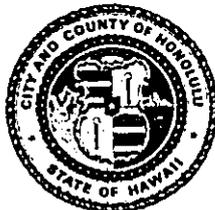


Disinfection Facility Kailua Regional Wastewater Treatment Plant
DEPARTMENT OF WASTEWATER MANAGEMENT
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET
HONOLULU, HAWAII 96813

JEREMY HARRIS
MAYOR



RECEIVED

'96 SEP 26 P3:29

FELIX B. LIMTIACO, P.E.
DIRECTOR

CHERYL K. OKUMA-SEPE, ESQ.
DEPUTY DIRECTOR

OFFICE OF ENVIRONMENTAL
QUALITY CONTROL

WEP 96-585

September 27, 1996

Mr. Gary Gill, Director
Office of Environmental Quality Control
220 South King Street, 4th Floor
Honolulu, Hawaii 96813

Dear Mr. Gill:

Subject: Notice of Determination - Negative Declaration
Effluent Disinfection Facility
Kailua Regional Wastewater Treatment Plant
TMK: 4-4-11:81

The Department of Wastewater Management (WWM), City and County of Honolulu, is the proposing and accepting agency for the above referenced project. The WWM has reviewed and responded to comments related to the draft environmental assessment for the project. The 30-day review period began on June 8, 1996. The WWM has determined that implementation of this project will not have significant environmental effects. Therefore, the agency is issuing a negative declaration. Please publish this notice in the October 8, 1996 Environmental Notice. We have enclosed a completed OEQC Bulletin Publication Form and four copies of the final EA.

Identification of Proposing Agency

The Department of Wastewater Management, City and County of Honolulu

Identification of Accepting Agency

The Department of Wastewater Management, City and County of Honolulu

Brief Description of Proposed Action

The proposed project provides an effluent disinfection facility utilizing ultraviolet (UV) light at the Kailua Regional Wastewater Treatment Plant (WWTP). This project was initiated to satisfy on the three Consent Decree (Civil No. 92-00263 DAE) agreements executed between the plaintiffs (Save Our Bays and Beaches, Hawaii's Thousand Friends, Sierra Club, and Surfrider Foundation) and the City and County of Honolulu to settle the lawsuit related to discharges from the Kailua Regional WWTP and Kaneohe Pre-Treatment Facility.

Design of the facility will be dependent upon the results of a pilot study currently being conducted at the Kailua Regional WWTP. However, in general, the facility will include arrays of UV lamps, electrical power and control equipment, concrete channel(s) to direct effluent flow through the UV lamps, piping, and isolation gates. The design capacity is tentatively set at 30 million gallons per day (MGD).

**Determination
Negative Declaration**

Reasons Supporting Determination

This determination is based on the significance criteria listed in §11-200-12 of the Environmental Impact Statement Rules. Specifically, these significance criteria are addressed below:

1. The proposed project will not result in an adverse commitment, loss, or destruction of any natural or cultural resources. The proposed site has already been developed and in use for almost 30 years.
2. The range of beneficial uses of the environment will not be curtailed. The project will provide a disinfection treatment process to the Kailua Regional WWTP. The disinfection process will have either a beneficial impact on the environment or no impact on the environment.
3. The project will not conflict with the state's long-term environmental policies or goals and guidelines as expressed in Chapter 344, HRS, and any revisions thereof and amendments thereto, court orders or executive orders. The project conforms with the Consent Decree (Civil No. 92-00263 DAE) issued by the U.S. District Court, District of Hawaii.
4. The proposed project will not substantially affect the economic or social welfare of the community or state. Although there is an associated cost the CCH, the Consent Decree requires that this money be spent for such a purpose.
5. The project will not adversely affect public health; rather, the project will ensure public health by providing a disinfection treatment process for the effluent from the Kailua Regional WWTP.
6. The project will not involve adverse secondary impact, such as population changes or effect on public facilities.
7. The project will not involve a substantial degradation of environmental quality and may even enhance the environmental quality of the receiving waters.
8. The project does not involve a commitment for larger actions and will not result in significant cumulative effect upon the environment. The proposed actions are complete and will require no further action.
9. The project will not substantially affect a rare, threatened or endangered species, or its habitat. The project will not affect the habitat of the endangered Hawaiian Stilt.
10. The project will not detrimentally affect air or water quality or ambient noise levels. Short-term impact will occur during the construction phase.

Mr. Gary Gill

- 3 -

September 27, 1996

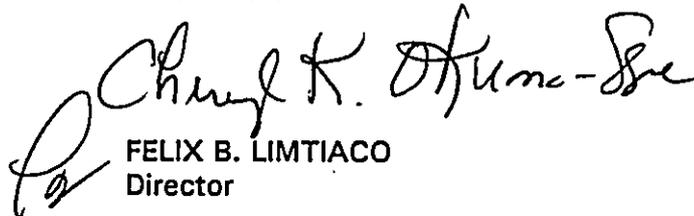
11. The project will not affect an environmentally sensitive area such as a flood plain, tsunami zone, erosion-prone area, geological hazardous land, estuary, fresh water, or coastal waters. The project may have a beneficial impact on coastal waters due to the additional treatment of treated effluent prior to ocean discharge.
12. The project does not affect identified scenic vistas or view planes. The proposed structure will be small, have a low profile and be constructed at an existing facility.
13. The project does not require substantial energy consumption. There will be *greater site power requirement because of the new UV disinfection system.* However, in order to achieve the same amount of disinfection using a chlorination system, a large amount of chemical would be used. The power required to produce these chemicals (chlorinating and dechlorinating agents) is believed to be greater than the energy required to operate a UV disinfection system.

Should you have any questions, please contact the following person:

Proposing Agency: Mr. Po Chan
Department of Wastewater Management
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813
(808) 523-4324

Consultant: Mr. Wes Geertsema
M & E Pacific, Inc.
1001 Bishop Street
Suite 500, Pauahi Tower
Honolulu, Hawaii 96813
(808) 521-3051

Very truly yours,


FELIX B. LIMTIACO
Director

Enclosures

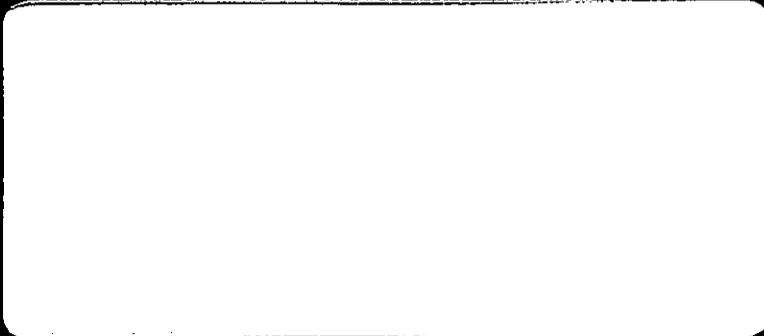
131

1996-10-08-0A-FEA - \$

Disinfection Facility

Kailua Regional Wastewater Treatment

Plant



FILE COPY

OCT 8 1996

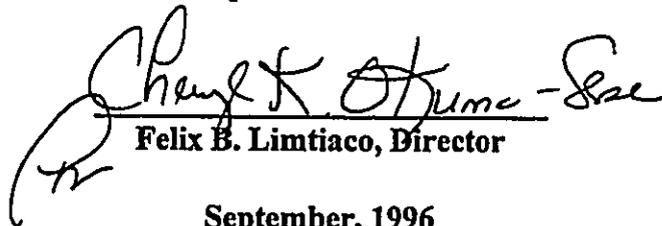
**FINAL
ENVIRONMENTAL ASSESSMENT**

**Disinfection Facility
Kailua Regional Wastewater Treatment Plant
TMK: 4-4-11: 81**

Prepared for

**City and County of Honolulu
Department of Wastewater Management**

Responsible Official:


Felix B. Limtiaco, Director

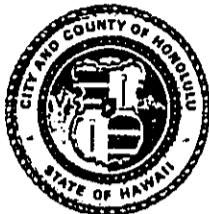
September, 1996

Prepared by

**M&E Pacific, Inc.
1001 Bishop Street,
500 Pauahi Tower
Honolulu, Hawaii
96813-3429**

DEPARTMENT OF WASTEWATER MANAGEMENT
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET
HONOLULU, HAWAII 96813



JEREMY HARRIS
MAYOR

FELIX B. LIMTIACO, P.E.
DIRECTOR

CHERYL K. OKUMA-SEPE, ESQ.
DEPUTY DIRECTOR

September 27, 1996

WEP 96-585

Mr. Gary Gill, Director
Office of Environmental Quality Control
220 South King Street, 4th Floor
Honolulu, Hawaii 96813

Dear Mr. Gill:

Subject: Notice of Determination - Negative Declaration
Effluent Disinfection Facility
Kailua Regional Wastewater Treatment Plant
TMK: 4-4-11:81

The Department of Wastewater Management (WWM), City and County of Honolulu, is the proposing and accepting agency for the above referenced project. The WWM has reviewed and responded to comments related to the draft environmental assessment for the project. The 30-day review period began on June 8, 1996. The WWM has determined that implementation of this project will not have significant environmental effects. Therefore, the agency is issuing a negative declaration. Please publish this notice in the October 8, 1996 Environmental Notice. We have enclosed a completed OEQC Bulletin Publication Form and four copies of the final EA.

Identification of Proposing Agency

The Department of Wastewater Management, City and County of Honolulu

Identification of Accepting Agency

The Department of Wastewater Management, City and County of Honolulu

Brief Description of Proposed Action

The proposed project provides an effluent disinfection facility utilizing ultraviolet (UV) light at the Kailua Regional Wastewater Treatment Plant (WWTP). This project was initiated to satisfy on the three Consent Decree (Civil No. 92-00263 DAE) agreements executed between the plaintiffs (Save Our Bays and Beaches, Hawaii's Thousand Friends, Sierra Club, and Surfrider Foundation) and the City and County of Honolulu to settle the lawsuit related to discharges from the Kailua Regional WWTP and Kaneohe Pre-Treatment Facility.

Design of the facility will be dependent upon the results of a pilot study currently being conducted at the Kailua Regional WWTP. However, in general, the facility will include arrays of UV lamps, electrical power and control equipment, concrete channel(s) to direct effluent flow through the UV lamps, piping, and isolation gates. The design capacity is tentatively set at 30 million gallons per day (MGD).

**Determination
Negative Declaration**

Reasons Supporting Determination

This determination is based on the significance criteria listed in §11-200-12 of the Environmental Impact Statement Rules. Specifically, these significance criteria are addressed below:

1. The proposed project will not result in an adverse commitment, loss, or destruction of any natural or cultural resources. The proposed site has already been developed and in use for almost 30 years.
2. The range of beneficial uses of the environment will not be curtailed. The project will provide a disinfection treatment process to the Kailua Regional WWTP. The disinfection process will have either a beneficial impact on the environment or no impact on the environment.
3. The project will not conflict with the state's long-term environmental policies or goals and guidelines as expressed in Chapter 344, HRS, and any revisions thereof and amendments thereto, court orders or executive orders. The project conforms with the Consent Decree (Civil No. 92-00263 DAE) issued by the U.S. District Court, District of Hawaii.
4. The proposed project will not substantially affect the economic or social welfare of the community or state. Although there is an associated cost the CCH, the Consent Decree requires that this money be spent for such a purpose.
5. The project will not adversely affect public health; rather, the project will ensure public health by providing a disinfection treatment process for the effluent from the Kailua Regional WWTP.
6. The project will not involve adverse secondary impact, such as population changes or effect on public facilities.
7. The project will not involve a substantial degradation of environmental quality and may even enhance the environmental quality of the receiving waters.
8. The project does not involve a commitment for larger actions and will not result in significant cumulative effect upon the environment. The proposed actions are complete and will require no further action.
9. The project will not substantially affect a rare, threatened or endangered species, or its habitat. The project will not affect the habitat of the endangered Hawaiian Stilt.
10. The project will not detrimentally affect air or water quality or ambient noise levels. Short-term impact will occur during the construction phase.

Mr. Gary Gill

- 3 -

September 27, 1996

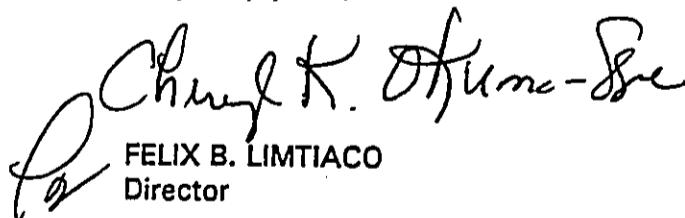
11. The project will not affect an environmentally sensitive area such as a flood plain, tsunami zone, erosion-prone area, geological hazardous land, estuary, fresh water, or coastal waters. The project may have a beneficial impact on coastal waters due to the additional treatment of treated effluent prior to ocean discharge.
12. The project does not affect identified scenic vistas or view planes. The proposed structure will be small, have a low profile and be constructed at an existing facility.
13. The project does not require substantial energy consumption. There will be greater site power requirement because of the new UV disinfection system. However, in order to achieve the same amount of disinfection using a chlorination system, a large amount of chemical would be used. The power required to produce these chemicals (chlorinating and dechlorinating agents) is believed to be greater than the energy required to operate a UV disinfection system.

Should you have any questions, please contact the following person:

Proposing Agency: Mr. Po Chan
Department of Wastewater Management
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813
(808) 523-4324

Consultant: Mr. Wes Geertsema
M & E Pacific, Inc.
1001 Bishop Street
Suite 500, Pauahi Tower
Honolulu, Hawaii 96813
(808) 521-3051

Very truly yours,


FELIX B. LIMTIACO
Director

Enclosures

TABLE OF CONTENTS

1.0	Applicant.....	1
2.0	Approving Agency.....	1
3.0	Consultation List.....	1
4.0	Project Objective and Need.....	1
5.0	Project Description	2
5.1	Disinfection Facility Design	2
5.2	Cost.....	3
6.0	Summary of Affected Environment.....	4
6.1	Location and Access	4
6.2	Kailua Regional WWTP Service Area.....	4
6.3	Environmentally Sensitive Areas.....	4
6.4	Topography and Climate.....	5
6.5	Water Quality.....	5
6.6	Infrastructure.....	5
6.7	Land Use Zoning.....	5
6.8	Geology and Hydrology.....	6
6.9	Soils.....	6
6.10	Natural Hazards.....	6
6.11	Archaeological and Historic Sites.....	6
6.12	Biological Resources.....	7
7.0	Probable Impacts and Mitigation Measures.....	7
7.1	Short-term Construction Related Impacts.....	7
7.2	Mitigation Measures to Impacts.....	7
7.3	Water Quality.....	8
7.4	Economic	8
8.0	Alternatives to the Proposed Action.....	9
8.1	No Action.....	9
8.2	Alternate Site	9
9.0	List of Permits	9
10.0	Determination.....	9
11.0	References	12

Appendix A: Comments and Responses

LIST OF FIGURES

- Figure 1: Regional Location Map
- Figure 2: Tax Map Key Location Map
- Figure 3: Proposed UV Structure Location 1
- Figure 4: Proposed UV Structure Location 2
- Figure 5: Proposed UV Structure Location 3
- Figure 6: Environmentally Sensitive Areas

1.0 APPLICANT

The applicant for the proposed Kailua Regional Wastewater Treatment Plant Disinfection Facility (project) is the Department of Wastewater Management (DWWM), City and County of Honolulu (CCH). This Environmental Assessment was prepared in accordance with Section 343, Hawaii Revised Statutes (HRS) and Chapter 200 of Title 11, Hawaii Administrative Rules (HAR). This Environmental Assessment is necessary because of the use of County land and funds.

2.0 APPROVING AGENCY

The accepting agency on a determination of significance for this Environmental Assessment is the CCH DWWM.

3.0 CONSULTATION LIST

The following parties were contacted during the preparation of this draft environmental assessment;

State of Hawaii:

Department of Land and Natural Resources:
Historic Preservation Division
Forestry and Wildlife Division
Department of Health
Office of Environmental Quality Control
Office of State Planning
University of Hawaii
Water Resources Research Center

City and County of Honolulu:

Department of Public Works:
Storm Water Quality Section
Department of Land Utilization

4.0 PROJECT OBJECTIVE AND NEED

The project objective is to provide a permanent disinfection facility that uses ultraviolet (UV) light to disinfect the effluent from the Kailua Regional Wastewater Treatment Plant (WWTP).

This project was initiated to satisfy one of the terms and conditions of a Consent Decree (Reference No.2) executed between the plaintiffs (Save Our Bays and Beaches, Hawaii's Thousand Friends, Sierra Club, and Surfrider Foundation) and the C&C to settle the

lawsuit related to discharges from the Kailua WWTP and Kaneohe WWTP. The lawsuit alleged that the discharges violated the Federal Water Pollution Control Act and the terms and conditions of National Pollutant Discharge Elimination System permits. The proposed disinfection facility will satisfy one of three Consent Decree agreements. The other two agreements provide for plaintiff involvement in the drafting of a facilities plan for the Kailua and Kaneohe service areas (including the Kailua WWTP) and monitoring and improvement of the water quality of the Kailua/Kaneohe watershed.

5.0 PROJECT DESCRIPTION

The project will be located at the existing Kailua Regional WWTP in the district of Koolaupoko (see Figure 1 and Figure 2). The proposed UV facility will equip the existing plant with the capability to disinfect plant effluent prior to discharge. The proposed UV disinfection facility will comply with all technical aspects of the Consent Decree.

UV disinfection of wastewater is performed by exposing the wastewater to UV light. The UV radiation damages the nucleic acids of the microorganisms in the water leaving them unable to reproduce. Since it is a physical, rather than a chemical process, no hazardous materials are used or byproducts produced. The effectiveness of UV disinfection is highly dependent upon the dose and the materials in the water (due to light absorbance, reflectance, shadowing and protection) which can reduce UV transmittance and even contain shielded microorganisms. At Kailua Regional WWTP, UV radiation is expected to kill 99% of enterococci, which is the standard indicator used for marine recreational waters.

Interest in UV radiation as the means of disinfection for this facility instead of the more traditional chlorination was a result of safety, health and cost concerns. Unlike the chlorination process, UV disinfection neither uses hazardous materials nor creates hazardous byproducts. Chemical oxidants, such as chlorine, have been shown to create harmful byproducts. Since the effluent from the facility is discharged into a sensitive marine environment, use or production of any harmful byproducts would be a critical issue. Chlorination requires the use and storage of potentially hazardous chemicals. An accidental release of these chemicals could create a health hazard for the surrounding community. Proper and safe chlorination and dechlorination facilities and systems are quite expensive in both capital and O&M costs (chemical costs), and may be more costly than comparable UV disinfection systems.

5.1 Disinfection Facility Design

Consistent with the Kailua Consent Decree, a pilot study is currently being conducted to determine the technical feasibility of the project. Two types of UV systems are being considered; a low pressure/low-intensity UV radiation unit and a more recently developed medium pressure/high intensity UV radiation unit. The low intensity unit requires

significantly more UV bulbs and therefore a much larger facility. Since the Kailua Regional WWTP is subject to excessive flows during heavy rainstorms, the pilot study will assess the suitability of excess storm flow, primary treated effluent and/or secondary treated effluent for treatment by UV disinfection. The study will assess the performances of the two UV units as well as try to determine the cleaning frequency which will be required for the low intensity unit, since cleaning of this unit must be performed manually. Cleaning should not be an issue for the high intensity unit since it has a built-in automatic cleaning system. Because of this feature and the greater number of bulbs required by the low intensity system, the low pressure system is expected to have much higher maintenance requirements. These maintenance requirements will be assessed during the study.

Results of the pilot study will be evaluated and used in the design of the permanent facility. The design capacity, according to CCH, is tentatively set at 30 million gallons per day (MGD). Disinfection equipment will include arrays of UV lamps, electrical power and control equipment, a concrete channel to direct effluent flow through the UV lamps, and associated piping and isolation gates. The design effort will concentrate on achieving a small building footprint without compromising the operational requirements and environment. Lamp intensity and/or the number of lamps in service will be controlled in response to effluent flow rate and UV transmittance for energy efficiency. Construction methods and sequencing will be engineered so that the existing plant operates without interruption during construction. The equipment specification will require proper dose delivery through ideal internal hydraulics, lamp failure and low dose alarms, longevity, and reliability. Lastly, design features will be incorporated to minimize maintenance requirements while encouraging routine O&M procedures and measures to assure operator safety.

Figures 3 through 5 show possible locations for the disinfection facility. It is noted that UV reactors generally have a low profile (less than 25 feet), and the low intensity UV unit will require a larger structure and more space than the high intensity unit. Nevertheless, the proposed concrete channel will direct effluent flow to pass through the UV disinfection system before being pumped to the Mokapu ocean outfall (plant discharge is discussed in Section 6.2). Instrumentation, power and control equipment for the UV lamps will be situated adjacent to the channel.

5.2 Cost

The cost of the proposed project will be estimated based on results of the pilot study and preliminary engineering report. One of the terms and conditions of the Consent Decree is to provide a permanent disinfection facility with a construction cost of \$2,800,000 or less.

6.0 ENVIRONMENTAL CHARACTERISTICS OF THE PROJECT

6.1 Location and Access

Figure 1 shows the proposed project site, located at the Kailua Regional WWTP on Kaneohe Bay Drive within the Koolau-poko judicial district. The site is identified as the 25.13 acre parcel Tax Map Key (TMK) 4-4-11:81, and the owner is identified as the City and County of Honolulu (Figure 2). It is a government exempt parcel allocated for the existing Kailua Regional WWTP. The UV disinfection facility will be located within the existing site boundaries, most likely near the effluent pump station as shown on Figures 3, 4 and 5.

The site is readily accessible via Kaneohe Bay Drive which is a major thoroughfare in the Kaneohe-Kailua community. Construction of an additional access road is not needed for this project.

6.2 Kailua Regional WWTP Service Area

The Kailua Regional WWTP receives wastewater from the greater Kailua, Kaneohe, Ahuimanu and Kahaluu areas, which are comprised primarily of residential neighborhoods with mixed commercial development. The current average dry weather flow in the service area is about 12 million gallons per day (mgd). The population for the service area is projected to be approximately 100,000 in the year 2005 (Reference No.4). Wastewater is conveyed to the Kailua Regional WWTP from several pumping stations located throughout the service area. Wastewater from the Kaneohe area is pretreated at the Kaneohe Pre-Treatment Facility (PTF) prior to arrival at the Kailua Regional WWTP. Process units at the Kailua Regional WWTP include screenings and grit removal, primary clarifiers, biotowers, a solids contactor, secondary clarifiers, sludge digesters and dissolved air flotation (DAF) thickeners.

6.3 Environmentally Sensitive Areas

The Kailua Regional WWTP is located adjacent to the Nuupia Pond wetland area (see Figure 6). The wetland area is located within a Special Management Area (SMA) and is considered biologically significant as a habitat of the endangered Hawaiian Stilt. The Kailua Regional WWTP is located near, but not within, the SMA boundary.

Residential development, including the Aikahi Elementary School and playground, is located near the Kailua Regional WWTP to the south and east. The project will not impact these areas, except during construction which is anticipated to last approximately 6 months (see Section 7.1).

6.4 Topography and Climate

The Kailua Regional WWTP is located on the windward coast of Oahu. Ground elevations at the site are approximately 20 feet above mean sea level. In general, Kailua has a mild subtropical climate and strong northeast tradewinds. The mean temperature is 75 °F, and the mean annual rainfall is 50 inches per year. Heavy rains often occur during November through April (Reference No.4).

6.5 Water Quality

Plant effluent is discharged from the effluent pump station (current capacity 30 mgd) through the Mokapu Ocean Outfall. The discharge ports for the outfall are located at a depth of 100 feet below the ocean surface, one mile offshore from Mokapu Point. The receiving waters are classified as Open Coastal Waters Class A.

Discharges of less than secondary treated wastewater during wet weather emergency bypasses of the old treatment facilities had resulted in violations of the Federal Water Pollution Control Act. These violations triggered the lawsuit and Consent Decree described in Section 4.0. Current Kailua Regional WWTP flows average 12 mgd. Additional flow is received during storm events due to inflow and infiltration of stormwater into the collection system. Heavy rains can result in flows in excess of 30 mgd at times, requiring emergency bypassing of treatment processes.

6.6 Infrastructure

Power for the Kailua Regional WWTP is provided by Hawaiian Electric Company (HECO). Telecommunication, water and sewer services are currently available at the project site.

6.7 Land Use and Zoning

The May 1983 Koolauapoko Development Plan classifies the Kailua Regional WWTP site for use as a Public Facility. The site is classified as Sewer (land use code 75) within an R-10 residential district, according to the State Land Use Commission. The Kailua Regional WWTP is classified as a government exempt parcel within a residential property classification, according to the generalized "PITT" land use codes. The UV disinfection facility will be an additional treatment process within an existing facility, thus no conflict of land use is anticipated.

Adjacent properties are shown in Figure 6. They include the Aikahi Park residential development and the Nuupia Pond wetland area. The Kailua Regional WWTP is adjacent to, but not within, the Special Management Area (SMA) defined by the Department of Land Utilization, CCH.

6.8 Geology and Hydrology

The project site is located on the windward side of the volcanic Koolau Range, on the north-eastern side of Oahu. The continuing processes of erosion, deposition, weathering and soil formation have formed valleys and deposits of alluvial material. Coralline sand predominates at the surface along the Kailua Bay coastline for several thousand feet inland (Reference No.4).

A low permeability zone known as caprock is situated between the upper sedimentary layers and the underlying basalt along the Oahu coastline. This caprock restricts the percolation of nonpotable brackish water, with high nutrient and salt concentrations from entering the basaltic aquifers. The caprock also prevents basal water, which is the primary drinking water source for Oahu, from moving seaward. There are no surface water bodies within the confines of Kailua Regional WWTP.

The Kailua Regional WWTP is located seaward of the Department of Health (DOH) Underground Injection Control line. Therefore, the groundwater underlying the project site is not considered a source of drinking water.

6.9 Soils

The project area lies on land classified by the U.S. Soil Conservation Service (Reference No.5), as Kokokahi clay, Keeau clay, and Mamala stony silty clay. The soils belong to the Kaena-Waialua association. This association is described as deep with fine-textured to coarse-textured subsoil or underlying material; on coastal plains and talus slopes and in drainage ways. Permeability, runoff and erosion hazard of the soils are slow to moderate. Design of the proposed project will be in accordance with structural standards and guidelines regarding building on the existing soil.

6.10 Natural Hazards

Although the project site is near the coastline, it is not in a flood-prone area. The Flood Insurance Rate Map (Reference No.8) indicates that the project site is in Zone X, an area which is outside the 500-year flood plain.

The Island of Oahu is in seismic Zone 1 as defined in the 1988 edition of the Uniform Building Code (Reference No.9). The intensity of earthquake effects are classified as intensity VI, able to break glassware and shake books off of shelves.

6.11 Archaeological and Historic Sites

The proposed area of construction will be within the property boundaries of the existing Kailua Regional WWTP which has been in operation since 1967. No known historic or archeological sites are located within the treatment facility property boundaries. Should

evidence of archeological sites be uncovered during excavation, all construction work will cease and the State Historic Preservation Office shall be notified immediately to allow for a field investigation.

6.12 Biological Resources

Generally, the project site is completely developed, providing little or no habitat for any terrestrial flora and fauna. The ground surface of the proposed project site is covered with introduced turf grass, and concrete pads. It is unlikely that any native plant will be found in the area.

Nesting colonies of sea birds are found on islands offshore of the windward coast of Oahu. The Nuupia Pond area located north of the Kailua Regional WWTP site is considered a biologically significant habitat for the endangered Hawaiian stilt.

7.0 PROBABLE IMPACTS AND MITIGATION MEASURES

7.1 Short-term Construction Related Impacts

The proposed construction activity will generate temporary adverse impacts due to fugitive dust, hydrocarbon emissions and noise from construction equipment and vehicles. Earth moving operations such as excavation for sewerlines and the UV contact tanks may result in minor soil erosion. Since all construction activities will take place within the treatment plant property boundaries, makai of Kaneohe Bay Drive, no significant interference with normal vehicular traffic is anticipated. The pilot study will be performed during the day in order to minimize noise impacts. Noise generated by the electrical generator on the high intensity UV Pilot Unit will be less than 85 db, probably not audible to the surrounding residents, due to the low sound level and distance. The pilot tests will begin around 9:00 a.m. and last for less than two hours. The generator will only run during the time samples are taken.

7.2 Mitigation Measures to Minimize Construction Related Impacts

The fugitive dust, hydrocarbon emission and noise from heavy vehicles are temporary. They are not considered to be a major concern since all construction activities will not be in the immediate vicinity of residents. Nevertheless, the contractor will be required to comply with the standards contained in Chapter 11-60, "Air Pollution Control", and Chapter 11-43, "Community Noise Control of Oahu", of DOH Administrative Rules. In addition, all construction-related vehicles traveling on roadways must meet the vehicle noise level requirements set forth in Chapter 11-42, "Vehicular Noise Control for Oahu", of the DOH Administrative Rules. Construction at the project site will be limited to normal business hours between 8:00 a.m. and 5:00 p.m. to further minimize potential noise and traffic impacts to the nearby community. Construction equipment and vehicles

producing gas or air exhaust will be equipped with mufflers to reduce noise and proper emission control devices to minimize hydrocarbon emission. Lastly, minor soil erosion will be minimized by promptly revegetating the disturbed soil with the same grass species as the existing site, and by preserving existing vegetation as much as possible during construction. Due to an anticipated small footprint for the disinfection facility, excessive dust generation is unlikely; however, if this should occur dust will be controlled by wetting the ground.

7.3 Water Quality

The proposed project will include UV treatment of excess flow during heavy storm periods prior to discharge to the existing Mokapu ocean outfall. The construction of the proposed project is considered a beneficial impact, because the effluent will receive additional treatment prior to discharge.

Most methods of disinfection, such as chlorination, rely on chemical oxidation of microorganisms to disinfect sewage. If the disinfectant chemicals are not used up by the time they are discharged, the residual disinfectant chemicals can be harmful to organisms in receiving waters. In addition, chlorine often combines with organic molecules in the wastewater to form harmful byproducts (carcinogenic compounds). Disposal into sensitive environments typically requires dechlorination (the addition of chemicals to neutralize the chlorine) prior to disposal. However, undesirable byproducts created by the chlorination process may still be present. Since UV radiation is a physical disinfectant, it only affects the microorganisms when they are exposed to the UV light. No known harmful byproducts are created and no hazardous chemicals persist in the effluent. Therefore, UV disinfection will not adversely alter the treated effluent by introducing any harmful substances, but will further treat the effluent by deactivating microorganisms.

7.4 Economic

The cost of the proposed project is limited by the Consent Decree agreement. The Consent Decree plaintiffs acknowledge that the intent of the project is to construct and operate an effective UV disinfection for a total cost of \$3,550,000 or less, including preliminary design. Construction cost requirements are limited to \$2,800,000 by the Consent Decree .

8.0 ALTERNATIVES TO THE PROPOSED ACTION

8.1. No Action

The project will satisfy one of the objectives of the Consent Decree agreement between the plaintiffs and CCH. The no action alternative may result in further litigation, unless the pilot study and preliminary engineering work indicates that the estimated implementation cost will exceed the Consent Decree limits.

8.2. Alternate Site

The proposed project is a modification to the existing Kailua Regional WWTP. The new disinfection facility is intended to be a part of the treatment process. An alternative site away from the treatment plant may involve costly land purchases as well as access difficulties. Connecting piping and system control would not be practical from an operation and maintenance standpoint. Additional pumping and piping to a remote site would greatly increase costs and reduce reliability, since additional equipment would be required which could fail or piping could leak.

9.0 LIST OF PERMITS

The following permits and clearances may be required as part of this project:

State of Hawaii:

NPDES Construction Dewatering Permit (DOH Clean Water Branch), if necessary

City and County of Honolulu:

Grading Permit (Department of Public Works)

Building Permit (Building Department)

Construction Dewatering Permit to Discharge into City & County of Honolulu Storm Drainage System (DPW Storm Water Quality Section), if necessary

10.0 DETERMINATION

In accordance with Chapter 343, Hawaii Revised Statutes, this Environmental Assessment has characterized the technical and environmental issues of the UV disinfection facility at the Kailua Regional WWTP, identified potential impacts and their significance. It is anticipated that the proposed project will not significantly impact the environment. Therefore, a Negative Declaration will be issued, and an Environmental Impact Statement is not required for this project. This determination is based on the significance criteria listed in §11-200-12 of the Environmental Impact Statement Rules. Specifically, these significance criteria are addressed below:

1. The proposed project will not result in an adverse commitment, loss, or destruction of any natural or cultural resources. The proposed site has already been developed and in use for almost 30 years.
2. The range of beneficial uses of the environment will not be curtailed. The project will provide a disinfection treatment process to the Kailua Regional WWTP. The disinfection process will have either a beneficial impact on the environment or no impact on the environment.
3. The project will not conflict with the state's long-term environmental policies or goals and guidelines as expressed in chapter 344, HRS, and any revisions thereof and amendments thereto, court orders or executive orders. The project conforms with the Consent Decree (Civil No. 92-00263 DAE) issued by the US. District Court, District of Hawaii.
4. The proposed project will not substantially affect the economic or social welfare of the community or state. Although there is an associated cost to the CCH, the Consent Decree requires that this money be spent for such a purpose.
5. The project will not adversely affect public health; rather, the project will ensure public health by providing a disinfection treatment process for the effluent from the Kailua Regional WWTP.
6. The project will not involve adverse secondary impacts, such as population changes or effects on public facilities.
7. The project will not involve a substantial degradation of environmental quality and may even enhance the environmental quality of the receiving waters.
8. The project does not involve a commitment for larger actions and will not result in significant cumulative effects upon the environment. The proposed actions are complete and will require no further action.
9. The project will not substantially affect a rare, threatened or endangered species, or its habitat. The project will not affect the habitat of the endangered Hawaiian Stilt.
10. The project will not detrimentally affect air or water quality or ambient noise levels. Short-term impacts will occur during the construction phase.
11. The project will not affect an environmentally sensitive area such as a flood plain, tsunami zone, erosion-prone area, geological hazardous land, estuary, fresh water,

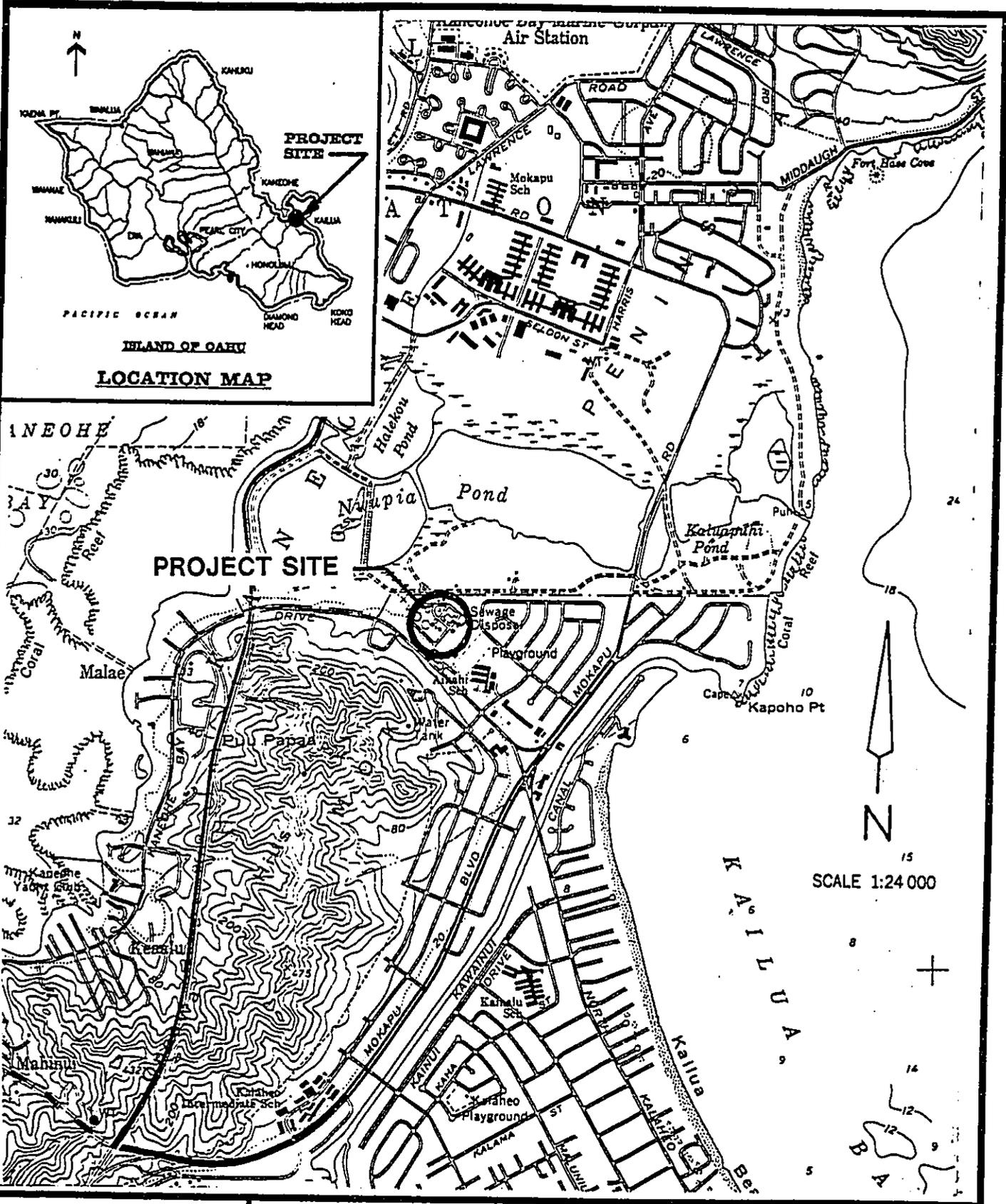
or coastal waters. The project may have a beneficial impact on coastal waters due to the additional treatment of treated effluent prior to ocean discharge.

12. The project does not affect identified scenic vistas or view planes. The proposed structure will be small, have a low profile and be constructed at an existing facility.
13. The project does not require substantial energy consumption. There will be a greater site power requirement because of the new UV disinfection system. However, in order to achieve the same amount of disinfection using a chlorination system, a large amount of chemicals would be used. The power required to produce these chemicals (chlorinating and dechlorinating agents) is believed to be greater than the energy required to operate an UV disinfection system.

11.0 REFERENCES

Documents reviewed during preparation of this Environmental Assessment:

1. Akinaka & Associates, Ltd., August 1995. Environmental Assessment for Kalaheo Avenue Relief Sewer.
2. Consent Decree (Civil No. 92-00263 DAE), August 1995, executed between Save our Bays and Beaches, Hawaii's Thousand Friends, Sierra Club, Surfrider Foundation (plaintiffs) and City and County of Honolulu (defendant).
3. GK & Associates/SEY Engineers, Inc., December 1993. Final Environmental Assessment for Kaneohe Bay South Wastewater Pump Station No. 5.
4. GMP Associates, Inc., March 1984. Revised Environmental Impact Statement for Kaneohe-Kailua Wastewater Facilities.
5. U.S. Department of Agriculture (USDA), Soil Conservation Service in Cooperation with the University of Hawaii Agricultural Experiment Station, August 1972. Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii.
6. TRW REDI Property Data, 1994, Real Estate Handbook. Information for 4-4-11:81.
7. TRW REDI Property Data, 1994, Realty Atlas. Tax map for 4-4-11, Scale 1 in. = 300 ft.
8. Federal Emergency Management Agency, 1987. Flood Insurance Rate Map (FIRM) for City and County of Honolulu, Hawaii, Community-Panel Number 150001 0060 B.
9. International Conference of Building Officials, 1991. Uniform Building Code.



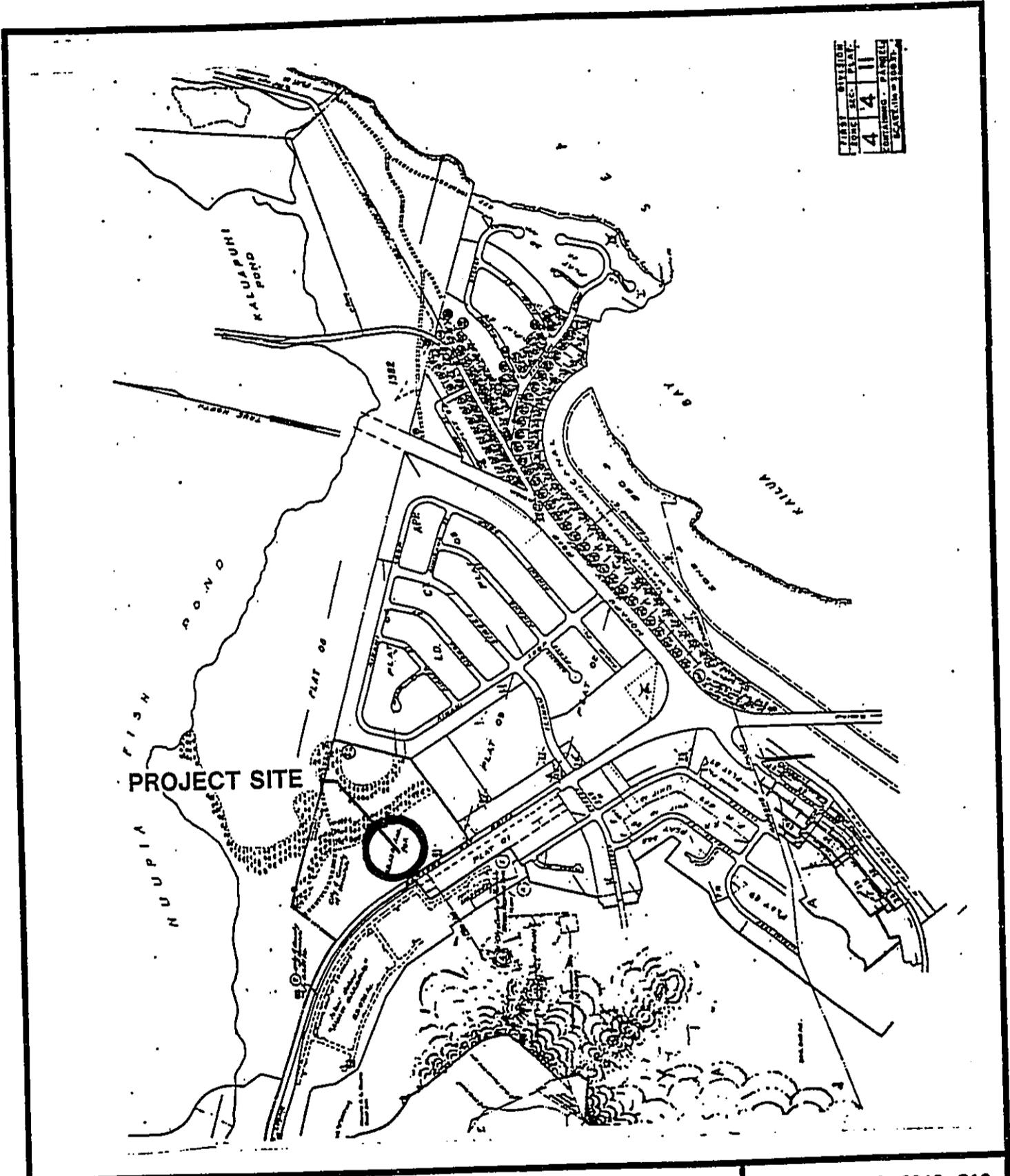
M&E PACIFIC, INC. **M&E**
 ENGINEERS & ARCHITECTS
 1091 SANDWICH ST., SUITE 200
 HONOLULU, HAWAII 96813 (808) 531-2811

REGIONAL LOCATION MAP

KAILUA WWTW DISINFECTION FACILITY
 ENVIRONMENTAL ASSESSMENT

M&E #018108-6940-010

FIGURE 1
 TMK 4-4-11: 81



FIRST DIVISION	4
SECOND DIVISION	4
SECTION	11
TOWNSHIP	21N
RANGE	150E

M&E PACIFIC, INC. **M&E**
 ENGINEERS & ARCHITECTS
 1001 KEELE ST., SUITE 200
 HONOLULU, HAWAII 96813 (808) 521-2811

TAX MAP KEY LOCATION MAP

KAILUA WWTP DISINFECTION FACILITY
 ENVIRONMENTAL ASSESSMENT

M&E #018108-6940-010
FIGURE 2
 TMK 4-4-11: 81

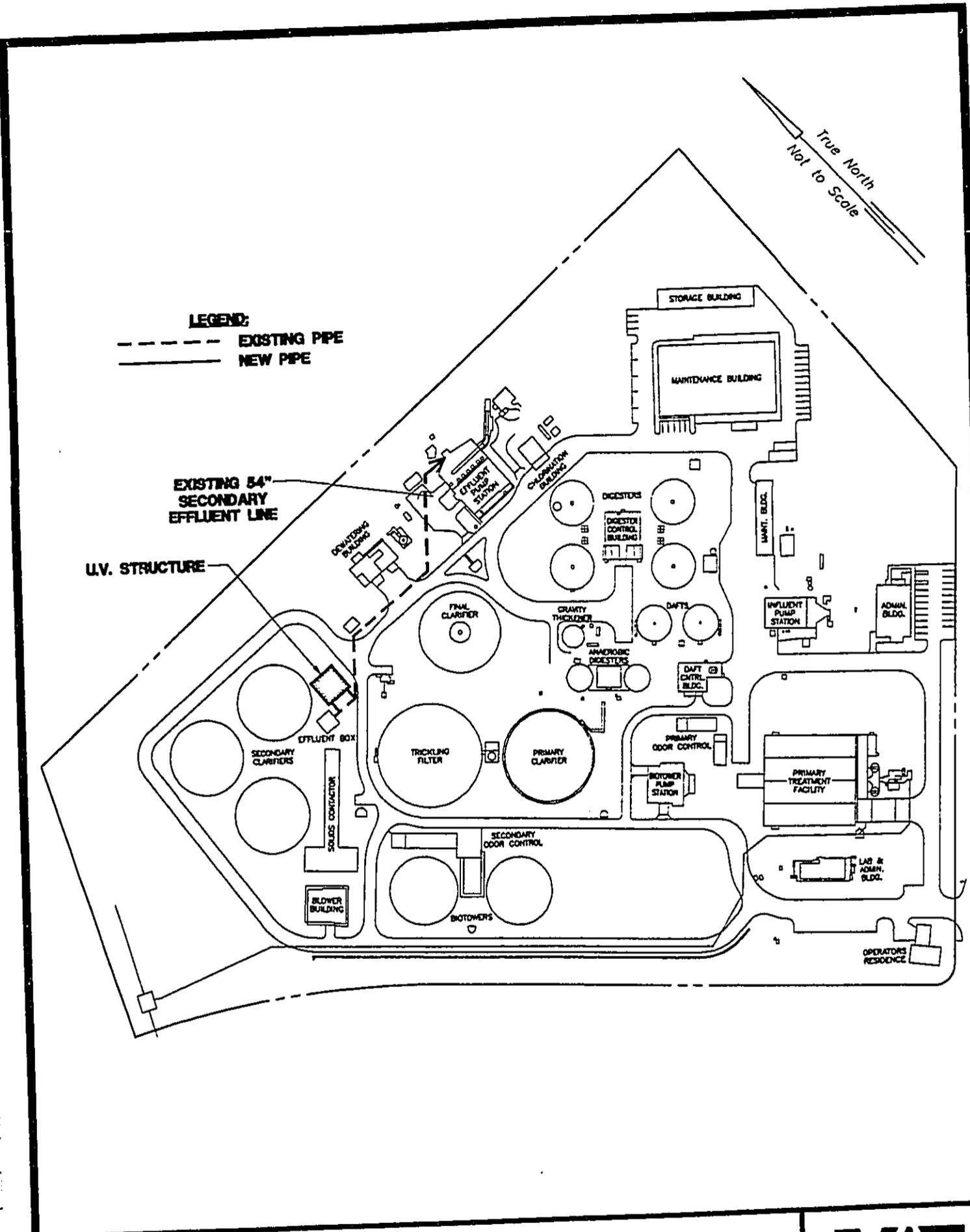
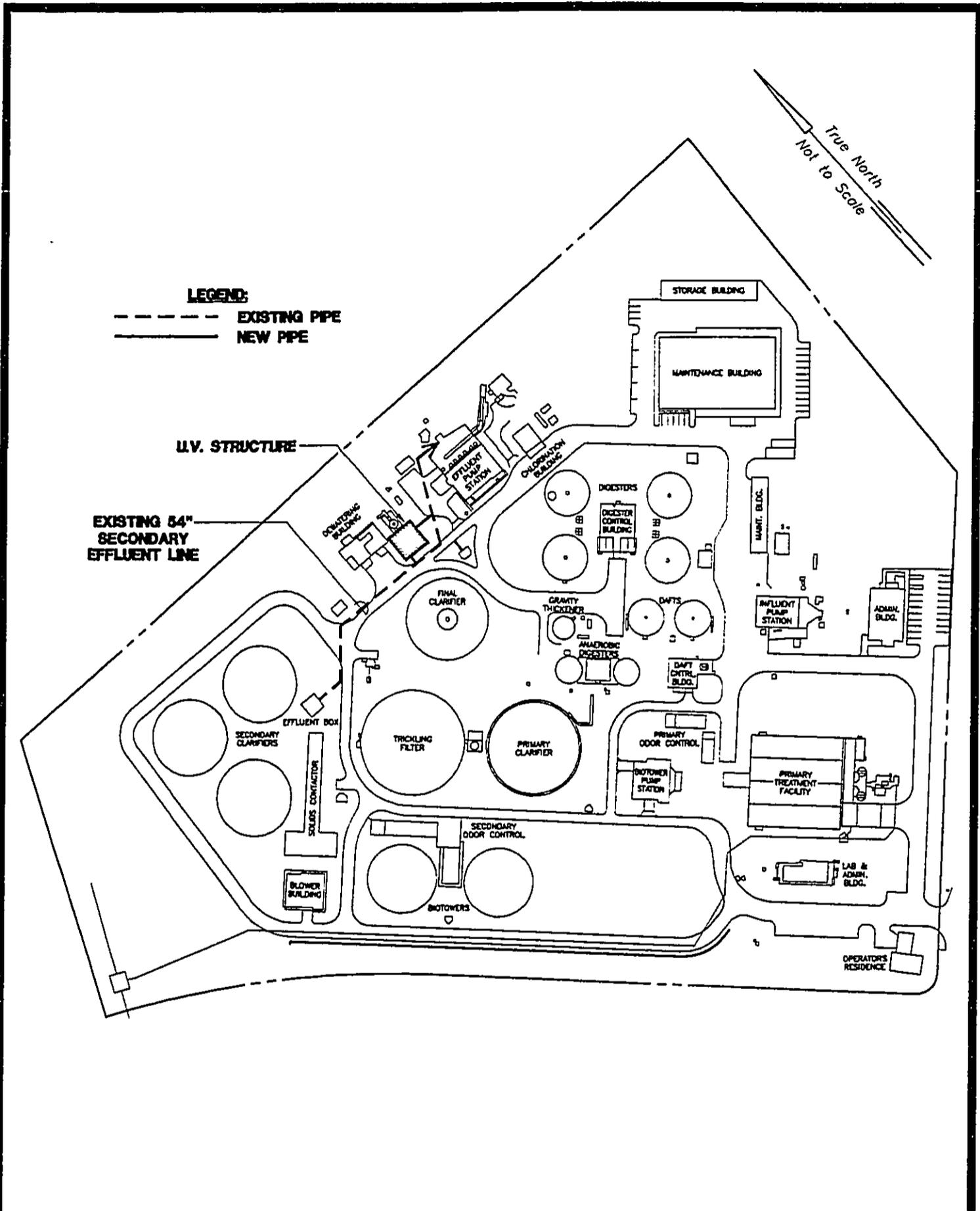


FIGURE 3
 PROPOSED U.V. STRUCTURE LOCATION 1





True North
 Not to Scale

FIGURE 4
 PROPOSED U.V. STRUCTURE LOCATION 2



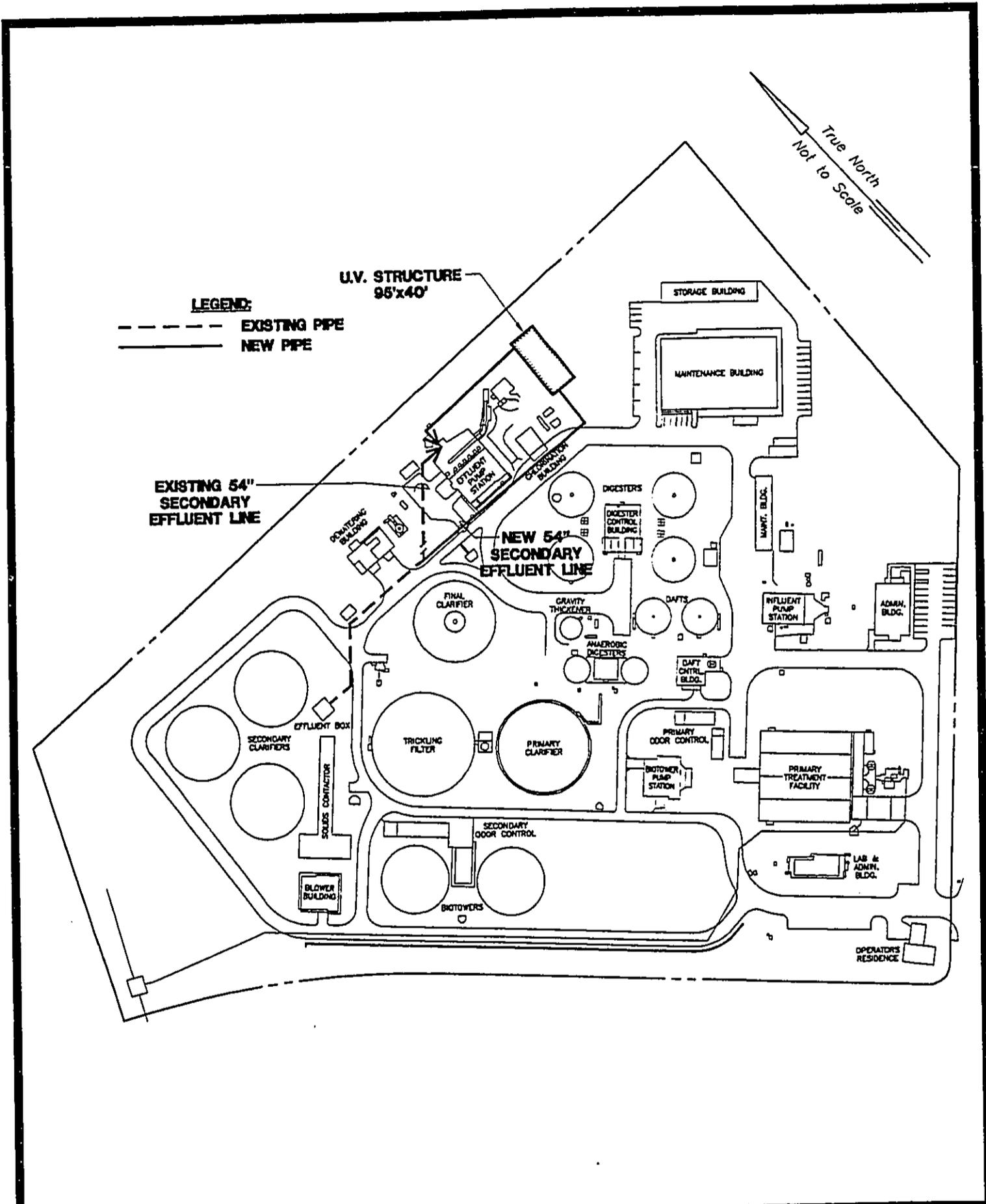
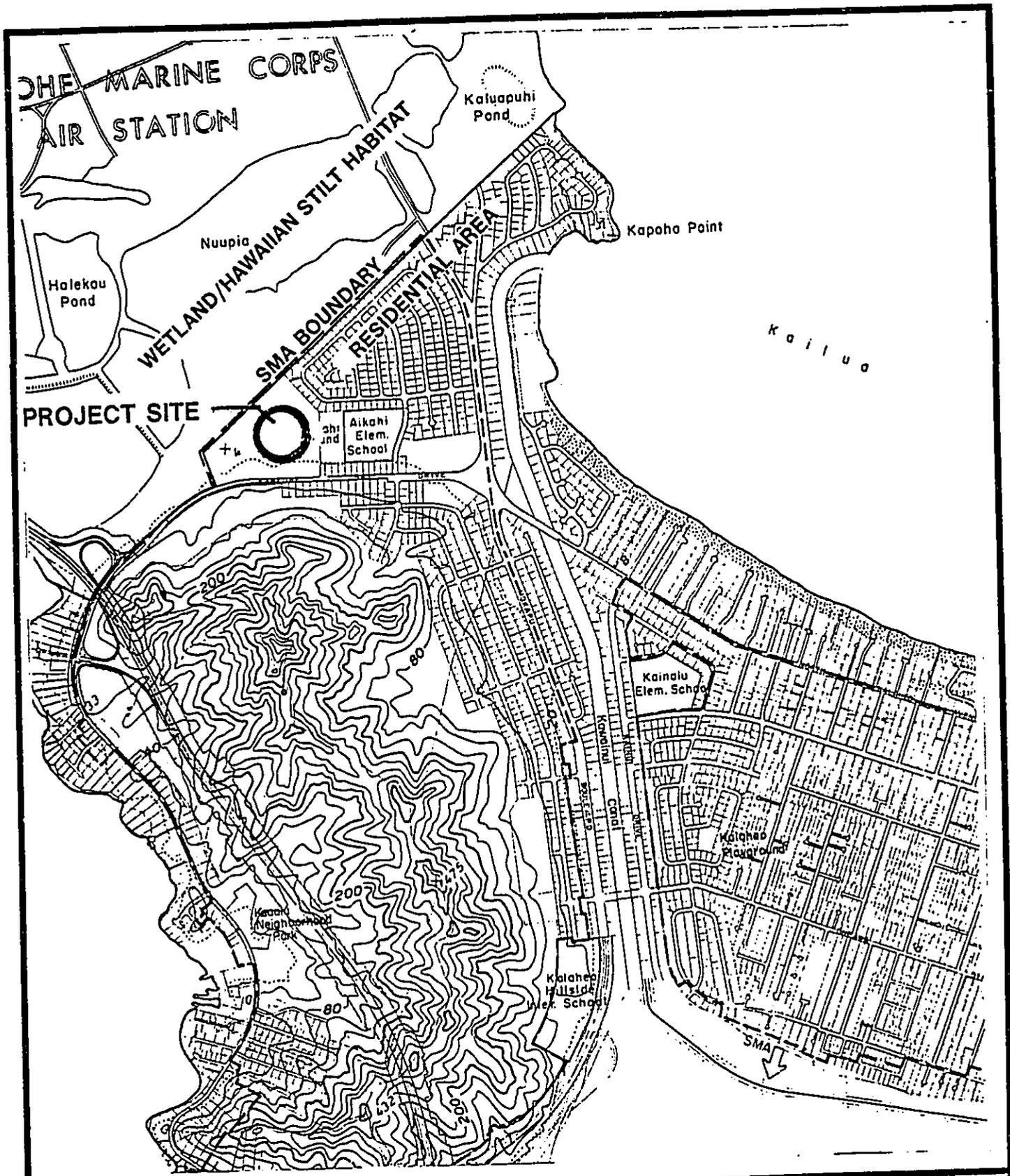


FIGURE 5
 PROPOSED U.V. STRUCTURE LOCATION 3





<p>M&E PACIFIC, INC. <small>DESIGNERS & ARCHITECTS 1801 KAILUA RD., SUITE 200 HONOLULU, HAWAII 96813 (808) 321-3061</small></p> 	<p>ENVIRONMENTALLY SENSITIVE AREAS</p> <p>KAILUA WWP DISINFECTION FACILITY ENVIRONMENTAL ASSESSMENT</p>	<p>M&E #018108-6940-010</p> <p>FIGURE 6</p> <p>TMK 4-4-11: 81</p>
---	--	--

Appendix A

Comments and Responses

BENJAMIN J. CAVEYANO
GOVERNOR



STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL

230 SOUTH KING STREET
HONOLULU, HAWAII 96813
TELEPHONE: (808) 586-4185
FACSIMILE: (808) 586-4186

GARY GILL
DIRECTOR

September 17, 1996

M&E Pacific, Inc.

A Meical & Eddy Company

Mr. Gary Gill, Director
Office of Environmental Quality Control
220 South King Street, Fourth Floor
Honolulu, Hawaii 96813

Mr. Felix Limtiaco, Director
Department of Wastewater Management
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Dear Mr. Limtiaco:

Subject: Draft Environmental Assessment for the Kailua Regional
Wastewater Treatment Plant Effluent Disinfection Facility

Thank you for the opportunity to review the subject document. We
have the following comments.

1. UV disinfection of the wastewater is performed by exposing the
wastewater to UV light. The UV radiation damages the nucleic
acids of the microorganisms in the water leaving them unable
to reproduce. Please describe any other chemical or
biological changes to the effluent after UV treatment. What
are the human health and environmental side-effects associated
with the chemical and biological changes?
2. Please compare the costs/benefits of UV treatment, chemical
disinfection and the no-action alternative.
3. What is the capacity of the proposed UV disinfection facility?
Please compare the above capacity with the average and maximum
effluent flows from the Kailua Plant.

Should you have any questions, please call Jeyan Thirugnanam at
586-4185. Mahalo.

Sincerely,


Gary Gill
Director

cc: M & E Pacific

Dear Mr. Gill

SUBJECT: Ultraviolet (UV) Effluent Disinfection Facility
Kailua Regional Wastewater Treatment Plant
Responses to Comments to draft Environmental Assessment (EA)

Thank you for reviewing the subject draft EA. We have the following responses to your
comments dated July 5, 1996.

1. UV disinfection is a physical process rather than a chemical or biological process, and no
hazardous materials will be used during the process. UV treatment is not known to alter
water chemistry and there are no known UV disinfection byproducts which may create
human health and environmental side-effects associated with chemical and biological
changes.
2. Implementation of the UV treatment satisfies one of the three Consent Decree (Civil No.
92-00263) DA/E agreements executed between the plaintiffs (Save our Bays and Beaches,
Hawaii's Thousand Friends, Sierra Club, Surfrider Foundation) and the City and County
of Honolulu. Alternatives such as chemical disinfection are not acceptable to the District
Court, therefore they were not discussed in greater detail in the draft EA. The no action
alternative is acceptable if estimated construction costs exceed \$2,800,000. However, if
the project can not be implemented because of cost considerations, then the two parties
will decide what to do with the remaining funds.
3. According to the City and County of Honolulu, the capacity of the proposed UV facility
is tentatively set at 30 million gallons per day (MGD). The average and peak design
flows for the Kailua WWTP are 15.2 and 24 MGD, respectively. However, flows greater
than 30 MGD have been estimated during heavy storm events.

500 South King Street
1001 E. Kalia Street, Honolulu, HI 96813
808-531-3051 FAX: 808-524-0246

RECEIVED JUL 10 1996

Regional Office

AWT

M&E Pacific, Inc.

The City and County of Honolulu Department of Wastewater Management (proposing agency) has determined that the implementation of this project will not have significant environmental effects. Therefore, the agency will be issuing a Negative Declaration (ND). If you have any questions, or if you would like a copy of the final EA and ND, please call me at (808) 521-3051.

Sincerely,



Peter Ono
Project Manager

cc: Po Chan - DWWWM, CCH

DEPARTMENT OF LAND UTILIZATION
CITY AND COUNTY OF HONOLULU
450 SOUTH KING STREET
HONOLULU, HAWAII 96813 • PHONE 833-4432



PERMIT MARKS
M.A.D.A.

Mr. Wes Geertsema
M&E Pacific, Inc.
Paahoi Tower
1001 Bishop Street, Suite 500
Honolulu, Hawaii 96813

June 25, 1996

Dear Mr. Geertsema:

Draft Environmental Assessment (EA)
Ultraviolet (UV) Effluent Disinfection At
Kailua Wastewater Treatment Plant (WWTP)

Tax Map Key: 4-4-111-POL-81

We have reviewed the above-referenced Draft EA and have the following comments:

1. An elevation drawing should be included in the Final EA, which shows the height of the proposed building. As the project site is zoned R-10 Residential District, the proposal cannot exceed the 25-foot height limit unless a height waiver for public uses is approved by our department.
2. Approximately what percentage of the microorganisms will be destroyed during the UV disinfection process?
3. A detailed plan showing the interior of the proposal should be included in the Final EA.
4. What type(s) of Best Management Practices will be implemented to prevent construction runoff from entering Nuupia Pond, which is adjacent to Kailua WWTP?

If you have any questions regarding this letter, please contact Ms. Dana Teramoto at 523-4648.

Very truly yours,

PATRICK T. ONISHI
Director of Land Utilization

PTO:fm
cc: Dept. of Wastewater Management
960322.djt

M&E Pacific, Inc.

A Metcalf & Eddy Company

September 17, 1996

Mr. Patrick T. Onishi, Director
Department of Land Utilization
City and County of Honolulu
630 South King Street
Honolulu, Hawaii 96813

Dear Mr. Onishi

SUBJECT: Effluent Disinfection Facility
Kailua Regional Wastewater Treatment Plant
Responses to Comments to draft Environmental Assessment (EA)

Thank you for reviewing the subject draft EA. We have the following responses to your comments dated June 25, 1996 (96-03362 DT).

1. The project is currently in the design phase, and an elevation drawing is not available at this time. UV reactors generally have a low profile, and it is anticipated that the building will not exceed the 25-foot height limit. The Department of Land Utilization will be contacted if a height waiver is required.
2. UV radiation damages the nucleic acids of the microorganisms leaving them unable to reproduce. UV radiation kills approximately 99% of enterococci, which is the standard indicator used for marine recreational waters. The percent of deactivation of microorganisms is dependent upon the dose.
3. Detailed plans are not available at this time and will not be included in the final EA since the project is still in the study phase.
4. There are no major earth moving activities in this project. The draft EA included vegetative cover of disturbed soil as a means to control minor soil erosion during construction. In addition, the contractor will be advised to preserve existing grass buffer areas as much as possible during construction.

Suite 500 Paahoi Tower
1001 Bishop Street, Honolulu, HI 96813
808-521-3051 FAX 808-524-0246

Recycled Paper

AWT

M&E Pacific, Inc.

The City and County of Honolulu Department of Wastewater Management (proposing agency) has determined that the implementation of this project will not have significant environmental effects. Therefore, the agency will be issuing a Negative Declaration (ND). If you have any questions, or if you would like a copy of the final EA and ND, please call me at (808) 521-3051.

Sincerely,



Peter Ono
Project Manager

cc: Po Chan - DWWWM, CCH

DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF HONOLULU

830 SOUTH KING STREET, 11TH FLOOR • HONOLULU, HAWAII 96813
PHONE: 808-531-4341 • FAX: 808-531-8887



JEREMY HARRIS
MAYOR

KENNETH SPRAGUE
DIRECTOR AND CHIEF ENGINEER
DEPARTMENT OF PUBLIC WORKS
REPORT NUMBER
ENV 98-150

June 19, 1996

Mr. Was Geertsma
Project Engineer
M&E Pacific, Inc.
1001 Bishop Street, Suite 500
Honolulu, Hawaii 96813

Dear Mr. Geertsma:

Subject: Draft Environmental Assessment (DEA)
Effluent Disinfection Facility
Kailua Regional Wastewater Treatment Plant
TMK: 4-4-11: 81

We have reviewed the subject DEA and have the following comments:

1. The DEA should address best management practices (BMPs) during construction to mitigate discharge of pollutants to City drainage system.
2. Since the size of the project appears small, it is suggested that rough dimensions, size of graded area and extent of new piping be included in the project description or on a schematic drawing.

Should you have any questions, please contact Mr. Alex Ho, Environmental Engineer, at 523-4150.

Very truly yours,


KENNETH E. SPRAGUE
Director and Chief Engineer

M&E Pacific, Inc.

A Metcalf & Eddy Company

September 17, 1996

Mr. Kenneth E. Sprague, Director and Chief Engineer
Department of Public Works
City and County of Honolulu
650 South King Street, 11th Floor
Honolulu, Hawaii 96813

Dear Mr. Sprague

SUBJECT: Effluent Disinfection Facility
Kailua Regional Wastewater Treatment Plant
Responses to Comments to draft Environmental Assessment (EA)

Thank you for your comments on the subject draft EA. WE have the following responses to your letter dated June 19, 1996 (ENV 96-150).

- The draft EA included vegetative cover of disturbed soil as a means to control minor soil erosion during construction. In addition, the contractor will be advised to preserve existing grass buffer areas as much as possible during construction.
- Design of the UV contact tank(s) size and type is dependent upon results of pilot tests which are currently ongoing. M&E Pacific is preparing a preliminary engineering report (PER) to address the design options and recommend the most feasible plan for the proposed facility. Preliminary size estimates for the facility, including the treatment channels, range from 1,000 to 5,000 square feet.

The City and County of Honolulu Department of Wastewater Management (proposing agency) has determined that the implementation of this project will not have significant environmental effects. Therefore, the agency will be issuing a Negative Declaration (ND). If you have any questions, or if you would like a copy of the final EA and ND, please call me at (808) 521-3051.

Sincerely,


Peter Ono
Project Manager

cc: Po Chan - DWWM, CCH

Suite 500 Palani Tower
1001 Bishop Street, Honolulu, HI 96813
808-521-3051 FAX 808-524-0245

Project File

AWT

WILLIAM J. EASTLAND
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION
P.O. BOX 521
HONOLULU, HAWAII 96809

ENVIRONMENTAL DEVELOPMENT
PLANNING
WATER RESOURCES
LAND AND NATURAL RESOURCES
CONTRACTS
CONSTRUCTION
PERMITTING
LAND DIVISION
LAND USE
WATER RESOURCES MANAGEMENT

REF LM JGD

JUN - 4 1996

Mr. Wes Geertsma
M & E Pacific, Inc.
1001 Bishop St
Paahai Tower ste 500
Honolulu, Hawaii 96813-0246

Dear Mr. Geertsma:

Subject: Request for Comments on the Effluent Disinfection Facility, Kailua Regional Wastewater Treatment Plant. Draft Environmental Assessment

The Oahu District Office of Land Management has no objections to the subject project located at the Kailua Regional Wastewater Treatment Plant located on land owned in fee by the City and County of Honolulu.

However, we do request that the applicant obtain all appropriate permits from the Federal, State and County agencies prior to construction.

Should you have any questions, you may contact me at 587-0433.

Very truly yours,

John Dooling
John Dooling
Oahu Land Agent *ds*

cc: Mr. Nekoba
Mr. Matsumoto

M&E Pacific, Inc.

A Metcalf & Eddy Company

September 17, 1996
Mr. John Dooling, Oahu Land Agent
Department of Land and Natural Resources (DLNR)
State of Hawaii
P.O. Box 621
Honolulu, Hawaii 96809

Dear Mr. Dooling

SUBJECT: Effluent Disinfection Facility
Kailua Regional Wastewater Treatment Plant
Responses to Comments to draft Environmental Assessment (EA)
Ref: LM JGD

Thank you for your letter of June 4, 1996. We understand DLNR has no objections to the subject project. In regard to your question about permitting, we want to ensure you that all applicable Federal, State and County permits will be obtained prior to construction activities.

The City and County of Honolulu Department of Wastewater Management (proposing agency) has determined that the implementation of this project will not have significant environmental effects. Therefore, the agency will be issuing a Negative Declaration (ND). If you have any questions, or if you would like a copy of the final EA and ND, please call me at (808) 521-3051.

Sincerely,

Peter Ono

Peter Ono
Project Manager

cc: Po Chan - DWWM, CCH

State 500 Paahai Tower
1001 Bishop Street, Honolulu HI 96813
808-521-3051 FAX 808-524-0246

Registered Printer

AWIT

PLANNING DEPARTMENT
CITY AND COUNTY OF HONOLULU

180 SOUTH KING STREET
HONOLULU HAWAII 96813



JEREMY MARSH
MAYOR

CHERYL D. SOON
CHIEF PLANNING OFFICER

CAROL TARAMON
DEPUTY CHIEF PLANNING OFFICER

MH 5/96-1257

July 1, 1996

Mr. Wes Geertsema
M & E Pacific, Inc.
1001 Bishop Street
Pauahi Tower, Suite 500
Honolulu, Hawaii 96813.

Dear Mr. Geertsema:

Draft Environmental Assessment (DEA)
for the Effluent Disinfection Facility,
Kailua Regional Wastewater Treatment Plant,
JMK: 4-4-11: 81, Koolauloko, Oahu, Hawaii.

In response to your request of May 23, 1996, we have reviewed the subject DEA and have the following comments to offer:

1. The proposed action is consistent with the Public and Quasi-Public (Public Facilities) designation on the Koolauloko Development Plan Land Use Map.
2. The Koolauloko Development Plan Public Facilities Map shows a symbol for a publicly funded sewage treatment plant/modification (Kailua Sewage Treatment Plant Modification), site determined, within six years.
3. We have no objections to the proposed disinfection facility that will equip the existing Kailua Wastewater Treatment Plant with the capability to disinfect plant effluent prior to discharge.

Mr. Wes Geertsema
M & E Pacific, Inc.
July 1, 1996
Page 2

Should you have any questions, please contact Matthew Higashida of our staff at 527-6056.

Sincerely,

Handwritten signature of Cheryl D. Soon in cursive.

CHERYL D. SOON
Chief Planning Officer

CDS:js

cc: Department of Wastewater Management
Office of Environmental Quality Control

RECEIVED JUL 5 1996

WILLIAM J. CAVTIARD
DIRECTOR OF HEALTH



STATE OF HAWAII
DEPARTMENT OF HEALTH
P.O. BOX 3378
HONOLULU, HAWAII 96801

LAWRENCE MAIZE
DIRECTOR OF HEALTH

SECRETARY

DEPARTMENT OF TRANSPORTATION SERVICES
CITY AND COUNTY OF HONOLULU

PACIFIC PARK PLACE
711 KAPOLAHONUA AVENUE SUITE 1200
HONOLULU, HAWAII 96813



CHARLES O. SWYMON
DIRECTOR

June 26, 1996

96-084/epo

July 5, 1996

TSP6/96-02413R

Mr. Wes Geertsema
Project Engineer
M&E Pacific, Inc.
Suite 500 Pauahi Tower
1001 Bishop Street
Honolulu, Hawaii 96813-3497

Dear Mr. Geertsema:

Subject: Environmental Assessment (EA)
Effluent Disinfection Facility
Kailua Regional Wastewater Treatment Plant (RWTP)
THK: (1) 4-4-11: 81

Thank you for allowing us to review and comment on the subject project. We have no objections to the proposed effluent disinfection facility at Kailua Regional Wastewater Treatment Plant.

Should you have any questions, please contact Ms. Lori Kajiwara of the Wastewater Branch at 586-4294.

Sincerely,

Bruce S. Anderson

BRUCE S. ANDERSON, Ph.D.
Deputy Director for Environmental Health

c: WWB

Mr. Wes Geertsema, Project Engineer
M & E Pacific, Inc.
Pauahi Tower Suite 500
1001 Bishop Street
Honolulu, Hawaii 96813

Dear Mr. Geertsema:

Subject: Kailua Regional Wastewater Treatment Plan Effluent
Disinfection Facility

In response to your May 23, 1996 letter, the draft environmental assessment for the subject project was reviewed. We have no objections or comments to offer.

Should you have any questions regarding this matter, please contact Faith Miyamoto of the Transportation System Planning Division at 527-6976.

Respectfully,

Charles O. Swymon
for CHARLES O. SWYMON
Director

cc: Mr. Po Chan,
Department of Waste
Water Management
Transportation Management Division

RECEIVED JUL 8 1996

RECEIVED JUN 8 1996