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

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TO _____

91-1686
DIR/DEP
WWM

03 MAY 1991

Sam Callejo
Director and Chief Engineer
Department of Public Works
City and County of Honolulu
650 South King Street
Honolulu, HI 96813

Dear Mr. Callejo:

A 301(h)-modified National Pollutant Discharge Elimination System (NPDES) permit has been issued to the following discharger:

Honouliuli Wastewater Treatment Facility
City and County of Honolulu
650 South King Street
Honolulu, HI 96813
NPDES Permit No. HI0020877

The staff at the Environmental Protection Agency (EPA) has reviewed the 301(h)-modified NPDES permit application for this facility and has prepared a draft permit, in accordance with the Clean Water Act of 1977 as amended. The EPA has also issued a public notice of its tentative decision to issue a permit to the above discharger. After considering the expressed views of all interested persons and agencies, pertinent Federal statutes and regulations, and State certification of the draft permit, the EPA, pursuant to 40 CFR 124, has prepared a final permit which does not differ significantly from the draft permit.

The 301(h)-modified NPDES permit is hereby issued upon the date of signature and shall become effective 33 days from the date of this letter, unless there is a written request for an evidentiary hearing. Pursuant to 40 CFR 124.74, requests for an evidentiary hearing must state each of the legal or factual questions alleged to be at issue and must demonstrate one of the following for each issue being raised in the hearing request: that the issue was raised during the public comment period; or the requester could not have reasonably anticipated the relevance or materiality of the issue during the public comment period. Any request for an evidentiary hearing must be submitted within 33 days from the date of this letter to the EPA at the above address, Attn: Hearing Clerk (RC).

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

OFFICE OF THE
REGIONAL ADMINISTRATOR

REGARDING

CITY AND COUNTY OF HONOLULU, HAWAII, ON BEHALF OF THE HONOULIULI WASTEWATER TREATMENT FACILITY, APPLICATION FOR A 301(H) VARIANCE FROM THE SECONDARY TREATMENT REQUIREMENTS OF THE CLEAN WATER ACT	FINAL DECISION OF THE REGIONAL ADMINISTRATOR UNDER 40 CFR PART 125 SUBPART G

It is my final decision to grant the request by the City and County of Honolulu, on behalf of the Honouliuli Wastewater Treatment Facility, for a modified National Pollutant Discharge Elimination System (NPDES) permit under section 301(h) of the Clean Water Act. Section 301(h) provides for a variance from the secondary treatment requirements of the Clean Water Act. The basis for this decision is described in the Tentative Decision Document and its Addendum for the City and County of Honolulu's Honouliuli Wastewater Treatment Facility.

EPA received the City and County of Honolulu's original Honouliuli Wastewater Treatment Facility 301(h) application on September 7, 1979. A tentative decision to approve the application, after it was revised, was issued by EPA on April 4, 1988. Public hearings regarding the City and County of Honolulu's Honouliuli Wastewater Treatment Facility draft NPDES permit were held on August 29, 1988 and November 29, 1988, at which times oral and written testimony was presented by the public. EPA revised the draft permit based in part on public comments.

The five-year permit shall be issued upon the date of signature by EPA and shall become effective on 06 JUN 1991 unless there is a written request for an evidentiary hearing under 40 CFR 124.74, that is approved by EPA. Any request for an evidentiary hearing must be submitted within 33 days of the date of this letter. Requests for an evidentiary hearing should be sent to the above address, attention: William H. Pierce (W-5).

5.2.91
Date

John C. Wise
Daniel W. McGovern
for Regional Administrator

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PERMIT NO. HI0020877

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") and Chapter 342 D, Hawaii Revised Statutes, and Chapters 11-54 and 11-55, Administrative Rules, Department of Health, State of Hawaii, the

CITY AND COUNTY OF HONOLULU
DEPARTMENT OF PUBLIC WORKS
HONOULIULI WASTEWATER TREATMENT PLANT

is authorized to discharge treated domestic wastewater from the outfall sewer located at 91-1501 Geiger Road, Ewa Beach, Oahu, Hawaii, to receiving waters named Mamala Bay of the Pacific Ocean, at coordinates: Discharge Serial Number 001: Latitude 21°17'00"N, Longitude 158°01'50"W, in accordance with effluent limitations, monitoring requirements, and other conditions set forth herein.

This permit shall become effective on: 06 JUN 1991.

This permit and the authorization to discharge shall expire at midnight: 05 JUN, 1996.

for John C. Lewin, M.D.
Director
Department of Health
State of Hawaii

Date: APR - 4 1991

Harry Seraydarian
Director
Water Management Division
U.S. Environmental Protection Agency, Region 9

for the Regional Administrator

Date: 5/3/91

A. EFFLUENT LIMITATIONS

During the period beginning with the effective date of this permit and lasting through , 1996 the permittee is authorized to discharge from outfall serial number 001. The discharge of effluent in excess of the following limits is prohibited:

EFFLUENT CHARACTERISTIC	DISCHARGE LIMITATIONS[1]			
	kg/day (lbs/day)		Other Units (Specify)	
	Monthly Average	Weekly Average	Monthly Average	Weekly Average
Biochemical Oxygen Demand (5-Day)	15,189 (33,487)	22,783 (50,230)	160 mg/L	240 mg/L
Suspended Solids	9,019 (19,882)	13,479 (29,720)	95 mg/L	142 mg/L

pH Not less than 6.0 standard units nor greater than 9.0 standard units.

	Monthly Average	Daily Maximum
"Whole-effluent Toxicity" ["toxic unit chronic" (TU_c)]	159.7 TU_c	159.7 TU_c 0.626 NOE
Total Residual Chlorine[20]		1.0 mg/l

Endnotes: See pages 55-58

Note: Throughout this permit, terms within quotation marks (" ") are defined in the 'Standard Provision and Reporting Requirements' Section.

B. RECEIVING WATER LIMITATIONS

The Hawaii Water Quality Standards (Chapter 11-54, Department of Health, Administrative Rules) were amended on January 18, 1990. The following general and specific water quality standards criteria apply to the Barbers Point outfall discharge into waters of Mamala Bay which are classified as "Class A" "dry" "open coastal waters:"

1. The discharge of wastes from outfall serial number 001 shall not cause the following water quality objectives to be violated in the receiving water:

   General Criteria

   a. The discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the HI DOH, as required by the Clean Water Act and regulations adopted thereunder.

   b. The receiving water shall be free of substances attributable to the discharge, including:

      1. Materials that will settle to form objectionable sludge or bottom deposits.
      2. Floating debris, oil, grease, scum, or other floating materials.
      3. Substances in amounts sufficient to produce taste or odor in the water or detectable off flavor in the flesh of fish, or in amounts sufficient to produce objectionable color, turbidity or other conditions in the receiving waters.
      4. High temperatures; biocides; pathogenic organisms; toxic, radioactive, corrosive, or other deleterious substances at levels or in combination sufficient to be toxic or harmful to human, animal, plant, or aquatic life, or in amounts sufficient to interfere with any beneficial use of the water.
      5. Substances or conditions or combinations thereof in concentrations which produce undesirable aquatic life.

   c. The survival of bioassay test organisms shall not be less than that in controls which utilize appropriate experimental water.

d. The discharge from the Honouliuli ocean outfall shall not interfere beyond the "zone of initial dilution"[2] (ZID) with the attainment or maintenance of that water quality which assures protection of public water supplies and the protection and propagation of a balanced indigenous population of shellfish, fish, and wildlife and allows recreational activities in and on the water.

2. The discharge of wastes from outfall serial number 001 shall not cause the following water quality objectives to be violated in ocean waters beyond the "zone of initial dilution"[2] (ZID):

Specific Criteria for "Class A" "Dry" "Open Coastal Waters"

Parameter	Geometric mean not to exceed the given value	Not to exceed the given value more than 10% of the time	Not to exceed the given value
Light Extinction Coefficient (k units)	0.10	0.30	0.55
Turbidity (Nephelometric Turbity Units)	0.20	0.50	1.00

Dissolved Oxygen - Not less than 75% saturation

3. The discharge of wastes from outfall serial number 001 shall not cause the following water quality objectives to be violated in ocean waters beyond the "zone of mixing"[3] (ZOM) established by the Department of Health, State of Hawaii (hereinafter HI DOH) with the concurrence of EPA Region IX:

Specific Criteria for "Class A" "Dry" "Open Coastal Waters"

Parameter	Geometric mean not to exceed the given value	Not to exceed the given value more than 10% of the time	Not to exceed the given value
Total Nitrogen (ug N/L)	110.00	180.00	250.00
Ammonia Nitrogen (ug NH4-N/L)	2.00	5.00	9.00
Nitrate + Nitrite Nitrogen (ug[NO3+NO2]-N/L)	3.50	10.00	20.00
Total Phosphorus (ug P/L)	16.00	30.00	45.00
Chlorophyll a (ug/L)	0.15	0.50	1.00

pH Units shall not deviate more than 0.5 units from a value of 8.1

Temperature - Shall not vary more than 1° C. from "ambient conditions".

Salinity - Shall not vary more than 10% from natural or seasonal changes considering hydrologic input and oceanographic factors.

4. The discharge of wastewater from outfall serial 001 shall not cause the following water quality objectives to be violated in marine recreational waters within 1,000 ft (305 m) of the shoreline, including natural public bathing or wading areas;

   a. Enterococci content shall not exceed a geometric mean of seven per one hundred milliliters in not less than five samples equally spaced over a thirty-day period.

   b. Raw or inadequately treated sewage or other pollutants of public health significance, as determined by the Director of Health, shall not be present in natural public bathing or wading areas.

C. MONITORING PROGRAM

The monitoring program is designed to provide data to demonstrate compliance with applicable water quality standards and 301(h) criteria, to evaluate the impact of the Honouliuli discharge on the marine biota, and to measure toxic substances in the discharge. Under 40 CFR 125.62, the monitoring program for a discharger receiving a 301(h) modified NPDES permit must:

- Document short- and long-term effects of the discharge on receiving waters, sediments, biota, and on beneficial uses of the receiving water.
- Determine compliance with NPDES permit terms and conditions, and state and federal water quality standards/criteria.
- Assess the effectiveness of toxic control programs.

Once an adequate background data base is established and predictable relationships among the biological, water quality, and effluent monitoring variables are demonstrated, it may be appropriate to revise the monitoring program.

Revisions may be made under the direction of EPA Region IX and the Hawaii Department of Health at any time during the five-year permit term, and may include a reduction or increase in the number of parameters to be monitored, the frequency of monitoring, or the number and size of samples collected.

The monitoring data will be used by EPA Region IX and the Hawaii Department of Health to assess whether the 301(h) modified permit should be terminated or renewed and to determine compliance with Federal and Hawaii water quality standards.

1. TREATMENT PLANT AND EFFLUENT MONITORING PROGRAM

a. Influent Monitoring

Influent monitoring is required to determine compliance with NPDES permit terms and conditions, assess treatment plant performance and removal efficiencies, and assess the effectiveness of toxics control programs, both industrial and non-industrial.

Influent monitoring is required for the Honouliuli WWTP discharging into the Barbers Point outfall. All influent samples shall be taken downstream from any additions to the

trunk sewer, and upstream of any in-plant return flows, and prior to treatment where representative samples of the influent can be obtained.

All influent samples should be collected and processed according to protocols found in EPA's guidance document entitled Quality Assurance and Quality Control (QA/QC) for 301(h) Monitoring Programs: Guidance on Field and Laboratory Methods (EPA, 1987a).

The following shall constitute the influent monitoring program for Honouliuli WWTP:

Parameter	Unit	Type of Sample	Minimum Frequency
Flow (Total)	MGD	Recorder/Totalizer	Continuous
BOD_5 @ 20°C	mg/L	24-hr composite	5 days per week[4]
Suspended Solids	mg/L	24-hr composite	5 days per week[4]
Oil and Grease[5]	mg/L	24-hr composite	Weekly[4]
pH	pH units	grab	5 days per week[4]
"Priority Pollutants" Volatiles[6]	mg/L;ug/L	24-hr composite	Semi-annually[7] (Jan/Feb, Jul/Aug)
Others	mg/L; ug/L	24-hr composite	Semi-annually[7] (Jan/Feb, Jul/Aug)
Other "Pesticides"	ug/L	24-hr composite	Semi-annually[7] (Jan/Feb, Jul/Aug)

b. Effluent Monitoring

Effluent monitoring is required to determine compliance with NPDES permit conditions, and state and federal water quality standards/criteria; to identify operational problems in order to improve plant performance; to provide data to determine the potential for toxicity to aquatic life and the potential effects on human health from toxic chemical substances discharged into marine waters; and to provide information on waste characteristics and flows for use in interpreting receiving water quality and biological data.

Effluent monitoring is required for the Honouliuli WWTP discharging into the Barbers Point outfall. All effluent samples shall be taken downstream from any additions to the treatment plant, and downstream of any in-plant return flows or disinfection units, and prior to mixing with the receiving waters where representative samples of the effluent can be obtained.

All effluent samples should be collected and processed according to protocols found in EPA's guidance document entitled Quality Assurance and Quality Control (QA/QC) for 301(h) Monitoring Programs: Guidance on Field and Laboratory Methods (EPA, 1987a).

The following shall constitute the effluent monitoring program:

Parameter	Unit	Type of Sample	Minimum Frequency
Flow (Total)	MGD	Recorder/Totalizer	Continuous
BOD_5 @ 20°C	mg/L	24-hr composite	5 days per week[4]
Suspended Solids	mg/L	24-hr composite	5 days per week[4]
Oil and Grease[5]	mg/L	24-hr composite	Twice Weekly[4]
pH	pH units	grab	5 days per week[4]
Temperature	oC	grab	Weekly[8]
Enterococcus Bacteria[9]	#/100 mL	grab	Daily
Fecal Coliform Bacteria	#/100 mL	grab	Daily
Total Chlorine Residual[10]	mg/L	grab	Twice Daily[11]
"Priority Pollutants"			
Volatiles[6]	mg/L; ug/L	24-hr composite	Semi-annually[7] (Jan/Feb, Jul/Aug)
Others	mg/L; ug/L	24-hr composite	Semi-annually[7] (Jan/Feb, Jul/Aug)
Asbestos[12]	ug/L	24-hr composite	Annually (Jan/Feb)
Other "Pesticides"	ug/L	24-hr composite	Semi-annually[7] (Jan/Feb, Jul/Aug)
"Whole effluent toxicity"	(see section c(1)(b)(i) of this permit)		Monthly

(pages 9+10)

Biomonitoring and Effluent Toxicity Limitation

i. Proposed Effluent Biomonitoring

Beginning 90 days after the effective date of this permit, the permittee shall conduct, or have a contract laboratory conduct, monthly static or flow-through chronic bioassays on composite effluent samples according to the methods described in Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms (EPA/600/4-89/001, March 1989) and Adaptation of the Sperm/Fertilization Bioassay Protocol to Hawaiian Sea Urchin Species (P.A. Dinnel, June 1988).

Compliance with "whole effluent toxicity" limits (as indicated in the NPDES permit effluent limitations), shall be determined by short-term chronic toxicity tests conducted once per month. These tests shall be conducted using Ceriodaphnia dubia and a Hawaiian Sea Urchin species, following the methods identified above. When at least three appropriate short term chronic bioassay protocols are available and have been approved by the Director of Health, the permittee shall rotate three test species such that each species is tested every three months.

Should the permittee be unable to perform the tests due to unacceptable control performances, the permittee shall notify the permitting authority and upon concurrence by DOH and EPA, shall so note on its monitoring reports.

Should the permittee find it overly difficult to obtain sea urchin gametes in spawning condition during specific periods of the year, the permittee shall detail its efforts to the permitting authority, and, upon concurrence by DOH, and EPA with this finding, shall record this fact in it's monitoring reports. Control performance must be determined to be unacceptable in three consecutive attempts to conduct the test in any individual month for the permittee to be considered unable to conduct the tests.

If after one year, the permittee demonstrates that a chronic test cannot be performed reliably during certain periods of the year, the permittee may during those periods substitute an acute test using any of the species below, meeting an LC50 of 3.8 percent. Such a substitution may only be made upon approval by the Director of Health and EPA Region IX, following review

of the chronic test results obtained during the previous year. The Director of Health and EPA Region IX may also approve alternate acute toxicity discharge limitations using an acute-chronic ratio based on toxicity test information specific to the Honouliuli discharge.

Test results for each species used will be reported on the permittee's monthly Discharge Monitoring Reports. Results shall be reported as percent survival.

ii.a. Alternative Biomonitoring

If within 30 days of the fifteenth month following the effective date of this permit, the permittee has determined that the chronic test does not perform reliably and has obtained approval to substitute it, the permittee shall conduct, or have a contract laboratory conduct, monthly static or flow-through acute bioassays on composite effluent samples according to the methods described in Methods for Measuring Acute Toxicity of Effluents to Freshwater and Marine Organisms (EPA 600/4-85/013, March 1985). Tests will be conducted in 3.8 percent effluent for a period of 96 hours unless the methods specify a shorter period for a definitive test for a particular species (e.g. 48 hours for daphnia). If static tests are used, the daily renewal solutions shall be fresh 24-hour composite samples, unless samples are shipped off-island to a contact laboratory in which case one 24-hour composite sample may be used for all renewals. Tests using locally available species may be conducted at ambient temperature. Test results for each species used will be reported on the permittee's monthly Discharge Monitoring Reports. Results shall be reported as percent survival.

b. Species Selection and Discharge Limitation

The permittee shall select 3 species for biomonitoring from the EPA Methods manual referenced above, or from the following list of locally available species, and notify the Director of Health of the selection within 30 days of the fifteenth month following the effective date of this permit. The permittee must obtain approval from the Director of Health before changing species after the initial notification.

SPECIES AND LIFE STAGE	DISCHARGE LIMITATION
(1) WATER FLEA (1-24 hours) *Ceriodaphnia dubia*	50% survival in 3.8% effluent
(2) FISH (1-30 days) *Tilapia mossambica* *Coryphaena hippurus*	50% survival in 3.8% effluent
(3) SHRIMP (0-14 days post larval) *Penaeus vannamei* *Penaeus monodon*	50% survival in 3.8% effluent

Ceriodaphnia may be used in freshwater only. *Tilapia* and *Penaeus vannamei* may be acclimated for use in fresh, brackish, or marine water. *Penaeus monodon* may be used in brackish or marine water. If necessary, the salinity of a discharge may be adjusted using salts to allow testing with marine species.

iii. Toxicity Reduction Evaluation

If the permittee violates the "whole effluent toxicity" discharge limitation, the permittee shall increase the biomonitoring frequency to once per week. The frequency shall remain at once per week until the permittee has complied with the toxicity limitation 6 consecutive times. If the permittee has 2 consecutive failures of the toxicity limitation, or if requested by the Director of Health or EPA Region IX, the permittee shall submit, within 45 days, a plan and schedule for conducting a toxicity reduction evaluation. The toxicity reduction evaluation, when completed, shall determine the source of toxicity and how the permittee can achieve the effluent toxicity limitation, including an implementation schedule. After approval of the plan by the Director of Health and EPA, the permittee shall conduct the evaluation within the specified timeframes. Upon completion of the toxicity reduction evaluation, this permit may be modified, or alternatively revoked and reissued, in order to incorporate appropriate permit conditions and compliance schedules. The increased monitoring and the submission of a toxicity reduction evaluation plan do not waive other remedies or penalties applicable under the Clean Water Act.

c. Outfall and Diffuser Monitoring

An annual inspection of the Barbers Point outfall and diffuser shall be conducted in the same month each year (month to be specified by the permittee). This should be a month with good underwater visibility. The inspection shall consist of an examination of the outfall and diffuser port system for leaks and flow distribution, and for determination of possible external blockage of ports by sand and silt disposition or other debris. This inspection may be made using a remote operated vehicle (ROV) camera at the same time the annual fish survey is conducted. A discussion of the results of this inspection shall be reported annually.

2. RECEIVING WATER QUALITY MONITORING PROGRAM

To determine compliance with water quality standards and the 301(h) criteria, the receiving water quality monitoring program must document water quality at the outfall, at areas near the "zone of initial dilution (ZID)"[2] boundary, at areas beyond the ZID where discharge impacts might reasonably be expected, and at reference/control areas. Water quality monitoring shall be conducted at stations along the shoreline and offshore at regular frequencies.

All water quality samples should be collected and processed according to the protocols found in EPA's guidance document entitled Quality Assurance and Quality Control (QA/QC) for 301(h) Monitoring Programs: Guidance on Field and Laboratory Methods (EPA, 1987a).

a. Shoreline Monitoring

Shoreline monitoring is conducted to assess bacteriological conditions in areas used for body-contact sports (e.g., swimming, wading), including natural public bathing areas, where shellfish may be harvested for human consumption, to assess aesthetic conditions for general recreational uses (e.g., picnicking), and to determine compliance with applicable water quality standards and 301(h) criteria.

Water quality sampling stations shall be established along the shoreline of Mamala Bay and hereafter referred to as Shoreline Stations. Shoreline Stations shall be designated and located as shown (also see Figure 1):

Barbers Point Discharge Shoreline Stations

Shoreline Station	Location	Coordinates[13] Latitude	Longitude
HS1	Ewa Beach Park	21°19'00.2"N	157°59'38.7"W
HS2	Oneula Beach	21°18'31.0"N	158°01'53.6"W
HS3	Between Oneula and Nimitz Beach	21°18'19.4"N	158°02'59.1"W
HS4	Nimitz Beach	21°18'09.3"N	158°04'11.8"W

The following shall constitute the Shoreline Water Quality Monitoring Program (Shoreline Stations):

Parameter	Units	Sample Type	Sample Frequency
Enterococcus[9]	#/100 mL	Surface grab[14]	5 days per month[15]
Fecal Coliform	#/100 mL	Surface grab[14]	5 days per month[15]
Visual Observations[16]			5 days per month

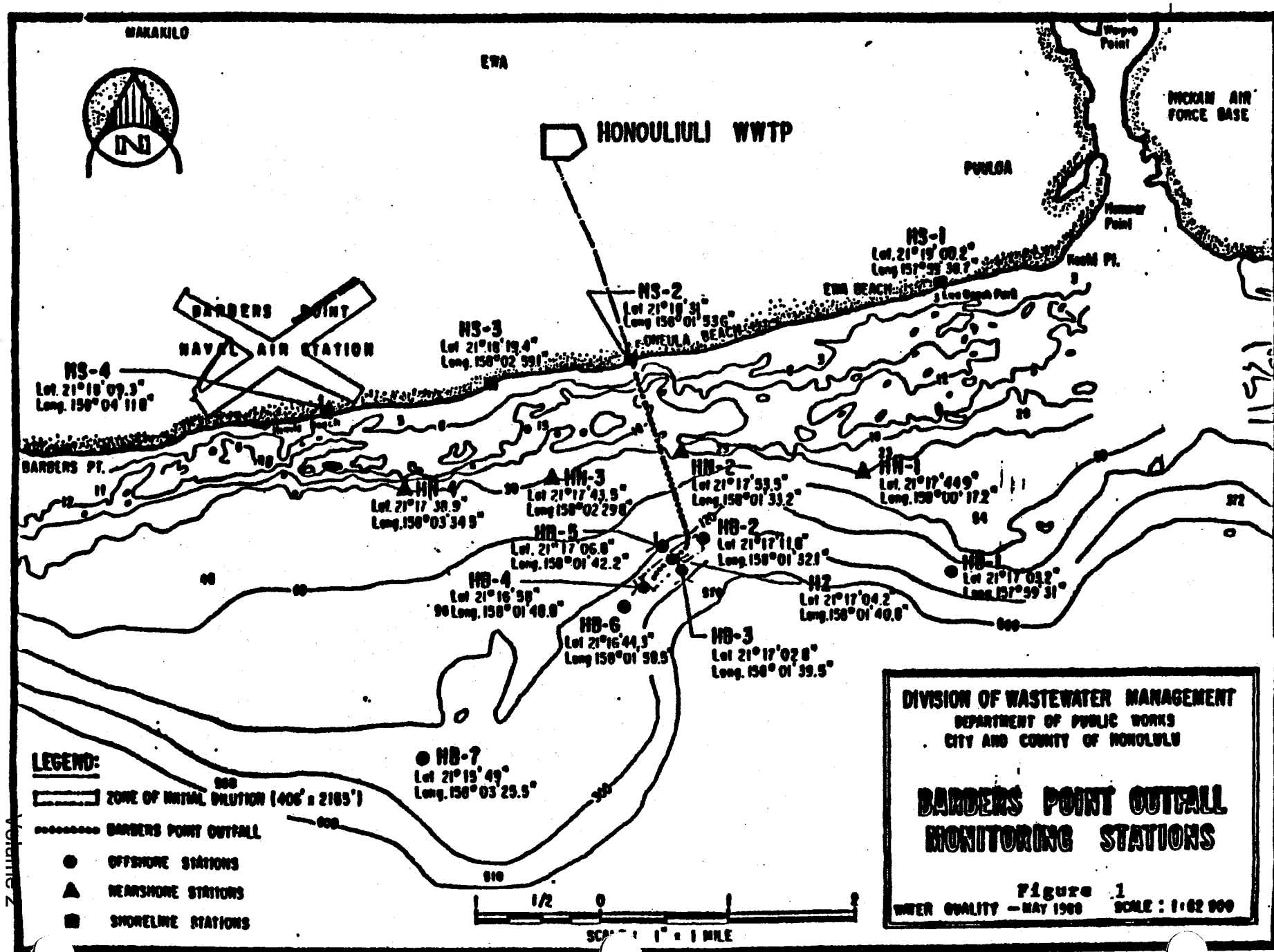
Shoreline Stations shall be occupied at the specified frequency during early morning hours. In the event of stormy weather that makes sampling hazardous or impractical, these samples can be omitted provided that such omissions do not occur in consecutive sampling days or more than ten days in any calendar year.

b. Nearshore Monitoring

Nearshore monitoring is conducted to assess bacteriological conditions in areas used for body-contact sports (e.g., surfing, wind-surfing), to assess aesthetic conditions for general boating and recreational uses, and to determine compliance with applicable water quality standards and 301(h) criteria.

Water quality sampling stations shall be established approximately 2,000 feet (610 m) or less from the shoreline, and hereafter referred to as Nearshore Stations. Nearshore Stations shall be designated and located as shown (also see Figure 1):

MAY 2 1991


MAKAKILO
EWA
HONOULIULI WWTP
PUULOA
HICKAM AIR FORCE BASE
Weipio Point
Hammer Point
Kaohi Pt.
EWA BEACH
ONEULA BEACH
BARBERS POINT NAVAL AIR STATION
BARBERS PT.
HS-1
Lat. 21°19'00.2"
Long 157°55'38.7"
HS-2
Lat 21°18'31"
Long 158°01'53.6"
HS-3
Lat 21°18'19.4"
Long. 158°02'59.1"
HS-4
Lat. 21°18'09.3"
Long. 158°04'11.8"
HN-1
Lat. 21°17'44.9"
Long. 158°00'17.2"
HN-2
Lat 21°17'53.5"
Long. 158°01'33.2"
HN-3
Lat 21°17'43.5"
Long 158°02'29.8"
HN-4
Lat. 21°17'38.9"
Long. 158°03'34.5"
HB-1
Lat 21°17'03.2"
Long 157°59'31"
HB-2
Lat 21°17'11.8"
Long. 158°01'32.1"
HB-3
Lat 21°17'02.8"
Long. 158°01'39.5"
HB-4
Lat 21°16'58"
Long. 158°01'48.8"
HB-5
Lat. 21°17'06.8"
Long. 158°01'42.2"
HB-6
Lat 21°16'44.3"
Long 158°01'58.5"
HB-7
Lat 21°15'49"
Long. 158°03'25.5"
H2
Lat 21°17'04.2"
Long. 158°01'40.8"
LEGEND:
ZONE OF INITIAL DILUTION (406' x 2165')
BARBERS POINT OUTFALL
OFFSHORE STATIONS
NEARSHORE STATIONS
SHORELINE STATIONS
1/2
0
1
2
SCALE: 1" = 1 MILE
DIVISION OF WASTEWATER MANAGEMENT
DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF HONOLULU
BARBERS POINT OUTFALL
MONITORING STATIONS
Figure 1
WATER QUALITY — MAY 1988
SCALE: 1:62 000

Nearshore Station	Location	Coordinates Latitude	Longitude
HN1	Between Ewa & Oneula	21°17'44.9"N	158°00'17.2"W
HN2	Oneula Beach	21°17'53.5"N	158°01'33.2"W
HN3	West of Oneula Beach	21°17'43.5"N	158°02'29.8"W
HN4	East of Nimitz Beach	21°17'38.9"N	158°03'34.5"W

It is recommended that the Nearshore Stations be located using a land-based microwave positioning system which affords a high degree of accuracy and precision (e.g., Miniranger). Other means may be used if in the judgment of the Hawaii Department of Health and EPA Region IX, they are of sufficient accuracy and precision to allow reoccupation of the station within plus or minus six (6) meters. The following shall constitute the Nearshore Water Quality Monitoring Program (Nearshore Stations):

Parameter	Units	Sample Type[14]	Sample Frequency
Enterococcus[9]	#/100 mL	Surface & Bottom grab	5 days per month[15]
Fecal Coliform	#/100 mL	Surface & Bottom grab	5 days per month[15]
Visual observations[16]			5 days per month[15]
Temperature	°C	Continuous profile	Quarterly
Dissolved oxygen	mg/L	Continuous profile	Quarterly
Salinity	ppt	Continuous profile	Quarterly
pH	pH units	Continuous profile	Quarterly
Oil & grease	mg/L	Surface grab	Quarterly
Light Extinction Coefficient	k units	NA	Quarterly
Turbidity	NTU	Surface, mid-depth & bottom	Quarterly

MAY 3 1991

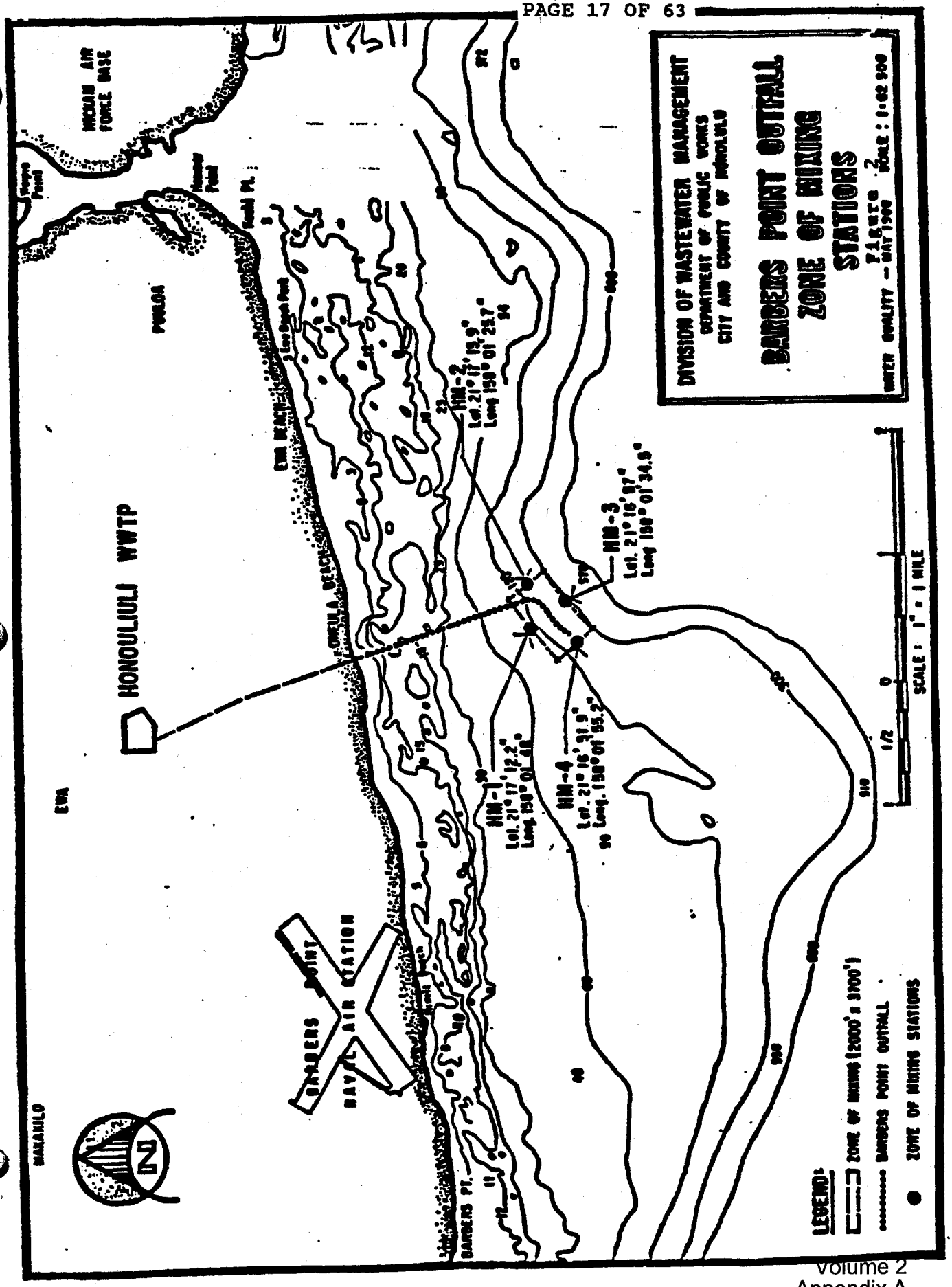
MAY 3 1991

c. Offshore Monitoring

Offshore monitoring is conducted to assess the effects of the wastewater on the receiving water environment and to determine compliance with applicable water quality standards and 301(h) criteria.

Water quality sampling stations shall be established at the diffuser site (i.e., within the ZID), at the boundary of the ZID[2], at the boundary of the zone of mixing (ZOM)[3], beyond the ZID and the ZOM, and at reference/control areas. These stations shall hereafter be referred to as Offshore Stations. Offshore Stations shall be designated and located as shown (also see Figures 1 and 2):

Offshore Station	Vicinity	Location	Coordinates Latitude	Coordinates Longitude
HZ	In-ZID	In the middle of the ZID	21°17'04.2"N	158°01'40.8"W
HB1	Upcoast reference	W of the ZID boundary	21°17'03.2"N	157°59'31.0"W
HB2	ZID	East ZID boundary	21°17'11.8"N	158°01'32.1"W
HB3	ZID	Offshore ZID boundary	21°17'02.8"N	158°01'39.5"W
HB4	ZID	West ZID boundary	21°16'58.0"N	158°01'48.8"W
HB5	ZID	Inshore ZID boundary	21°17'06.8"N	158°01'42.2"W
HB6	Nearfield	SW of the ZID boundary	21°16'44.3"N	158°01'58.5"W
HB7	Downcoast	SW of the ZID reference	21°15'49.0"N	158°03'25.5"W
HM1	ZOM	Inshore ZOM boundary	21°17'12.2"N	158°01'48.0"W
HM2	ZOM	East ZOM boundary	21°17'15.9"N	158°01'25.7"W
HM3	ZOM	Offshore ZOM boundary	21°16'57.0"N	158°01'34.5"W
HM4	ZOM	West ZOM boundary	21°16'51.9"N	158°01'55.2"W


DIVISION OF WASTEWATER MANAGEMENT
DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF HONOLULU
BARBERS POINT OUTFALL
ZONE OF MIXING
STATIONS
Figure 2
WATER QUALITY — MAY 1990
SCALE: 1:62 500
HONOULIULI WWTP
EWA
MAKAKILO
PUULOA
NICKAM AIR FORCE BASE
EWA BEACH
ONEULA BEACH
BARBERS POINT
NAVAL AIR STATION
BARBERS PT.
HM-1
Lat. 21° 17' 12.2"
Long. 158° 01' 48"
HM-2
Lat. 21° 17' 15.9"
Long 158° 01' 25.7"
HM-3
Lat. 21° 16' 57"
Long 158° 01' 34.5"
HM-4
Lat. 21° 16' 51.9"
Long. 158° 01' 55.2"
SCALE: 1" = 1 MILE
LEGEND:
ZONE OF MIXING (2000' x 3700')
BARBERS POINT OUTFALL
ZONE OF MIXING STATIONS

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It is recommended that the Offshore Stations be located using a land-based microwave positioning system which affords a high degree of accuracy and precision (e.g., Miniranger). Other means may be used if in the judgment of the Hawaii Department of Health and EPA Region 9, they are of sufficient accuracy and precision to allow reoccupation of the stations within plus or minus six (6) meters. The following shall constitute the Offshore Water Quality Monitoring Program as shown:

Parameter	Units	Stations	Sample Type[14]	Sample Frequency
Visual Observations[16]		All Offshore Stations		Quarterly
Temperature	°C	"	Continuous profile	Quarterly
Salinity	ppt	"	Continuous profile	Quarterly
Oil & Grease	mg/L	HZ,HB1,HB2, HB3,HB4,HB5, HB6,HB7	Surface grab	Quarterly
Dissolved Oxygen	mg/L	"	Continuous profile	Quarterly
Light Extinction Coefficient	k units	"	NA	Quarterly
Turbidity	NTU	"	Surface, mid-depth & bottom	Quarterly
Enterococcus[9] and Fecal Coliform	#/100 mL	HM1,HM2,HM3, HM4,HB1,HB2, HB3,HB4,HB5, HB6,HB7	Surface & bottom grab	Quarterly
pH	pH units	"	Continuous profile	Quarterly
Total Nitrogen	ug N/L	"	Surface, mid-depth & bottom	Quarterly
Ammonia Nitrogen	ug NH4-N/L	"	Surface, mid-depth & bottom	Quarterly

Parameter	Units	Stations	Sample Type[14]	Sample Frequency
Nitrate + Nitrite Nitrogen	ug (NO3+NO2)-N/L	"	Surface, mid-depth & bottom	Quarterly
Total Phosphorus	ug P/L	"	Surface, mid-depth & bottom	Quarterly
Chlorophyll a	ug/L	"	Surface, mid-depth & bottom	Quarterly

Note: Surface, mid-depth & bottom sample types are grabs. Continuous profiles should provide readings every ten (10) meters.

d. Ocean Currents Monitoring

Collection of data on ocean currents is conducted to determine the potential for onshore transport of effluent and to aid in the predictions of effluent dilution and sediment accumulation. Collection of data on current velocities will augment available information on oceanographic processes near the discharge site.

Measurement of currents during critical periods (e.g., maximum and minimum stratification, minimum dissolved oxygen, Kona winds) is required during the first two years of monitoring. It is recommended that currents be measured for a minimum of 30-day intervals at the plume trapping depth and in near-bottom waters during identified critical periods. Deployment of recording current meters should be located at stations near the diffuser, inshore and offshore from the diffuser.

The discharger shall submit a proposal for determining the speed and direction of local ocean currents. The proposal shall be implemented when the NPDES permit becomes effective, after approval by the Hawaii Department of Health and EPA Region IX.

3. SEDIMENT AND BIOLOGICAL MONITORING

Sediment and biological monitoring is conducted to assess the accumulation of pollutants in sediments and organisms, to monitor the status of the benthic community, to evaluate the physical and chemical quality of the sediments, and to evaluate compliance with 301(h) criteria.

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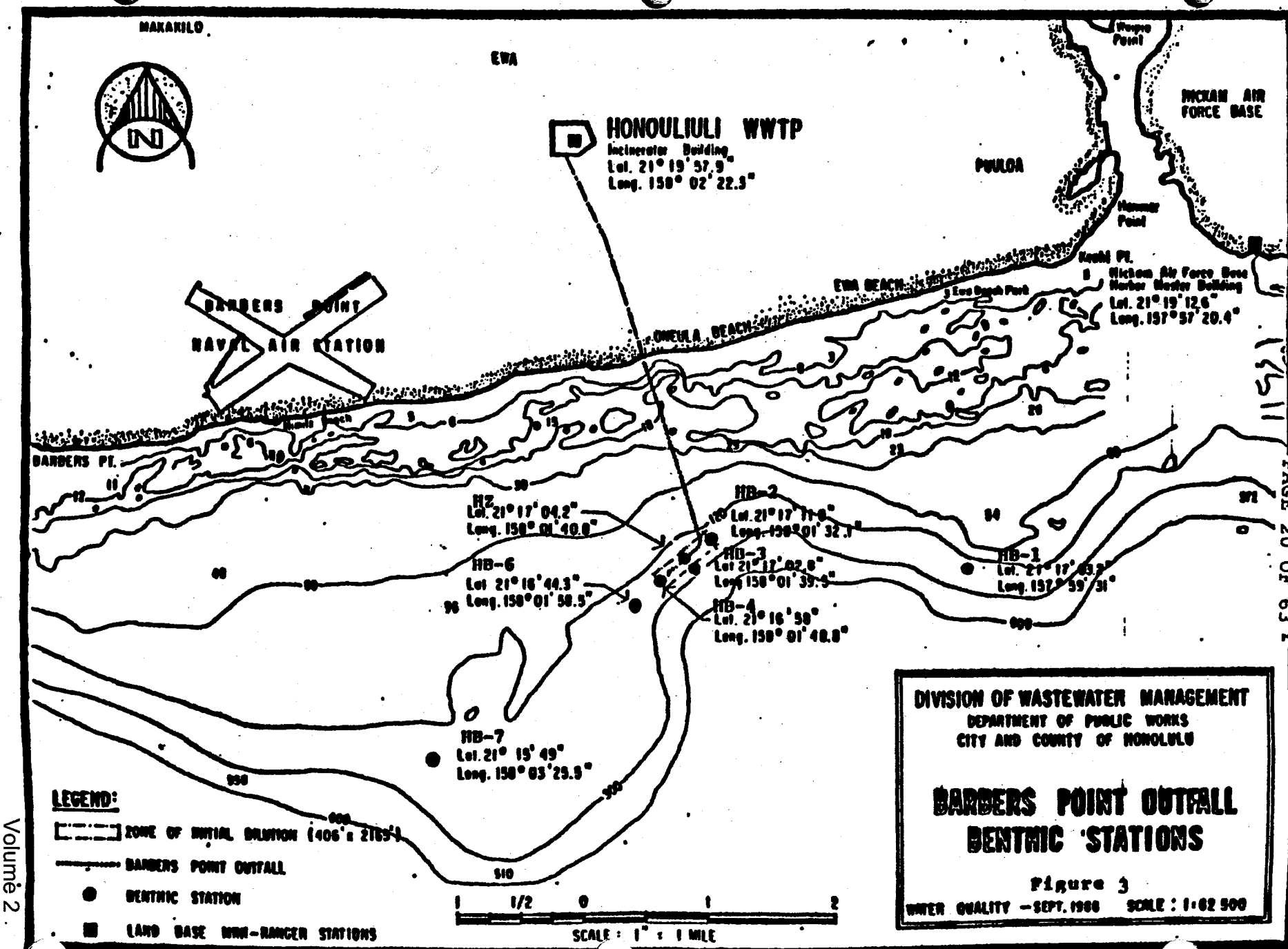
MAKAKILO
EWA
HONOULIULI WWTP
Incinerator Building
Lat. 21° 19' 57.9"
Long. 158° 02' 22.3"
PUULOA
HICKAM AIR FORCE BASE
Hammer Point
Keahi Pt.
Hickam Air Force Base Harbor Master Building
Lat. 21° 19' 12.6"
Long. 157° 57' 20.4"
EWA BEACH
ONEULA BEACH
BARBERS POINT NAVAL AIR STATION
BARBERS PT.
HZ
Lat. 21° 17' 04.2"
Long. 158° 01' 40.8"
HB-2
Lat. 21° 17' 11.8"
Long. 158° 01' 32.1"
HB-3
Lat. 21° 17' 02.8"
Long. 158° 01' 39.5"
HB-4
Lat. 21° 16' 58"
Long. 158° 01' 48.8"
HB-6
Lat. 21° 16' 44.3"
Long. 158° 01' 58.5"
HB-1
Lat. 21° 17' 03.2"
Long. 157° 59' 31"
HB-7
Lat. 21° 15' 49"
Long. 158° 03' 25.5"
LEGEND:
ZONE OF INITIAL DILUTION (406' x 2165')
BARBERS POINT OUTFALL
BENTHIC STATION
LAND BASE MRR-RANGER STATIONS
1 1/2 0 1 2
SCALE: 1" = 1 MILE
DIVISION OF WASTEWATER MANAGEMENT
DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF HONOLULU
BARBERS POINT OUTFALL
BENTHIC STATIONS
Figure 3
WATER QUALITY — SEPT. 1988
SCALE: 1:62 500

The benthic sediment and biological samples should be collected and processed according to protocols found in EPA's guidance document entitled Quality Assurance and Quality Control (QA/QC) for 301(h) Monitoring Programs: Guidance on Field and Laboratory Methods.

Sediment and biological sampling stations shall be established at the locations specified in Figure 3 (Barbers Point Outfall Benthic Stations) for the following seven Stations: HZ, HB1, HB2, HB3, HB4, HB6, and HB7.

a. Sediment Analysis

Seven Benthic Stations (HZ, HB1, HB2, HB3, HB4, HB6, and HB7) shall be sampled once per year in January/February for sediment analyses (see Figure 3). Sample handling and preservation procedures should follow those outlined in "Procedures for Handling and Chemical Analysis of Sediment and Water Samples" (EPA/CE-81-1). Three replicate samples shall be taken and will be evaluated to determine within station variability. Based on these data, the number of replicate samples required for sediment quality analyses and evaluation may be changed in subsequent sampling. Each replicate sample shall be taken from a separate van Veen sampler and shall not be composited for analysis. The following determinations shall be made on each sample at each station:

1. A 0.1 m^2 modified van Veen sampler shall be used to collect the benthic samples.

2. Total organic carbon (TOC; mg/kg)

3. Oxidation-reduction potential (Eh; mv)

4. Oil and grease (mg/kg)

5. Grain size distribution (phi units)

6. "Priority Pollutants" and other "Pesticides" baseline data (only the top 2 cm of sediment shall be used from each replicate sample):

a. In the first year of the NPDES permit, chemical analyses for all "Priority Pollutants" and other "Pesticides" shall be conducted on each sediment sample.

b. In the remaining four years of the NPDES permit, chemical analyses shall be required for:

1) "Priority Pollutants" and other "Pesticides" that were identified in the sediments and/or effluents in the first year's survey, and in the Effluent Monitoring Program conducted on a yearly basis, thereafter.

2) "Priority Pollutants" and other "Pesticides" identified in fish tissues in the first year's survey, and in the Fish Tissue Analysis conducted on a yearly basis, thereafter.

The analytical protocols found in EPA's guidance document entitled Analytical Methods for U.S. EPA Priority Pollutants and 301(h) Pesticides in Estuarine and Marine Sediments (Tetra Tech, Inc. 1986) should be used to measure "Priority Pollutants" and other "Pesticides" in the sediment samples. Upon approval by EPA Region IX and the Hawaii Department of Health, other protocols may be used provided they have the same cleanup procedures and the same detection limits as the EPA 301(h) protocols.

b. Infauna Analysis

Concurrent with the Sediment Sampling, seven Benthic Stations (HZ, HB1, HB2, HB3, HB4, HB6, and HB7) shall be occupied annually (January/February) for benthic infaunal sampling (see Figure 3). It is recommended that the Benthic Stations be located using a land-based microwave positioning system which affords a high degree of accuracy and precision (e.g., Mini-ranger). Other means may be used if in the judgment of the Hawaii Department of Health and EPA Region IX, they are of sufficient accuracy and precision to allow reoccupation of the stations within plus or minus six (6) meters.

Infauna sampling shall consist of the following:

1. During the first year of sampling, a total of five (5) replicate 0.1 m^2 modified van Veen grab samples shall be taken at each station for biological analysis. Based on these data, the number of replicate samples required for infauna quality analysis and evaluation may be changed in subsequent sampling.

2. From each grab sample, one 7.6 cm diameter subsample to a depth of 5 cm shall be taken.

3. Each grab sample shall be passed through a 0.5 mm screen, and the organisms retained and preserved as appropriate for subsequent identification.

Infauna analysis and evaluation shall consist of the following determinations made at each station:

1. Identification of all organisms (total assemblages) to the lowest taxon possible.

2. Community structure analysis[17] for each replicate, each station, and the group of offshore stations. [See EPA's guidance document entitled "Recommended Biological Indices for 301(h) Monitoring Programs" (EPA, 1987b)].

3. Mean, range, standard deviation, sample number, and 95% confidence limits, if appropriate, should be determined for the values obtained. The discharger may be required to conduct additional statistical analyses to determine temporal and spatial trends in the marine environment.

4. Statistical analyses shall be conducted and graphic displays shall be presented in the monitoring reports to demonstrate the current status of, and any changes to the benthic infauna communities found at the ZID boundary, gradient, and reference stations.

c. Fish and Megainvertebrate Analysis

Fish communities shall be surveyed annually (January/February). At the outfall terminus, fish shall be identified, counted, and photographed (using videotapes) at fixed points and along two fixed length transect lines using a remote operated vehicle (ROV) camera. The videotapes will be analyzed and this fish survey will measure temporal changes in fish assemblages. In addition, divers will make visual observations of fish utilizing three line-transects parallel to the 30 foot isobath, inshore at Nearshore Station HN2 at a depth of 9 m (30 ft). Spatial changes will not be monitored since the outfall structure represents a unique feature within the surrounding soft bottom environment, and the uniqueness of the outfall habitat precludes selection of an appropriate control site. Appropriate biostatistical tests should be utilized to determine temporal changes in fish assemblages.

Pollutant body burdens in fish consumed by humans will be measured, in order to determine whether or not the effects of the waste discharge may constitute a threat to public health.

Once each year, during January/February, fish shall be collected from within the ZID by hook and line or by setting baited lines or traps. The fish shall be representative of those caught by recreational and commercial fishermen in the area and shall be analyzed annually for all "Priority Pollutants" and other "Pesticides."

Fish samples shall be identified and quantified as to species, number of individuals per species, standard length and wet weight. Physical abnormalities and disease symptoms shall be described and recorded (e.g., fin rot, lesions, tumors).

At least three species of common epibenthic fish shall be collected for "Priority Pollutants" and other "Pesticides" analyses. For each species, a single composite sample shall consist of standardized[18] muscle tissue and liver samples removed from approximately 10 fish[19] selected at random. The cumulative total number of composite samples should be at least three.

If population increases of epibenthic megainvertebrates (sea urchins, holothurians, etc.) occur in the vicinity of the outfall diffuser, chemical analysis of selected species may be required by EPA Region IX.

The analytical protocols found in EPA's guidance document entitled Bioaccumulation Monitoring Guidance: 4. Analytical Methods for U.S. EPA Priority Pollutants and 301(h) Pesticides in Tissues from Estuarine and Marine Organisms (Tetra Tech, Inc., 1986a) should be used to measure "Priority Pollutants" and other "Pesticides" in tissue samples.

Fish catch statistics from the State of Hawaii, Division of Fish and Game, will be annually reviewed in January/February to detect changes in fish abundance and distribution in the vicinity of the outfall. A summary and findings of this review shall be reported in the annual monitoring report.

d. Coral Reef Survey

It is important to assess the impact of the Honouliuli wastewater discharge on coral communities in the Barbers Point area. This assessment of changes on living coral coverage will also include a study of reef fishes. Prior to the effective date of the NPDES permit, the discharger shall submit a field study design for approval by EPA Region 9 and the Hawaii Department of Health to assess the impacts of the discharge on the coral reefs in the Barbers Point area. This design should include provisions for mapping the location and extent of the coral reefs, particularly those reefs inshore of the discharge site in 30-60 feet of water. Guidance for such surveys is provided in the "Design of 301(h) Monitoring Programs for Municipal Wastewater Discharges to Marine Waters," November 1982, EPA

#430/0-82-010 (pages 70-71). In addition, the discharger should consult "Ecological Impacts of Sewage Discharges on Coral Reef Communities," September 1983, EPA #430/9-83-010, for further information. The discharger shall implement the field study after approval of the design by EPA Region IX and the Hawaii Department of Health, and upon the issuance of the NPDES permit.

STANDARD PROVISIONS AND REPORTING REQUIREMENTS:

A. DEFINITIONS

1. "Ambient conditions" means the existing conditions in the surrounding waters not influenced by man.

2. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility whose operation is necessary to maintain compliance with the terms and conditions of this permit.

3. "Class A" means all other "open coastal waters" not otherwise specified under section 11-54-06(b) of the State of Hawaii water quality standards.

4. "Composite sample" means, for flow rate measurements, the arithmetic mean of no fewer than eight individual measurements taken at equal intervals for 24 hours or for the duration of the discharge, whichever is shorter.

   "Composite sample" means, for other than flow rate measurement,

   a. A combination of at least eight individual portions obtained at equal time intervals for 24 hours, or the duration of the discharge, whichever is shorter. The volume of each individual portion shall be directly proportional to the discharge flow rate at the time of sampling.

   OR

   b. A combination of at least eight individual portions of equal volume obtained over a 24-hour period. The time interval will vary such that the volume of wastewater discharged between samplings remains constant.

The compositing period shall equal the specified sampling period, or 24 hours, if no period is specified.

5. "Daily discharge" means:

   a. For flow rate measurement, the average flow rate measured during a calendar day or during any 24-hour period reasonably representative of the calendar day for purposes of sampling.

   b. For pollutant measurements, the concentration or mass emission rate measured during a calendar day or during any 24-hour period reasonably representative of the calendar day for purposes of sampling.

6. "Daily maximum" limit means the maximum acceptable "daily discharge". For pollutant measurements, unless otherwise specified, the results to be compared to the "daily maximum" limit are based on "composite samples."

7. "Dry" water quality criteria apply when the "open coastal waters" receive less than three million gallons per day of freshwater discharge per shoreline mile.

8. "Duly authorized representative" is one whose:

   a. Authorization is made in writing by a principal executive officer or ranking elected official;

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

   c. Written authorization is submitted to the HI DOH and EPA Region IX. If an authorization becomes no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements must be submitted to the HI DOH and EPA Region IX prior to or together with any reports, information, or other applications to be signed by an authorized representative.

9. "Grab sample" is defined as any individual sample collected in a short period of time not exceeding 15 minutes. "Grab samples" shall be collected during normal peak loading conditions for the parameter of interest, which may or may not be during hydraulic peaks. It is used primarily in determining compliance with "daily maximum" limits.

10. "Hazardous substance" means any substance designated under 40 CFR 116 pursuant to Section 311 of the Clean Water Act.

11. "Heavy metals" are, for the purposes of this permit, arsenic, cadmium, chromium, copper, lead, mercury, nickle, silver, and zinc.

12. "Incompatible pollutants" are:

   a. Pollutants which create a fire or explosion hazard in the POTW;

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b. Pollutants which will cause corrosive structural damage to the POTW, or wastewaters with pH lower than 5.0 pH units, unless the facilities are specifically designed to accommodate such wastewater;

c. Solids or viscous pollutants in amounts which will cause obstruction to the flow in the POTW, resulting in interference;

d. Any pollutant, including oxygen-demanding pollutants (e.g., BOD) released into the wastewater system at a flow rate and/or pollutant concentration which will cause interference in the POTW;

e. Heat in amounts which will inhibit biological activity in the POTW resulting in interference, or heat in such quantities that the temperature at the POTW treatment plant exceeds 40°C (104°F) unless the Regional Administrator of EPA Region IX, upon the request of the POTW, approves alternative temperature limits.

13. "Indirect discharger" means a non-domestic discharger introducing pollutants into a publicly owned treatment and disposal system.

14. "Initial dilution" is the process which results in the rapid and irreversible turbulent mixing of wastewater with ocean water around the point of discharge.

For a submerged buoyant discharge, characteristics of most municipal wastes that are released from the submarine outfalls, the momentum of the discharge and its initial buoyancy act together to produce turbulent mixing. Initial dilution in this case is completed when the diluting wastewater ceases to rise in the water column and first begins to spread horizontally.

Numerically, initial dilution is expressed as the ratio of the volume of discharged effluent plus ambient water entrained during the process of initial dilution to the volume of discharged effluent.

15. "Mass emission rate" is obtained from the following calculations for any calendar day:

$$\text{Mass emmission rate (lb/day)} = 8.345/N \sum_{i=1}^{N} Qi\ Ci$$

$$\text{Mass emmission rate (kg/day)} = 3.785/N \sum_{i=1}^{N} Qi\ Ci$$

in which 'N' is the number of samples analyzed in any calendar day. 'Qi' and 'Ci' are the flow rate (MGD) and the concentration (mg/L), respectively, which are associated with each of the 'N' grab samples which may be taken in any calendar day. If a composite sample is taken, 'Ci' is the concentration measured in the composite sample and 'Qi' is the average flow rate occurring during the period over which samples are composited.

The daily concentration of all constituents shall be determined from the flow-weighted average of the same constituents in the combined waste stream as follows:

$$\text{Daily concentration} = 1/Qt \sum_{i=1}^{N} Qi\ Ci$$

in which 'N' is the number of component waste streams. 'Qi' and 'Ci' are the flow rate (MGD) and the constituent concentration (mg/L), respectively, which are associated with each of the 'N' waste streams. 'Qt' is the total flow rate of the combined waste streams.

16. "Monthly average" is the arithmetic mean of daily concentrations, or of daily "mass emission rates", over the specified monthly period:

$$\text{Average} = 1/N \sum_{i=1}^{N} Xi$$

in which 'N' is the number of days samples were analyzed during the period and 'Xi' is either the constituent concentration (mg/L) or mass emission rate (kg/day or lb/day) for each sampled day.

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17. "100 year frequency flood" means a flood of unusually large magnitude and which is characterized by its infrequent occurrence.

18. "Open coastal waters" means marine waters bounded by 100 fathom (183 m; 600 ft) depth contour and the shoreline excluding bays named in section 11-54-06(a) of the State of Hawaii water quality standards.

19. "Overflow" means the intentional or unintentional diversion of flow from the collection and transport systems, including the pumping facilities.

20. "Pesticides" are, for purposes of this permit, those six constituents referred to in 40 CFR 125.58(m) (demeton, guthion, malathion, mirex, methoxychlor, and parathion).

21. "Pollutant-free wastewater" means infiltration and inflow, cooling waters, and condensates which are essentially free of pollutants.

22. "Priority pollutants" are those constituents referred to in 40 CFR 401.15 and listed in the EPA NPDES Application Form 2C, pp. V-3 through V-9.

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

24. "Sludge" means the solid, semi-liquid suspension of solids, residues, screenings, grit, scum and precipitates separated from, or created in wastewater by the unit processes of a treatment system. It also includes, but is not limited to, all supernatant, filtrate, centrate, decantate, and thickener overflow/underflow in the solids handling parts of the wastewater treatment system.

25. "Toxic pollutant" means any pollutant listed as toxic under Section 307(a)(1) of the Clean Water Act or under 40 CFR 122, Appendix D. Violation of the maximum daily discharge limitations are subject to the 24-hour reporting requirement (paragraph E.4).

26. "Toxicity test" is the means to determine the toxicity of a chemical or an effluent using living organisms. A toxicity test measures the degree of response of an exposed test organism to a specific chemical or effluent.

27. "Toxic unit chronic" is the reciprocal of the effluent dilution that causes no unacceptable effect on the test organisms by the end of the chronic exposure period.

28. "Tsunami" means any large sea wave produced by submarine earth movement or volcanic eruption.

29. "Upset" means any exceptional incident in which there is unintentional and temporary noncompliance with effluent limitations in the permit because of factors beyond the reasonable control of the discharger. It does not include noncompliance caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, careless or improper operation, or those problems the discharger should have foreseen.

30. "Waste", "waste discharge", "discharge of waste", and "discharge" are used interchangeably in this permit. The requirements of this permit are applicable to the entire volume of water, and the material therein, which is disposed of to ocean waters.

31. "Weekly average" is the arithmetic mean of daily concentrations, or of daily mass emmission rates, over the specified weekly period:

$$\text{Average} = 1/N \sum_{i=1}^{N} Xi$$

in which 'N' is the number of days samples were analyzed during the period and 'Xi' is either the constituent concentration (mg/L) or "mass emission rate" (kg/day or lb/day) for each sampled day.

32. "Whole-effluent toxicity" is the aggregate toxic effect of an effluent measured directly with a "toxicity test".

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33. "Zone of initial dilution" (ZID) means the region of initial mixing surrounding or adjacent to the end of the outfall pipe or diffuser ports, providing that the ZID may not be larger than allowed by mixing zone restrictions in applicable water quality standards [40 CFR 125.58(w)]. For purposes of designating monitoring stations, the region within a horizontal distance equal to a specified water depth (usually depth of outfall or average depth of diffuser) from any point of the diffuser or end of the outfall and the water column above and below that region, including the underlying seabed.

34. "Zone of mixing" (ZOM) means limited areas around outfalls and other facilities approved by the HI DOH with the concurrence of EPA Region IX to allow for the initial dilution of waste discharges [State of Hawaii Water Quality Standards].

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B. PROHIBITIONS

1. Introduction of "incompatible pollutants" to the treatment system is prohibited.

2. Discharge of any radiological, chemical, or biological warfare agent or high-level radioactive "waste" into the ocean is prohibited.

3. Discharge of "toxic pollutants" in violation of effluent standards or prohibitions established under Section 307(a) of the Clean Water Act is prohibited.

4. Pipeline discharge of "sludge" or sludge drying bed leachate to the ocean is prohibited; the discharge of municipal and industrial "waste" sludge directly to the ocean, or into a "waste" stream that discharges to the ocean, is prohibited. The discharge of sludge digester super-natant directly to the ocean, or to a "waste" stream that discharges to the ocean without further treatment, is prohibited.

5. Intentional introduction of pollutants into the collection, treatment, or disposal system by an "indirect discharger" that may: (a) inhibit or disrupt the treatment process, system operation,

or the eventual use or disposal of sludge; or (b) flow through the system to the receiving water is prohibited.

6. Intentional introduction of "pollutant free wastewater" to the collection, treatment, and disposal system is prohibited.

7. Any "overflow" or "bypass" of facilities, including the "waste" collection system, is prohibited. The HI DOH and EPA Region IX may take enforcement action against the discharger for "bypass," unless the following conditions apply:

   a. When "overflow" or "bypass" was unavoidable to prevent loss of life, personal injury, or "severe property damage";

   b. Where there were no feasible alternatives to the "overflow" or "bypass," such as the use of auxiliary treatment facilities, retention of untreated waste, or maintenance during normal periods of equipment down time. (This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent an "overflow" or "bypass" which could occur during normal periods of equipment down time or preventive maintenance.); and

   c. When the discharger submitted a notice in advance of the need for an "overflow" or "bypass," to the HI DOH and EPA Region IX at least ten (10) days before the "overflow" or "bypass."

   For an unanticipated "overflow" or "bypass," the discharger shall notify the HI DOH and EPA Region IX of each such "overflow" or "bypass," in accordance with procedures outlined in paragraph E.4 of General Reporting Requirements. The written confirmation shall include information relative to the location; estimated volume; pH, BOD, and SS values; date and time; duration; cause; and remedial measures taken to effect cleanup and/or to prevent recurrence. Immediate measures shall be initiated to clean up wastes due to any such "overflow" or "bypass"

and to abate the effects thereof or, in the case of threatened pollution or nuisance, to take other necessary remedial action.

8. Odors, vectors, and other nuisances of sewage or "sludge" orgin beyond the limits of the treatment plant site due to improper operation of plant facilities, as determined by the HI DOH and EPA Region IX, are prohibited.

C. PROVISIONS

1. The discharger shall comply with State Water Quality Standards for the area in which the discharge is located, following the "initial dilution" of the discharge. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the discharger from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation under authority preserved by Section 510 of the Act.

2. The discharger shall, at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the discharger to achieve compliance with this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. All of these procedures shall be described in an Operation and Maintenance Manual. The discharger shall keep in a state of readiness all systems necessary, at any time, to achieve compliance with the conditions of this permit. All systems, both those in service and reserve, shall be inspected and maintained on a regular basis. Records shall be kept of the tests and made available to the regulatory agencies.

3. All facilities used for transport, treatment, or disposal of "wastes" shall be adequately protected against "overflow" or washout as the result of a "tsunami" or "100-year frequency flood".

4. Collection, treatment, and disposal systems shall be operated in a manner that precludes public contact with wastewater.

5. Collected screenings, "sludges," and other solids removed from liquid "wastes" shall be disposed of in a manner approved by the Director of the Department of Health, State of Hawaii and EPA Region IX.

6. Wastewater treatment facilities subject to this permit shall be supervised and operated by persons possessing certificates of appropriate grade, as determined by the HI DOH. If such personnel is not available to staff the wastewater treatment facilities, a program to promote such certification shall be developed and enacted by the discharger. Activities of this program shall be reported in the annual report as outlined in paragraph E.15 of the General Reporting Requirements.

7. The HI DOH, EPA Region IX and other authorized representatives shall be allowed:

   a. Entry upon premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this permit;

   b. Access to copy any records that must be kept under the conditions of this permit;

   c. To inspect any facility, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

   d. To photograph, sample, and monitor for the purpose of assuring compliance with this permit.

8. After notice and opportunity for a hearing, this permit may be terminated or modified for cause, including, but not limited to:

   a. Violation of any term or condition contained in this permit;

   b. Obtaining this permit by misrepresentation, or by failure to disclose fully all relevant facts;

   c. Endangerment to human health or environment that can only be regulated to acceptable levels by modification or termination; and

   d. Any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

9. This permit does not convey any property rights of any sort or any exclusive privileges. The requirements prescribed herein do not authorize the commission of any act causing injury to the property of another, nor protect the discharger from liabilities under federal, state or local laws, nor create a vested right for the discharger to continue the "waste" discharge.

10. The discharger shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment, including such accelerated or additional monitoring as necessary to determine the nature and impact of the violation.

11. The provisions of this permit are severable. If any provision of this permit is found invalid, the remainder of this permit shall not be affected.

12. The discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for "toxic pollutants" within the time provided in the regulations that establish these standards or prohibitions, even if this permit has not yet been modified to incorporate the requirement. If such standards or prohibitions are more stringent than any limitation upon such pollutants in this permit, this permit shall be modified or reissued by

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the HI DOH and EPA Region IX in accordance with such toxic effluent standards or prohibitions and so notify the discharger.

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

14. If additional or revised water quality standards are approved pursuant to Section 303 of the Clean Water Act, or amendments thereto, the HI DOH and EPA Region IX may revise and modify this permit in accordance with such standards.

15. The discharger shall furnish, within a reasonable time, any information the HI DOH and EPA Region IX may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit.

16. The discharger shall maintain in good working order a sufficient alternate power source for operating the wastewater treatment and disposal facilities. All equipment shall be located to minimize failure due to moisture, liquid spray, flooding, and other physical phenomena. The alternate power source shall be designed to permit inspection and maintenance and shall provide for periodic testing. If such alternate power source is not in existence, the discharger shall halt, reduce, or otherwise control all discharges upon the reduction, loss, or failure of the primary source of power.

17. EPA Permit Conditions pursuant to 40 CFR Parts 122.41 (m) and (n), concerning treatment plant bypass and upset, are hereby incorporated by reference into this permit.

D. <u>GENERAL MONITORING REQUIREMENTS</u>

1. Influent, effluent, and receiving water monitoring must be conducted according to the current test procedures approved by EPA under 40 CFR 136, entitled "Guidance Establishing Test Procedures for the Analysis of Pollutants," unless other test

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procedures have been specified in this permit. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. Other current EPA guidelines for chemical analysis are found in Methods for Chemical Analysis of Water and Wastes (EPA-600/4-79-020, Revised March 1983) and Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater (EPA-600/4-82-057, July, 1982). The nine Guidance Documents[15] for monitoring 301(h) variables, as prepared for the EPA Office of Marine and Estuarine Protection by Tetra Tech, Inc., should be utilized where appropriate. In addition, the HI DOH and EPA Region IX, at their discretion, may specify tests which are more sensitive than those found in the above guidelines.

2. The discharger shall have, and implement, an accurate written quality assurance (QA) plan for laboratory analyses. An annual report shall be submitted by March 31 of each year which summarizes the QA activities for the previous year. Duplicate chemical analyses must be conducted on a minimum of ten percent of the samples or at least one sample per month, whichever is greater. A similar frequency shall be maintained for analyzing spiked samples. When requested by EPA, the discharger will participate in the NPDES discharge monitoring report QA performance study. The discharger must have a success rate equal to or greater than eighty (80) percent.

3. Water quality analyses performed in order to monitor compliance with this permit shall be by a laboratory certified by the HI DOH for the constituent(s) being analyzed. Bioassay(s) performed in order to monitor compliance with this permit shall be in accordance with guidelines approved by the HI DOH. If the laboratory used or proposed for use by the discharger is not certified by the HI DOH due to restrictions in the State's laboratory certification program, or in cases where certification does not exist for other reasons, the discharger shall be considered in compliance with this provision provided:

   a. Data remains consistent with results of samples analyzed by the HI DOH;

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b. A quality assurance program is used at the laboratory, including a manual containing steps followed in this program, that is available for inspections by staff of the HI DOH and EPA Region IX;

c. Certification is pursued in good faith and obtained as soon as possible after the program is reinstated.

4. Influent samples shall be representative of the influent to the treatment plants. If possible, influent samples shall be taken at all points of inflow to the wastewater treatment plants, upstream of any in-plant return flows.

5. Effluent samples shall be taken downstream of the last addition of waste to the discharge works where a representative sample may be obtained prior to mixing with the receiving waters.

6. The results of any monitoring which is conducted, using approved test procedures and at locations specified in this permit, more frequently than required by this permit, shall be included in calculations and reports.

7. All monitoring instruments and devices used by the discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy. The flow measurement system shall be calibrated at least once per year, ormore frequently as necessary, to ensure continued accuracy of the system.

8. The discharger shall maintain records of all monitoring information, including all calibration and maintenance records; all original strip chart recordings for continous monitoring instrumentation; the date, exact place, and time of sampling of measurement; the individual(s) who performed the sampling or measurement; the date(s) analyses were performed; the laboratory and individual(s) who performed the analyses. Records shall be maintained for a minimum of five (5) years. This period may be extended during the course of any unresolved litigation regarding this discharge or

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when requested by the HI DOH and EPA Region IX. It is recommended that the discharger maintain the results of all analyses indefinitely.

E. GENERAL REPORTING REQUIREMENTS

1. Monitoring results shall be reported at intervals and in a manner specified in the 'Monitoring Program' of this permit.

2. Monitoring reports for influent and effluent data shall be submitted to the HI DOH and EPA Region IX on preprinted Discharge Monitoring Report Forms supplied by EPA Region IX, or on an alternative form for the grease and oil, "Priority Pollutants" (including asbestos) and "Pesticides" data, according to the following schedule:

Constituents and Monitoring Frequency	Report Due
Influent and Effluent Monitoring: Continuous, five (5) days per week, Twice Weekly, Weekly, Monthly	By last day of the following month
Influent and Effluent Monitoring: Semiannually	March 31, Sept 30
Influent and Effluent Monitoring: Annually	March 31

Monitoring reports containing the raw data (also see item 3. below) for all other constituents of the monitoring program shall be submitted to the HI DOH and EPA Region IX according to the following schedule:

Constituents and Monitoring Frequency	Report Due
Solids Handling Monitoring: Annually	March 31
Shoreline and Nearshore Receiving Water Monitoring: 5 days per month	By last day of the following month
Nearshore and Offshore Receiving Water Monitoring: Quarterly	Within 30 days of the end of the monitoring period
Offshore Sediment and Biological Monitoring: Annually	Within 90 days of the end of the monitoring period

In addition, all data generated by this monitoring program shall be submitted quarterly to EPA Region IX in accordance with the specifications in the ODES (Ocean Data Evaluation System) Data Submissions Manual. All chemistry data (i.e., water quality, sediment pollutant, influent/effluent, bioaccumulation) must include the QA/QC blank data (in comparable units) and uncorrected values of the chemical analyses on the environmental samples. An abstract of the purpose of the program, a description of the methods used (both field and laboratory), and QA/QC procedures and results must be included for each data set submitted. The abstract and description of methods should follow the formats provided in the ODES Data Submissions Manual Updates. In addition, a data description questionnaire must be completed for each data set submitted. Data in ODES format should be submitted to EPA's 301(h) regional coordinator or the designated ODES system operator as ASCII text files on floppy disks. Other methods of data submission (e.g., electronic transfer methods) may also become available in the future; the latest submission options may be obtained from the 301(h) regional coordinator. Data submitters are responsible for performing rigorous quality assurance checks on the submitted data to ensure accuracy and compatibility with ODES requirements. To assist data submitters in the QA process, an ODES data entry package, with built-in data checking routines, has been developed and is available from the 301(h) regional coordinator. If data do not meet minimum compatibility standards similar to those provided by the data entry package, they will be returned to the submitter for correction. If these data submission requirements are not met, the discharger will not be in compliance with permit conditions.

See Section D.2., 'General Monitoring Requirements', contained in 'Standard Provisions and Reporting Requirements' of this permit regarding submittal of annual report summarizing QA activities for the previous year. See item 15. in this section of this permit regarding submittal of annual assessment reports. See Section F.4., 'Pretreatment Requirements' contained in 'Standard Provisions and Reporting Requirements' of this permit regarding submittal of annual pretreatment activities report.

3. Records and reports of marine monitoring surveys conducted to meet receiving water monitoring requirements of the "Monitoring Program" shall include, as a minimum, the following information:

a. A description of climatic and receiving water characteristics at the time of sampling (weather observations, floating debris, discoloration, wind speed and direction, swell or wave action, date and time of sampling or measurements, 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. The individual(s) who performed the sampling or measurements and a description of the sample collection and preservation procedures used in the survey.

d. A description of the specific method used for laboratory analysis. In general, analyses shall be conducted according to paragraph D.1. of the General Monitoring Requirements. Variations in procedure may be acceptable to accommodate the special requirements of sediment analysis. All such variation must be reported with the test results.

e. The date(s) the analyses were performed and the individual(s) who performed them.

4. Any noncompliance that may endanger health or the environment shall be reported verbally immediately, and in no case later than 24 hours from the time the discharger becomes aware of the noncompliance, to the State of Hawaii, Department of Health (808) 543-8309 and EPA Region IX, (415) 744-1905. Unless waived by EPA Region IX, a written report shall be submitted to the above agencies within five (5) days of awareness of noncompliance and its cause; the period of noncompliance (including exact dates, times) or anticipated duration; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. This provision includes but is not limited to:

a. Violation of a discharge prohibition;

b. Any "upset", "overflow", or unanticipated "bypass" that exceeds an effluent limitation; and

c. Violation of a maximum daily discharge limitation for any "toxic pollutant" or "hazardous substance."

5. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule shall be submitted within 14 days following each scheduled date unless otherwise specified within this permit. If reporting noncompliance, the report shall include a description of the reason, a description and schedule of tasks necessary to achieve compliance, and an estimated date for achieving full compliance. A second report shall be submitted within 14 days of full compliance.

6. All instances of noncompliance not reported under paragraph number E.2, E.4, and E.5 of 'General Reporting Requirements' shall be reported at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph E.4.

7. The discharger shall give advance notice to the HI DOH and EPA Region IX as soon as possible of any planned physical alterations or additions to the permitted facility or any planned physical alterations or additions to the permitted facility or any planned changes in the permitted facility or activity that may result in noncompliance with permit requirements.

8. Within 90 days after the "Monthly average" daily dry-weather flow equals or exceeds 75 percent of the design capacity of waste treatment and/or disposal facilities subject to this permit, the agency which owns such facilities shall file a written report with the HI DOH and EPA Region IX. The agency's senior administrative officer shall sign a letter which transmits that report and certifies that the discharger's policy-making body is adequately informed about the report's contents. The report shall include:

   a. The average daily flow for the month, the date on which the instantaneous peak flow occurred, the rate of that peak flow, and the total flow for the day;

   b. The best estimate of when the monthly average daily dry-weather flow rate will equal or exceed the design capacity of the facilities; and

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c. A schedule for studies, design, and other steps needed to provide additional capacity for waste treatment and/or disposal facilities before the waste flow rate equals the capacity of present units.

This requirement is applicable to those facilities which have not reached 75 percent of capacity as of the effective date of this permit and to those facilities which have reached 75 percent of capacity by that date but for which no such report has been pre- viously submitted. Such report shall be filed within 90 days of the effective date of permit.

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9. The discharger shall submit all reports required by this permit to the following agencies, as appropriate:

Director of Health
State of Hawaii
Environmental Protection
and Health Services Division
1250 Punchbowl Street
Honolulu, HI 96813

Regional Administrator
U. S. Environmental Protection Agency
Region IX
75 Hawthorne Street (W-5-3)
San Francisco, CA 94105

10. Transfer of control or ownership of a waste discharge facility must be preceded by a notice to the HI DOH and EPA Region IX at least thirty (30) days in advance of the proposed transfer date. The notice must include a written agreement between the existing discharger and proposed dis- charger containing specific dates for transfer of respon- sibility, coverage, and liability between them. Whether a permit may be transferred without modification or revocation and reissuance is at the discretion of the HI DOH and EPA Region IX. If permit modification or revocation and reis- suance is necessary, transfer may be delayed 180 days after the HI DOH and EPA Region 9's receipt of a complete applica- tion for waste discharge requirements and a NPDES permit.

11. Should the discharger discover that it failed to submit any relevant facts or that it submitted incorrect information in a report, it shall promptly submit the missing or correct information.

12. All reports required by this permit and other information requested by the HI DOH and EPA Region IX shall be signed by a principal executive officer or ranking elected official, or by a "duly authorized representative" of that person.

13. Any person signing a report shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there is significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

14. The discharger must notify the HI DOH and EPA Region IX whenever:

    a. There is a new introduction of pollutants into the sewer system from an "indirect discharger" which would be subject to Section 301 or 306 under the Clean Water Act if it were directly discharging these pollutants.

    b. There is a substantial change in the volume or character of pollutants being introduced to the system and the anticipated impact of the waste upon the quality and quantity of the aggregate discharge.

15. By June 30 of each year, the discharger shall submit an annual assessment report to the HI DOH and EPA Region IX. The report shall contain both tabular and graphical summaries of the monitoring data obtained during the previous year and shall present discussions of findings and conclusions with regard to compliance with the bases of the Section 301(h) decision and criteria. In-depth discussions of the results of the monitoring surveys shall be included and data from the reference station compared with data from the outfall and gradient stations. The discharger shall discuss the

compliance record and corrective actions taken, or which may be needed, to bring the discharger into full compliance with this permit. The report shall address operator certification and provide a list of current operating personnel and their grade of certification. The report shall include the date of the facilities's Operation and Maintenance Manual, the date the manual was last reviewed, and whether the manual is complete and valid for the current facilities. The report shall restate, for the record, the laboratories used by the discharger to monitor compliance with this permit and provide a summary of performance relative to Section D., the 'General Monitoring Requirements'.

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F. PRETREATMENT REQUIREMENTS

1. The discharger shall be responsible for the performance of all pretreatment requirements contained in 40 CFR 403 and shall be subject to enforcement actions, penalties, fines, and other remedies by the EPA Region IX, or other appropriate parties, as provided in the Clean Water Act, as amended. The discharger shall implement and enforce its Approved POTW Pretreatment Program. The discharger's Approved POTW Pretreatment Program is hereby made an enforceable action against an individual user for noncompliance with applicable standards and requirements as provided in the Clean Water Act.

2. The discharger shall enforce the requirements promulgated under Sections 307(b), 307(c), 307(d), and 402(b) of the Clean Water Act. The discharger shall cause industrial users subject to Federal Categorical Standards to achieve compliance no later than the date specified in those requirements or, in the case if a new industrial user, upon commencement of the discharge.

3. The discharger shall perform the pretreatment functions as required in 40 CFR 403, including, but not limited to:

   a. Implement the necessary legal authorities as provided in 40 CFR 403.8(f)(1);

   b. Enforce the pretreatment requirements under 40 CFR 403.5 and 403.6;

c. Implement the programmatic function as provided in 40 CFR 403.8(f)(2);

d. Provide the requisite funding and personnel to implement the pretreatment program as provided in 40 CFR 403.8(f)(3).

e. Implement the DSS Amendments to the General Pretreatment Regulations in accordance with the following schedule:

1) By 6 months from the date that this permit becomes effective, the permittee shall develop and implement an enforcement response plan as specified in 40 CFR 403.8(f)(5). The plan shall, at a minimum:

a) Describe how the permittee will investigate instances of noncompliance;
b) Describe the types of escalating enforcement responses that the permittee will take in response to all anticipated types of industrial user violations and the time periods within which responses will take place;

c) Identify (by title) the official(s) responsible for each type of response; and,
d) Adequately reflect the permittee's primary responsibility to enforce all applicable pretreatment requirements and standards.

2) By 12 months from the date that this permit becomes effective, the permittee shall have in place a permit or individual control mechanism for each significant industrial user (SIU), as specified in 40 CFR 403.8(f)(1)(iii). The permits must contain the following minimum conditions:

a) A statement of duration not to exceed five years;
b) A statement of non-transferability without prior notification;
c) A listing of all applicable effluent limits;

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d) Self-monitoring, sampling, reporting, notification and recordkeeping requirements (including pollutants to be monitored, sampling location, sampling frequency and sample type);
e) A statement of applicable civil and criminal penalties available for violations; and
f) Any applicable compliance schedule.

3) By 6 months from the date that this permit becomes effective, the permittee shall modify its legal authority to include the following requirements:

a) Prohibit the discharge of wastestreams with a closed cup flashpoint of less than 140 degrees Fahrenheit [40 CFR 403.5(b)(1)];
b) Prohibit the discharge of petroleum oil, non-biodegradable cutting oil, or products of mineral oil origin in amounts that will cause pass through or interference [40 CFR 403.5(b)(6)];

c) Prohibit the discharge of pollutants causing toxic gases, vapors or fumes in quantities that may cause acute worker health and safety problems [40 CFR 403.5(b)(7)];
d) Prohibit the discharge of trucked pollutants, except at points designated by the POTW [40 CFR 403.5(b)(8)];
e) Adopt a definition of SIU that is at least as stringent as that adopted by EPA in 40 CFR 403(t); and

f) Adopt a criterion that is at least as stringent as that adopted by EPA in 40 CFR 403.8(f)(2)(vii) for determining which IUs are in significant noncompliance.

4. By June 30 of each year, the discharger shall submit an annual report to the HI DOH and EPA Region IX describing the discharger's pretreatment activities over the previous 12 months. In the event that the discharger is not in compliance with any condition or requirement of this permit, then the discharger shall comply with such conditions and requirements. This report shall contain, but not be limited to, the following information:

   a. The results of all influent and effluent analysis performed by the discharger. Sampling and analysis occurring in each quarterly reporting period identified in paragraph d. below shall be reported in the quarterly reports required under paragraph d.

   b. A discussion of upset, interference, or pass through incidents, if any, at the POTW which the discharger knows or suspects were caused by industrial users of the POTW system. The discussion shall include the reasons why the incidents occurred, the corrective actions taken and, if known, the name and address of the industrial user(s) responsible. The discussion shall also include a review of the applicable pollutant limitations to determine whether any additional limitations or changes to existing requirements may be necessary to prevent pass through, interference, or noncompliance with sludge disposal requirements.

   c. The cumulative number of industrial users that the discharge has been notified regarding Baseline Monitoring Reports and the cumulative number of industrial user responses.

   d. An updated list of the discharger's industrial users, including their names and addresses, or a list of deletions and additions keyed to a previously submitted list. The discharger shall provide a brief explanation for each deletion. The list shall identify the industrial users subject to Federal Catergorical Standards by specifying which set(s) of standards are applicable. The

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list shall indicate which categorical industries, or specific pollutants from each industry, are subject to local limitations that are more stringent than the Federal Categorical Standards. The discharger shall also list the noncategorical industrial user that are subject only to local discharge limitations. The discharger shall characterize the compliance status of each industrial user by employing the following description:

(1) In compliance with Baseline Monitoring Report requirements (where applicable);

(2) Consistently achieving compliance;

(3) Inconsistently achieving compliance;

(4) Significantly violated applicable pretreatment requirements as defined by 40 CFR 403.8(f)(2)(vii);

(5) On a schedule to achieve compliance (include the date final compliance is required);

(6) Not achieving compliance and not on a compliance schedule; or

(7) The discharger does not know the industrial user's compliance status.

A report describing the compliance status of any industrial user characterized by the descriptions in item d.(3) through (7) above shall be submitted quarterly from the annual report date to the HI DOH and EPA Region IX. The report shall identify the specific compliance status of each industrial user. This quarterly reporting requirement shall commence upon issuance of this permit.

e. A summary of the inspection and sampling activities conducted by the discharger during the past year to gather information and data regarding industrial users. The summary shall include:

(1) The names and addresses of the industrial users subject to surveillance by the discharger and an explanation of whether they were inspected, sampled, or both and the frequency of these activities at each user; and

(2) The conclusions or results from the inspection or sampling of each industrial user.

f. A summary of the compliance and enforcement activities during the past year. The summary shall include the names and addresses of the industrial users affected by the following actions:

(1) Warning letters or notices of violation regarding the industrial users' apparent noncompliance with Federal Categorical Standards or local discharge limitations. For each industrial user, identify whether the apparent violation concerned the Federal Categorical Standards or local discharge limitations;

(2) Administrative Orders regarding the industrial users' noncompliance with Federal Categorical Standards or local discharge limitations. For each industrial user, identify whether the violation concerned the Federal Categorical Standards or local discharge limitations;

(3) Civil actions regarding the industrial users' noncompliance with Federal Categorical Standards or local discharge limitations. For each industrial user, identify whether the violation concerned the Federal Categorical Standards or local discharge limitations;

(4) Criminal actions regarding the industrial users' noncompliance with Federal Categorical Standards or local discharge limitations. For each industrial user, identify whether the violation concerned the Federal Categorical Standards or local discharge limitations;

(5) Assessment of monetary penalties. For each industrial user identify the amount of the penalties;

(6) Restriction of flow to the POTW; or

(7) Disconnection from discharge to the POTW.

g. A description of any significant changes in operating the pretreatment program which differ from the information in the discharger's Approved POTW Pretreatment Program including, but not limited to changes concerning: the program's administrative structure; local industrial discharge limitations; monitoring program or monitoring frequencies; legal authority or enforcement policy; funding mechanism; resource requirements; or staffing levels.

h. A summary of the annual pretreatment budget, including the costs of pretreatment program functions and equipment purchase.

i. A summary of public participation activities to involve and inform the public.

G. <u>SLUDGE REQUIREMENTS</u>

1. The following information must be submitted within sixty (60) days of the effective date of this permit to the following agencies, U. S. Environmental Protection Agency, Region IX, Pretreatment Program and Compliance Section, (W-5-2), 75 Hawthorne Street, San Francisco, California, 94105 and Hawaii State Department of Health, Environmental Protection and Health Services Division, 1250 Punchbowl Street, Honolulu, Hawaii 96813.

a. A characterization of sludge quality including sludge percent solids and quantitative results of chemical analysis for the priority pollutants listed in 1987 40 CFR 122 Appendix D, Tables II and III (excluding total phenols). A list of these pollutants is included as Attachment A. All sludge samples shall be a composite of a minimum of twelve (12) discreet samples taken at equal

time intervals over 24 hours. Suggested methods for analysis of sludge are provided on Attachment B. Recommended analytical holding times for sludge samples should reflect those specified in 40 CFR 136.3(e).

b. Annual sludge production in dry tons.

c. A schematic diagram showing sludge handling facilities (e.g. digestors, lagoons, drying beds, incinerators) and a solids flow diagram.

d. A narrative description of sludge dewatering and other treatment processes including process parameters. (For example, if sludge is digested, report average temperature and retention time of the digestors. If drying beds are used, report depth of application and drying time. If compositing is used, report the temperature achieved and duration.)

e. A description of disposal methods including the following information related to the disposal methods used at this facility. If more than one method is used, include the percentage of annual sludge production disposed by each method.

   i. For landfill disposal include the present classifications of the landfills used, and the names and locations of the facilities receiving sludge.

   ii. For land application include the application rate in lbs/acre/year (specify wet or dry), and the subsequent uses of the land.

   iii. For incineration include the disposal methods of ash, and the names and locations of facilities receiving ash (if applicable)

2. Records of sludge monitoring information must meet records content requirements, and must also include the results of associated blank, matrix spike, replicate samples and surrogate spikes.

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3. Sludge priority pollutant analysis as required by 1.a., above shall be performed twice annually at six month intervals. The results shall be submitted within sixty (60) days of sampling.

4. Sludge use/disposal practices must be in compliance with all current Federal and State regulations.

5. Reopener If an applicable "acceptable management practice or numerical limitation for pollutants in sewage sludge promulgated under Section 405(d)(2) of the Clean Water Act, as amended by the Water Quality Act of 1987, is more stringent than the sludge pollutant limit or acceptable management practice in this permit, or controls a pollutant not limited in this permit, this permit may be reopened to include requirements promulgated under Section 405(d)(2), regardless if whether or not the permit is modified. The permittee shall comply with the limitations by no later than the compliance deadline specified in the applicable regulations as required by Section 405(d)(2)(D) of the Clean Water Act.

6. Notice of change in sludge disposal practices. The permittee shall give prior notice to the Regional Administrator of changes planned in the permittee's sludge disposal practices.

H. NONINDUSTRIAL SOURCE CONTROL PROGRAM

In accordance with 40 CFR 125.64(d), the discharger shall implement the Nonindustrial Source Control Program according to the following time schedule:

Task	Compliance Date	Report of Compliance Due
1. Submit draft plan and schedule after compliance of Nonindustrial Source Control Program to the HI DOH and EPA Region IX	3 months after effective date of permit	1 month after compliance date

Task	Compliance Date	Report of Compliance Due
2. Begin implementation of plan and schedule	16 months after effective date	1 month after compliance date
3. Submit progress report	As specified in schedule of activities	Include report in annual report

I. ENFORCEMENT

1. The discharger must comply with all conditions of this permit. Permit noncompliance is a violation of State and Federal laws and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a renewal application for an NPDES permit.

2. Any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained in this permit shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than two years per violation, or by both for a first conviction. For a second conviction, such a person is subject to a fine of not more than $20,000 per day of violation, or imprisonment of not more than four years, or both.

3. Any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than two years per violation, or by both for a first conviction. For a second conviction, such a person is subject to a fine of not more than $20,000 per day of violation or imprisonment of not more than four years, or both.

4. Any person who causes a violation of any condition in this permit is subject to a civil penalty not to exceed $25,000 per day of each violation. Any person who negligently causes a violation of any condition in this permit is subject to a fine of not less than $2,500 nor more than $25,000 per day of violation, or by imprisonment for not more than one year, or both for a first conviction. For a second

conviction, such a person is subject to a fine of not more than $50,000 per day of violation, or by imprisonment of not more than two years, or both.

5. Any person who knowingly causes a violation of any condition of this permit is subject to a fine of not less than $5,000 nor more than $50,000 per day of violation, or by imprisonment for not more than three years, or by both for a first conviction. For a second conviction, such a person is subject to a fine of not more than $100,000 per day of violation, or imprisonment of not more than six years, or both.

6. Any person who knowingly causes a violation of any condition of this permit and, by so doing, knows at that time that he thereby places another person in imminent danger of death or serious bodily injury shall be subject to a fine of not more than $250,000, or imprisonment of not more than 15 years, or both. A person who is in an organization and violates this provision shall be subject to a fine of not more than $1,000,000 for a first conviction. For a second conviction under this provision, the maximum fine and imprisonment shall be doubled.

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

8. A discharger seeking to establish the occurrence of an "upset" has the burden of proof. A discharger who wishes to establish the affirmative defense of "upset" shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

   a. An "upset" occurred and that the discharger can identify the cause(s) of the "upset";

   b. The permitted facility was, at the time of "upset," being properly operated;

   c. The discharger submitted notice of "upset" as specified in paragraph E.4. of 'General Reporting Requirements'; and

   d. The discharger complied with any remedial measures required under paragraph C.10. of 'Provisions'.

No determination made before an action for noncompliance, such as during administrative review of the claims that noncompliance was caused by an upset, is final administrative action subject to judicial review.

ENDNOTES

1. The mass emmission rates for discharge limitations for BOD_5 and SS are based on a flow rate of 25.08 MGD (1.0988 m^3/sec). This is consistent with the Honouliuli Section 301(h) tentative decision document (TDD) dated April 1988.

2. The ZID dimensions set by the Honouliuli 301(h) Tentative Decision Document are 124.2 m (407.5 feet) wide and 660.7 m (2,167.7 feet) along the centerline of the diffuser.

3. The ZOM dimensions established by the Hawaii Department of Health, with the concurrence of EPA Region IX, for the Barbers Point discharge are 610 m (2000 feet) wide and 1,128 m (3,700 feet) along the centerline of the diffuser. This permit may be reopened by the permitting authorities to incorporate any new ZOM dimensions which may be necessitated by new information, new methods of calculation or other requirements of state or local law.

4. For all sampling except sludge, shall be arranged so that each day of the 7-day week is represented, at least once each month (5 days per week, twice weekly), or every two months (weekly).

5. Oil and grease monitoring in the influent and effluent of each plant shall consist of a minimum of 3 grab samples taken over a 24-hour period at approximately equal intervals. One sample shall be taken during peak flow. The solvent from each sample shall be extracted separately and the extracts combined in proportion to flow to produce a single composite sample for analysis.

6. Volatile priority pollutant monitoring in the influent and effluent of the plant shall consist of three (3) grab samples taken over a 24-hour period at approximately equal intervals. One sample shall be taken

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at peak flow. Each sample shall be preserved and analyzed separately. A mathematical composite will be computed for the three samples.

7. Priority pollutants and other pesticides shall be measured in the influent and effluent semi-annually (once during the wet season, and once during the dry season) during the first year of the permit. Thereafter, annual measurements will be made, alternating between the wet season one year, and the dry season the next year.

8. The time of day and day of week should be varied for weekly grab samples.

9. Enterococcus bacteria are measured to assess the need for and effectiveness of the chlorination program. The test methods for Enterococcus are available in the EPA Research and Development report, EPA-600/4-85/076 Test Methods for Escherichia coli and Enterococci in Water by the Membrane Filter Procedure. In addition, it is recommended that EPA document EPA-440/5-84-002 Ambient Water Quality Criteria for Bacteria - 1986, be consulted.

10. Total chlorine residual is measured to determine the chlorine demand of the effluent for calculation of the chlorine dose, and in order to determine compliance with effluent limitations for chlorine when these are in effect (see also endnote 20). The permittee shall also save a record of the continuous chlorine analyzer used for operation of the chlorination system for inspection if necessary. Contact time following chlorination and prior to discharge of the effluent shall not be less than 15 minutes.

11. Sampling of total chlorine residual shall be done only when chlorine is in use.

12. Although asbestos is a priority pollutant, asbestos will not be included in required monitoring unless specifically mentioned in the permit. Initially, analyses for asbestos shall be performed on an annual basis on the effluent and on the sludge from each plant. The term "priority pollutants" as used else

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where in this program does not include asbestos. If it is determined that significant amounts of asbestos are being discharged, additional monitoring may be required to determine whether there are any negative impacts on the ocean environment.

13. If station coordinates are not given in this permit, the exact location (i. e., latitude, longitude, depth) of the station shall be determined by the City and County of Honolulu, and reported in appropriate monitoring reports.

14. Surface samples (grabs) shall be taken within 1 meter of depth, mid-depth samples shall be taken at mid-depth (assuming no pycnocline exists), and bottom samples (grabs) shall be taken 0-1 meters above the bottom. Continuous profiles should provide readings every 10 meters.

15. Sampling shall be arranged to assure that 5 equally spaced samples per month are obtained (approximately equally spaced for months containing 31 days). Not more than 6 consecutive days without sampling shall occur between each month's monitoring schedule.

16. Visual observations of wind (e.g., direction, velocity), weather (e.g., cloudy, sunny or rainy), water current (e.g., direction), tidal condition (e.g., high, low or slack tide), water color, turbidity, odor, and floating or suspended matter in the water or on the beach, rocks and jetties, or beach structures shall be made and recorded at stations or while in transit. The character and extent of such matter will be described. The dates and times of sampling, and these observations shall also be reported.

17. Community structure analysis of benthic infauna shall include number of species, species abundance per grab sample, species richness, species diversity (e.g., Shannon-Weiner), species evenness and dominance, similarity analyses (e.g., Bray-Curtice, Jaccard, Sorensen), and cluster analyses (e.g., unweighted pair group method).

18. Tissue samples removed from individuals shall be of uniform weight, and all individuals should be of the same size and sex, if possible.

19. Where appropriate, individuals comprising the smallest 10 percent by weight shall not be used as part of the composite sample. Individuals for tissue analysis shall be randomly selected from the remaining organisms.

20. The effluent limitations for total residual chlorine shall be in effect only when the discharge is being chlorinated. The need for disinfection of the Honouliuli WWTP effluent shall be determined by the Director of Health at any point during the term of the permit. The final determination concerning disinfection shall be based upon (but not limited to) the permittee's ability to meet current State of Hawaii water quality standards for marine recreational waters.

    Additional criteria shall be the results of the bacteriological monitoring program required by the Section 301(h)-modified Sand Island WWTP NPDES Permit No. HI 0020117, Part C.3. If the results of this monitoring program indicate that disinfection of the Sand Island WWTP effluent shall be required, disinfection of the Honouliuli WWTP effluent shall also be required.

TECHNICAL GUIDANCE DOCUMENTS

A series of technical guidance documents for the 301(h) program have been developed by EPA's 301(h) contractor, Tetra Tech, Inc., under the direction of EPA Headquarters, Office of Marine and Estuarine Protection. These documents include the following:

1. U.S. EPA (1987a). Quality Assurance and Quality Control (QA/QC) for 301(h) Monitoring Programs: Guidance on Field and Laboratory Methods. Office of Marine and Estuarine Protection, U.S. Environmental Protection Agency. EPA 430/9-86-004, 267 pp.

2. U.S. EPA (1987b). Recommended Biological Indices for 301(h) Monitoring Programs. Office of Marine and Estuarine Protection, U.S. Environmental Protection Agency. EPA 430/9-86-002, 17 pp.

3. U.S. EPA (1987c). Evaluation of Survey Positioning Methods for Nearshore Marine and Estuarine Waters. EPA 430/9-86-003.

4. U.S. EPA (1987d). Bioaccumulation Monitoring Guidance: Selection of Target Species and Review of Available Data - Volume 1. EPA 430/9-86-006.

5. Tetra Tech, Inc. (1987a). Guidance for Conducting Fish Liver Pathology Studies During 301(h) Monitoring. Tetra Tech, Inc., Bellevue, Wa.

6. Tetra Tech, Inc. (1987b). Bioaccumulation Monitoring Guidance: Strategies for Sample Replication and Compositing. Tetra Tech, Inc., Bellevue, Wa.

7. Tetra Tech, Inc. (1987c). Technical Support Document for ODES Statistical Power Analysis. Tetra Tech, Inc., Bellevue, Wa.

8. Tetra Tech, Inc. (1987c). ODES Data Submission Manual. Tetra Tech, Inc., Bellevue, Wa.

9. Tetra Tech, Inc. (1987d). ODES User's Guide. Tetra Tech, Inc., Bellevue, Wa.

10. Tetra Tech, Inc. (1986a). Analytical Methods for EPA Priority Pollutants and 301(h) Pesticides in Tissues from Estuarine and Marine Organisms. Tetra Tech, Inc., Bellevue, Wa.

11. Tetra Tech, Inc. (1986b). Analytical Methods for EPA Priority Pollutants and 301(h) Pesticides in Estuarine and Marine Sediments. Tetra Tech, Inc., Bellevue, Wa.

12. Tetra Tech, Inc. (1985a). Estimating the Potential for Bioaccumulation of Priority Pollutants (Bioaccumulation Monitoring Guidance #1). Tetra Tech, Inc., Bellevue, Wa.

13. Tetra Tech, Inc. (1985b). Recommended Analytical Detection Limits (Bioaccumulation Monitoring Guidance #3). Tetra Tech, Inc., Bellevue, Wa.

PRIORITY POLLUTANTS

Metals

Antimony
Arsenic
Beryllium
Cadmium
Chromium
Copper
Lead
Mercury
Nickel
Selenium
Silver
Thallium
Zinc

Other

Cyanide
Asbestos (?)

Pesticides

Aldrin
Dieldrin
Chlordane
4,4-DDT
4,4-DDE
4,4-DDD
Alpha-Endosulfan
Beta-Endosulfan
Endosulfan Sulfate
Endrin
Endrin Aldehyde
Heptachlor
Heptachlor Epoxide
Alpha-BHC
Beta-BHC
Gamma-BHC (Lindane)
Delta-BHC
PCB 1016
PCB 1221
PCB 1232
PCB 1242
PCB 1248
PCB 1254
PCB 1260
Toxaphene

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Base/Neutral Extractibles

Acenaphthene
Benzidine
1,2,4-Trichlorobenzene
Hexachlorobenzene
Hexachloroethane
Bis(2-Chloroethyl)Ether
2-Chloronaphthalene
1,2-Dichlorobenzene
1,3-Dichlorobenzene
1,4-Dichlorobenzene
3,3-Dichlorobenzidine
2,4-Dinitrotoluene
2,6-Dinitrotoluene
1,2-Diphenylhydrazine
Fluoranthene
4-Chlorophenyl Phenyl Ether
4-Bromophenyl Phenyl Ether
Bis(2-Chloroisopropyl)Ether
Bis(2-Chloroethoxy)Methane
Hexachlorobutadiene
Hexachlorocyclopentadiene
Isophorone
Naphthalene
Nitrobenzene
N-Nitrosodimethylamine
N-Nitrosodiphenylamine
N-Nitrosodi-N-Propylamine
Bis(2-Ethylhexyl)Phthalate
N-Butyl Benzyl Phthalate
Di-N-Butyl Phthalate
Di-N-Octyl Phthalate
Diethyl Phthalate
Dimethyl Phthalate
1,2-Benzanthracene
3,4-Benzo-Pyrene
3,4-Benzofluoranthene
11,12-Benzofluoranthene
Chrysene
Acenaphthylene
Anthracene
1,12-Benzoperylene
Fluorene
Phenanthrene
1,2,5,6-Dibenzanthracene
Indeno(1,2,3-CD)Pyrene
Pyrene
TCDD (?)
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Acid Extractibles

2,4,6-Trichlorophenol
P-Chloro-M-Cresol
2-Chlorophenol
2,4-Dichlorophenol
2,4-Dimethylphenol
2-Nitrophenol
4-Nitrophenol
2,4-Dinitrophenol
4,6-Dinitro-O-Cresol
Pentachlorophenol
Phenol

Volatile Organics

Acrolein
Acrylonitrile
Benzene
Carbon Tetrachloride
Chlorobenzene
1,2-Dichloroethane
1,1,1-Trichloroethane
1,1-Dichloroethane
1,1,2-Trichloroethane
1,1,2,2-Tetrachloroethane
Chloroethane
2-Chloroethyl Vinyl Ether
Chloroform
1,1-Dichloroethylene
1,2-Trans-Dichloroethylene
1,2-Dichloropropane
1,3-Dichloropropene
Ethylbenzene
Methylene Chloride
Methyl Chloride
Methyl Bromide
Bromoform
Bromodichloromethane
Dibromochloromethane
Tetrachloroethylene
Toluene
Trichloroethylene
Vinyl Chloride

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Deleted

Trichlorofluoromethane
Dichlorodiflouromethane
-(46 FR 2266, 8Jan81)
Bis(Chloromethyl)Ether
-(46 FR 10724, 4Feb81)

Suggested methods for the analysis of sludge samples:

Pesticides: EPA Method 8080 (from: Test Methods for Evaluating Solid Waste: Physical/ Chemical Methods July, 1982, SW 846, 2nd ed.).

or

EPA Method 608 (from: Test Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater, July, 1982 EPA-600/4-82-057).

Volatile Organics and Semi-Volatile Organics (BN/A's):

EPA Methods 624 and 625 (from: Test Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater, July, 1982 EPA-600/4-82-057).

or

EPA Methods 8240 and 8270 (from: Test Methods for Evaluating Solid Waste: Physical/ Chemical Methods July, 1982, SW 846, 2nd ed.).

Metals: will be analyzed using methods SW-846 or the EPA 600 series for metals, a described below.

	SW-846		EPA 600 (metals)
Element	Digestion and Analysis		Analysis
Sb	3050	7040/7041	204
As	3050	7060	206
Be	3050	7090/7091	208
Cd	3050	7130/7131	213
Cr	3050	7190/7191	218.1-3
Cu	3050	7210/7211	220
Pb	3050	7420/7421	239
Ni	3050	7520/7521	249
Se	3050	7740	270
Ag	3050	7760/7761	272
Th	3050	7840	279
Zn	3050	7950/7951	289
Hg	N/A	7470/7471	245
CN^-	N/A	9010	335

(from: Test Methods for Evaluating Solid Waste:Physical/ Chemical Methods July, 1982. SW 846, 2nd ed.).
(from : Methods for Chemical Analysis of Water and Wastes March, 1983. EPA 600/4-79020).