	Max Daily	Units	Frequency ⁽³⁾	Sample Type ⁽⁴⁾
Flow rate	(1)	mgd	Continuous	Calculated
pH (hydrogen ion)	Within 6.5 and 9.0 s.u. at all times.		Continuous	Metered
Turbidity	1.0 greater than receiving water body ⁽⁵⁾	NTU	1X/Discharge	Discrete
Settleable Solids	45	mg/L	1X/Discharge	Discrete
Chlorine, Total Residual (TRC)	11	ug/L	1X/Discharge	Discrete
Aluminum ⁽²⁾	200	µg/L	1X/Discharge	Discrete
Copper ⁽²⁾	3	µg/L	1X/Discharge	Discrete
Manganese ⁽²⁾	20	µg/L	1X/Discharge	Discrete
Mercury ⁽²⁾	2	µg/L	1X/Discharge	Discrete
Zinc ⁽²⁾	10	µg/L	1X/Discharge	Discrete
Chloroform	470	µg/L	1X/Discharge	Discrete
Dichlorobromomethane	46	µg/L	1X/Discharge	Discrete
Heptachlor	.00021	µg/L	1X/Discharge	Discrete
Total Dissolved Solids	1000	mg/L	Annually	Discrete
Nitrate-nitrite (as N)	0.5	mg/L	Annually	Discrete
Fluoride	0.8	mg/L	Annually	Discrete
Cadmium ⁽²⁾	3.9	µg/L	Annually	Discrete
Chromium VI ⁽²⁾	16	µg/L	Annually	Discrete
Selenium ⁽²⁾	20	µg/L	Annually	Discrete
Silver ⁽²⁾	4.1	µg/L	Annually	Discrete
Arsenic ⁽²⁾⁽⁶⁾	70	µg/L	Annually	Discrete
Lead ⁽²⁾⁽⁶⁾	140	µg/L	Annually	Discrete

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

(2) All metals shall be measured and reported in terms of total recoverable.

(3) Continuous monitoring only required during discharge.

Annual monitoring required one time/calendar year. If discharge does not occur during the year, discharger does not have to sample that year.

(4) Composite samples shall be taken at regular intervals spanning the course of a single discharge. If the discharge duration is greater than 24 hours, the sample shall be a 24-hour composite.

Discrete samples shall be taken during the course of the discharge when the concentrations of pollutants are at their highest. If a peak concentration time is not determined, the sample shall be pulled during the first thirty minutes of discharge.

- (5) Turbidity shall be sampled both at the outfall and at the point in the receiving water immediately upstream of the outfall. The turbidity in the effluent shall not be more than 1.0 NTU greater than the receiving water body.
- (6) Monitoring requirement and limits for arsenic and lead are incorporated into the permit as required by the Section 401 Water Quality Certification.

C. Upset Provisions

1. Any discharge by the permittee not out of the backwash settling tank during a significant rain or inversion event shall be considered an “upset.” Any such discharge is not authorized under this permit.
2. In the event of an upset, the permittee shall:
 - a. Monitor for all parameters as specified in Table 2, below:

Table 2: Upset Monitoring Requirements

Parameter	Units	Sample Type
Total Flow	mgd	Estimate
pH	s.u.	Discrete ⁽¹⁾
Turbidity	NTU	Discrete
Settleable Solids	mg/L	Discrete
TRC	ug/L	Discrete
Aluminum ⁽²⁾	ug/L	Discrete
Copper ⁽²⁾	ug/L	Discrete
Manganese ⁽²⁾	ug/L	Discrete
Mercury ⁽²⁾	ug/L	Discrete
Zinc ⁽²⁾	ug/L	Discrete
Chlorodibromomethane	ug/L	Discrete
Chloroform	ug/L	Discrete
Dichlorobromomethane	ug/L	Discrete
Heptachlor	ug/L	Discrete

- (1) One grab pH sample shall be taken within 10 minutes of the discovery of an upset. One additional pH grab sample shall be taken per additional hour of upset.
- (2) All metals shall be measured and reported in terms of total recoverable.

If the upset occurs during a discharge event and the upset flow is the same flow as the effluent through the outfall, upset monitoring does not have to be conducted. Effluent monitoring may be considered representative of the upset.

- b. Report the upset in accordance with provisions for twenty-four hour reporting of noncompliance described in Part II.A. of this permit.

- c. Include the following information in a written submission, which must be submitted within five days after the permittee becomes aware of the upset:
 - i. Date(s) and duration.
 - ii. An identification of the treatment process being bypassed, if applicable.
 - iii. The cause(s) of the upset.
 - iv. A justification of whether, or not, the facility was being properly operated at the time.
 - v. A description of efforts made to contain and/or direct the upset.
 - vi. Results from the monitoring required in section a, above.

Part II. MONITORING AND REPORTING

A. *Twenty-four Hour Reporting of Noncompliance*

1. In accordance with 40 CFR 122.41(l)(6)(i), (ii), and (iii), the following condition is expressly incorporated into this permit. 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, to EPA and Guam EPA. The permittee shall notify EPA and Guam EPA at the following telephone numbers:

Pacific Islands Office, CED-6
EPA - Region IX
(415) 972-3769

Administrator
Guam EPA
(671) 475-1658

A written submission shall also be provided 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.

2. The following information 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.
 - c. Violation of a maximum daily discharge limit for any of the pollutants listed by the director in the permit to be reported within 24 hours (see 40 CFR 122.44(g)).
3. The Director may waive the written report on a case-by-case basis for reports required under paragraph A.2, if the oral report has been received within 24 hours.

B. *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 effluent analyses required in Table 1 of this permit, the permittee shall utilize 40 CFR 136 test methods with MDLs and

MLs that are lower than the effluent limits in Table 1 of this permit. If all MDLs or MLs are higher than these effluent limits or criteria concentrations, then the permittee shall utilize the test method with the lowest MDL or ML. 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 ML. Influent and effluent analyses for metals shall measure “total recoverable metal”, except as provided under 40 CFR 122.45(c).

2. For a test method with a published MDL, the permittee shall ensure that the laboratory utilizes a standard calibration where the lowest standard point is near but above the published MDL, in accordance with the instructions for calibration in the test method. For a test method with a published ML, the permittee shall ensure that the laboratory utilizes a standard calibration where the lowest standard point is at or below the published ML, but still within the range of quantitation for the test method, in accordance with the instructions for calibration in the test method.
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 ML to be reported; required QC results to be reported (e.g., matrix spike recoveries, duplicate relative percent differences, blank contamination, laboratory control sample recoveries, surrogate spike recoveries, etc.) and acceptance criteria; and corrective actions to be taken in response to problems identified during QC checks; and
 - d. Discussion of how the permittee will perform data review and reporting of results to EPA and Guam EPA and how the permittee will 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 EPA and Guam EPA 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 ML; 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 ML; 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 ML; 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 ML; 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. As an attachment to each DMR form, the permittee shall report for all parameters with monitoring requirements specified in Table 1 of this permit: the test method number or title and published MDL or ML; the test method number or title and preparation procedure used by the laboratory, the laboratory's MDL for the test method computed in accordance with Appendix B of 40 CFR 135, the standard deviation (S) from the laboratory's MDL study, and the number of replicate analyses (n) used to compute the laboratory's MDL; and the laboratory's lowest calibration standard. 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. All monitoring results shall be submitted in such a format as to allow direct comparison with the effluent limits, monitoring requirements, and conditions of this permit. Influent and effluent monitoring results must be reported on EPA Form 3320-1, a pre-printed Discharge Monitoring Report form (“DMR”) provided by the EPA Region 9 DMR Coordinator for NPDES. A DMR form must be submitted for the reporting period even if there was not any discharge. DMR forms shall be submitted on the 28th day of the month following the previous quarterly reporting period. For example, under quarterly submission, the three DMR forms for January, February, and March are due on April 28th. Duplicate signed copies of these, and all other reports required herein, shall be submitted to EPA and the Guam EPA at the following addresses, unless otherwise specified in this permit:

Pacific Islands Office
EPA – Region IX
75 Hawthorne Street, Mail Code CED-6
San Francisco, CA 94105

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

Part III. SPECIAL CONDITIONS

A. Permit Reopener(s)

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. Priority Pollutant Scan

The permittee shall monitor for all priority pollutants in accordance with the methods described in the most recent edition of 40 CFR 136 during the first discharge after the

beginning of the fourth year after issuance of this permit. 40 CFR 131.36 provides a complete list of Priority Toxic Pollutants.

C. Best Management Practices

1. The permittee shall minimize the frequency and impact of upsets and discharges not authorized to be discharged through Outfall 002.
2. The permittee shall contain and divert all discharges and upsets as to avoid or minimize the exposure of flow from potential sources of pollution. In minimizing exposure, the permittee shall pay particular attention to the following:
 - a. Use grading, berming, or curbing to divert flow away from contamination;
 - b. Clean up spills and leaks in the area of potential flow promptly using dry methods (e.g., absorbents) to prevent the discharge of pollutants;
 - c. Use spill/overflow protection equipment.
3. The permittee shall keep clean all potential drainage areas that are possible sources of pollutants, using such measures as sweeping at regular intervals, keeping materials orderly and labeled, and storing materials in appropriate containers.
4. Best Judgment and Management Practices shall be implemented to prevent or minimize water quality degradation.
5. The permittee shall take immediate corrective actions or engineering measures to address significant non-compliance with water degradation and/or environmental problems and notify Guam EPA within 24 hours.

D. Section 401 Water Quality Certification

The permittee shall comply with all requirements set forth in the conditional Section 401 Water Quality Certification for NPDES GU0020389 (Attachment B).

Part IV. DEFINITIONS

1. “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.
2. 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.
3. 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.
4. A “daily maximum allowable effluent limitation” means the highest allowable “daily discharge.”
5. 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.
6. 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.
7. 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.

8. The “minimum level” or “ML” is the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed 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 ML is not available, then an interim ML shall be calculated. The interim ML is equal to 3.18 times the published method-specific MDL rounded to the nearest multiple of 1, 2, 5, 10, 20, 50, etc. (When neither an ML nor MDL are available under 40 CFR 136, an interim ML should be calculated by multiplying the best estimate of detection by a factor of 3.18; when a range of detection is given, the lower end value of the range of detection should be used to calculate the ML.) At this point in the calculation, a different procedure is used for metals, than non-metals:
- a. For metals, due to laboratory calibration practices, calculated MLs may be rounded to the nearest whole number.
 - b. For non-metals, because analytical instruments are generally calibrated using the ML as the lowest calibration standard, the calculated ML is then rounded to the nearest multiple of (1, 2, or 5) x 10ⁿ, where n is zero or an integer. (For example, if an MDL is 2.5 ug/l, then the calculated ML is: 2.5 ug/l x 3.18 = 7.95 ug/l. The multiple of (1, 2, or 5) x 10ⁿ nearest to 7.95 is 1 x 10¹ = 10 ug/l, so the calculated ML, rounded to the nearest whole number, is 10 ug/l.)
9. 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.
10. 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 ML.

Part V. ATTACHMENTS

- A. Standard Conditions***
- B. Guam EPA Section 401 Water Quality Certification***
- C. Fact Sheet***