DEPARTMENT OF WATER SUPPLY • COUNTY OF HAWAII
25 AUPUNI STREET • HILO, HAWAII 96720
TELEPHONE (808) 961-8660 • FAX (808) 961-8657

June 21, 1999

Mr. Gary Gill, Director
State of Hawaii
Office of Environmental Quality Control
235 South Beretania Street
State Office Tower, Suite 702
Honolulu, HI 96813

FINAL ENVIRONMENTAL ASSESSEMENT (EA)
FINDING OF NO SIGNIFICANT IMPACT (FONSI)
WAIPUNAULA 1.0-MG RESERVOIR AND TRANSMISSION WATERLINE
WAIPUNAULA, SOUTH KONA DISTRICT, ISLAND OF HAWAII

The County of Hawaii Department of Water Supply has reviewed comments received during the 30-day public comment period which began on April 8, 1999. The Department has determined that this project will not have significant environmental effects and has issued a FONSI. Please publish this notice in the July 8, 1999 OEQC Environmental Notice.

We have enclosed a completed OEQC Bulletin Publication Form and four copies of the Final EA.

If there are any questions, please contact our Water Resources and Planning Branch at (808) 961-8660.

Milton D. Pavao, P.E.
Manager

GGA:gms

Enc.

1999-07-08 - HA-FEA -

FINAL ENVIRONMENTAL ASSESSMENT

Finding of No Significant Impact (FONSI)

WAIPUNAULA 1.0 MG RESERVOIR AND TRANSMISSION WATERLINE

Waipunaula, District of South Kona
Island of Hawaii
State of Hawaii

June 1999

Prepared For:

DEPARTMENT OF WATER SUPPLY
County of Hawaii
25 Aupuni Street
Hilo, Hawaii 96720

Prepared By:
Inaba Engineering, Inc.
273 Waianuenue Avenue • Hilo, Hawaii 96720

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SUMMARY SHEET

Project:	WAIPUNAULA 1.0 MG RESERVOIR AND TRANSMISSION WATERLINE
Applicant:	Department of Water Supply County of Hawaii 25 Aupuni Street Hilo, Hawaii 96720
Land Owner:	County of Hawaii, Others (See below)
Proposing Agency:	Department of Water Supply County of Hawaii
Project Location:	Waipunaula, South Kona District County of Hawaii, Island of Hawaii
Tax Map Key: 3rd Division	8-2-01 : 93 Existing Tank Site, ≈14,300 SF : 94 William Henriques, ≈3,300 SF : 91 Elston Umemoto, ≈11,850 SF :106 Kealakekua Ranch Ltd., Koa Road Mamalahoa Hwy Right-of-Way
Land Area:	Tank Site Approximately 29,200 S.F. Water Line Alignment Approximately 1,400 L.F.
Existing Use:	Existing 250,000 gallon DWS Water Tank Agricultural, Coffee Orchard
State Land Use Designation:	Agricultural
County General Plan:	Orchard
Existing Zoning:	Ag-5 (Agricultural 5 acres)
Contact Person:	Mr. Milton Pavao, P.E., Manager Department of Water Supply County of Hawaii 25 Aupuni Street Hilo, Hawaii 96720 Phone: 808.961.8660 Fax: 808.961.8657

TABLE OF CONTENTS

		Page
PART 1	DESCRIPTION OF PROPOSED PROJECT	1
	A. Project Location	
	B. Purpose and Objectives of Project	
	C. Ownership	4
	D. Project Schedule and Cost	
	E. Consultation with Agencies, Organizations and Individuals	
PART 2	ENVIRONMENTAL SETTING	5
	A. Soils	
	B. General Climate	
	C. Flood Hazards	9
	D. Volcanic and Seismic Hazard	
	E. Flora and Fauna	
	F. Historic Sites	
	G. Existing Land Use	
PART 3	SUMMARY POTENTIAL IMPACTS AND MITIGATION MEASURES	10
	A. Short Term Impacts	
	B. Long Term Impacts	
	C. Permits And Approvals	
	D. Tank Demolition & Removal	
PART 4	ALTERNATIVES TO THE PROPOSED ACTION	12
	A. No Action	
	B. Alternate Action	
PART 5	RELATIONSHIP TO PLANS AND POLICIES	13
	A. Kona Regional Plan	
	B. Hawaii County General Plan	
PART 6	DETERMINATION	15
PART 7	FINDINGS AND REASONS	15
	REFERENCES	18

LIST OF FIGURES:

		Page
Figure 1.	Island Location Map	2
Figure 2.	USGS Vicinity Map	3
Figure 3.	Existing Koa Road Alignment	6
Figure 4.	Existing Tank Site Layout	7
Figure 5.	Proposed Land Acquisitions, Tank Site Layout	8

LIST OF APPENDICES:

APPENDIX A	Tax Map Key of Area
APPENDIX B	South Kona Water System Map
APPENDIX C	Comment Letters and Response
APPENDIX D	Lead Paint Facility Survey

PART 1

DESCRIPTION OF PROPOSED ACTION

A. Project Location

The proposed activity is located in Waipunaula, South Kona District, Island of Hawaii (See Figure 1, 2). The proposed water line alignment starts at vicinity of the intersection of Mamalahoa Highway and Koa Road (Private), goes mauka along Koa Road approximately 1,400 lineal feet to the existing Waipunaula Tank Site. Koa Road is immediately south of the Kealakekua Ranch Shopping Center. The waterline and tank improvements will be located within existing county utility easements, the existing Waipunaula Tank Site and on portions of two adjoining parcels.

B. Project Description, Purpose and Objectives of Project

The County of Hawaii Department of Water Supply (DWS) plans to construct a new DWS standard 1.0 million gallon reinforced concrete water tank and related site improvements on its existing Waipunaula Tank Site. This reservoir will replace the existing steel tank that was installed in about 1961 or about 37 years ago. The existing 250,000 gallon steel tank is experiencing corrosion and in need of repair. The steel tank will be kept in service during construction and then removed upon completion of the new reservoir. In addition, there is a concern that the exterior paint on the steel tank may be lead based. As part of this project, the paint will be tested and if necessary, an appropriate handling and removal procedure will be specified. (See Part 3, Section D, Tank Demolition and Removal and Appendix D, Lead Paint Facility Survey.) Installation of the a new 1.0 million gallon concrete tank will resolve maintenance and repair issues related to the existing tank.

The DWS proposes to install a new 12" waterline to service the new reservoir. The new waterline will run parallel to the existing 12" waterline from Mamalahoa Highway up along Koa Road which currently services the existing steel tank and will be kept in use. The single 8" waterline serves as both the influent and effluent line to the existing tank. The additional 12" waterline will provide a separate inflow and outflow capability thereby increasing the efficiency of the system. Proposed pipeline alignment location is shown in Figure 3.

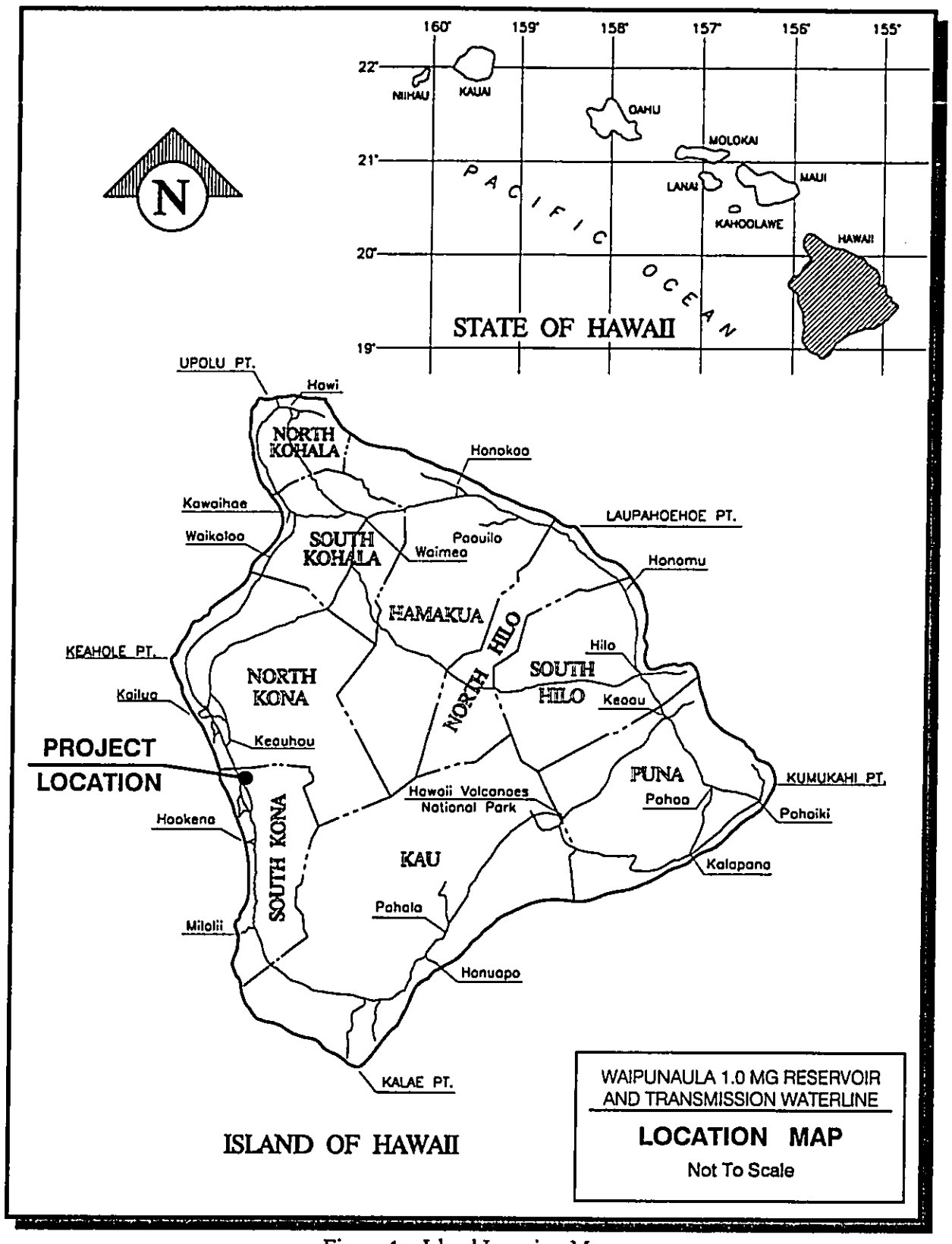


Figure 1 - Island Location Map

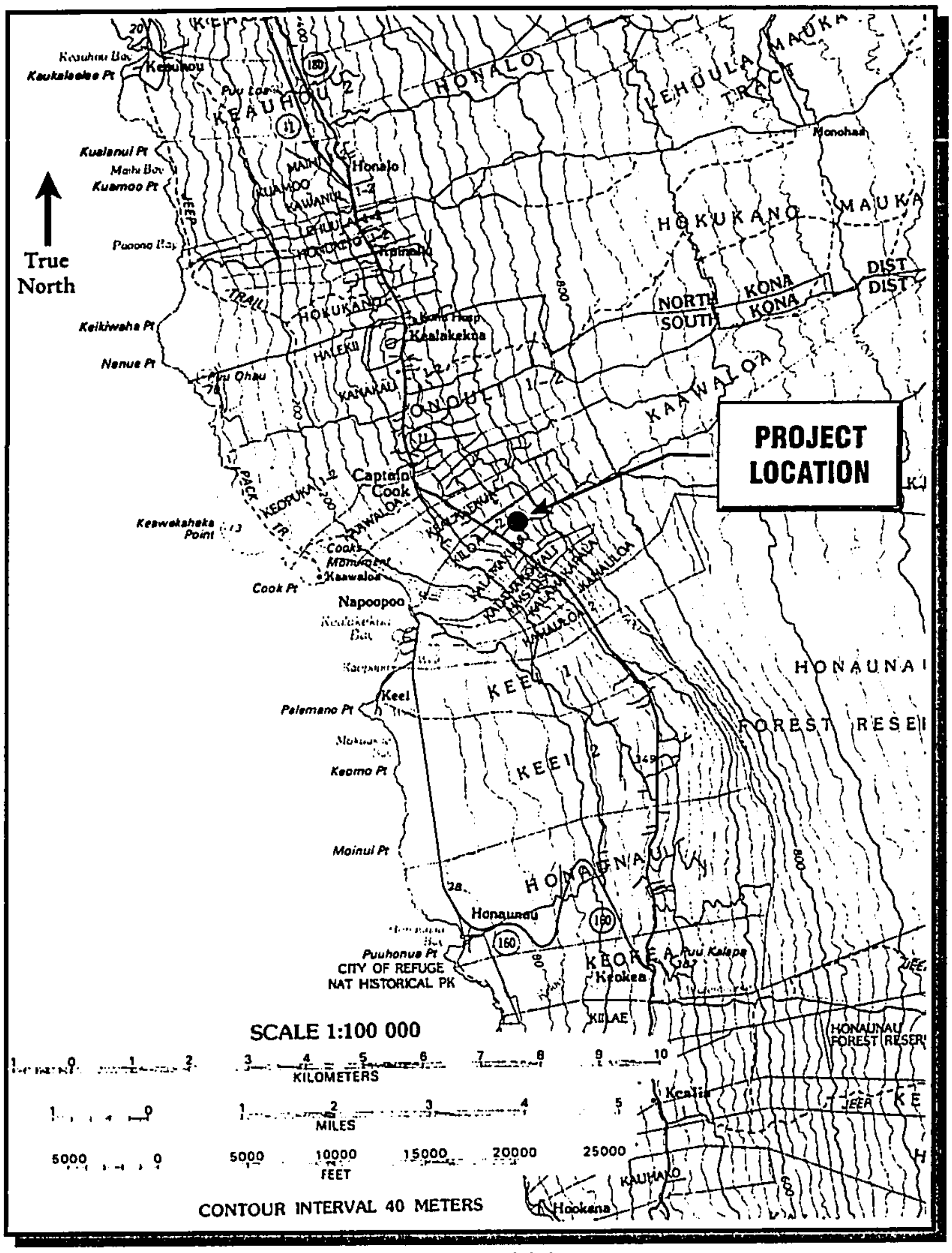


Figure 2 - USGS Vicinity Map

Benefits of this project will be the ability of the DWS to have a higher storage capacity to meet demands for the system service area which includes South Kona and North Kona if necessary. This includes storage for normal use, drought conditions and fire fighting situations. Current DWS standards do not allow use of steel tanks. Installation of a reinforced concrete tank will provide higher reliability and less maintenance and will conform to current DWS standards.

C. Ownership

The waterline and appurtenances will be owned by the Department of Water Supply, County of Hawaii. The waterline will be installed in private Koa Road which is covered by an existing utility pipeline easement and State Highway right-of-way. The existing Waipunaula Tank Site is owned by the County of Hawaii Department of Water Supply. To accommodate the new 1.0 million gallon water tank the DWS will need to acquire additional area from two adjoining parcels; TMK 8-2-01:91 & 94. See Appendix A, Tax Map Key of Area.

D. Project Schedule and Cost

The proposed project schedule which is subject to change is as follows:

Proposed Project Schedule:

Public Process:	March 1999 - May 1999
Field Survey:	March- 1999
Engineering Design and Review:	April 1999 - August 1999
Bid Process:	September 1999 - October 1999
Award & Execution of Contract:	November 1999 - December 1999
Construction:	January - June 2000

The estimated preliminary construction cost of the project is one million two hundred fifty thousand dollars ($ 1,250,000.00). Funding will be from the Department of Water Supply.

E. Consultation with Agencies, Organizations and Individuals

The following have been contacted during the preparation of this environmental

assessment.

County Department of Water Supply
County Department of Public Works
County Planning Department
State Department of Transportation

This draft environmental assessment was prepared using information gathered from previously published documents (See Reference Listing) and informal contacts with the agencies listed above.

PART 2

ENVIRONMENTAL SETTING

Physical Environment Characteristics

A. Soils

Soils in the area are classified as *HRD* per the "Soil Survey of Island of Hawaii, State of Hawaii," by the Soil Conservation Service. Symbol *HRD* represents "Honaunau silt loam, 6 to 20 percent slopes" soil series, with erosion factor K=0.05, and falls in hydrologic group "C." Honaunau series consists of moderately well-drained silt loams that formed in volcanic ash. These are gently sloping to moderately steep. Permeability is rapid, runoff is slow and the erosion hazard is slight. Some areas of the *HRD* classification are described as Honaunau extremely rocky silty clay loam , 6 to 20 percent slopes. These areas are characterized by rock outcrops occupying 25 to 50 percent of the surface of this soil. These soils are at intermediate elevations on the leeward side of Mauna Loa. Natural vegetation would consist of ohia, koa, tree fern and alapaio fern. Areas in the vicinity of the project are mostly planted in coffee.

B. General Climate

Average annual rainfall ranges from 60 to 80 inches and with temperatures ranging in the 60's to the 80's Fahrenheit. Winds are light and variable generally from the south west. The ground elevation at the tank site is about 1,740 feet above sea

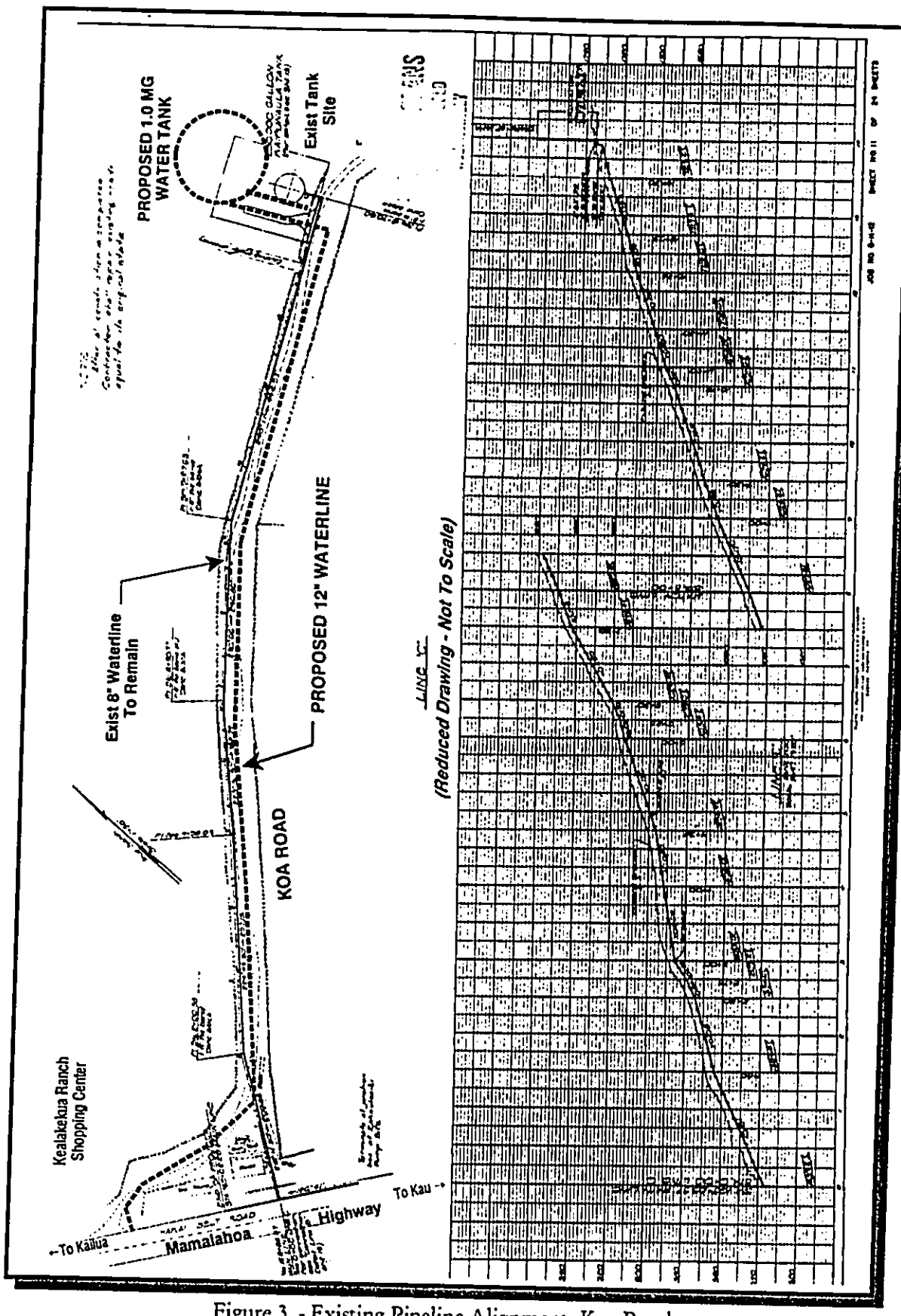


Figure 3 - Existing Pipeline Alignment, Koa Road
Proposed Pipeline Alignment

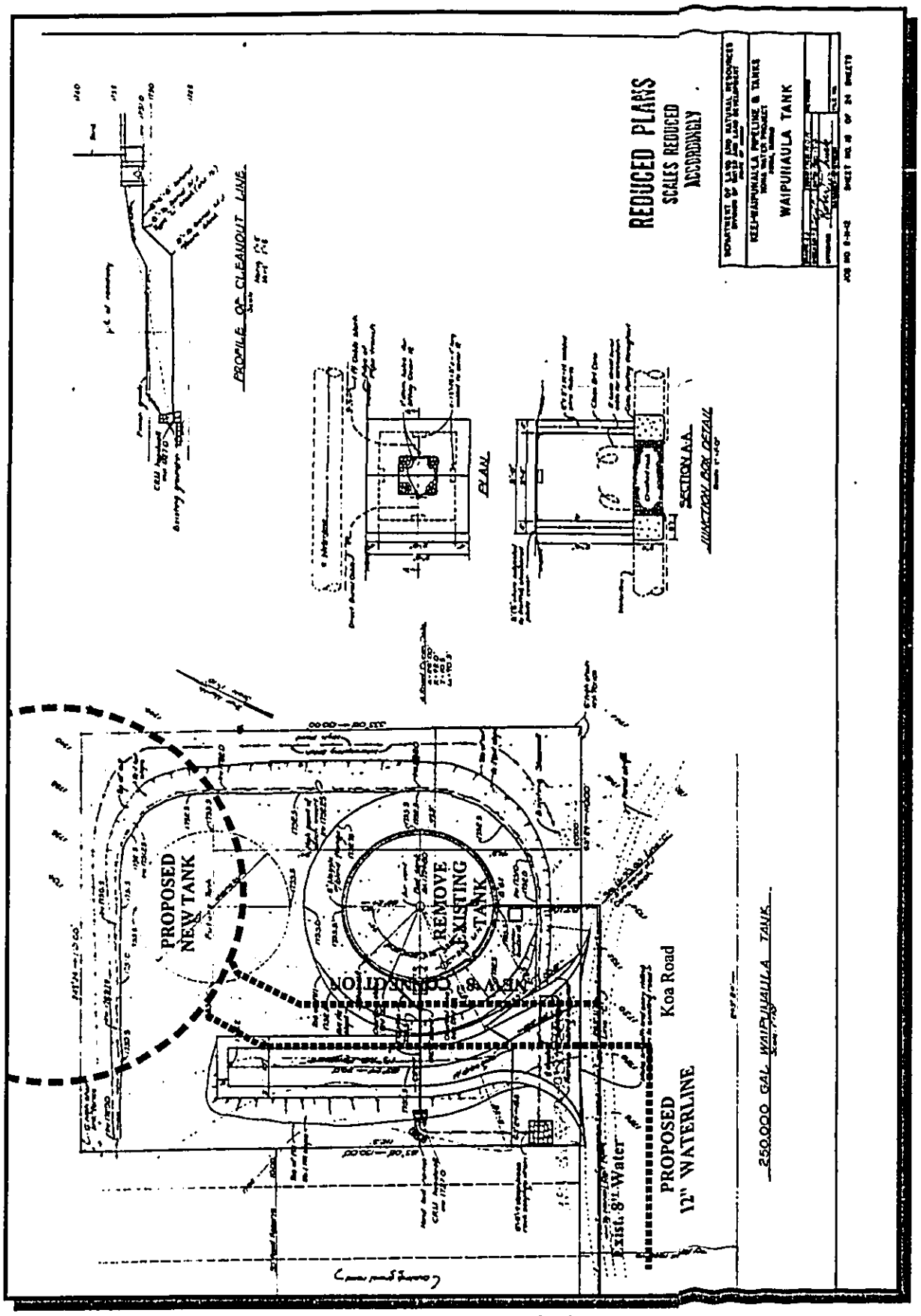


Figure 4 - Existing Tank Site

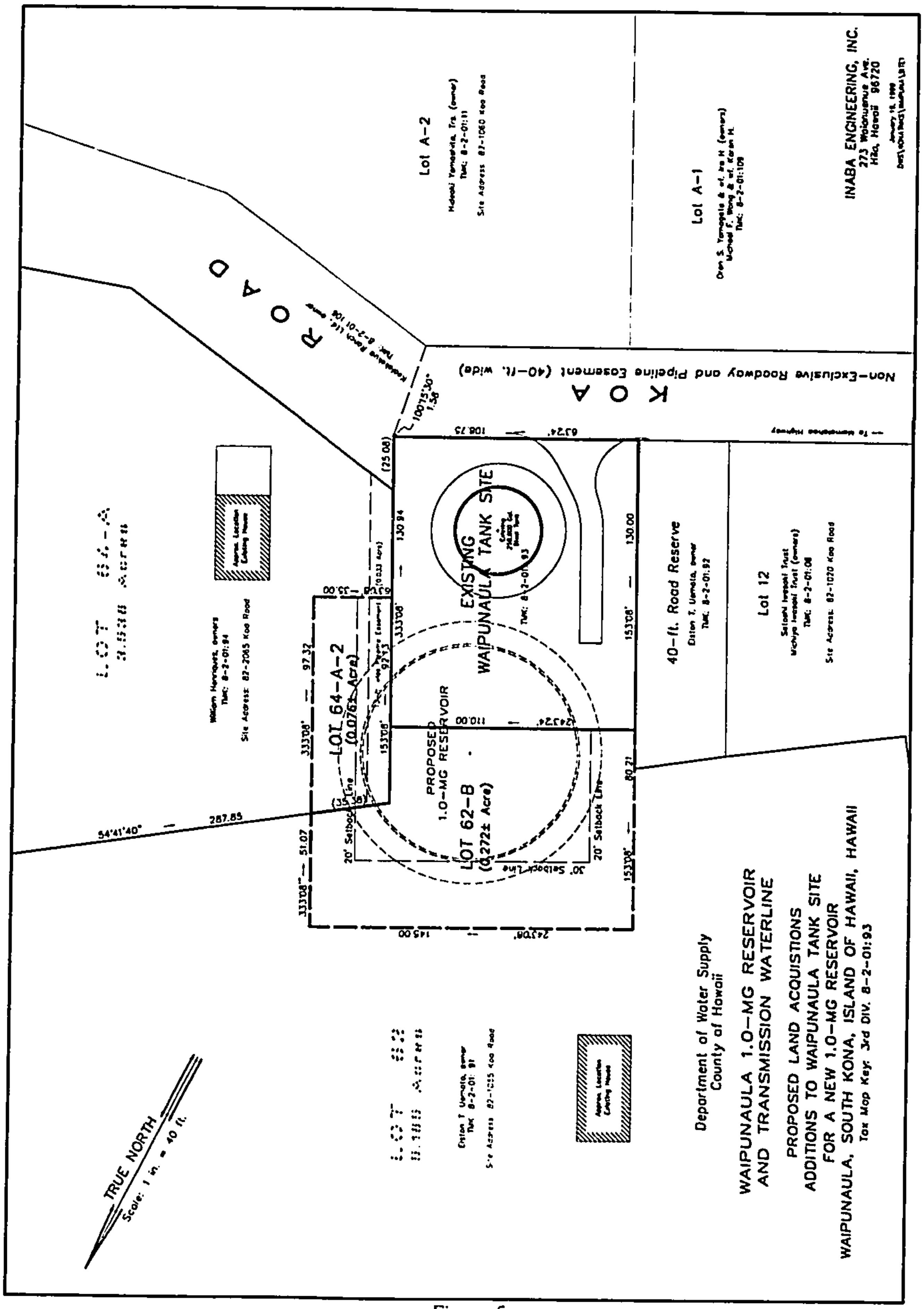

Department of Water Supply
County of Hawaii
WAIPUNAULA 1.0-MG RESERVOIR
AND TRANSMISSION WATERLINE
PROPOSED LAND ACQUISITIONS
ADDITIONS TO WAIPUNAULA TANK SITE
FOR A NEW 1.0-MG RESERVOIR
WAIPUNAULA, SOUTH KONA, ISLAND OF HAWAII, HAWAII
Tax Map Key: 3rd DIV. 8-2-01:93
INABA ENGINEERING, INC.
273 Waianuenue Ave.
Hilo, Hawaii 96720
TRUE NORTH
Scale: 1 in. = 40 ft.
Lot A-2
Lot A-1
Lot 12
40-ft. Road Reserve
KOA ROAD
Non-Exclusive Roadway and Pipeline Easement (40-ft. wide)
EXISTING WAIPUNAULA TANK SITE
PROPOSED 1.0-MG RESERVOIR
LOT 62-B
(0.272± Acre)
LOT 64-A-2
(0.076± Acre)
20' Setback Line
30' Setback Line

Figure 5.

level.

C. Flood Hazards

Federal Insurance Rate Maps (FIRM), indicates the project area to be in "Other Areas Zone X." These are areas determined to be outside 500-year flood plain. Installation of the proposed improvements does not present a flood hazard to surrounding areas, nor will it be susceptible to flooding damage from the surrounding area.

D. Volcanic and Seismic Hazard

Waipunaula is located on the lower slopes of Mauna Loa which is one of five volcanoes forming the island of Hawaii. The slopes of Mauna Loa are located in Hazard Zones 1, 2, 3, & 6. All of Waipunaula is located in Hazard Zone 3. The island of Hawaii is divided into zones according to the degree of hazard from lava flows. Zone 1 is the area of greatest hazard and Zone 9 is of the least hazard.

Hazard zones for seismic or earthquake activity has not been established for the island of Hawaii.

E. Flora and Fauna

Because the alignment of the waterline will be under and along existing roadway pavement and paralleling the existing waterline, there should be no effect to flora along the new pipeline. The existing tank site has no significant vegetation. No protected or endangered animal species are expected to be affected during construction of the project and during its eventual operation. On parcels to be acquired, the vegetation is typical of that associated with homes and maintained areas and coffee trees.

F. Historic Sites

There are no know historic sites to be affected by the proposed improvements. The waterline will generally follow the alignment of the existing waterline under the roadway and therefore pipeline excavation will likely occur in previously disturbed areas. The existing tank site was extensively excavated and graded to accomodate the existing facilities. Additional land areas that are proposed to be acquired have homes and farm related structures on them and are planted in coffee. Much of the land area was previously owned by Kealakekua Ranch, Ltd. which

would indicate pastoral uses prior to development. Any historical or archaeological features, if present, would probably have been eliminated.

G. Existing Land Use

The waterline will run along the existing paved single land Koa Road. The concrete water tank will be on the existing Waipunaula Tank Site and portions of two adjoining parcels. .Land uses along the waterline alignment are generally family agricultural orchards. The surrounding parcels are occupied by homes and farm sheds and planted with coffee trees. Uses along Mamalahoa highway north of the project include the Kealakekua Ranch Shopping Center and various commercial activities in the Captain Cook Area. Uses south of the project are agricultural which would include coffee, avocado, and macadamia.

State Land Use District classification system designates the area as *agricultural*. The County of Hawaii General Plan land use allocation designates the area as *orchard*. County of Hawaii zoning in the area is Ag-5a or agricultural 5 acres.

PART 3

SUMMARY POTENTIAL IMPACTS AND MITIGATION MEASURES

A. Short Term Construction Impacts

Construction activity related to the proposed waterline, concrete water tank and appurtenances will create short term impacts on the surrounding environment such as noise, dust, and traffic impacts. These impacts would occur only during the construction phase of the project and is temporary in nature.

Heavy equipment noise may be mitigated by allowing work only during normal working hours. The contractor shall also be required to maintain his equipment with appropriate mufflers and noise suppressors in accordance with state regulations.

Ambient air quality will be affected by equipment emissions and construction

generated dust. Dust can be managed by the Contractor using water sprinkling, limiting exposed areas, and covering the exposed trench areas with trench plates as soon as practicable. Equipment must be properly maintained to assure efficient operation in terms of fuel combustion to assure the cleanest possible exhaust emissions.

To minimize soil erosion, runoff, and sedimentation, the Contractor shall employ necessary measures to insure compliance with the County of Hawaii Grading Ordinance, and the applicable State Department of Health Pollution Control Standards. If construction dewatering is to be done, the contractor shall obtain necessary permits for the discharge of construction dewatering. The Contractor shall also be required to implement a Best Management Practices Plan as prescribed by the National Pollution Discharge Elimination System (NPDES) permit as administered by the State Department of Health, if required.

Traffic impacts will be mitigated by instituting a traffic control plan approved by the County of Hawaii Department of Public Works and the State Department of Transportation for work within their respective jurisdictions. T Construction road work and material deliveries shall be scheduled to minimize the disruption to traffic.

B. LONG TERM IMPACTS

No long term major negative impacts are expected as a result of this project. This project will benefit the local community and current and future water service customers.

C. PERMITS AND APPROVALS

Construction plans will submitted to the following agencies for review and approval signatures:

Department of Water Supply
Department of Public Works
Planning Department
State of Hawaii Department of Health
State of Hawaii Dept. of Transportation

The following is a list of permits that may be required:

State of Hawaii Dept. Of Health
NPDES General Permit Coverage:

Hydro Testing Water
Community Noise Permit for Construction.
State of Hawaii, Dept of Transportation Right-Of-Way Permit

D. TANK DEMOLITION AND REMOVAL

A lead paint facility survey was performed by EnvironMETeo Services, Inc. (EMET) in March 1999. (See Appendix D, Lead Paint Facility Survey) The test results have detected lead in excess of 1.0 mg/cm² on certain painted surfaces on the tank. Based on the survey results, EMET will be retained by the DWS to provide a lead paint response action specification for the tank demolition and removal phase of the project. These specifications will conform to applicable rules and regulations required by the concerned governmental agencies. The contractor will be required to abide by these specifications during the demolition and removal process.

PART 4

ALTERNATIVES TO THE PROPOSED ACTION

A. No Action

The "No Action" alternative will not allow the objectives of the proposed project to be achieved. This alternative will result in no physical change to the water system and surrounding area and have no impacts. The steel water tank will continue to corrode and possibly leak, will remain under capacity and be susceptible to failure. Fire protection will not be enhanced.

There will be no benefits realized by the community.

B. Alternate Action

No alternate action was considered for this project.

PART 5

RELATIONSHIP TO PLANS AND POLICIES

A. Kona Regional Plan (1982):

Some of the goals and policies of the Kona Regional Plan for Water Infrastructure, Chapter V, include the following:

- Ensure that adequate, efficient and dependable public utility services will be available to users.
- Maximize efficiency and economy in the provision of utility services.
- Improve and replace inadequate systems.
- The fire prevention distribution system shall be coordinated with water distribution systems in order to ensure water supplied for fire-fighting systems.

Recommendations of the plan included:

- Implement the improvements proposed for Kona by the Water Master Plan, dated December 1980, and
- The location and timing of major water system improvement should be coordinated with other infrastructural improvement and with overall community priorities.

Proposed improvements planned include epoxy lining of steel tanks.

Implementation of this project meets objectives of the Kona Regional Plan Goals, Policies and Standards listed above. Current DWS standards do not allow steel tanks and therefor would not promote epoxy lining of existing steel tanks. The DWS is in the process of replacing aging steel tanks with more reliable and lower maintenance reinforced concrete water tanks as needed and as funding permits.

B. The General Plan Hawaii County, November 1989:

Some of the listings under Section 4. Goals, Policies and Standards, Public Utilities, WATER, POLICIES, are as follows:

- All water systems shall be designed and built to Department of Water Supply standards.
- Improve and replace inadequate systems.
- Water sources shall be adequately protected to prevent depletion and contamination from natural and man-made occurrences or events.
- Water system improvements should be first installed in areas which have established needs and characteristics, such as occupied dwellings and other uses, or in areas adjacent to them if there is need for urban expansion, or to further

the expansion of the agricultural industry.

- The fire prevention systems shall be coordinated with water distribution systems in order to ensure water supplies for fire protection purposes.

Under STANDARDS, the following:

- Water Systems shall meet the requirements of the Department of Water Supply and the Subdivison Control Code.

And under H. SOUTH KONA, (5) PUBLIC UTILITIES, (a) Water, Courses of Action, the following:

- Pursue ground water source investigation, exploration and development in areas that would provide for anticipated growth and that would provide for efficient and economic system operation.
- Increase the capacity of the booster pump stations as required.
- Increase capacity of the booster pump for the South Kona water system as the demand increases.
- Construct new reservoirs as needed.

Under (8) LAND USE, (a) AGRICULTURE, Courses of Action, the following:

- Assist in the provision of water in agricultural areas.

Implementation of this project would meet and comply with objectives of the General Plan Goals, Policies and Standards listed above.

PART 6

DETERMINATION

The proposed project is intended to benefit residents, farmers, agricultural and commercial activities for South Kona and is not expected to significantly alter the environment. Negative impacts will be mainly short term and minimal, and related to construction activity. Therefore, it is determined that the issuance of a Negative Declaration is appropriate.

PART 7

FINDINGS AND REASONS

In determining the issuance of a Negative Declaration and Finding of No Significant Impact (FONSI), the proposed action was reviewed and found to have no significant impact on the following significance criteria.

- Involves the loss or destruction of any natural or cultural resource;
  The proposed project is within an existing private paved roadway and on an existing tank site which has been previously excavated, thus, is not anticipated to affect any natural or cultural resource. No archaeological sites are known to exist within the pipeline alignment and existing tank site which are previously disturbed areas.

- Curtails the range of beneficial uses of the environment.
  This project will not curtail beneficial use of the environment. The area is developed and the project purpose is to satisfy demands on the existing water system which will enhance and maximize current use of the agricultural and commercial areas affected.

- Conflict with the State's long-term goals or guidelines and expressed in Chapter 344 HRS.
  This proposed project is consistent with the Environmental Policies established in Chapter 344 HRS.

- Substantially affect the economic or social welfare of the community or state.
  The proposed waterline replacement is intended to provide adequate uninterrupted water flow and fire protection to service areas. The existing system is currently

inadequate. Installation of the water tank and waterline serves only to enhance the conditions of the area. Short term economic benefits will be realized by construction employment and spending in the area. This project is intended to replace and upgrade portions of the existing system.

- Substantially affects public health.
  This project will not substantially affect public health. Any public health effects would be related to construction activity which is temporary and short term in nature. The contractor is required to comply with all Department of Health rules and regulations related to his actions.

- Involves substantial secondary effects such as population changes or infrastructure demands.
  The proposed waterline replacement is intended to provide adequate uninterrupted water flow and fire protection because the existing system is currently inadequate. These improvements are intended to satisfy existing water commitments of the Department of Water Supply.

- Involves substantial degradation of environmental quality.
  Once completed, the waterline will not affect environmental quality. Any effects on environmental quality will be short term and related to construction activity. The contractors are required to comply with all Department of Health environmental and pollution control rules and regulations.

- Is individually limited but cumulatively has considerable effect on the environment, or involves a commitment to larger actions.
  The proposed waterline replacement is intended to replace and upgrade portions of the existing system. Installation of the proposed improvements are intended to satisfy existing water commitments of the Department of Water Supply. Larger actions in the area such as the proposed Kealakekua Bay Club and the Villages at Hokukano are required to fund and install facilities to satisfy water demands beyond available commitments from the DWS..

- Substantially affects a rare, threatened or endangered species or its habitat.
  The proposed improvements will be installed along an existing paved roadway and on an existing DWS tank site. There will be no known effect to rare, threatened or endangered species or its habitat.

- Detrimentally affects air or water quality or ambient noise levels.
  Once completed, the reservoir and waterline will not detrimentally affect air or water

quality or ambient noise levels. Any effects to be noted will be short term and related to construction activity. During construction the contractor is required to comply with all state and county regulations related to air and water quality and to mitigate noise levels related to his construction equipment and activity.

- Affects an environmentally sensitive area, such as a flood plain, tsunami zone or erosion prone area, geologically hazardous land, estuary, freshwater area, or coastal waters.
  The improvements will not affect any environmentally sensitive area. The new reservoir and waterline will not create a condition that is substantially different from the existing situation.

- Substantially affects scenic vistas and view planes identified in county of state plans or studies.
  This project does not affect scenic vistas or view planes. Although the capacity of the new water tank is greater, the overall height of the new tank will be lower than the existing steel tank.

- Requires substantial energy consumption.
  This project will not require substantial energy consumption.

REFERENCES

Atlas of Hawaii, Second Edition, 1983, Department of Geography, University of Hawaii

The General Plan Hawaii County, November, 1989, County of Hawaii

Hawaii County Water Use and Development Plan, Review Draft, February 1992, Commission of Water Resource Management, Department of Land and Natural Resources, State of Hawaii.

Kona Regional Plan, 1982, Prepared by County of Hawaii, Department of Planning, Hilo, Hawaii.

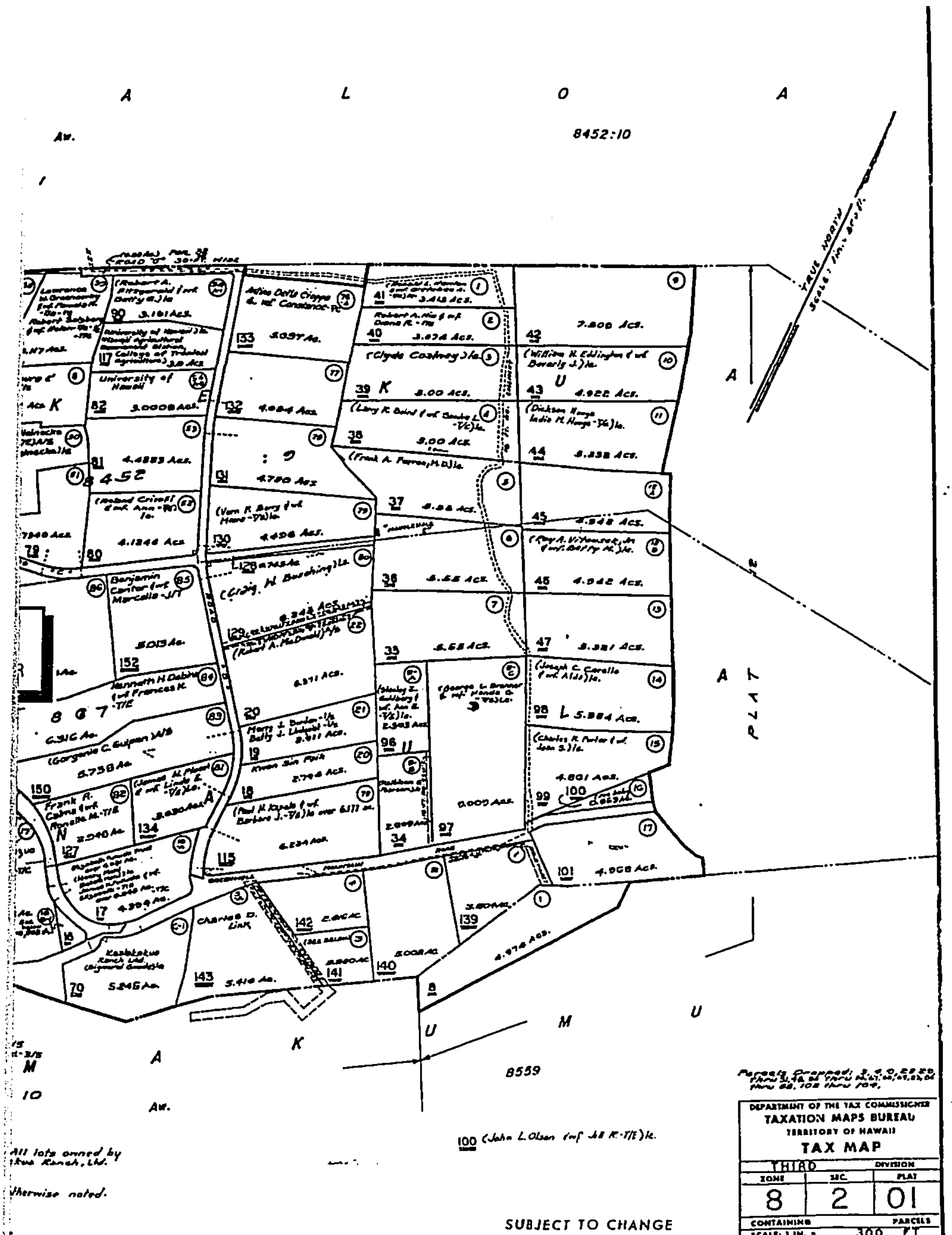
Rules of Practice and Procedure, October 1996, County of Hawaii, Planning Commission.

Soil Survey of Island of Hawaii, State of Hawaii, December 1973, United States Department of Agriculture Soil Conservation Service, In Cooperation with University of Hawaii Agricultural Experiment Station.

Volcanic and Seismic Hazards on the Island of Hawaii, U.S. Department of the Interior, U.S. Geological Survey, Christina Heliker.

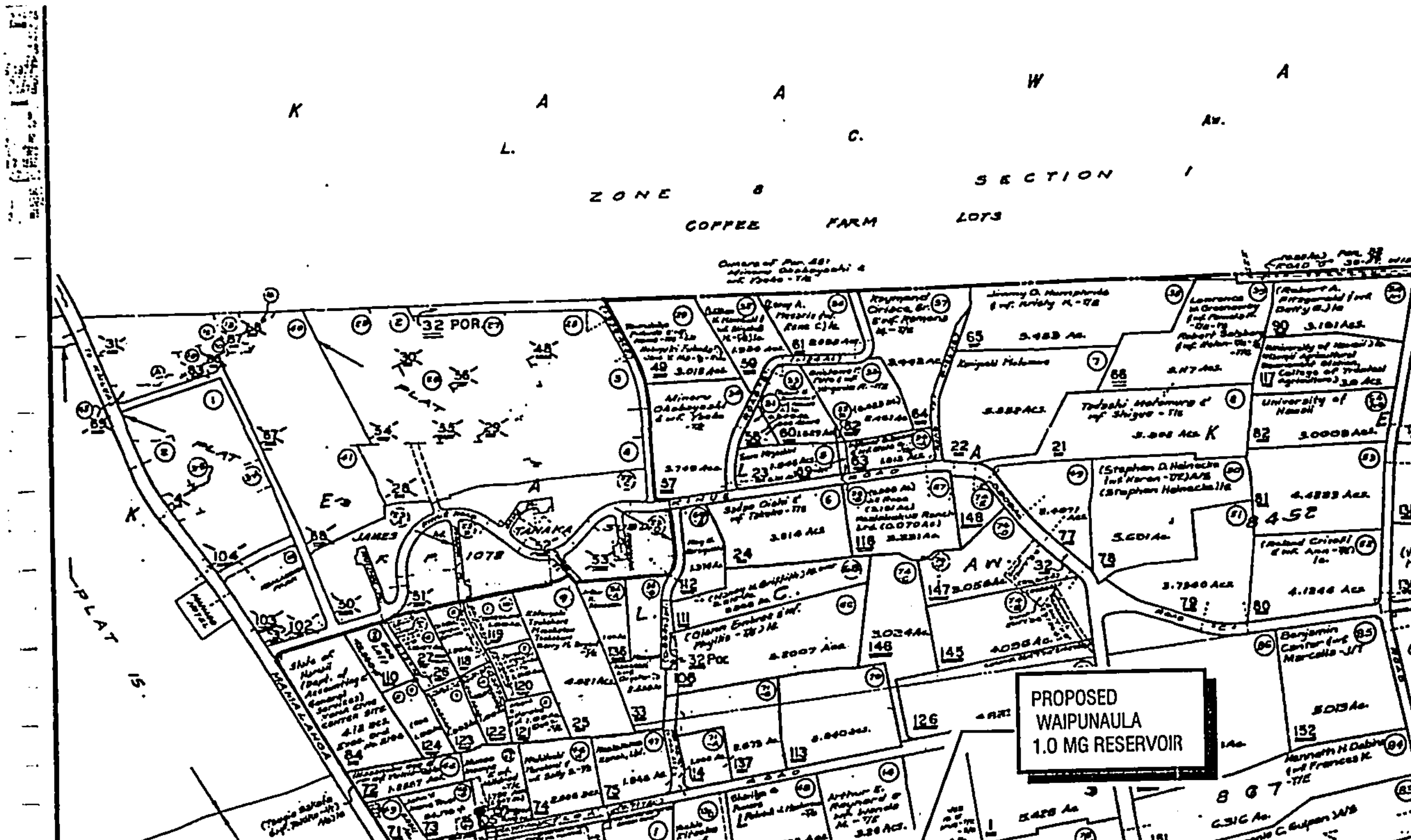
Kealakekua Bay Club Draft Environmental Impact Study, November 1991, Belt Collins & Associates for Royal Coast Development and PAC INV Hawaii, Inc.

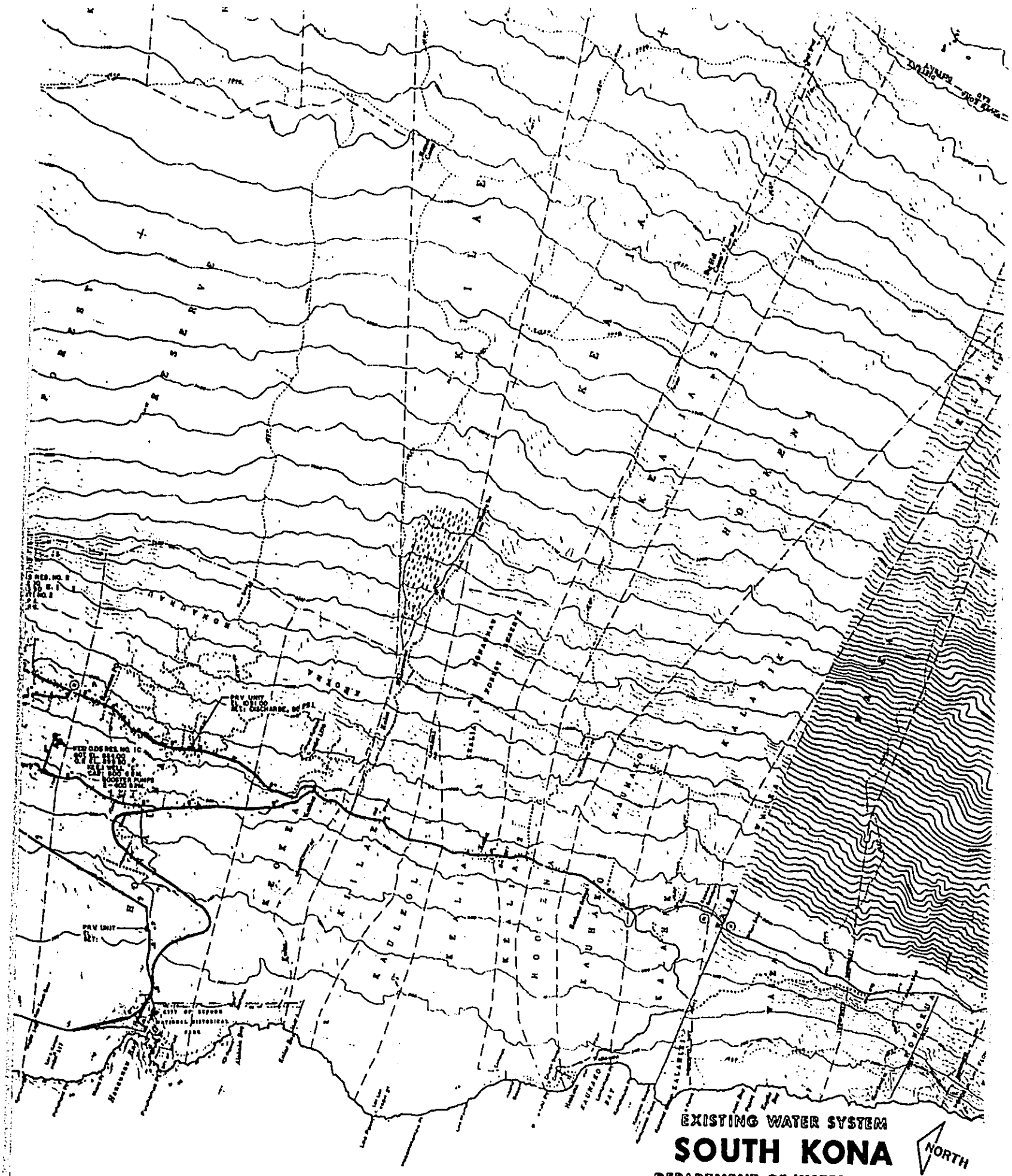
Villages of Hokukano Final Environmental Impact Study, September 1993, PBR, Hawaii for Oceanside 1250.

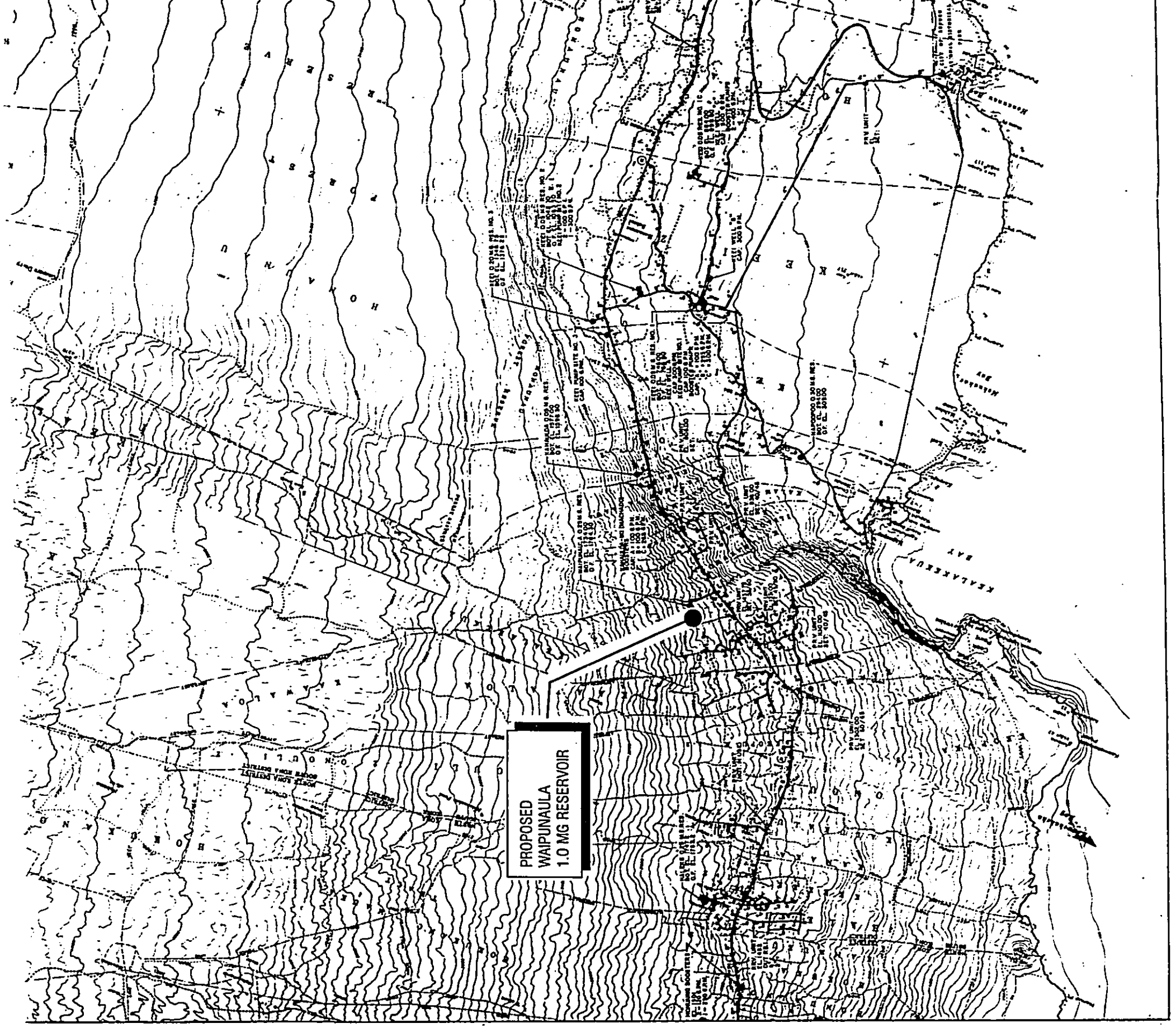


A L O A
8452:10
8559
TRUE NORTH
DEPARTMENT OF THE TAX COMMISSIONER
TAXATION MAPS BUREAU
TERRITORY OF HAWAII
TAX MAP
THIRD DIVISION
ZONE 8
SEC. 2
PLAT 01
SCALE: 1 IN. = 300 FT
SUBJECT TO CHANGE
All lots owned by
Otherwise noted.

APPENDIX A


ZONE 8 SECTION 1
COFFEE FARM LOTS
PROPOSED
WAIPUNAULA
1.0 MG RESERVOIR
Kealakekua Ranch
Shopping
Center
Parcel 71
United States Postal Service
NOTE: All lots owned by Kealakekua Ranch, Ltd. unless otherwise noted.
3 1738
COFFEE FARM LOTS, KEALAKEKUA, KILOA 1 & 2 and WAIPUNAULA 1 & 2 SOUTH KONA, HAWAII


EXISTING WATER SYSTEM
SOUTH KONA
DEPARTMENT OF WATER SUPPLY
COUNTY OF HAWAII
NORTH
SCALE IN FEET
8-A


PROPOSED
WAIPUNAULA
1.0 MG RESERVOIR

APPENDIX C

Stephen K. Yamashiro
Mayor

Virginia Goldstein
Director

Russell Kokubun
Deputy Director

County of Hawaii
PLANNING DEPARTMENT
25 Aupuni Street, Room 109 • Hilo, Hawaii 96720-4252
(808) 961-8288 • Fax (808) 961-8742

April 26, 1999

Mr. Jason K. Inaba, P.E.
INABA ENGINEERING, INC.
273 Waianuenue Ave.
Hilo, HI 96720

Dear Mr. Inaba:

Request for Comments re: DEA (Draft Environmental Assessment)(3/99)
Waipunaula 1.0 MG Reservoir & Transmission Waterline
Hawaii County Department of Water Supply (DWS Job No. 98-720)
Coffee Farm Lots, Waipunaula, S. Kona, Hawaii Island
TMK: 8-2-01: 93, 94, 91, 106, 02

Thank you for requesting our review of the above DEA. Our comments are provided below pursuant to Hawaii Administrative Rule 11-200-9(a)(1) as the county agency responsible for implementing the Hawaii County General Plan. The following information pertains to the land use laws that apply to this project site and that are under or related to the Planning Department's jurisdiction.

Land Use Zonings & Designations
According to the DEA and the departments' zoning maps, this project will include the parcels listed above. The following three land use laws apply to these parcels:

- County Zoning Code: Agricultural (Ag-1ac. & Ag-5ac.)
- SLU (State Land Use): "A" (Agricultural)
- County GP (General Plan) Land Use Designation: Orchards

SMA (Special Management Area). The project site is not within the county's SMA zone; and therefore, it does not require SMA review for an exemption or permit.

Hawaii County Zoning Code Requirements: Permitted Use. Pursuant to and consistent with county Zoning Code secs. 25-4-11(a) & (b), -1-5(b)(86), and -5-72(a)(17), the proposed new water tank, waterline, and related site improvements qualify as a public use or structure necessary for agricultural practices; as a result, it is "...a permitted use in any county zone district."

SLU: "Agricultural" District. The proposed improvements are permitted in the state "A" district.

Conforms w/ County GP Land Use Designation: Orchards. The project site location is designated Orchards, according to the LUPAG (Land Use Pattern Allocation Guide) Map - III County GP, Ordinance No. 89-142 (effective: November 4, 1989).

Thank you for this opportunity to offer comments on the Draft Environmental Assessment. Any follow-up to these comments may be made with Earl Lucero. Ph: 961-8288.

Sincerely,

for VIRGINIA GOLDSTEIN
Planning Director

EML:gp
P:\wp60\earl\letters\ldea1.eml

cc: Hawaii County Department of Water Supply
SMA Section
West HI Planning Office

APPENDIX D

EMET EnvironMETeo Services, Inc.
Environmental / Industrial Health & Safety

Lead Paint Facility Survey

for

Inaba Engineering, Inc.
273 Walanuenue Avenue
Hilo, Hawaii 96720

Facility Surveyed

Waipunaula Reservoir Tank
Waipunaula, South Kona ,Hawaii

Conducted by

EnvironMETeo Services Inc. (EMET)

March 18, 1999

EMET ID: 9810400

Table of Contents

Certification of Report.....2
Summary.....3
Lead Background Information.....3
Lead Paint Survey.....4
Bulk Sampling and Sample Analyses.....4
Limitations.....5

Load Paint Survey Results.....Appendix A
Photographs.....Appendix B
Certifications.....Appendix C

Certification of Report

We certify that this report is based on a physical survey for lead paint performed by EnvironMETeo Services Inc. (EMET) on March 18, 1999 of the areas affected by the planned demolition activities as prepared Inaba Engineering, Inc.

Painted surfaces were tested for lead concentrations utilizing a x-ray fluorescence (XRF) analyzer, an acceptable EPA and HUD testing methodology.

Results of the presence or absence of lead-containing paint are based on the visual inspection, and on the analysis of suspect paint encountered.

EnvironMETeo Services Inc. (EMET) makes no warranty and assumes no liability for the inappropriate use or misuse of this document. This report is not a specification for lead paint and should not be used as such.

Clifford How
Project Director

Summary

Waipunaula Reservoir Tank, located in Waipunaula, South Kona, Hawaii, was surveyed for lead paint by EMET on March 18, 1999. EMET's scope of work consisted of lead paint investigation of the areas subject to planned demolition activities, as prepared by Inaba Engineering, Inc. The survey was conducted in accordance with EMET's scope of work, as requested and authorized by Jason Inaba of Inaba Engineering, Inc.

Lead paint
U.S. Department of Housing and Urban Development (HUD) regulations, 24 CFR Parts 35, 200, 881, and 886; and Guidelines for the evaluation and control of lead-based paint hazards in housing - dated June 1995, define lead-based paint as paint with lead content in excess of 1.0 mg/cm² or 5000 parts per million (ppm) or greater. However, OSHA (HIOSH) regulates any activity disturbing paint that contains lead, even if the content of lead is below the HUD standard.

Based on the test results, painted surfaces containing lead content in excess of 1.0 mg/cm², was detected in the following:

description	location
metal surfaces and components w/ green paint	tank exterior, including top, upper wall, piping, ladder and railing
metal surfaces and components w/ black paint	tank exterior, including lower wall, piping and ladder

Based on the test results, painted surfaces containing lead content less than 1.0 mg/cm² was detected on all other components tested.

Lead Background Information

Lead occurs as an element in nature (bluish in color). It was recovered in early

times as a by-product in the smelting of silver. Once lead is mined, processed and introduced into man's environment, it is a potential problem forever. No known or foreseeable technology will destroy or render it harmless. The chronic disease of lead poisoning is often referred to as plumbism and may result from many occupational and non-occupational exposures.

It wasn't until the late 1700's that lead was suspected of being an occupational hazard. Benjamin Franklin described the toxic effects of lead occurring in tradesmen who used lead in their occupations, including printers, plumbers and painters. He lamented the fact that no one seemed to be doing anything to protect people from the poisonous nature of lead.

The severity of the problem is only now being fully realized. Children are especially vulnerable and susceptible to lead. We know now that too much lead in the body can cause serious damage to vital organs such as kidneys, red blood cells, the central nervous system as well as the brain. High levels of lead can cause retardation, convulsions, coma and sometimes death.

Lead Paint Survey

On March 18, 1999, Gary Wu of EMET Services Inc., conducted a survey for lead-containing paint of the following:

Waipunaula Reservoir Tank
Waipunaula, South Kona, Hawaii

The purpose of the survey, sampling, and testing was to measure the concentration of lead in the existing paint prior to scheduled demolition activities.

Sample Analyses

Twelve (12) XRF readings of painted surfaces were conducted. A unique

identification number was assigned to each test location and entered on a data sheet, indicating ID number, location and lead concentration.

Painted surfaces were tested for lead concentrations utilizing a x-ray fluorescence (XRF) instrument, an acceptable EPA/HUD testing methodology.

Limitations

The lead paint survey was performed to measure lead concentrations in paint. Original plans and specifications were not available for review. Therefore, because of limitations and the nature of the facility's construction and EMET's scope of work, the potential remains for undiscovered lead paint.

This report is not a specification for lead paint materials and should not be used as such.

EnvironMETeo Services Inc. (EMET) makes no warranty and assumes no liability for the inappropriate use or misuse of this document.

EMET

Appendix A

Lead Paint Survey Results

Inaba Engineering, Inc.
Walpunaula Reservoir Tank
Painted Surface Test Results

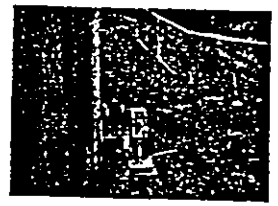
EMET ID: 9810400
Project Name: Walpunaula Reservoir Tank
Date: 3/15/99
Inspector: Gary Wu
XRF Serial #:U746D4415
XRF Analyzer Mode: Standard
Ranges (NEG<INC<POS): Device PCS

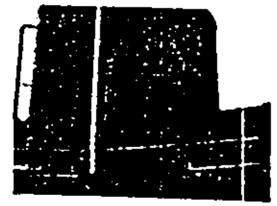
No	Insp	Room	Side	Struture	Feature	Condition	Substrate	Color	PbL(mg/cm²)	RES	PbK(mg/cm²)	Combined	Secs
1	GW	Calibrate-1							0.95 ±0.10	POS	0.1 ±0.4	1.0 ±0.2	20.3
2	GW	Calibrate-2							0.97 ±0.12	POS	1.1 ±0.4	1.0 ±0.2	20.3
3	GW	Calibrate-3							1.06 ±0.14	POS	0.5 ±0.5	1.1 ±0.2	20.3
4	GW	Tank Exterior	C	Wall-1	upper	Poor	Metal	Green	>>5.0 ±1.00	POS	23.1 ±8.3	23.1 ±8.2	1.1
5	GW	Tank Exterior	B	Wall-1	upper	Poor	Metal	Green	>>5.0 ±1.00	POS	30.2 ±4.8	30.2 ±4.8	1.1
6	GW	Tank Exterior	A	Wall-1	upper	Poor	Metal	Green	>>5.0 ±1.00	POS	41.1 ±8.2	41.1 ±8.2	1.1
7	GW	Tank Exterior	D	Wall-2	lower	Poor	Metal	Black	>>5.0 ±1.00	POS	23.5 ±8.2	23.5 ±8.2	1.1
8	GW	Tank Exterior	C	Wall-2	lower	Poor	Metal	Black	>>5.0 ±1.00	POS	21.4 ±4.9	21.4 ±4.8	1.1
9	GW	Tank Exterior	C	Ladder-1	upper	Poor	Metal	Green	>>5.0 ±1.00	POS	18.8 ±4.9	19.9 ±5.0	1.1
10	GW	Tank Exterior	C	Ladder-2	lower	Poor	Metal	Black	>>5.0 ±1.00	POS	21.8 ±4.7	21.8 ±4.8	1.1
11	GW	Tank Exterior	C	Pipe-1		Poor	Metal	Green	1.06 ±0.14	POS	1.1 ±0.7	1.1 ±0.2	20.0
12	GW	Tank Exterior	C	Pipe-2		Poor	Metal	Black	0.84 ±0.10	NEG	0.9 ±0.7	0.8 ±0.2	20.0
13	GW	Tank Exterior	1	Tank Cover-1		Poor	Metal	Green	>>5.0 ±1.00	POS	28.1 ±5.6	28.1 ±5.8	1.1
14	GW	Tank Exterior	1	Railing-1		Poor	Metal	Green	>>5.0 ±1.00	POS	31.2 ±8.2	31.2 ±8.2	1.1
15	GW	Tank Exterior	1	Electrical Box-1		Poor	Metal	Grey	0.03 ±0.10	NEG	1.0 ±0.2	0.0 ±0.2	20.8
16	GW	Calibrate-4							0.86 ±0.13	POS	0.6 ±0.4	1.0 ±0.2	20.3
17	GW	Calibrate-5							1.05 ±0.14	POS	0.4 ±0.4	1.1 ±0.2	20.3
18	GW	Calibrate-6							1.00 ±0.13	POS	0.7 ±0.5	1.0 ±0.2	20.3

EMET

Appendix B

Photographs


Tank elec. box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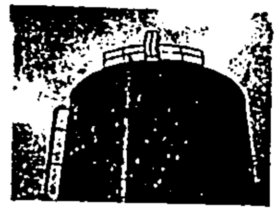
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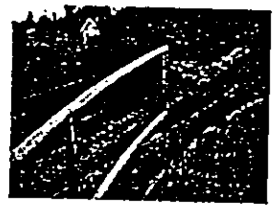
Tank exterior 3


Tank railing


Top of tank 1


Top of tank 2

9810400 Waipunaula Reservoir

M·E·T·A

Mayhew Environmental Training Associates

INCORPORATED

Certificate # 7ME06269701DI010

This is to certify that

Gary Wu

has on 06/26/97, in HONOLULU, HI
completed the EPA Regional Training Center Model Program

EPA Model Lead Inspector Initial Course

on 06/23/97 - 06/26/97 and passed the associated examination on 06/26/97
with a score of 70% or better

KANSAS EST 1985 MAYHEW INC. 1985 ENVIRONMENTAL TRAINING ASSOCIATES SAFETY INCORPORATED

Instructor

President

Soc. Soc #: 575-88-2879

META - P.O. Box 786 - Lawrence KS 66044 - 800-444-6382

EMET

Appendix C

Certifications

Lead Paint Survey
Waipunaula Reservoir Tank

EMET: 9810400

NITON®

CORPORATION

Certificate of Achievement

Gary Wu

EnviroMETeo(EMET) Services Inc.

has successfully completed the Manufacturer's Course in measurement technology, monitoring and machine maintenance of the NITON XRF Spectrum Analyzer.

V19970815-01
Certificate Number

08/15/97 Waipahu, HI
Course Date & Site

Director of Training

President & CEO - NITON

Tufts University

CENTER FOR ENVIRONMENTAL MANAGEMENT

Division of Education and Training

This is to certify that

Clifford How

has successfully completed course requirements in

Lead Inspector Training

9011.02.006
Certificate Number

November 26 - 28, 1990
Course Date

N/A
Examination Date

N/A
Expiration Date

SIGILLUM UNIVERSITATIS TUFTENSIS PAX ET LUX SIS

Associate Director for Education and Training

Director Center for Environmental Management

Printed on Recycled Paper

NITON®

CORPORATION

Certificate of Achievement

Clifford How

EnvironMETeo Services, Inc.

has successfully completed the Manufacturer's Training Course for the NITON Spectrum Analyzer *and is now certified in radiation safety and monitoring, measurement technology, and machine maintenance of the* NITON XRF Spectrum Analyzer.

V1998322-3
Certificate Number

3/22/98 Las Vegas
Course Date & Site

Training Coordinator

Vice President, Marketing

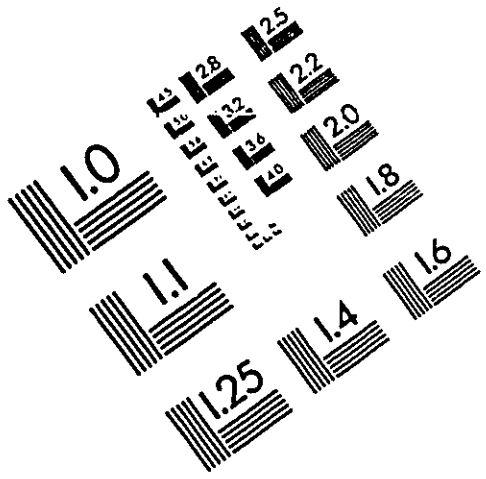
END

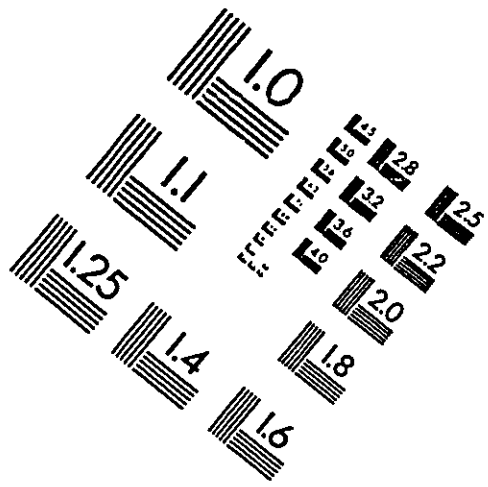
CERTIFICATION

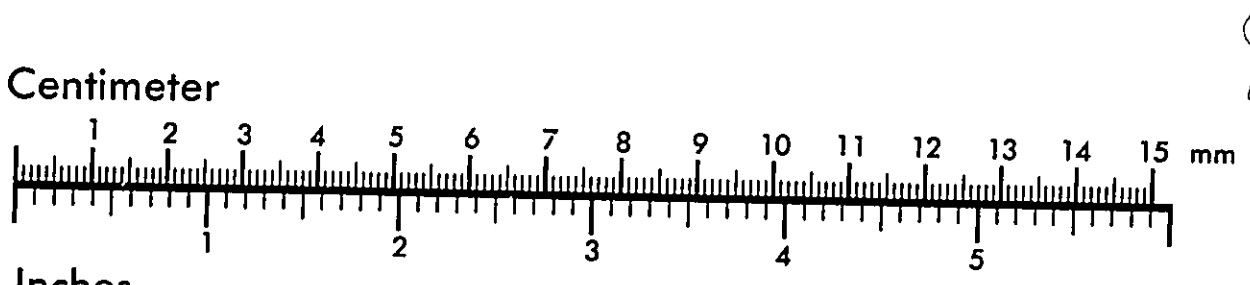
I HEREBY CERTIFY THAT THE MICROPHOTOGRAPH APPEARING IN THIS REEL OF FILM ARE TRUE COPIES OF THE ORIGINAL DOCUMENTS.

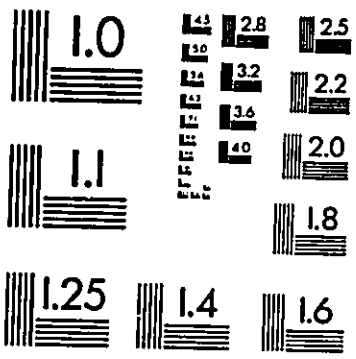
2004
DATE

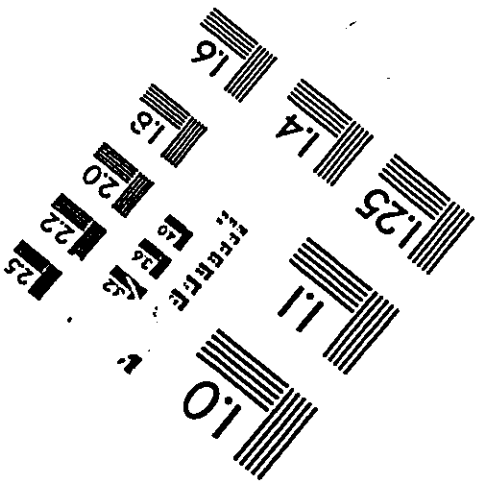
Cathy Miyashiro
SIGNATURE OF OPERATOR

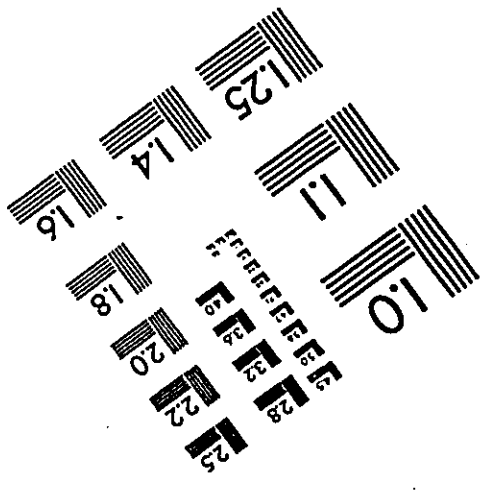












DENSITY TARGET