

AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Clean Water Act, as amended, (33 U.S.C. 1251 *et seq.*, the "Act"),

American Samoa Power Authority
P. O. Box PPB
Pago Pago, American Samoa 96799

is authorized to discharge treated wastewater from the Tafuna Sewage Treatment Plant outfall (Discharge Serial No. 001), located off Fogagogo on Tutuila Island, Territory of American Samoa,

Latitude: 14° 20' 54" S
Longitude: 170° 43' 30" W

to receiving waters named Vai Cove, South Pacific Ocean, in accordance with effluent limitations, monitoring requirements, and other conditions set forth herein, and in the attached USEPA Region 9 *Standard Federal NPDES Permit Conditions*, dated May 10, 1990.

This permit shall become effective on _____, 1999.

This permit and the authorization to discharge shall expire at midnight, _____, 2004.

Signed this _____ day of _____, 1999.

For the Regional Administrator

Alexis Strauss, Director
Water Division

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A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS, ZONE OF INITIAL DILUTION LIMITATIONS AND ZONE OF MIXING LIMITATIONS

1. Effluent limitations and monitoring requirements are based upon a project end-of-permit annual average flow of 0.088 m³/sec (2.0 MGD). The permittee is authorized to discharge from Discharge Serial No. 001:

a. Such discharge shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Maximum Discharge Limitations Unless Otherwise Noted						Monitoring Requirements	
	Average Monthly (lbs/day)	Average Weekly (lbs/day)	Maximum Daily (lbs/day)	Average Monthly (mg/L)	Average Weekly (mg/L)	Maximum Daily (mg/L)	Monitoring Frequency	Sample Type
Flow (m ³ /day)	n/a ¹	n/a	n/a	²	²	²	Continuous	Continuous
Biochemical Oxygen Demand (5-day) ³	1,669	2,504	3,338	100	150	200	Once/week	8 hr Composite
	Both the influent and the effluent shall be monitored. The arithmetic mean of the BOD ₅ values, by concentration, for effluent samples collected over 30 consecutive calendar days shall not exceed 70% of the arithmetic mean, by concentration, for influent samples collected at approximately the same times during the same period.							

¹ n/a = not applicable.

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

³ Concentration limitations for BOD₅ are based on the permittee's previous 301(h)-modified NPDES permit issued June 30, 1985. Mass emission rate limitations were calculated using a project end-of-permit annual average flow of 0.088 m³/sec (2.0 MGD). These limitations were requested by the permittee in its 301(h) application dated March 26, 1992.

Effluent Characteristic	Maximum Discharge Limitations Unless Otherwise Noted						Monitoring Requirements	
	Average Monthly (lbs/day)	Average Weekly (lbs/day)	Maximum Daily (lbs/day)	Average Monthly (mg/L)	Average Weekly (mg/L)	Maximum Daily (mg/L)	Monitoring Frequency	Sample Type
Total Suspended Solids ⁴	1,252	1,878	2,504	75	113	150	Once/week	8 hr Composite
Both the influent and the effluent shall be monitored. The arithmetic mean of the TSS values, by concentration, for effluent samples collected over 30 consecutive calendar days shall not exceed 70% of the arithmetic mean, by concentration, for influent samples collected at approximately the same times during the same period.								
Settleable Solids	n/a			1 ml/L	n/a	2 ml/L	Once/day	Discrete
pH	Not less than 6.5 nor greater than 8.6.						Once/week	Discrete
Oil and grease	n/a			²	n/a	²	Quarterly (Nov/Feb/May/Aug)	Discrete
Whole Effluent Toxicity (TUc) ⁵	n/a			²	n/a	²	Quarterly (Nov/Feb/May/Aug)	24 hr Composite

⁴ Concentration limitations for TSS are based on the permittee's previous 301(h)-modified NPDES permit issued June 30, 1985. Mass emission rate limitations are calculated using a projected end-of-permit annual average flow of 0.088 m³/sec (2.0 MGD). These limitations were requested by the permittee in its 301(h) application dated March 26, 1992.

⁵ See Part A.4 of this permit for explanation of requirements.

2. The discharge shall be substantially free from:
 - a. Materials attributable to sewage that will produce objectionable color, odor, or taste, either of itself or in combinations, or in the biota.
 - b. Visible floating materials, grease, oil, scum, foam, and other floating material attributable to sewage.
 - c. Materials attributable to sewage that will produce visible turbidity or settle to form objectionable deposits.
 - d. Substances and conditions or combinations thereof attributable to sewage which may be toxic to humans, other animals, plants, and aquatic life or produce undesirable aquatic life.

3. The discharge shall not cause:
 - a. The temperature in the receiving water to deviate more than 1.5° Fahrenheit from conditions which would occur naturally, to fluctuate more than 1° Fahrenheit on an hourly basis, or to exceed 85° Fahrenheit due to the influence of other than natural causes.
 - b. Changes in basin geometry or freshwater inflow that will alter current patterns in such a way as to adversely affect existing biological populations or sediment distribution in the receiving water.
 - c. The average turbidity in the receiving water at and beyond the Zone of Initial Dilution to exceed 0.25 NTU.
 - d. The average total phosphorous in the receiving water at and beyond the Zone of Initial Dilution to exceed 15 ug/L.
 - e. The average total nitrogen in the receiving water at and beyond the Zone of Initial Dilution to exceed 130 ug/L.
 - f. The average chlorophyll a in the receiving water at and beyond the Zone of Initial Dilution to exceed 0.25 ug/L.
 - g. The light penetration depth in the receiving water at and beyond the Zone of Initial Dilution to not exceed 130 ft 50 percent of the time.
 - h. A dissolved oxygen content in the receiving water at and beyond the Zone of Initial Dilution less than 80% saturation, or less than 5.5 mg/L.

- i. The pH in the receiving water at and beyond the Zone of Initial Dilution to range less than 6.5 nor greater than 8.6, and to deviate more than 0.2 pH units from that which occurs naturally.
 - j. Enterococci density (concentration) in the receiving water at and beyond the Zone of Mixing to exceed a geometric mean of 35 CFU/100 mL steady state geometric mean, nor any single sample to exceed 124 CFU/100 mL.
4. Whole Effluent Toxicity Monitoring Requirements

The USEPA Region 9 Laboratory will conduct only the quarterly or annual chronic toxicity test for the permittee. Any additional toxicity tests (see Parts A.4.e and A.4.f of this permit) shall be conducted by the permittee. The permittee is responsible for reporting toxicity test results to USEPA Region 9.

The permittee shall conduct quarterly toxicity tests on composite effluent samples. Samples shall be collected and shipped⁶ in accordance with the Standard Operating Procedure (see Attachment 3) and the Memorandum of Agreement (effective 7/25/97) agreed upon by the permittee and USEPA Region 9. If, after two years of toxicity testing, measured toxicity is less than or equal to the chronic toxicity target values specified in Part A.4.b of this permit, then the monitoring frequency shall be reduced to annually (November).

a. Test Species and Methods

The permittee shall conduct toxicity tests with the sea urchin, *Strongylocentrotus purpuratus*, or sand dollar, *Dendraster excentricus* (fertilization test method 1008.0). The chronic toxicity of the effluent shall be estimated as specified in *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms*, EPA/600/R-95/136, August 1995 (or most recent edition).

⁶ The permittee should coordinate with Utulei Sewage Treatment Plant (NPDES Permit No. AS0020001) so that effluent samples from both treatment plants can be collected and shipped at the same time to the USEPA Region 9 Laboratory (the Laboratory) where tests will be performed. In order to coordinate testing procedure, notice of the sampling schedule should be submitted to the Laboratory at least 30 days prior to shipment of each sample. The permittee shall attempt to ensure a total holding time from collection of the last portion of the composite sample until arrival at the Laboratory of not more than 36 hours. Should longer than a 36-hour holding time be anticipated, the permittee shall petition USEPA Region 9 (CMD-5) for an extension of the holding time (see Section 8.5.4, EPA/600/R-95/136). The extended holding time shall not exceed 72 hours.

b. Definition of Toxicity

Chronic toxicity measures a sublethal effect (*e.g.*, reduced growth, reproduction) to experimental test organisms exposed to an effluent compared to that of the control organisms. For this discharge, toxicity is defined by an exceedance of a chronic toxicity target value. These chronic toxicity target values are a Maximum Daily Value of 347 TUc, and an Average Monthly Value of 173 TUc.

c. Quality Assurance

- (1) A series of five dilutions and a control shall be tested. The series shall include the two instream waste concentrations (IWCs) of 0.3% effluent and 0.6% effluent, one dilution below the IWC of 0.3% effluent, and two dilutions above the IWC of 0.6% effluent. The IWC is the percentage of effluent at the edge of the mixing zone over a specified averaging period.
- (2) If organisms are not cultured in-house, concurrent testing with reference toxicants shall be conducted. Where organisms are cultured in-house, monthly reference toxicant testing is sufficient.
- (3) If either the reference toxicant tests or the effluent tests do not meet all test acceptability criteria as specified in the test methods manual, then the permittee must re-sample and re-test within approximately 14 days.
- (4) Reference toxicant tests shall be conducted using the same test conditions as effluent toxicity tests (*i.e.*, same test duration, *etc.*).
- (5) Control and dilution water should be lab water, as described in the test methods manual. If the dilution water used is different from the culture water, a second control using culture water shall also be tested.
- (6) When effluent monitoring frequencies for whole effluent toxicity and priority pollutants are concurrent, then chemical analyses for priority pollutants shall be performed on a split of the sample collected for whole effluent toxicity testing.

d. Preparation of Initial Investigation Toxicity Reduction Evaluation (TRE) Workplan

The permittee shall submit to USEPA Region 9 an initial investigation toxicity reduction evaluation (TRE) workplan [approximately 1-2 pages] within 90 days of the effective date of this permit. This workplan shall describe steps which the permittee intends to follow in the event that toxicity (as defined) is detected, and should include at minimum:

- (1) A description of the investigation and evaluation techniques that would be used to identify potential causes/sources of toxicity, effluent variability, treatment system efficiency;
 - (2) A description of the facility's method of maximizing in-house treatment efficiency, good housekeeping practices, and a list of all chemicals used in operation of the facility;
 - (3) If a toxicity identification evaluation (TIE) is necessary, who (*e.g.*, contract laboratory, *etc.*) will conduct the TIE.
- e. Additional Toxicity Testing and Toxicity Reduction Evaluation/Toxicity Identification Evaluation (TRE/TIE)
- (1) If toxicity (as defined) is detected, then, based on an evaluation of the test results and additional available information, the permittee shall conduct additional toxicity tests and/or initiate a TRE, in accordance with the permittee's initial investigation TRE workplan and *Toxicity Reduction Evaluation Protocol for Municipal Wastewater Treatment Plants* (EPA/600/2-88/062, 1989), as directed by USEPA Region 9.
 - (2) As directed by USEPA Region 9, the permittee shall develop a detailed TRE workplan which includes:
 - (a) Further actions to investigate/identify the cause(s) of toxicity;
 - (b) Actions the permittee has taken/will take to mitigate the impact of the discharge, to correct the noncompliance, and to prevent the recurrence of toxicity;
 - (c) A schedule under which these actions will be implemented;and shall submit this workplan to USEPA Region 9 for approval.
 - (3) As part of this TRE process, the permittee may initiate a TIE using the test methods manuals, EPA/600/R-96/054 (Phase I), EPA/600/R-92/080 (Phase II), and EPA/600/R-92/081 (Phase III), to identify the cause(s) of toxicity.
- f. Reporting
- (1) The permittee shall submit a full report of toxicity test results, including any toxicity testing required by Parts A.4.e of this permit, with the DMR for the month in which the toxicity tests are conducted. A full report shall

consist of: (1) toxicity test results; (2) dates of sample collection and initiation of each toxicity test; and (3) chronic toxicity target values. Toxicity test results shall be reported according to the test methods manual chapter on Report Preparation.

- (2) Within 14 days of receipt of test results exceeding a chronic toxicity target value, the permittee shall provide written notification to USEPA Region 9 of:
 - (a) Findings of the TRE or other investigation to identify the cause(s) of toxicity;
 - (b) Actions the permittee has taken/will take, to mitigate the impact of the discharge and to prevent the recurrence of toxicity;
 - (c) When corrective actions, including a TRE, have not been *completed*, a schedule under which corrective actions will be implemented; or
 - (d) The reason for not taking corrective action, if no action has been taken.

g. Toxicity Reopener

This permit may be modified in accordance with the requirements set forth at 40 CFR 122 and 124, to include appropriate conditions or limitations to address demonstrated effluent toxicity based on newly available information, or to implement any USEPA Region 9-approved new Territory water quality standards applicable to effluent toxicity.

5. Samples taken in compliance with the effluent monitoring requirements specified above shall be taken at the following locations:
 - a. Influent samples shall be taken after the last addition to the collection system and prior to any in-plant return flows and the first treatment process, where representative samples of the influent can be obtained.
 - b. Effluent samples shall be taken after any in-plant return flows and the last treatment process and prior to mixing with the receiving waters, where representative samples of the effluent can be obtained.

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. *8 hour Composite sample* means a combination of eight equal individual portions taken at equal time intervals over any 8-hour period that reasonably represents the calendar day. The volume of each individual portion shall be directly proportional to the discharge flow rate at the time of sampling.
4. *24 hour Composite sample* means a combination of 24 individual portions taken at equal time intervals over any 24-hour period that reasonably represents the calendar day. The volume of each individual portion shall be directly proportional to the discharge flow rate at the time of sampling.
5. *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. *Discrete sample* means any individual sample collected in less than 15 minutes. The sampling period shall coincide with the period of maximum discharge flow.
7. *Maximum daily discharge limitation* means the highest allowable “daily discharge.”

C. NONINDUSTRIAL SOURCE CONTROL PROGRAM REQUIREMENTS

Under 40 CFR 125.66(d)(1), the permittee must implement a public education program designed to minimize the entrance of nonindustrial toxic pollutants into the Tafuna² Sewage Treatment Plant. In accordance with the Tentative Decision Document, the permittee shall continue to implement its approved Nonindustrial Source Control Program. Copies of all public educational materials designed to minimize the entrance of nonindustrial toxic pollutants and pesticides into the Tafuna Sewage Treatment Plant from the period covering the previous calendar year shall be submitted with the quarterly water column monitoring report due January 28th to USEPA Region 9 and ASEPA.

D. SLUDGE/BIOSOLIDS LIMITATIONS AND MONITORING REQUIREMENTS

1. All biosolids⁷ generated by the permittee shall be reused or disposed of in compliance with applicable portions of:
 - a. 40 CFR 503: For biosolids that are land applied, placed on a surface disposal site (dedicated land disposal site or monofill), or incinerated; 40 CFR 503, Subpart B (land application) applies to biosolids applied for the purpose of providing nutrients or conditioning the soil for crops or vegetation. 40 CFR 503 Subpart C (surface disposal) applies to biosolids placed on the land for the purpose of disposal;
 - b. 40 CFR 258: For biosolids disposed in municipal solid waste landfills;
 - c. 40 CFR 257: For all biosolids use and disposal practices not covered in 40 CFR 258 or 503.
2. The permittee is responsible for assuring that all biosolids produced at the sewage treatment plant are used or disposed of in accordance with 40 CFR 257, 258, and 503, whether the permittee reuses or disposes of the biosolids directly or transfers the biosolids to another entity for further treatment, reuse, or disposal. The permittee is responsible for informing subsequent preparers, applicers, and disposers of the requirements which these entities must meet under 40 CFR 257, 258, and 503.
3. No biosolids shall be allowed to enter wetlands or other waters of the United States.
4. Biosolids treatment, storage, reuse, or disposal shall not contaminate groundwater.
5. Biosolids treatment, storage, reuse, or disposal shall be performed in a manner as to minimize nuisances such as objectionable odors or flies.
6. The permittee shall assure that haulers transporting biosolids for off-site treatment, reuse, or disposal take all necessary measures to keep the biosolids contained.
7. If biosolids are stored for over two years from the time it was generated, the permittee must ensure compliance with all requirements for surface disposal in 40 CFR 503 Subpart C, or must submit a written request for longer temporary storage, including information required in 40 CFR 503.20(b), to USEPA Region 9.
8. Sludge containing PCBs equal to or greater than 50 mg/kg of total solids (100% dry weight basis) shall be disposed of in accordance with 40 CFR 761.

⁷ Biosolids means stabilized, non-hazardous sewage sludge.

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

10. Monitoring shall be conducted as follows:
 - a. Biosolids shall be tested during November of years 1999 and 2002 for all pollutants listed under section 307(a) of the Act. Test results shall be expressed in mg pollutant per kg biosolids on a 100% dry weight basis.

 - b. Biosolids shall be tested during November of years 1999 and 2002, or more frequently if necessary, to determine hazardousness using the Toxicity Characterization Leachate Procedure (see Method 1311 in *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, EPA Publication SW-846). Contaminants and regulatory levels are found in Table 1 in 40 CFR 261.24(b).

 - c. Biosolids which are land applied or placed in a surface disposal site shall be tested for metals as required in 40 CFR 503.16 and 40 CFR 503.26 using *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods* (see 40 CFR 503.8(b)(4)), and for organic-N, ammonium-N, and nitrate-N using *Standard Methods for the Examination of Water and Wastewater* (1989). The appropriate monitoring frequency for these tests shall be determined by the biosolids volume land applied or placed in a surface disposal site. Test results shall be expressed in mg pollutant per kg biosolids on a 100% dry weight basis.

Biosolids Volume (dry metric tons/year)	Monitoring Frequency
0 - 290	Annually (Nov)
290 - 1500	Quarterly (Feb/May/Aug/Nov)
1500 - 15,000	Bi-Monthly (Feb/Apr/Jun/Aug/Oct/Dec)
> 15,000	Monthly

- d. For biosolids which are land applied, the permittee shall demonstrate that biosolids meet Class A or Class B pathogen requirements by one of the methods listed in 40 CFR 503.32. 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).
 - e. Biosolids that are placed on a surface disposal site shall be monitored as follows:
 - (1) Biosolids shall be tested for metals as required in 40 CFR 503.26 using *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods* (see 40 CFR 503.8(b)(4)), at the appropriate frequency required by Part D.10.c of this permit. Test results shall be expressed in mg pollutant per kg biosolids on a 100% dry weight basis.
 - (2) Prior to placement on a surface disposal site, the permittee shall demonstrate that biosolids meet Class B pathogen requirements, or shall ensure that the site is covered at the end of each operating day.
 - (3) 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).
 - (4) When biosolids are placed on a surface disposal site, 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.
 - f. Biosolids disposed of in a municipal solid waste landfill unit shall be tested semi-annually using the Paint Filter Test (Method 9095 in *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*) to demonstrate compliance with 40 CFR 258.28 which prohibits disposal of materials with free liquids in a municipal solid waste landfill unit.
11. For biosolids which are land applied, the permittee, either directly or through contractual agreements with their biosolids management contractors, shall comply with the following 40 CFR 503 notification requirements:
- a. A reuse/disposal plan shall be submitted to the USEPA Region 9 Biosolids Coordinator. The plan shall include: results of monitoring/analyses required for use or disposal at the new or previously unreported site(s); a description and topographic map of the proposed site(s) for use or disposal; names and addresses of the applicer(s) and site owner(s); and a listing of any Territory or local permits which must be obtained. For land application sites, the plan shall be submitted by the land applicer and shall include: a description of the crops or vegetation to be

grown; proposed nitrogen loading rates and determination of agronomic rates; depth to groundwater; and a groundwater monitoring plan (if one exists).

- b. For biosolids that are land applied, if the permittee's biosolids do not meet 40 CFR 503.13 Table 3 metals concentration limitations, then the permittee must require the land applier to notify USEPA Region 9 of any previous site applications of biosolids subject to cumulative loading limitations and the cumulative amounts of pollutants applied to date at the site, per 40 CFR 503.12(e) and (j).
 - c. For biosolids that are land applied, the permittee shall notify the applier in writing of the nitrogen content of the biosolids, and of all the applier(s) requirements in 40 CFR 503, including the requirement that the applier certify that management practices, site restrictions, and any applicable vector attraction reduction requirements in 40 CFR 503 Subpart B have been met. The permittee shall require the applier to certify at the end of 38 months following application of Class B biosolids that harvesting restrictions in effect have been met.
 - d. If bulk biosolids are shipped to another State/Tribal/Territory Lands, the permittee must send notice prior to the initial shipment of bulk biosolids to permitting authorities in the receiving State/Tribal/Territory Land (the USEPA Regional Office for that area and the State/Tribal/Territory authorities).
12. The permittee shall submit an annual biosolids report to the USEPA Region 9 Biosolids Coordinator by February 19th of each year for the period covering the previous calendar year. The report shall include:
- a. The amount of biosolids generated that year, in dry metric tons, and the amount accumulated from previous years.
 - b. Results of all monitoring required by Part D.10 of this permit.
 - c. Descriptions of pathogen requirements, vector attraction reduction requirements, site and harvesting restrictions, management practices, and certifications, as required in 40 CFR 503.17 and 40 CFR 503.27.
 - d. Results of any required groundwater monitoring or certification by a groundwater scientist that the application/disposal will not contaminate an aquifer.
 - e. Names and addresses of land appliers, surface disposal site operators, and landfill operators; and volumes applied or disposed (dry metric tons).

- f. Names, mailing addresses, and street addresses of entities who received biosolids for further treatment, storage, disposal in a municipal solid waste landfill, or for other use or disposal methods not covered above, and volumes delivered to each.
13. The permittee shall require any applicators contracted to manage their biosolids to submit an annual biosolids report to the USEPA Region 9 Biosolids Coordinator by February 19th of each year, for the period covering the previous calendar year. The report shall include: names and addresses of land applicators and surface disposal site operators, name, location (site addresses and latitude/longitude), and size (hectares) of site(s), volumes applied/disposed (dry metric tons) and for land application, biosolids loading rates (metric tons per hectare), nitrogen loading rates (kg/ha), dates of application, crops grown, dates of seeding and harvesting, and certifications that the requirements to obtain information in 40 CFR 503.12(e)(2), management practices in 40 CFR 503.14, and site restrictions in 40 CFR 503.32(b)(5) have been met.
14. The general requirements in 40 CFR 503.12 and the management practices in 40 CFR 503.14 do not apply when bulk biosolids are applied to land, if the biosolids meet the pollutant concentrations in 40 CFR 503.13(b)(3), the Class A pathogen requirements in 40 CFR 503.32(a), and one of the vector attraction reduction requirements in 40 CFR 503.33(b)(1) through (b)(8).

E. RECEIVING WATER MONITORING REQUIREMENTS AND CONDITIONS

1. The permittee shall conduct the following receiving water monitoring program (*i.e.*, water column monitoring) in Vai Cove.

a. Water Column Monitoring Stations (see Attachment 4)

The permittee shall verify all station locations (latitude and longitude) and depths during the first sampling survey and shall submit this information with the first quarterly water column monitoring report to USEPA Region 9 and ASEPA for approval.

Station		Location
n/a	Diffuser midpoint	Latitude: 14°20' 54" S Longitude: 170°43' 30" W
A1	Zone of Initial Dilution	27.4 m (90 ft) northeast of the diffuser midpoint; 27.4 m (90 ft) depth
A2	Zone of Initial Dilution	27.4 m (90 ft) southwest of the diffuser midpoint; 27.4 m (90 ft) depth
B	Zone of Mixing	190 m (627 ft) shoreward of the diffuser midpoint; 5.5 m (18 ft) depth
C	Reference	212 m (700 ft) northeast of the diffuser midpoint; 27.4 m (90 ft) depth

b. Water Column Monitoring

Receiving Water Characteristic	Units	Station	Monitoring Frequency	Sample Type/ Sampling Depths *
Turbidity	NTU	A1, A2, B, C	Quarterly (Nov/Feb/May/Aug)	Nephelometer
Total Phosphorus	ug/L	A1, A2, B, C	"	Grab
Total Nitrogen	ug/L	A1, A2, B, C	"	"
Chlorophyll a	ug/L	A1, A2, B, C	"	"
Light Penetration	ft	A1, A2, B, C	"	Secchi disk
Dissolved Oxygen	mg/L	A1, A2, B, C	"	Grab
pH	pH units	A1, A2, B, C	"	"
Enterococci	CFU/100 mL	A1, A2, B, C	"	"

* For grab samples, the sampling depth profile at Stations A1, A2, and C is 1 m below the surface, mid-depth, and 1 m above the bottom, and the sampling depth profile at Station B is mid-depth. Samples shall be collected and analyzed according to *Quality Assurance and Quality Control (QA/QC) for 301(h) Monitoring Programs: Guidance on Field and Laboratory Methods* (EPA 430/9-86-004).

- (1) Water column monitoring data and an analysis of these data may be provided to the permittee by another entity, if a MOA has been agreed to by the permittee and this entity. A copy of the MOA must be submitted to USEPA Region 9 and ASEPA for approval before this alternative water column monitoring procedure is implemented by the permittee.
2. The permittee shall submit quarterly water column monitoring reports to USEPA Region 9 and ASEPA by January 28th, April 28th, July 28th, and October 28th for the period covering the previous three calendar months. These reports shall include:
 - a. A description of climatic and receiving water characteristics at the time of sampling (*e.g.*, weather observations, floating debris, discoloration, wind speed and direction, swell or wave action, time of sampling, tide height, *etc.*).
 - b. A description of sampling stations, including differences unique to each station (*e.g.*, station location, sediment grain size, distribution of bottom sediments, rocks, shell litter, calcareous worm tubes, *etc.*).
 - c. A description of the sample collection and preservation procedures used in the receiving water monitoring program.

- d. A description of the specific method used for laboratory analysis.
- e. An in-depth discussion of the results of the receiving water monitoring program with regard to compliance with the criteria for modifying the secondary treatment requirements under Section 301(h) of the Act. All tabulations and computations shall be explained.

Where water column monitoring data and/or data analyses are reported to USEPA Region 9 and ASEPA by another entity (see Part E.1.b.1 of this permit), the permittee's quarterly report shall include a copy of the approved MOU and citation(s) under which information provided in accordance with the approved MOU is submitted to USEPA Region 9 and ASEPA.

F. GENERAL MONITORING AND REPORTING REQUIREMENTS

1. All wastewater monitoring, and sludge/biosolids monitoring, receiving water monitoring, sample preservation, and analyses shall be performed as described in the most recent edition of 40 CFR 136, Appendix B, unless otherwise specified in this permit. For priority toxic pollutant and 301(h) pesticide effluent analyses, the permittee shall utilize an approved test procedure with a Method Detection Limit⁸ (MDL) that is lower than the saltwater and/or human health (for consumption of organisms only) criteria concentrations listed in 40 CFR 131.36(b)(1). If the MDL is higher than the criteria concentrations, then the permittee shall utilize the approved test procedure with the lowest MDL. In accordance with 40 CFR 122.45(c), effluent analyses for metals shall measure "total recoverable metal", except for chromium (VI) which shall be measured as "dissolved metal."
2. The results of all monitoring required by this permit shall be submitted in such a format as to allow direct comparison with the limitations and requirements of this permit.
3. The permittee shall submit influent and effluent monitoring results on monthly Discharge Monitoring Report (DMR) forms (EPA No. 3320-1) to USEPA Region 9 and ASEPA by the 28th of March, June, September, and December for each period covering the previous three calendar months (*e.g.*, December, January and February monthly DMRs are due by March 28th). Unless otherwise specified, effluent flow shall be reported in terms of the arithmetic mean flow over each monthly period, and the maximum daily flow over that monthly period.
4. For the purposes of reporting, the permittee shall use the reporting threshold equivalent to

⁸ The Method Detection Limit (MDL) is the minimum concentration of an analyte that can be detected with 99% confidence, as defined by a specific laboratory method in 40 CFR 136, Appendix B.

the laboratory's method detection limit ⁸ (MDL). As such, the permittee must utilize a standard calibration where the lowest standard point is equal to or less than the concentration of the minimum level ⁹ (ML). Analytical results at or above the laboratory's MDL shall be reported on the DMR as the measured concentration. For analytical results between the MDL and the ML, the permittee shall report in the comment section on the DMR the standard deviation (S) value (determined by the laboratory during the MDL study). Analytical results below the laboratory's MDL shall be reported as zero (*i.e.*, "0").

5. Duplicate signed copies of all reports required herein shall be submitted to the Regional Administrator and ASEPA at the following addresses:

USEPA Region 9
Pacific Insular Area Program (CMD-5)
75 Hawthorne Street
San Francisco, CA 94105-3901
Telephone: 415/744-1484

ASEPA
Office of the Governor
Pago Pago, American Samoa 96799
Telephone: 684/633-2305

⁹ The Minimum Level (ML) is the concentration in a sample 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. Where a promulgated ML is not available, an interim ML is calculated using a factor of 3.18 times the MDL.

Attachment 1:
LOCATION MAP

Attachment 2:
PROCESS DIAGRAMS

Attachment 3:

STANDARD OPERATING PROCEDURE
FOR
WHOLE EFFLUENT TOXICITY

Attachment 4:

RECEIVING WATER MONITORING STATIONS

Attachment 5:

STANDARD NPDES PERMIT CONDITIONS