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AN EQUAL OPPORTUNITY EMPLOYER
COUNTY OF KAUAI
DEPARTMENT OF PUBLIC WORKS
3021 UMI STREET
LIHUE, KAUAI, HAWAII 96766

December 9, 1994

'94 DEC 13 P12:45

Mr. Brian J. J. Choy, Director
Office of Environmental Quality Control
220 S. King Street, 4th Floor
Honolulu, HI 96813

Dear Mr. Choy:

RE: NEGATIVE DECLARATION FOR THE CONSTRUCTION OF THE LIHUE DEBRIS RECYCLING STATION, THK 3-7-02-PORTION OF 01 KAUAI, HAWAII

The Department of Public Works, County of Kauai has reviewed the comments received during the 30-day period which began on August 8, 1994. The agency has determined that this project will not have significant environmental effect and has issued a negative declaration. Please publish this notice in the December 23, 1995 OEQC Bulletin.

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

If you have any questions, please contact our Solid Waste Coordinator, Dale Burton, at 241-6860.

Sincerely,

Steve Oliver
County Engineer

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Enclosures
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Harding Lawson Associates

Final Environmental Assessment
Lihue Debris-Recycling Station
Lihue, Kauai, Hawaii

Engineering and Environmental Services

1994-12-23-KA-FEA-Lihue Debris Recycling Station

Final Environmental Assessment
Lihue Debris-Recycling Station
Lihue, Kauai, Hawaii

Prepared for

County of Kauai
Department of Public Works
Solid Waste Division
3021 Umi Street
Lihue, Kauai, Hawaii

HLA Project No. 23045.202

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Project Engineer

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December 12, 1994

0435LA

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This document was prepared for the sole use of the County of Kauai and the regulatory agencies that are directly involved in this project, the only intended beneficiaries of our work. No other party should rely on the information contained herein without prior written consent of Harding Lawson Associates.

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1.0 INTRODUCTION

This environmental assessment (EA) is prepared pursuant to Chapter 343, Hawaii Revised Statutes (HRS), and associated Title 11, Chapter 200, Department of Health (DOH) Rules. The proposed action is an agency action, involving the expenditure of Federal Emergency Management Agency (FEMA) funds by the County of Kauai (county), lands to be owned by the county, and lands within the Conservation District.

The proposed action assessed herein is the construction and operation of the Lihue Debris-Recycling Station (LDRS). The recycling station is a facility where segregated debris from Hurricane Iniki and construction projects may be processed for reuse or recycling. The facility is to be located adjacent to the solid waste transfer station in Lihue, Kauai, Hawaii.

2.0 DESCRIPTION OF THE PROPOSED ACTION

2.1 General Description

The county proposes to construct a debris-recycling station adjacent to the Lihue Transfer Station (Figure 1). This facility is one of four debris-recycling stations proposed for the County of Kauai. The other currently proposed sites are located at Koloa, on Phase I of Kekaha Landfill, and on the north shore of Kauai. The development of the debris-recycling stations will be wholly funded by FEMA.

The purpose of the debris-recycling stations is two-fold: (1) To divert as much Hurricane Iniki debris as possible from Kekaha Landfill; and (2) to provide convenient, suitable processing areas for wastes resulting from ongoing construction projects, including green waste, and future disasters. If the county decides to continue operation once the hurricane debris has been processed, the debris-recycling stations will provide a means to meet the recycling/diversion requirements (25 percent waste diversion by 1995 and 50 percent waste diversion by 2000) set forth by state regulations.

The primary facility functions will include collection and volume reduction of green waste, processing of construction and demolition debris, and segregation of recyclables, including aggregates and metals. There will be no onsite disposal or burning; therefore, all material will be removed from the debris-recycling stations. The proposed site plan is provided on Figure 2.

The materials collected at the LDRS will be removed from the site once a month or more frequently, if necessary. Green waste, once chipped, will be removed from the site within 48 hours. The maximum volume that can be collected at the site prior to removal will be dictated by the height of the piles, which is not to exceed 15 feet. During prehurricane conditions (once a hurricane watch has been declared), the LDRS operators will be required to secure the debris by covering the piles with chain-link fencing or wire

mesh materials, and anchoring the fencing/mesh material to the ground. The county will store sufficient quantities of fencing/mesh onsite for use as needed.

2.2 Project Description

Hurricane Iniki caused the destruction of many houses, businesses and other structures. The severe damage of these facilities, their contents, and to Kauai's abundant vegetation, as well as the loss of electricity and other utilities, resulted in the generation of a large volume of solid waste. Much of the hurricane debris has been disposed of at Kekaha Landfill. However, a significant amount of hurricane debris has been collected and transported to temporary hurricane debris-receiving (THDR) sites. A large amount of debris is still being generated as a result of Hurricane Iniki as residents and businesses repair or rebuild their homes and business facilities.

The county's immediate response to the overwhelming amount of waste generated by Hurricane Iniki was to open five THDR sites on private properties identified as Olokele, Puhi, Wailua, Anahola, and Kilauea. These sites were needed to handle both the debris which had to be cleared immediately from roadways, and the refuse and waste which could not be handled by the inoperable refuse transfer stations and landfill. Initially, all types of wastes were received at the THDR sites. Once transfer station and landfill operations were restored, only nonputrescible wastes that were segregated and recoverable were accepted at these locations.

Hurricane debris will continue to be collected from throughout the island. It is estimated that construction and demolition (C&D) debris will continue to be generated for the next 12 to 18 months, as homeowners and businesses rebuild and repair their homes and offices. Therefore, the debris-recycling stations will be sized to both process the material that will be collected over the next 18 months and provide temporary storage in the

event of future disasters. Descriptions of the diversion processes that will be implemented at the LDRS are provided in the following sections.

2.2.1 Green Waste Diversion

Green waste refers to all the nonmanufactured organic materials that were generated as a result of Hurricane Iniki and general foliage clearing. This includes all downed trees, broken tree limbs, branches, uprooted shrubs and other natural foliage. Green wastes entering the debris-recycling stations should be free of contaminants, such as metals or mixed wastes.

The primary use of processed green waste will likely be the production of mulch and/or compost products (at other facilities) which can be used as ground cover or soil amendment. The green waste will be reduced in size at the LDRS and removed, within 48 hours of being chipped, to other locations for additional processing. In addition to mulch and compost products, green waste material may also be ground and used for biofuel production.

There has been some concern about fires being generated or birds being attracted to the green waste piles. To reduce the potential for combustion of green waste material, the green waste piles will be removed from the LDRS at least once a month and within 48 hours of being chipped. According to the U.S. Department of Agriculture, Animal Damage Control (ADC), in their letter dated August 30, 1994 (appendix), ". . . as long as composting does not occur at the proposed LDRS, . . . the facility should not attract the birds commonly associated with refuse operations." If birds are attracted to the LDRS operations, the county will take proper mitigative action and consult with ADC.

2.2.2 Construction and Demolition Debris Diversion

Construction and demolition (C&D) debris includes all wood generated as a result of demolition, renovation, and construction activities; all ferrous and nonferrous metals; aggregate, such as concrete, asphalt, and roofing tiles; and appliances (white goods). The C&D material will be segregated by type when it arrives at the LDRS.

The processed wood is likely to be used for biofuel. The biofuel will be used as a supplement to bagasse, which will be burned at an on-island boiler. The ferrous and nonferrous metals recovered will be processed by a metal recycler.

The aggregates, such as concrete, asphalt concrete and roofing tiles, that are recovered from the C&D debris will be crushed for base material for access roads for appropriate public projects and facilities. The material may also be used as fill material by the county, construction companies and land developers, plantations, resorts, golf courses, and landscaping companies.

C&D debris may or may not be crushed onsite, depending on the operator of the facility (county- or privately operated), and/or the contractor hired to crush the material and transport it offsite. The most probable scenario is for all volume reduction activities to occur at the LDRS, including crushing, to reduce the volume of material to be transported offsite. If crushing of C&D debris occurs onsite, appropriate mitigative measures will be taken to reduce dust. Dust control measures are discussed in Section 4.7.

2.2.3 Recyclables Diversion

Other recyclables, such as corrugated containers, plastic sheeting, newspaper, glass, and aluminum cans will be collected at the LDRS in specified containers. These materials are required to be as clean as possible and free of contaminants when brought to

the facility. The materials may be densified prior to removal from the site and the recyclables transported to market.

2.2.4 Hazardous Waste Exclusion

Hazardous or toxic wastes, including lead-based paints and asbestos, will not be accepted at the LDRS. However, debris painted with lead-based paint and asphalt roofing materials may be accepted. Emission control will be established during chipping operations to reduce the potential for dust to become airborne. Asphalt roofing materials to be received at the LDRS are unlikely to be asbestos-containing material (ACM) because asbestos was used as reinforcement in roofing materials until the early 1970s (according to technical representatives of asphalt roofing manufacturers), and Hurricane Iwa removed many of the older roofs in 1982. The county is currently planning to sample the existing piles of segregated roofing material at the THDR sites, which were generated by Hurricane Iniki. If the sampling activity indicates that the average asbestos content is less than one percent and appropriate permits for recycling and diversion are obtained from the state DOH, the county will divert roofing materials from the landfill. However, if the sampling activity indicates that the average asbestos content is greater than one percent, then the county will not accept roofing materials at the LDRS.

Incoming loads to the LDRS will be visually inspected for unacceptable items, including hazardous waste, petrochemicals and transformers. If unacceptable items are found in a load, the LDRS operators will not accept the load and will require the transporter to remove the waste from the site and dispose of it properly. The LDRS operators will have a list of facilities with addresses that will accept materials which the LDRS will not accept.

2.2.5 Ancillary Facilities

In addition to the areas required for processing the hurricane debris, a gate house with truck scales, equipment storage area, aboveground fuel storage tank, and parking area will be provided. The gate house and truck scales are currently planned to be located along the southeastern boundary of the recycling station (Figure 2). The site will be secured with fencing, gates, and perimeter lighting. Utilities such as water, electricity, telephone, and possibly sewer (otherwise a septic tank and drain system) will be provided at the site.

2.3 Waste Reduction Programs

Hawaii state law requires all counties to divert 25 percent of the waste generated within the county away from landfill disposal by 1995 and 50 percent by 2000. Continued operation of the proposed debris-recycling stations after the hurricane debris has been processed can help the county achieve these diversion goals.

The following table identifies the percentages of the Kauai solid waste stream that could be recycled/recovered (based on 1989 Waste Stream Composition) if the county continues operation of the debris-recycling stations.

Kauai Recyclables/Recoverables*

Waste Component	Percentage (%)
PAPER	
Newspaper	3.5
Cardboard	9.7
High-grade paper	0.8
MIXED PLASTICS	4.5
GLASS	
Beverage containers	4.2
Other glass	0.3
METAL	
Aluminum cans	0.9
Tin cans	1.8
White goods	1.1
Ferrous metals	3.2
Nonferrous metals	0.9
Mixed metals	2.1
ORGANIC	
Large yard waste	6.6
Yard waste	13.1
Wood	9.8
CONSTRUCTION DEBRIS	1.7
TOTAL	**64.2**

*Source: R.W. Beck. 1989. Waste Stream Characteristics Analysis.

3.0 DESCRIPTION OF THE AFFECTED ENVIRONMENT

3.1 Physical Characteristics

3.1.1 Location

The proposed LDRS will be located adjacent to the Lihue transfer station, which is on Ahukini Road (Figure 1). Industrial businesses and some agricultural fields surround the proposed facility. The businesses are associated primarily with the Lihue airport, which is approximately 1,000 feet east and southeast of the site. These businesses include a helicopter facility and a tour bus facility.

The land for the proposed LDRS is owned by the Lihue Plantation Company, Ltd., a subsidiary of Amfac/JMB Hawaii, Inc. (Amfac), (Tax Map Key [TMK] 3-7-02, portion of 01), and the county is in negotiation with Amfac to acquire the property as delineated on Figure 2. The transfer station is on county-owned land. Some construction will occur within the transfer station property to provide joint access and utility connections.

3.1.2 Climate and Air Quality

The island of Kauai is a semitropical environment. Annual rainfall varies around the island, and the area of the project site receives approximately 45 inches of rain per year. Temperatures at the project site average between 65.5 degrees Fahrenheit (°F) (low) and 77.9°F (high). Winds are predominantly out of the northeast at 10 to 13 knots (WOA and ENA, 1993).

Air quality around the island of Kauai is monitored by the Hawaii DOH Clean Air Branch. In the Lihue area, total suspended particles in the air in 1990 ranged from 13 micrograms per cubic meter to 20 micrograms per cubic meter (WOA and ENA, 1993). Measurements of the other pollutants are not available (WOA and ENA, 1993).

3.1.3 Geology

The island of Kauai is the oldest, northernmost, and most complicated, structurally, of the eight major islands lying in the southern end of the Hawaiian Archipelago. The Kauai land mass is believed to be attributed to two major volcanic activities, the Waimea Canyon volcanic series and the Koloa volcanic series.

The Waimea Canyon volcanic series is thought to have originated from a huge shield volcano. Principal volcanic activity of this series began and ended in the Pleistocene Epoch of the Tertiary period.

The Koloa volcanic series occurred after a long period of inactivity. Lava from this series covered the older Waimea Canyon volcanic series. The proposed debris-recycling station site is on soil underlain by the Koloa volcanic series that erupted during the Pleistocene Epoch. The Koloa volcanic series is mostly dense to moderately dense. The lava flows are predominantly of a'a, although pahoehoe is also present (Macdonald and others, 1960).

3.1.4 Topography and Soils

The proposed LDRS site is on a plateau just south of Hanamaulu Bay. The site is at an elevation of approximately 90 feet mean sea level (MSL). The area slopes gently down toward the northeast with little relief.

According to the Soil Conservation Service (SCS, 1972), the soils present onsite are from the Lihue series. The Lihue series consists of well-drained soils developed in material weathered from basic igneous rock. Generally, these soils are used for irrigated sugar cane (as is the case for the LDRS), pineapple, truck crops, orchards, wildlife habitat, woodland and home sites.

The SCS further states that the permeability of the Lihue silty clay is moderately rapid, and runoff is generally slow. A boring log from a nearby well (Macdonald and others, 1960) indicates that the clay in the vicinity of the well is present from the surface to a depth of 57 feet. The clay is underlain by olivine basalt.

3.1.5 Flood Hazard

According to Flood Insurance Rate Map No.150002-0140C, dated March 4, 1987, the proposed LDRS is in Zone X, which is determined to be outside the 500-year flood plain. Further, according to the Kauai Civil Defense, the debris-recycling station site is not in the tsunami zone.

3.1.6 Water Quality

3.1.6.1 Surface Water

The stream closest to the proposed site is Hanamaulu Stream, approximately 2,000 feet northwest of the site. There are currently irrigation and drainage ditches across the site which serve the sugar cane field in this area. We understand that the irrigation and drainage waters discharge into ponds for infiltration and evaporation. These ponds were constructed near the coastline.

3.1.6.2 Marine Waters

The site is approximately 2,000 feet west of the Pacific Ocean and 900 feet south of Hanamaulu Bay. The state DOH classifies Hanamaulu Bay as a Class A water. The DOH objective for Class A waters is that they be used for recreational purposes and that aesthetic enjoyment is protected. Any other use shall be permitted as long as it is compatible with the protection and propagation of fish, shellfish, and wildlife, and with recreation in and on these waters.

3.1.6.3 Groundwater

Groundwater beneath the site is within the Hanamaulu Aquifer System. Groundwater in the Hanamaulu Aquifer System occurs either as basal, perched, or high-level dike groundwater. In lower elevations, such as the LDRS location, development of the basal groundwater is difficult due to low productive yield. The groundwater near the coast is brackish, according to Macdonald (Macdonald and others, 1960). The hydraulic gradient of the basal groundwater is generally seaward.

Potable water for the Lihue area is derived from wells located inland of the underground injection control (UIC) line, whereas the site is seaward of the UIC line. The nearest drinking water well is approximately 9,000 feet southwest of the site.

3.1.7 Flora and Fauna

3.1.7.1 Flora

The project site is cultivated with sugar cane. The sugar cane farming has replaced most endemic vegetation in the site area. No rare or endangered plant species are expected in the project site vicinity. Endemic plant species previously observed in the vicinity of Lihue Airport include Hawaiian koa (*Acacia koa*), kukui (*Aleurites moluccana*), tree fern (*Cibotium chamissoi*), ti (*Cordyline terminalis*), staghorn fern (*Dicranopteris linearis*), hau (*Hibiscus titiaceus*), and sandalwood (*Santalum elipticum*) (WOA and ENA, 1993).

Exotic plant species observed in the Lihue airport vicinity include: klu (*Acacia farnesiana*), spiny amaranth (*Amaranthus spinosus*), Japanese tea (*Cassia leschenaultiana*), radiate fingergrass (*Chloris radiata*), pilipiliula (*Chrysopogon aciculatus*), bermuda grass (*Cynodon dactylon*), demanthus (*Demanthus virgatus*), lantana (*Lantana camara*), eroa (*Leucaena glauca*), sensitive plant (*Mimosa pudica*), guinea grass (*Panicum maximum*), para grass (*Panicum purpescens*), hilo grass (*Paspalum conjugatum*), guava (*Psidium guajava*),

rhodomyrtus (*Rhodomyrtus tomentosa*), thimbleberry (*Rubus rosaefolius*), bristly foxtail (*Setaria verticillata*), natal red top (*Trichlaena repends*), hilaloa (*Watheria americana*), and cocklebur (*Xamthium strumarium*) (WOA and ENA, 1993).

A botanical survey was conducted in June 1994 for Amfac's Lihue-Hanamaulu Master Plan, which includes the proposed LDRS site. The survey (*Botanical Survey, Lihue-Hanamaulu Master Plan*, prepared by Char and Associates) confirms that none of the plants found during the field studies are lined, proposed, or candidate-threatened and endangered species; nor are any of the plants considered rare or vulnerable (Amfac JMB, 1994).

3.1.7.2 Fauna

Industrial development in the project site vicinity has resulted in most native bird species relocating into inland mountainous forest areas. Native water birds along the coastal areas are present; however, few nesting areas or suitable habitat areas for these birds are in the vicinity of the project site.

The project site is adjacent to the Lihue airport property. Four species of endangered birds have been observed within a 5-mile radius of the Lihue airport. These species are the Koloa duck (*Anas platyrhynchos wyv*), the Hawaiian coot (*Fulica americana haw.*), the Hawaiian Gallinule (*Gallinula chlorpus haw.*), and the Hawaiian stilt (*Himantopus mexacanus haw.*) (WOA and ENA, 1993). In the immediate vicinity of the Lihue airport, the Hawaiian coot and the Hawaiian stilt have been observed. According to the Lihue Airport Master Plan, the preferred habitat of these species is the former Lihue Mill settling basin, southwest of the project site, approximately 4,500 feet (WOA and ENA, 1993). However, according to ADC and the state Department of Transportation, Airports Division (DOT-A), more birds appear to be attracted to the Kauai Lagoons project than to the former Lihue Mill settling basin.

Mammals typically found in the project site vicinity include black rat (*Rattus rattus*), Hawaiian rat (*Rattus exulans*), Norway rat (*Rattus norvegicus*), house mouse (*Mus musculus*), feral pig (*Sus scrofa*), feral goat (*Copra hircus*), and feral cat (*Felis felis*) (WOA and ENA, 1993). The Hawaiian hoary bat (*Lasiurus cinerus sematus*) is the only known native mammal found on the island of the Kauai, although this species has not been observed in the project site area (WOA and ENA, 1993).

An avifaunal and feral mammal survey was conducted in July 1994 for Amfac's Lihue-Hanamaulu Master Plan, which includes the proposed LDRS site. The survey report (*Avifaunal and Feral Mammal Survey of Molokoa Lands for Amfac's Lihue-Hanaumaulu Master Plan, Kauai*, prepared by Phillip Bruner) documented that two endangered bird species, the Hawaiian duck (*Anas wyvilliana*) and common moorhen (*Gallinula chloropus*), were observed at the Hanamaulu Gulch wetlands; and that three other endangered bird species, the black-necked stilt (*Himantopus mexicanus*), Hawaiian coot (*Fulica alai*), and nene goose (*Nesochen sandvicensis*,) were not observed but may occur at the Hanamaulu Gulch and wetlands (Amfac JMB, 1994). The Hanamaulu Gulch and wetlands are outside the proposed master plan development and are approximately 2,000 feet from the proposed LDRS site.* The survey report also stated that no special or unique habitat for birds and mammals, nor any threatened or endangered species, exists on the property included in the Master Plan development (Amfac JMB, 1994).

Thus, no adverse impacts to endangered bird or mammal species is expected to occur with the development of the project. The proposed facility's attraction to birds will be reduced with the implementation of mitigative measures, as discussed in Section 4.0.

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* Although none was observed during this survey, the threatened Newell's shearwater, may overfly the proposed site, which is between the ocean and their mountain burrows.

As sugar cane is currently cultivated on the project site area (adjacent to the existing solid waste transfer station and Lihue Airport), it is unlikely to be suitable habitat for any endangered wildlife.

3.2 Social and Economic Characteristics

3.2.1 Noise

The generally moderate to moderately high ambient noise levels at the debris-recycling stations are due to the Lihue airport complex. Based on information provided by Akinaka and Associates, Ltd. (1989), and Peat, Marwick, Mitchell and Co. (1976), the noise contours generated by aircraft are the highest at the proposed LDRS.

3.2.2 Aesthetics

The current use of the site is for agricultural purposes. A transfer station is adjacent to the proposed LDRS, and the surrounding area is industrialized. The addition of the proposed debris-recycling station is compatible with the surrounding uses and should not result in a significant change in the aesthetics of the area. In addition, the proposed facility will have a visual buffer, consisting of a berm and vegetation, around the inland perimeters and along the road frontages.

3.2.3 Land Ownership and Use

The proposed debris-recycling station will be located on the property which is owned and operated by the Lihue Plantation Company (a subsidiary of Amfac) for the cultivation of sugar cane. The county is currently in negotiation with Amfac to acquire the proposed property. The site is along Ahukini Road and a private cane haul road, adjacent to the Lihue Transfer Station. The Lihue airport is 1,000 feet to the east and southeast of the site.

3.2.3.1 Lihue Development Plan

The Lihue Development Plan is used to attain the objectives of Kauai County's General Plan, which provides direction to Kauai's future. The project area is designated for agricultural and public facility land use by the Kauai General Plan. The debris-recycling station conforms to the Development Plan and General Plan.

3.2.3.2 County Zoning

The Kauai Comprehensive Zoning Ordinance (CZO) provides procedures for the division of the county into land use districts and regulations for the type, size, placement, and control of structures within various zoning district classifications. Under the CZO, the site is zoned agricultural.

3.2.3.3 State Land Use

The state legislature has created four general land use districts and a state land use commission to regulate boundary changes between the districts. These districts are urban, agricultural, rural, and conservation. The LDRS is primarily on land classified as state-designated agricultural districts. The line separating land for conservation crosses a portion of the site on the northeastern side. According to the Department of Land and Natural Resources (DLNR), the conservation portion of the site is primarily within the General "G" subzone and possibly within Limited "L" subzone. Recycling activities will not regularly be conducted in the conservation area. Currently, only construction-grading activities, stormwater controls (e.g., water storage ponds), and additional temporary emergency debris storage are planned for the conservation area, which are permitted uses within these subzones.

Amfac has recently submitted a petition to the state Land Use Commission to change the agricultural and conservation designation to urban. However, the Land Use

Commission is uncertain when this conversion will be made, and the county would like to begin construction of the proposed facility by the end of the year, if possible. Thus, it is anticipated that a Special Use Permit and Special Management Area Permit will be required by the county Planning Department; and a Conservation District Use Permit will be required by the DLNR. This EA will be used in filling the Special Management Area permit and the Conservation District use permit.

3.2.4 Historical/Cultural Resources

The project site has been extensively cultivated for sugar cane production for many years. As a result of this activity, any historical sites which may have existed on the site have almost assuredly been destroyed. It is, therefore, highly unlikely any such sites exist today. Should any artifacts be discovered during the development of the project site, work in the area will stop immediately and an archaeological reconnaissance study will be conducted prior to continuing construction.

3.2.5 Demography and Employment

The County of Kauai had an estimated total resident population of 50,497 as of 1990. The projected population totals provided by state economists for the years 1995, 2000, and 2005 are, respectively, 63,900; 69,100; and 72,000. The largest towns on Kauai are Kapaa, with 8,149 residents, and Lihue, with 5,536 residents.

The majority of the residents within the debris-recycling station project area are employed at Lihue. Lihue is the primary commercial, business, and governmental center of Kauai. The LDRS is not expected to require significant numbers of employees to manage the facility; however, the facility will enhance the economy of the recycling industry.

3.2.6 Traffic and Utilities

Temporary access to the site will either be from the existing entrance through the refuse transfer station from Ahukini Road, or the proposed southern entrance to the property from the cane haul road (Figure 2). Ahukini Road is the same road used for access to the Lihue airport facility. (Entrance to the airport is before that of the private cane haul road and the Lihue Transfer Station.) The state DOT-A is planning to limit future access to this portion of Ahukini Road to traffic serving the proposed general aviation area across from the recycling station. Thus, the county is planning to use Ahukini Road as a temporary access until permanent access can be provided. The Lihue Transfer Station and LDRS are located on the portion of Ahukini Road where minimal traffic volumes occur; therefore, no additional road work, such as a left-turn lane or road widening, is anticipated. If temporary access from the private cane haul road is developed, an easement from the landowners will be obtained.

Permanent access to the LDRS will be coordinated with Amfac's development plans in order to provide safe access and to reduce disruptions to operations at Lihue Airport. Permanent access is planned to occur from the southern entrance of the site via the planned future roadway that extends from Kapule Highway, which is a limited access highway to Ahukini Road. The earliest anticipated date of construction of the planned future access road is 1996 or 1997.

Water, electrical, and telephone services are available at the Lihue Transfer Station. Currently, the water system for the Lihue Transfer Station is in poor condition and can not provide fire flow requirements. A septic tank and drains have been constructed at the transfer station to support the restroom facility. The water system will be upgraded as

part of the LDRS construction, assuming the county is granted permanent connection to Amfac's infrastructure.

4.0 PROBABLE IMPACT OF THE PROPOSED ACTION AND MITIGATIVE MEASURES

4.1 General Measures

The debris-recycling stations will benefit Kauai for several reasons. First, the debris-recycling stations will help divert much of the existing Hurricane Iniki debris from being disposed of at Kekaha Landfill by processing recoverable materials for secondary uses, such as biofuel production and composting. During the cleanup of Hurricane Iniki, a majority of the recoverable material will consist of construction and demolition debris. After the cleanup, the largest volume of material processed at the debris-recycling stations will be green waste.

Second, the debris-recycling stations can continue to be used after the hurricane debris has been processed to facilitate reaching diversion quotas established by the Hawaii state legislature.

Finally, even if the county decides not to use the debris-recycling stations after the hurricane debris is processed, these facilities will be available for future use if Kauai has another disaster. By having these in place, the following observed problems associated with the previous THDR sites can be avoided:

- No receiving sites immediately available to receive debris;
- Difficulty in obtaining rights-of-entry to sites;
- Protection of the environment; and
- Costly site cleanup and closure.

4.2 Population and Area to be Served

An estimated 44 percent of Kauai's population will be served by the LDRS. This accounts for approximately 22,350 people who live in Hanamaulu, Kapaa, Lihue, Wailua, the Wailua Homesteads, Puhi, and the remaining towns in the immediate vicinity of the LDRS.

4.3 Water Quality

The LDRS will not accept any putrescible or hazardous wastes. Therefore, any water that percolates down through the waste piles will be relatively innocuous and will not be classified as leachate. The LDRS will have asphalt-concrete or gravel surfaces that will be graded to control surface-water runoff. The stormwater runoff will be controlled onsite through the use of a surface and subsurface drainage system; and stormwater will be discharged offsite into stormwater drainage/irrigation ditches along Ahukini Road, into the existing DOT-A drainage system, or into Hanamaulu Bay. Preliminary calculations have indicated that it would be difficult to retain all of the water onsite due to the quantity of water generated during a 25-year, 24-hour storm (approximately 11 million gallons). Thus, as an option, only a portion of the stormwater will be retained onsite for irrigation, dust control, and fire protection, depending upon available water sources. A new drainage channel is planned to be constructed by DOT-A during the realignment of Ahukini Road, at which time the county may contribute funds to DOT-A to design the new channel to accommodate the Lihue solid waste management facilities flows. This new channel is anticipated to be constructed by 1996.

A National Pollution Discharge Elimination System (NPDES) permit will be obtained, as stormwater discharge into state waters is anticipated. Under the NPDES permit, the quality of water discharged into state waters will be monitored. As a stormwater quality control measure, oil/water separators will be used to treat water collected from areas where oil may be present, such as metals collection area, equipment storage, and parking areas.

4.4 Vector and Bird Control

The project site will accept only segregated, processible loads of debris, including green waste, C&D debris, and recyclable items. Piles will be periodically removed (at least once a month) in accordance with the site's operating permit. As a result, consistent, suitable habitats for rodents and other vectors are not likely to exist. Additionally, due to the nature of the waste accepted, available food sources for vectors or birds are not expected to exist onsite. The lack of a food source and prevalent activity on the project site will preclude significant bird activity. Should putrescible waste material be erroneously deposited at the site, the waste will be collected and moved to the adjacent transfer station for transport to the Kekaha Landfill, eliminating the potential attraction to birds or rodents. According to the ADC, in the letter dated August 30, 1994 (appendix), ". . . as long as composting does not occur at the proposed LDRS, . . . the facility should not attract the birds commonly associated with refuse operations." The above statement by the ADC does not assume that birds may not be attracted to the proposed water storage pond. The design of the water storage pond, if needed, will include mitigative controls to reduce the potential for attracting birds. As recommended by the ADC, mitigative controls, such as lining the pond, creation of near-vertical walls, and construction of a stainless-steel cable grid over the basin will be incorporated into the design if the water surface of the pond is exposed. An alternative to these mitigative measures would be to provide cover over the entire pond. The ADC will also be consulted on the pond design as it progresses, as well as on the appropriate landscaping vegetation (such as non-seed-bearing vegetation) to be used at the LDRS. The Federal Aviation Administration and the DOT-A are currently reviewing the project regarding the potential for bird attraction.

We understand that the threatened Newell's shearwaters tend to become confused by bright lights as they fly over the project area to and from their nest burrows in the mountains to the sea where they forage (Amfac/JMB, 1994). Thus, the county plans to have shields on the proposed perimeter security lighting that will direct light toward the ground.

4.5 Litter

Flying litter will be reduced by enforcing incoming vehicles to cover their loads and by constructing a chain-link fence around the site to contain windblown debris. Litter strewn by the wind beyond the boundaries of the site will be collected as necessary by LDRS operators.

The proposed LDRS is planned to be in operation 10 hours a day, 7 days a week, similar to the existing transfer station. The county realizes that after-hours dumping may occur; thus, the county plans to establish a bounty program, which will help enforce litter laws.

4.6 Fire

A potential for fire will exist because of the type of waste (green waste and C&D debris) that will be collected and processed at the debris-recycling station. To mitigate the fire hazard, the green waste pile and the C&D piles will be removed at least once a month or within 48 hours from the time green waste is chipped.

We do not anticipate significant potential for combustion of green waste prior to the material being chipped because the volume of air circulating through the piles reduces the heat accumulated within the piles. Once the green waste is chipped, however, the heat generated within the piles can easily escalate because the volume of the material is reduced. We have been in contact with the county fire department for guidance in our design of the

fire protection system. As an option (if sufficient potable water is not available), a portion of the surface water will be stored in the water storage pond, filtered and chlorinated, then used for irrigation, dust control, and fire protection.

4.7 Dust

Once the site is cleared and grubbed, airborne dust will be reduced by the use of water trucks; limiting earthwork and processing during windy conditions; immediately covering excessively dusty or powdery materials with other materials; covering open loads; applying dust palliative such as a tree resin-modified emulsion on road surfaces; and properly maintaining roadways.

Dust emissions during processing, specifically green waste and C&D chipping, will be reduced with the use of water and dust barriers, as needed. As mentioned above, material processing will be limited during windy conditions.

4.8 Noise

Noise will be generated at the LDRS by the processing equipment, heavy equipment, and commercial vehicles. Present noise levels in the vicinity are not expected to increase significantly. Elevated noise conditions currently at the site are due to the Lihue airport and helicopter facilities. Employees working near the processing equipment and with heavy equipment will be wearing protective hearing equipment, as required by the Occupational Safety and Health Administration (OSHA). Noise generated at the facility will be reduced by limiting operations of the facility to the hours between 7:30 a.m. and 5:30 p.m.

4.9 Odor

Decaying wastes, especially putrescible wastes, can cause foul odors. The debris-recycling station will not accept putrescible wastes, and composting of green wastes will not occur at the Lihue site facility. Therefore, odors at the LDRS will be minimal.

4.10 Traffic

Traffic on Ahukini Road, which will be used on a temporary basis, will increase with the development of the debris-recycling station. The increased traffic will consist primarily of commercial haulers. Assuming 50 percent of divertible loads currently being delivered to the Kekaha Landfill are routed through the LDRS, it is anticipated the increase in traffic on Ahukini Road will be approximately 20 trucks per hour (200 trucks per day for a 10-hour day) during the remainder of the Hurricane Iniki cleanup. Backups or other traffic problems along Ahukini Road are not anticipated because the transfer station and debris-recycling station are near the end of the dead-end portion of Ahukini Road, where only few other industrial-type businesses and the recreational pier are located. As other proposed recycling stations are opened, this volume of traffic to the LDRS will decrease accordingly.

When access can be obtained from the proposed Amfac access road, which is planned to originate at Kapule Highway (Hanamaulu-Ahukini Cutoff Road), the impact of traffic from the LDRS on Ahukini Road will be reduced.

4.11 Emergency Operating Procedures

An operations plan will be prepared for the LDRS, and an emergency response plan will be included. This emergency response plan should be followed if emergency conditions occur at the debris-recycling station which will require special attention by the onsite personnel to maintain operation of the facility and to protect public health.

Onsite personnel will be trained to alert themselves to potentially dangerous situations in which they should not become involved (e.g., presence of strong, irritating or nauseating odors). The onsite personnel shall also be familiar with areas accessible to people, equipment, and vehicles; communications; areas of known or suspected hazards; site access; and nearest water sources. They will also be familiar with important phone numbers, such as the fire department and emergency medical assistance.

When onsite personnel are notified of an emergency situation, the response to the situation should be to:

- Assess the condition and its impact upon human lives, public health, and operation of the facility;
- Determine the required response with particular attention to human lives and public health;
- Notify the appropriate personnel, utilities, and regulatory agencies as soon as possible;
- Take corrective action to restore the facility to normal operations; and
- Call 911, if applicable.

During prehurricane conditions (once a hurricane watch has been declared), the LDRS operators will be required to secure the debris by covering the piles with chain-link fencing or wire mesh materials, and anchoring the fencing/mesh material into the ground. Sufficient quantities of the fencing/mesh material will be stored onsite for use as needed.

It is important to note that the debris-recycling stations are being developed in response to an emergency situation and to help respond to future emergency situations. With the development of the debris-recycling stations, designated areas will have been established where debris can be delivered quickly and in an orderly manner if any natural disaster, such as a hurricane, should occur on Kauai.

4.12 Protection of Public Health

The debris-recycling station and its equipment will be operated in a manner such that personnel and public health will be protected. The personnel will be trained on the proper site and equipment operating procedures. An operations plan will be available which will be adhered to at all times.

The debris-recycling station will be secured by fencing, gate and perimeter lighting. The public will be allowed onsite only during working hours and only under the supervision of operating personnel who will direct traffic, assist the public, and keep the public away from operating equipment.

4.13 Public Input Concerning Public Health and the Environment

Obtaining public input regarding the proposed facility is required for the permitting process. Public input for the debris-recycling stations has been obtained since the beginning of the siting process, and considered in choosing the proposed locations. In addition, the public meeting that was held on February 2, 1993, at the Lihue Neighborhood Center, informed the public about the function of the debris-recycling stations, and about the associated environmental impacts. This meeting gave people an opportunity to voice their concerns, which were, in turn, addressed in the design of the site. For example, the public expressed its concern that the debris-recycling station would detract aesthetically from the surrounding area. For this reason, the debris-recycling station will contain a visual buffer to make the sites more aesthetically pleasing.

5.0 ALTERNATIVES TO THE PROPOSED ACTION

5.1 "No Action" Alternative

Alternatives to constructing a debris-recycling station in Lihue would be a "No Action" alternative or to locate the facility on other land parcels, as discussed in Section 5.2 If the "No Action" alternative is taken, an area in Lihue would not be made available for the collection, segregation, and preparation of recyclables for transport to processing facilities; and, thereby, valuable space would be consumed in the Kekaha Phase II Landfill, reducing the effective life. The "No Action" alternative would also make it difficult for the county to meet the required waste diversion rates, and thus, is not recommended.

5.2 Alternate Site Selection

The main objective of the debris-recycling stations is to divert hurricane and other debris from being disposed of at Kekaha Landfill. The initial determination to establish five sites was later modified to four sites around the island to accomplish the diversion goal. The selection of the proposed four sites were based on the following criteria:

- Adjacent to or near existing or proposed county refuse transfer station;
- Adequate distribution of sites around the island to provide convenient access to residents and businesses in most developed areas;
- Adequate size to perform necessary functions;
- Convenient and safe access to highway;
- Level to minimally sloped topography;
- Minimal level of pre-existing or potential for future environmental concerns related to impacts on wetlands, surface water, groundwater, air quality, habitat, noise and aesthetic, recreational, archaeological and/or other resources;
- Compatible with existing and surrounding land uses;
- Adequate separation from residential areas;

- Sufficient visual and/or distance buffers from major roadways; and
- Available utilities and other required infrastructure/services.

The debris-recycling station locations currently proposed include Lihue, Koloa, the top of Kekaha Phase I Landfill, and the north shore area of the island. Seven other potential sites in Lihue were considered during the site selection process. The Ahukini site was the only one that met all of the selection criteria.

A separate environmental assessment is being performed for each location. The Lihue site is well-suited for the debris-recycling station because it meets the criteria used to select the site and it will be able to service the largest population center of Kauai.

5.3 Best Practical Technology

The hurricane generated several types of debris. Each type was addressed separately to determine the best method for keeping the debris from entering Kekaha Landfill. The criteria for determining the best method included:

- Complying with the hierarchy of disposal methods set forth by the state of Hawaii;
- Minimizing environmental impacts;
- Producing the best recovery rate possible; and
- Being cost-effective.

It was proposed that the debris-recycling stations be developed so that collection, segregation, and processing for transportation of different types of debris could be performed on the same site, reducing transportation and hauling costs. The Lihue facility site will be capable of collecting and processing for transport of green waste, C&D debris, and recyclables. The actual processing methods and ultimate use of the collected materials

will be based on the demand of such products and the processing contractors selected to handle the segregated materials.

6.0 SIGNIFICANCE CRITERIA AND DETERMINATION

In accordance with the environmental assessment procedure, construction of the proposed debris-recycling station does not have significant adverse effects on the environment, as follows:

- **Involves a loss or destruction of any natural or cultural resource.** There are no known natural or cultural resources associated with the existing active sugar cane field.

- **Curtails the range of beneficial uses of the environment.** The proposed site, located adjacent to the existing transfer station, is on land zoned for agriculture and conservation, but in an area that is planned for conversion to urban. Thus, the proposed project is compatible with the planned development.

- **Conflicts with the state's long-term environmental policies or goals and guidelines.** The proposed project will comply with state guidelines and regulations for recycling facilities and will assist the county in achieving waste diversion goals, as set by the state legislature.

- **Substantially affects public health.** The proposed facility will be designed and operated in accordance with DOH's guidelines and regulations with the intent to protect public health and the environment. Mitigative measures will be implemented as recommended by the FAA and the ADC to reduce bird attraction to the facility and, thus, reduce potential bird hazards to the neighboring Lihue airport.

- **Involves a substantial degradation of environmental quality.** The proposed project will reduce the quantity of waste disposed of at the landfill and will promote recycling and reuse (reducing use of virgin natural resources).

- **Is individually limited but cumulatively has considerable effect on the environment, or involves a commitment to larger actions.** The proposed project is an integral part of the solid waste management plan for the island. Other actions that may be required to make this action successful may be educating residents and businesses to support this relatively new approach to solid waste management.

- **Substantially affects a rare, threatened or endangered species or its habitat.** There are no known rare, threatened or endangered species or habitat currently existing at the site.

- **Detrimentally affects air or water quality or ambient noise levels.** Minimal impacts on air quality (diesel exhaust, dust) and noise are anticipated during construction and operation, but will be limited by normal construction practices (i.e, mufflers, water wagons). The proposed facility and operation

will be designed to control and direct stormwater around and away from the stored materials. Any water discharged offsite and into state waters will be in accordance with NPDES regulations.

- **Affects an environmentally sensitive area, such as a flood plain, tsunami zone, erosion-prone area, geologically hazardous land, estuary, freshwater area, or coastal waters.** The debris-recycling station is not within the flood plain or tsunami zone. The proposed project will be designed to reduce impact on surface waters from stormwater originated from the site and will be monitored in accordance with state and federal regulations if any discharge offsite occurs.

On the basis of the above criteria, comments received from agencies, and subsequent discussions with some of these agencies, we anticipate that the proposed project will not have a significant adverse effect on the environment. Thus, the County of Kauai Solid Waste Section provides a negative declaration on the construction and operation of the proposed LDRS.

7.0 AGENCIES AND ORGANIZATIONS CONSULTED

The following agencies and organizations were consulted regarding this environmental assessment:

- County of Kauai, Department of Public Works, Solid Waste Section
- County of Kauai, Planning Department
- State of Hawaii, Department of Health, Solid Waste Branch
- State of Hawaii, Department of Land and Natural Resources
- State of Hawaii, Department of Transportation, Airports Division
- Federal Aviation Administration
- U.S. Department of Agriculture, Animal Damage Control
- Amfac/JMB Hawaii, Inc.

8.0 REFERENCES

Akinaka & Associates, Ltd. 1989. *Supplemental environmental impact statement, interim helicopter facility, Lihue airport complex.* Prepared for Airports Division, Department of Transportation, Honolulu International Airport, January.

Amfac/JMB Hawaii, Inc., and the Lihue Plantation Company, Limited (Amfac JMB). 1994. *Draft environmental impact statement, Lihue-Hanamaulu master plan.* October.

Beck, R.W. 1990. *Waste stream characteristics analysis final report.* Prepared for County of Kauai, Department of Public Works, March.

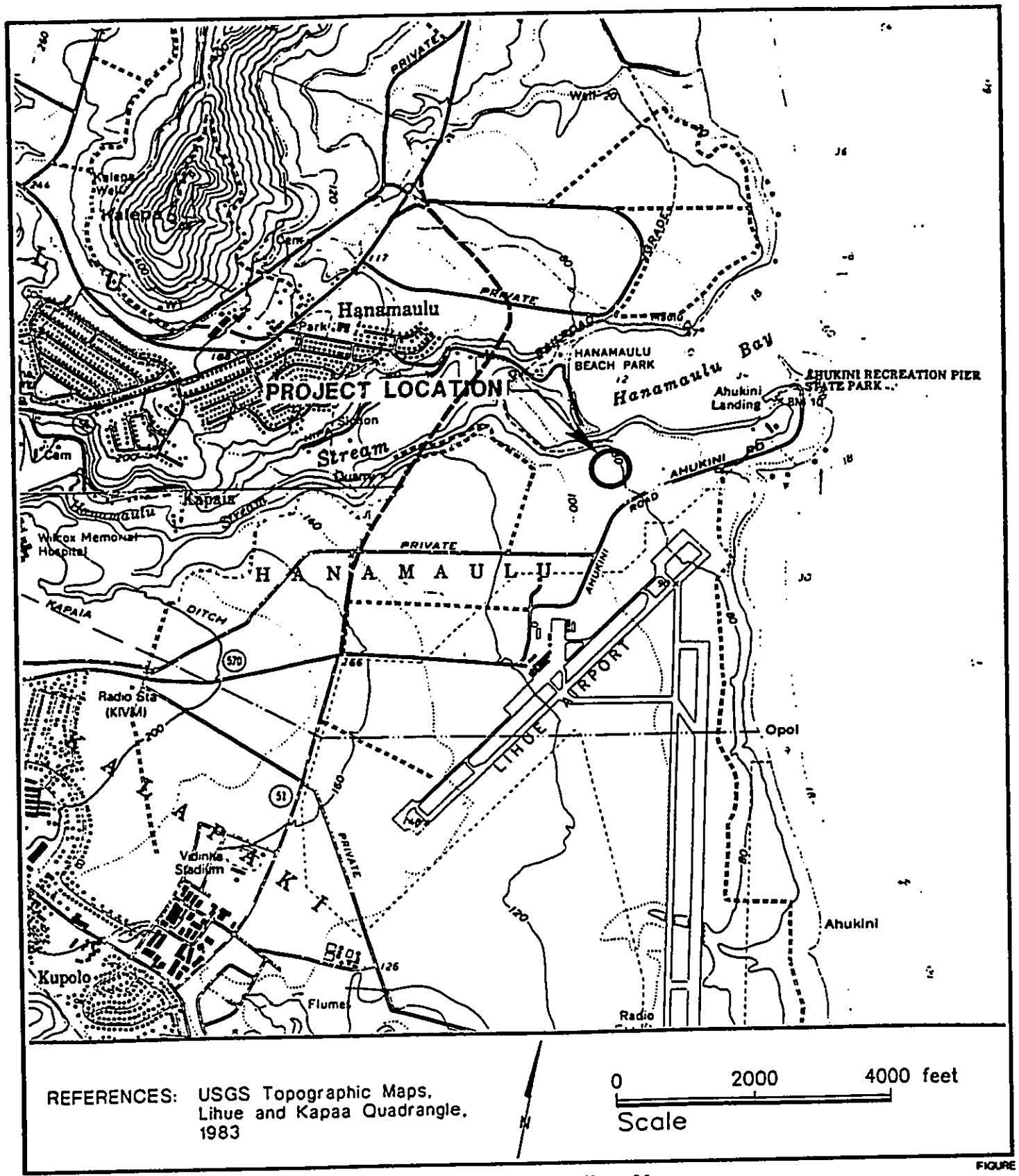
Macdonald, G.A., D.A. Davis, and D.C. Cox. 1960. *Geology and groundwater resources of the island of Kauai, Hawaii.* Bulletin 13, Hawaii Division of Hydrography, U.S. Geological Survey, United States Department of Interior.

Peat, Marwick, Mitchell & Co. 1976. *Environmental impact statement - Lihue airport master plan study.* Prepared for State of Hawaii Department of Transportation, July.

U.S. Department of Agriculture, Soil Conservation Service (SCS). 1972. *Soil survey of islands of Kauai, Oahu, Maui, Molokai, and Lanai, state of Hawaii.* The University of Hawaii Agricultural Experiment Station, August.

Wilson Okamoto and Associates, Inc. (WOA), and Edward K. Noda and Associates (ENA). 1993. *Lihue airport land acquisition - final environmental assessment and negative declaration.* Prepared for the State of Hawaii, Department of Transportation, May.

FIGURES



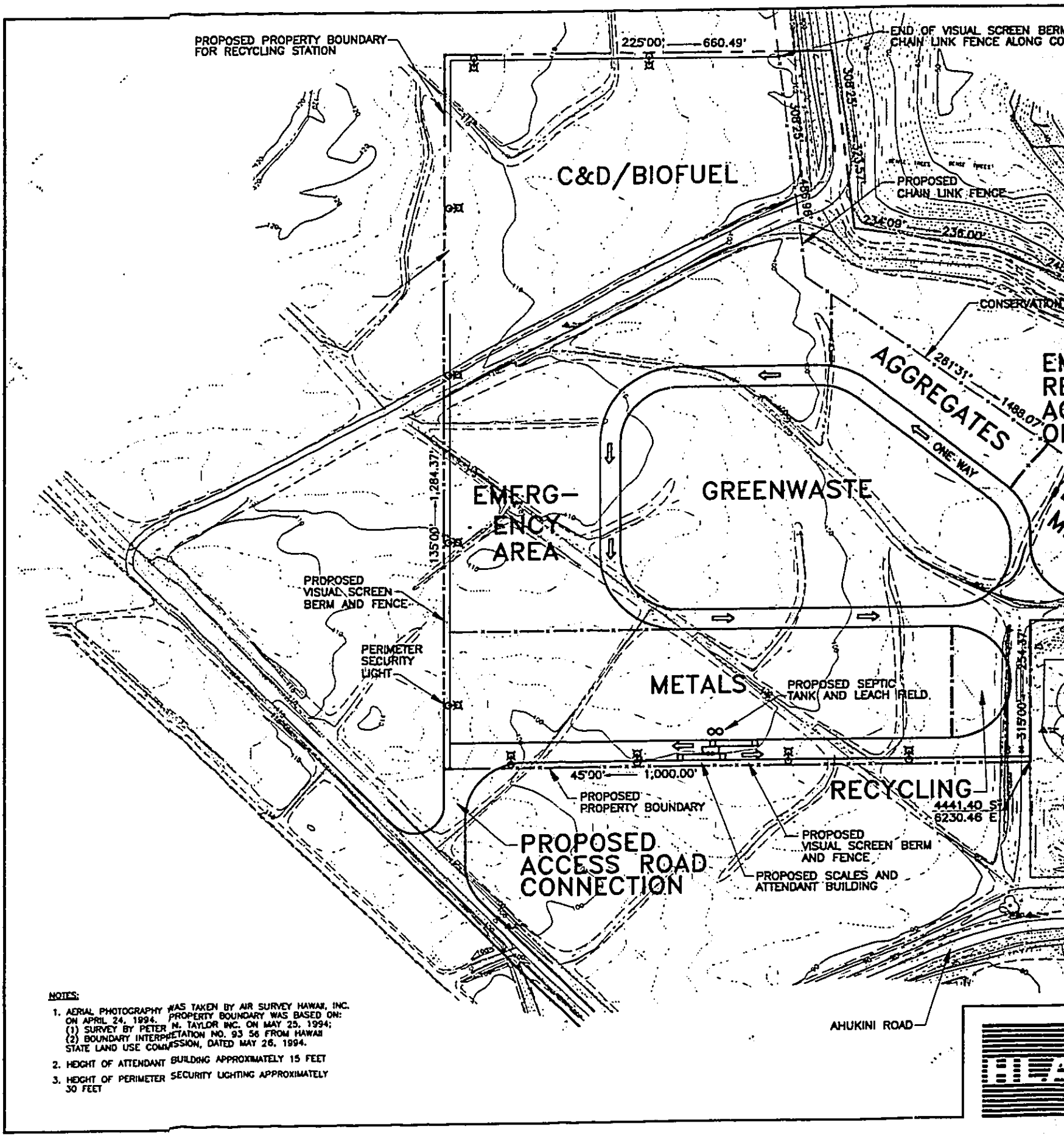
REFERENCES: USGS Topographic Maps, Lihue and Kapaa Quadrangle, 1983

FIGURE 1

Location Map
Lihue Debris Recycling Station
Lihue, Kauai, Hawaii

Harding Lawson Associates
Engineering and Environmental Services

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
jcl	23045.205		6/94	



NOTES:

1. AERIAL PHOTOGRAPHY WAS TAKEN BY AIR SURVEY HAWAII, INC. ON APRIL 24, 1994. PROPERTY BOUNDARY WAS BASED ON:
   (1) SURVEY BY PETER N. TAYLOR INC. ON MAY 25, 1994;
   (2) BOUNDARY INTERPRETATION NO. 93 56 FROM HAWAII STATE LAND USE COMMISSION, DATED MAY 26, 1994.
2. HEIGHT OF ATTENDANT BUILDING APPROXIMATELY 15 FEET
3. HEIGHT OF PERIMETER SECURITY LIGHTING APPROXIMATELY 30 FEET

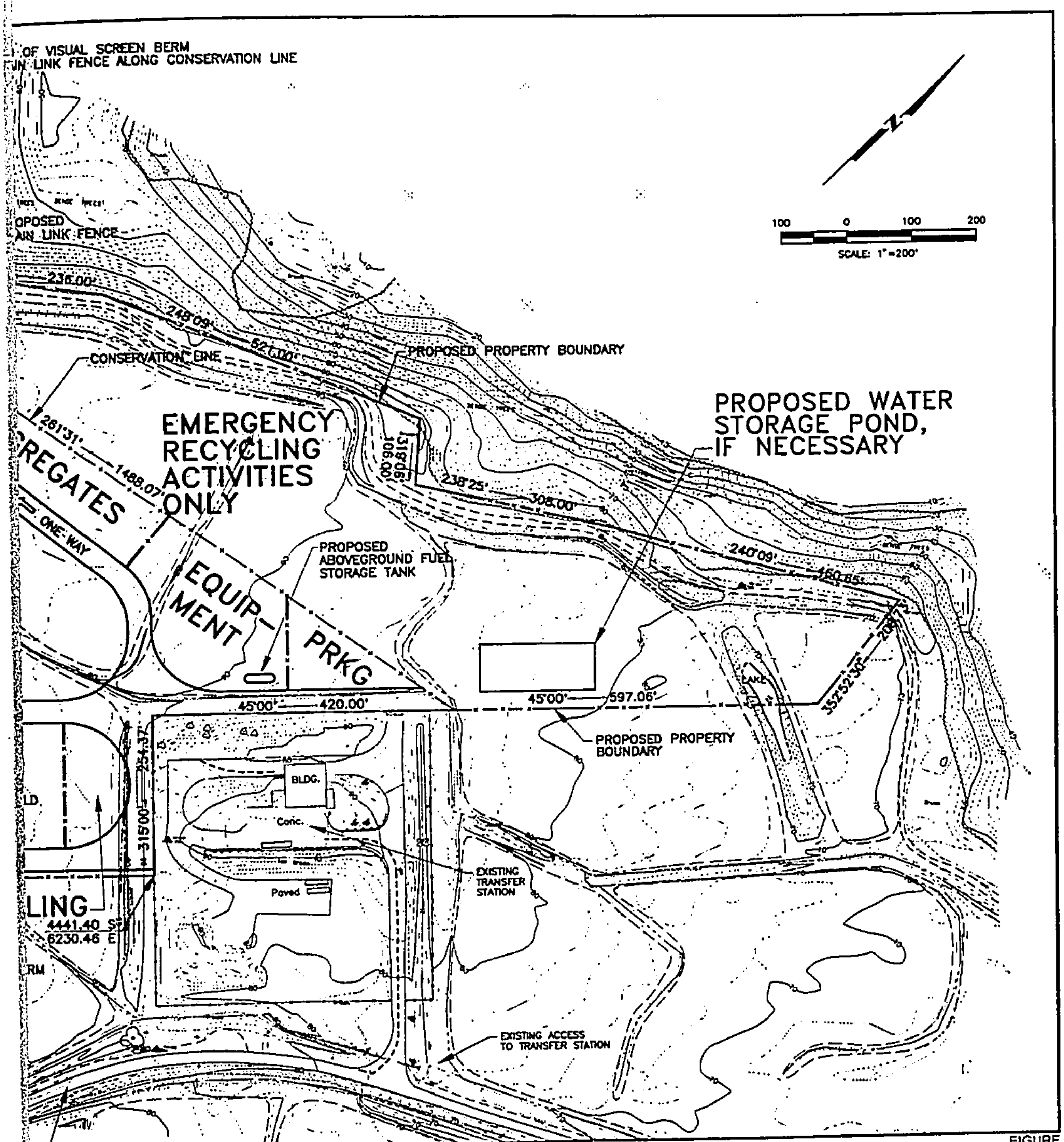


FIGURE 2

PROPOSED FACILITY LAYOUT
LIHUE DEBRIS RECYCLING STATION
KAUAI, HAWAII

Harding Lawson Associates
Engineering and Environmental Services

DRAWN	JOB NUMBER	APPROVED	FILE	DATE	REVISED DATE
jrl/jcl	23045 203		23045012 2000 19941208.1101	7/94	

APPENDIX

Comments and Responses to Draft Environmental Assessment

AMFAC/JMB HAWAII, INC

700 Bishop Street
P.O. Box 3230
Honolulu, Hawaii 96801
(808) 543-8900
Fax (808) 543-8513

Amfac

September 7, 1994

Mr. Dale Burton
Solid Waste Coordinator
Department of Public Works
County of Kauai
3021 Umi Street
Lihue, HI 96766

Dear Mr. Burton:

Re: Draft Environmental Assessment
Lihue Debris-Recycling Station, Lihue, Kauai, Hawaii

Thank you very much for the opportunity to review the above document. As you know, Amfac/JMB Hawaii, Inc., and The Lihue Plantation Company, Limited, are very supportive of Kauai County's efforts at recycling and reducing Iniki-related debris. After reviewing the Draft EA, we offer the following comments:

1. Page 2, third paragraph, second sentence, the EA states "...all material will be removed from the debris-recycling stations." The EA should also discuss the time frame for removal will be for the various types of debris, especially green waste. Also, is there a plan for the securing of debris during pre-hurricane conditions?

2. Section 2.2.1 Green Waste Diversion. According to the staff of the Animal Damage Control division of the U.S. Department of Agriculture, exposed green waste may attract birds who may fly into the flight paths of the Lihue Airport, causing potentially hazardous conditions. Thus, the storage and removal of green waste should probably be addressed in more detail.

3. Section 2.2.2. Will the "C&D debris" be crushed off-site?

4. Page 7, second paragraph, first sentence, please revise as follows: "The land for the proposed LRDS is owned by **The Lihue Plantation Company, Limited, a subsidiary of** Amfac/JMB Hawaii, Inc...."

5. Section 3.1.7.2 Fauna. The EA states "Four species of endangered birds have been observed..." but lists five species. The EA also states that the "...preferred habitat of these species is the former Lihue Mill Settling Basin...," but discussions with USDA Animal Damage Control staff indicate that there are probably a larger number of cited species and other birds attracted to the Kauai Lagoons project than the Lihue Mill Settling Basin.

6. Page 12, last paragraph, first sentence, should be revised to "...Lihue Plantation Company **(a subsidiary of Amfac)**...."

7. Section 3.2.3.3. It is our understanding that the Special Management Area is located on the Hanamaulu side of the bluff edge in the vicinity of the proposed project. Assuming that is correct, will a Special Management Area Use Permit (SMP) still be required? If a Conservation District Use Permit (CDUP) is required, is the subject EA going to be used for the CDUP (and/or the SMP, if required)? If so, it should be so stated.

8. Section 3.2.6. The description of access to the proposed project should be revised to reflect that Kapule Highway is a limited access highway, and that permanent access to the proposed project will be coordinated with Amfac/JMB Hawaii's development plans in order to provide safe access and to reduce disruptions to operations at Lihue Airport.

9. Section 4.3. Stormwater detention onsite in a large basin may attract birds. Design of this basin should include measures to mitigate any potential hazards to aircraft.

10. Section 4.4. This section ("...available food sources for vectors or birds are not expected to exist onsite. The lack of a food source and prevalent activity on the project site will preclude significant bird activity...") should be revised to address concerns currently being raised by the staff of the USDA Animal Damage Control and State DOT Airports Division, based on their experience with bird populations in the vicinity of the Kauai Lagoons project.

11. 4.5 Fire. We are concerned with the potential for fire, especially given the recent stubborn green waste fire that occurred at Campbell Industrial Park on Oahu. Is there more detailed information on the storage and disposal of green waste? Will the new fire station at Lihue Airport provide service to the debris-recycling station?

Again, we thank you for the opportunity to review the subject EA. Should you have any questions regarding this letter, please do not hesitate to call me at 543-8525.

Very truly yours,

Timothy E. Johns lyk

Timothy E. Johns
Vice President & General Manager
Real Estate Division, Oahu/Kauai Development

TEJ:lyk

cc: M. Furukawa, Amfac
J. Higham, Amfac
V. Shigekuni, PBR Hawaii

United States Department of Agriculture

Animal and Plant Health Inspection Service

Animal Damage Control

August 30, 1994

Mr. Russell C.H. Leong
Harding Lawson Associates
Engineering and Environmental Services
235 Pearlridge Center, Phase 1
98-1005 Moanalua Rd.
Aiea, HI 96701

Dear Mr. Leong,

Thank you for allowing us to comment on the Draft Environmental Assessment for the Lihue Debris-Recycling Station. The Animal Damage Control Program of the U.S. Department of Agriculture cooperates with the State of Hawaii, Department of Transportation, Airports Division to manage wildlife hazards at Lihue Airport. A wildlife hazard can be defined as the potential for a damaging aircraft collision with wildlife on or near an airport. Birds are the most common hazard. Collisions between aircraft and birds can be serious, especially if a bird is ingested by a jet engine. Birds and other wildlife are attracted to the aerodrome environment for food, water, or shelter. Any proposed development near an airport should be carefully examined to determine whether it may create conditions that attract birds or other wildlife and result in increased hazards.

Debris Recycling Station

We have examined the EA and have made some observations at existing debris recycling stations on Kauai. We have come to the conclusion that as long as composting does not occur at the proposed Lihue Debris-Recycling Station, as described in the EA, the facility should not attract the birds commonly associated with refuse operations.

Runoff Settling Basin

Increased wildlife hazards can be expected from the proposed settling basin that you described to me over the telephone. Any water feature at the departure end of Runway 3 will attract birds unless it is designed to discourage bird use. Ducks from the Westin Lagoons can be expected to fly across Runway 3 and affect aircraft on takeoff. Migratory shorebirds, and resident wading birds can be expected to use the water and create additional hazards. If birds are able to drink from the basin we can expect possible hazards from non-waterfowl species as well. We understand that specifications for the settling basin have not been made. We would like to offer these general recommendations now, and would appreciate being allowed to review more formal specifications when they are developed.

1. The water basin should not be of earthen substrate. Earthen sides and bottom provide conditions for higher invertebrate productivity and growth of emergents, submergents and other wetland plants. In effect, these conditions create waterfowl habitat. We suggest specifications that would cover the sides and bottom with material that would not allow plant growth. A butyl lining may be appropriate.

2. The sides of the basin should be vertical or nearly vertical. Vertical sides will not allow wading birds or non-waterfowl access to the water from land.

3. Water depth should be maintained at 3 feet or more to discourage use by flocks of shorebirds, or wading birds such as black-crowned night herons, black-necked stilts and egrets.

4. Posts should be constructed around the perimeter of the water basin to allow the installation of a grid of stainless steel cable over the entire water basin. This cable grid is a deterent to birds that access the water by air.

5. The operator of the settling basin should provide trained personnel year-round to actively haze birds from the basin to discourage its use. Note: The USDA provides this service on a user-pay basis.

6. Vegetation around the settling basin should be well maintained. No trees should be allowed around the basin.

7. A barrier to toads should surround the entire settling basin. Toads will attract cattle egrets.

While it is preferable not to put a settling basin in the proposed location, the above recommendations should discourage bird use to a manageable level. Please let me know when more specifications are available.

Sincerely,

TIM J. OHASHI
Assistant State Director

U.S. Department of Transportation
Federal Aviation Administration

AIRPORTS DISTRICT OFFICE
BOX 50244
HONOLULU, HI 96850-0001
PHONE: (808) 541-1243
FAX: (808) 541-3462

August 11, 1994

Mr. Dale Burton
Department of Public Works
County of Kauai
3021 Umi Street
Lihue, Kauai, HI 96766

Dear Mr. Burton:

We have reviewed the Draft Environmental Assessment (EA) for the proposed Lihue Debris-Recycling Station (LDRS) transmitted on July 29, 1994. We have the following comments on the Draft EA:

1. Page 15 - Ahukini Road does not dead end near the proposed LDRS site but continues to the Ahukinin Landing. This is a minimal traffic area; however, we are concerned with the additional traffic this facility will generate through the airport and potential for debris falling from vehicles onto airport roads.

2. Page 17 - The FAA has not stated that we "currently have no objections to the proposed activity." We continue to have reservations regarding the potential for the LDRS to be a bird attractant.

3. Page 19 - Traffic on Ahukini Road by users of this facility will impact airport traffic; therefore, direct access from Kapule Highway should be considered.

We appreciate the opportunity to review this Draft EA and if you have any questions regarding our comments, please contact us.

Sincerely,

David J. Welhouse

David J. Welhouse
Airport Engineer/Planner

Henry A. Sumida
Airports District Office Manager

cc: Russell Leong, Harding Lawson Assoc.
Owen Miyamoto

JOHN WAIHEE
GOVERNOR

DIRECTOR

DEPUTY DIRECTORS
KANANI HOLT
GLENN M. OKIMOTO
JOYCE T. OMINE
CALVIN M. TSUDA

IN REPLY REFER TO:

AIR-EP
94.253

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
AIRPORTS DIVISION

400 RODGERS BOULEVARD, SUITE 700
HONOLULU INTERNATIONAL AIRPORT • HONOLULU, HAWAII 96819-1880

August 30, 1994

Mr. Dale Burton
Solid Waste Coordinator
COUNTY OF KAUAI
Department of Public Works
3021 Umi Street
Lihue, Hawaii 96766

Dear Mr. Burton:

Subject: Lihue Debris-Recycling Station
Draft Environmental Assessment

We have reviewed the subject project and are opposed to the construction and operation of a debris-recycling station near Lihue Airport for the following reasons:

1. The potential bird attraction, increased traffic, windblown debris, odor and unsightliness of the facility will have a negative impact upon operations and users of Lihue Airport.

2. What methods will be used to assure that no hazardous or toxic materials will be received at the recycling station? Our concern is materials such as lead-based paint and asbestos which may be contained in construction debris could become airborne during processing and drift onto airport property which is downwind of the facility during tradewind conditions. Similarly, petrochemicals or toxic materials such as PCB in transformers may leak and contaminate the soil and groundwater. Will there be an air quality and water monitoring program?

3. Although the proposed project site is not within airport property, the Lihue Airport Master Plan, October 1989, expresses our long-term interest in reserving this area for uses supporting the airport.

Thank you for this opportunity to provide our comments. If you have any questions, please call Mr. Benjamin Schlapak of my Planning staff at 838-8821.

Very truly yours,

for Owen Miyamoto
Airports Administrator

JOHN WAIHEE
GOVERNOR OF HAWAII

KEITH W. AHUE, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

DEPUTIES
JOHN P. KEPPELER II
DONA L. HANAIKE

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

P. O. BOX 621
HONOLULU, HAWAII 96809

AQUACULTURE DEVELOPMENT PROGRAM
AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
CONSERVATION AND ENVIRONMENTAL AFFAIRS
CONSERVATION AND RESOURCES ENFORCEMENT
CONVEYANCES
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
LAND MANAGEMENT
STATE PARKS
WATER AND LAND DEVELOPMENT

REF:OCEA:SKK

FILE NO.: 95-070
DOC. ID.: 4884

SEP 7 1994

Mr. Dale Burton, Solid Waste Coordinator
Department of Public Works
County of Kauai
3021 Umi Street
Lihue, Hawaii 96766

Dear Mr. Burton:

SUBJECT: Draft Environmental Assessment (DEA): Lihue Debris-Recycling Station, Lihue, Kauai; TMK: 3-7-02: por. 1

We have reviewed the DEA information for the subject project transmitted by your memorandum dated July 29, 1994, and have the following comments:

Office of Conservation and Environmental Affairs

The Office of Conservation and Environmental Affairs (OCEA) comments that the portion of proposed facility to be developed for stormwater controls and emergency debris storage is located primarily within the General "G" subzone, and possibly within Limited "L" subzones of the Conservation District.

Should the this area remain within the Conservation District and consequently require a Conservation District Use Application (CDUA), we suggest that the DEA be revised to discuss the Conservation District subzones and the project's compliance with the subzone objectives, standards, conditions and guidelines.

Division of Aquatic Resources

The Division of Aquatic Resources (DAR) earlier comments during the early-assessment process are reproduced below for emphasis:

> "The Hanamaulu Stream and Bay are biologically important and sustain significant fisheries. Serious measures should therefore be taken to avoid runoff from the site into these waters. The stormwater retention basin under consideration should be incorporated in the plans. Because existence of the facility will encourage after-hours dumping throughout the area, adequate security to prevent such activity should be assured. Otherwise, it is likely that the stream and the bay could become alternate sites for unplanned waste disposal."

Historic Preservation Division

The Historic Preservation Division (HPD) comments they have reviewed the DEA information and believe that this project will have a "no effect" on significant historic sites. The area was in existing cane cultivation, and therefore the possibility of significant historic sites still being present, is minimal.

We have no other comments to offer at this time. Thank you for the opportunity to comment on this matter.

Please feel free to call Steve Tagawa at our Office of Conservation and Environmental Affairs, at 587-0377, should you have any questions.

Very truly yours,

KEITH W. AHUE

c: Russell Leong, HLA Assoc.

Harding Lawson Associates

December 7, 1994

23045.202
0510LA

Mr. David Welhouse
Airport Engineer/Planner
Federal Aviation Administration
Airports District Office Box 50244
Honolulu, Hawaii 96850-0001

Response to Comments
Draft Environmental Assessment
Lihue Debris-Recycling Station
Lihue, Kauai, Hawaii

Dear Mr. Welhouse:

On behalf of the County of Kauai, Solid Waste Section, we would like to take this opportunity to thank you for your comments in your August 11, 1994, letter and to provide you with our response.

Comment 1 - Debris on Ahukini Road

Currently, Ahukini Road is the only available access to the proposed site, and it is being used by the existing transfer station facility. Vehicles are required by law to cover loads likely to create windblown debris. The county will use enforcement and public education to increase the use of load covers. The proposed fencing around the site will likely contain wind-carried debris. The county will also require the facility operators to pick up windblown litter in the immediate vicinity of the facility. We anticipate that these actions will reduce the potential for littering debris to accumulate on the access road. These measures will be included in the Lihue Debris-Recycling Station's (LDRS's) operations manual. The county will also provide the state Department of Transportation, Airports Division (DOT-A) with a point of contact at the county Solid Waste Section to discuss their concerns regarding LDRS operations.

Comment 2 - FAA's Position on Proposed Project

During our meeting on July 20, 1993, we understood that, on the basis of proposed location and on the nature of waste (segregated, nonputrescible waste, such as construction/demolition debris, green waste, and recyclables) to be received at the site, the Federal Aviation Administration (FAA) agreed that there should be no problem with birds. We also understood that the proposed project does not conflict with current or proposed rules concerning airport area development. Since the time of our initial meeting, the only

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significant change to the conceptual design is the now-planned retention basin for storm water.

From our August 4, 1994, meeting and your August 11 letter, we now understand that the FAA has a concern regarding the potential for the LDRS to be a bird attractant. The FAA's concern is the potential littering of debris along Ahukini Road and the construction of a retention basin, which would attract birds. As the LDRS will accept only segregated, nonputrescible waste, we do not anticipate that birds will be attracted to the site or to any fallen debris from vehicles along the access road. Also, the county will implement a system, as described under our response to Comment 1, to reduce littering and the potential for the accumulation of litter on the access road.

As suggested by Mr. Tim Ohashi of the U.S. Department of Agriculture, Animal Damage Control (ADC), we propose three options: (1) to construct a lined storage basin with approximately vertical side slopes, short solid fencing around the perimeter of the basin, and cable grid over the basin if the water surface is to be exposed; (2) to construct a fully covered basin, not exposing the water surface; or (3) to discharge storm water directly offsite without using a basin, if possible. These controls are expected to act as deterrents to birds. We would like to resolve this issue with the FAA and welcome a discussion or response to our proposed methods in reducing litter and the attraction of birds.

In addition, the ADC has visited some of the existing temporary hurricane debris-receiving (THDR) sites because of a concern about the green waste being a bird attractant at the LDRS. The green waste at the LDRS will not be composted and will be stored onsite temporarily. From the ADC's observations at the THDR sites, we understand that as long as composting does not occur at the facility, they believe the facility will not attract birds commonly associated with station operations.

Comment 3 - Traffic on Ahukini Road

The county has submitted a request with Amfac/JMB Hawaii, Inc., for use of their proposed access road from the bypass highway to the proposed LDRS. In the best-case scenario, the new Amfac/JMB Hawaii, Inc.'s access road would be constructed in 1996 or 1997. Thus, the county's use of Ahukini Road would be on a temporary basis, until the Amfac/JMB's new access road is constructed.

Your comments will be incorporated into the final Environmental Assessment. Please feel free to call if you have any additional questions or concerns.

Yours very truly,

HARDING LAWSON ASSOCIATES

Russell C.H. Leong
Associate Engineer

RCHL/LKI/hl

QC: PBC PBC

cc: County of Kauai, Solid Waste Section/Mr. Dale Burton
Department of Transportation, Airports Division/Mr. Gene Matsushige

Harding Lawson Associates

December 7, 1994

23045.202
0525LA

Mr. Keith W. Ahue, Chairman
Department of Natural Resources
P.O. Box 621
Honolulu, Hawaii 96809

Response to Comments
Draft Environmental Assessment
Lihue Debris-Recycling Station (LDRS)
Lihue, Kauai, Hawaii

Dear Mr. Ahue:

On behalf of the County of Kauai, Solid Waste Section, we would like to take this opportunity to thank you for your comments in your September 7, 1994, letter and to provide you with our response.

Office of Conservation and Environmental Affairs - Conservation District Use Application

Although Amfac/JMB Hawaii, Inc. has submitted a petition to the state Land Use Commission to change the site's agricultural and conservation designation to urban, we anticipate that we will need to submit a Conservation District Use Application to meet the county's proposed construction schedule. Thus, we will include in the Final Environmental Assessment (EA), a discussion of the Conservation District subzones and the project's compliance with the subzone objectives, standards, conditions and guidelines.

Division of Aquatic Resources - Surface Water Runoff and Littering

The storm water generated at the site will be collected and discharged into the existing irrigation ditches, the DOT-A storm drainage system, or Hanamaulu Bay, with a portion of the water diverted to the water storage pond, if needed. The water collected in the water storage pond may be used as irrigation, dust control, and fire protection. Due to the amount of rain that would be generated during a 25-year, 24-hour storm (approximately 11 million gallons), it would be difficult to manage all of the water onsite, while implementing controls to reduce bird attraction to the pond. (Birds create a hazard to the departing aircraft from the neighboring airport.) Any discharge of water offsite and into state waters shall meet National Pollutant Discharge Elimination System (NPDES) requirements.

The proposed LDRS is planned for operation 10 hours a day, 7 days a week, similar to the existing transfer station. We realize that after-hours dumping may occur; thus, the county plans to establish a bounty program, which will help enforce litter laws. Also, the county will

require LDRS operators to collect debris and refuse from the vicinity of the LDRS and existing transfer station as a result of dumping.

Your comments and recommendations will be incorporated into the final Environmental Assessment. Please feel free to call if you have any additional questions or concerns.

Sincerely yours,

HARDING LAWSON ASSOCIATES

Russell C.H. Leong
Associate Engineer

RCHL/LKI/hl

QC: PBC PBC

cc: County of Kauai, Solid Waste Section/Mr. Dale Burton

Harding Lawson Associates

December 7, 1994

23045.202
0526LA

Mr. Tim Ohashi, Assistant State Director
U.S. Department of Agriculture
Animal Damage Control
3375 Koapaka Street, Suite H-420
Honolulu, Hawaii 96819

Response to Comments
Draft Environmental Assessment
Lihue Debris-Recycling Station
Lihue, Kauai, Hawaii

Dear Mr. Ohashi:

On behalf of the County of Kauai, Solid Waste Section, we would like to take this opportunity to thank you for your comments in your August 30, 1994 letter. We are eager to implement your recommendations on the design of the water storage basin and will request your review as our design progresses. If birds become a problem at the site during operations, the county will consult your office as needed.

Your comments and recommendations will be incorporated into the final Environmental Assessment. Please feel free to call if you have any additional questions or concerns.

Sincerely yours,

HARDING LAWSON ASSOCIATES

Russell C.H. Leong
Associate Engineer

QC: PBC PBC

RCHL/LKI/hl

cc: County of Kauai, Solid Waste Section/Mr. Dale Burton

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Environmental Services

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December 7, 1994

23045.202
0528LA

Mr. Owen Miyamoto, Aiports Administrator
Department of Transportation
Airports Division
400 Rodgers Boulevard, Suite 700
Honolulu, Hawaii 96819

Response to Comments
Draft Environmental Assessment
Lihue Debris-Recycling Station
Lihue, Kauai, Hawaii

Dear Mr. Miyamoto:

On behalf of the County of Kauai, Solid Waste Section, we would like to take this opportunity to thank you for your comments in your August 30, 1994, letter and to provide you with our response.

Comment 1 - Bird Attractant, Traffic, Litter, Odor, Unsightliness

Because the Lihue Debris-Recycling Station (LDRS) will only accept segregated, non-putrescible waste and will not conduct composting operations, we do not anticipate that the site will attract the birds commonly associated with refuse operations. The U.S. Department of Agriculture, Animal Damage Control (ADC) office, has come to the same conclusion regarding birds and the proposed recycling activities (see enclosed letter from ADC dated August 30, 1994). However, there is a potential for birds to be attracted to the proposed surface-water storage pond. We will implement the design criteria recommended by the ADC and will consult them on the design of the basin to reduce the potential for attracting birds.

Ahukini Road, the only available access to the proposed site, is being used by the existing transfer station facility. The County of Kauai has submitted a request with Amfac/JMB Hawaii, Inc., to use their proposed access road from Kapule Highway to the proposed realigned Ahukini Road, which will redirect traffic from the LDRS and transfer station away from Ahukini Road. As the best-case scenario, Amfac/JMB Hawaii, Inc., anticipates construction of this new access road to be in 1996 or 1997. Thus, the county's use of Ahukini Road would be on a temporary basis, until the Amfac/JMB's new access road is constructed.

Windblown debris from the LDRS will be controlled by the proposed fencing around the facility. The county will require the facility operators to pick up windblown litter in the immediate vicinity of the facility. Vehicles are required by law to cover loads likely to create windblown debris. The county will use enforcement and public education to increase the use of load covers. The county will provide the state Department of Transportation, Airports

Division (DOT-A), with a point of contact at the county Solid Waste Section to respond to the DOT-A concerns.

Because putrescible waste will not be accepted at the LDRS and green waste composting will not occur at the LDRS, no odors for the proposed facility is anticipated.

In addition to the fencing, the facility will be bounded along the inland perimeters and roadway frontages, west of the existing transfer station, by a 4-foot-high soil berm (as shown on Figure 2 of the Draft Environmental Assessment), which will be vegetated and landscaped with shrubs and trees. The ADC will be consulted on the appropriate vegetation to be used.

Comment 2 - Hazardous Waste Exclusion

Hazardous or toxic wastes, including lead-based paints and asbestos, will not be accepted at the LDRS. However, debris painted with lead-based paint and asphalt roofing materials may be accepted. Emission controls will be established during chipping operations to reduce the potential for airborne dust. Asphalt roofing materials to be received at the LDRS are unlikely to be asbestos-containing material (ACM) because asbestos was used as reinforcement in roofing materials until the early 1970s (according to technical representatives of asphalt roofing manufacturers), and Hurricane Iwa removed many of the older roofs in 1982. The county is currently planning to sample the existing piles of segregated roofing material at the temporary hurricane debris-receiving (THDR) sites, which were generated by Hurricane Iniki. If the sampling activity indicates that the average asbestos content is less than one percent and appropriate permits for recycling and diversion are obtained from the state Department of Health (DOH), the county will divert roofing materials from the landfill. However, if the sampling activity indicates that the average asbestos content is greater than one percent, then the county will not accept roofing materials at the LDRS.

Incoming loads to the LDRS will be visually inspected for unacceptable items, including hazardous waste, petrochemicals and transformers. If unacceptable items are found in a load, the LDRS operators will not accept the load and will require the transporter to remove the waste from the site and dispose of it properly. The LDRS operators will have a list of facilities with addresses that will accept materials which the LDRS will not accept. Because the proposed materials to be received at the site are not hazardous or putrescible, any water that percolates down through the waste piles will be relatively innocuous and will not be classified as leachate. Thus, no air or groundwater monitoring programs are planned nor currently required by Department of Health. However, if stormwater runoff is to be discharged offsite into state waters, monitoring of surface-water discharge will be performed in accordance with applicable National Pollutant Discharge Elimination System (NPDES) regulations.

Comment 3 - Lihue Airport Master Plan

We realize that the proposed LDRS site is part of the area included in the Lihue Airport Master Plan, dated October 1989, which was to be used for airport supporting activities. However, we understand from our September 14, 1994, meeting that DOT-A is willing to modify their plans to accommodate the proposed LDRS facility if the county will implement programs to satisfy DOT-A's concerns iterated in Comments 1 and 2. The county will provide DOT-A with a copy of the draft operations plan for the facility, when available, for their review and comment.

Your comments will be incorporated into the final Environmental Assessment. Please feel free to call if you have any additional questions or concerns.

Sincerely yours,

HARDING LAWSON ASSOCIATES

Russell C.H. Leong
Associate Engineer

RCHL/LKI/hl

QC: PBC PBC

Enclosure: Letter from USDA, Animal Damage Control, dated August 30, 1994

cc: County of Kauai, Solid Waste Section/Mr. Dale Burton

United States Department of Agriculture

Animal and Plant Health Inspection Service

Animal Damage Control

August 30, 1994

Mr. Russell C.H. Leong
Harding Lawson Associates
Engineering and Environmental Services
235 Pearlridge Center, Phase 1
98-1005 Moanalua Rd.
Aiea, HI 96701

Dear Mr. Leong,

Thank you for allowing us to comment on the Draft Environmental Assessment for the Lihue Debris-Recycling Station. The Animal Damage Control Program of the U.S. Department of Agriculture cooperates with the State of Hawaii, Department of Transportation, Airports Division to manage wildlife hazards at Lihue Airport. A wildlife hazard can be defined as the potential for a damaging aircraft collision with wildlife on or near an airport. Birds are the most common hazard. Collisions between aircraft and birds can be serious, especially if a bird is ingested by a jet engine. Birds and other wildlife are attracted to the aerodrome environment for food, water, or shelter. Any proposed development near an airport should be carefully examined to determine whether it may create conditions that attract birds or other wildlife and result in increased hazards.

Debris Recycling Station

We have examined the EA and have made some observations at existing debris recycling stations on Kauai. We have come to the conclusion that as long as composting does not occur at the proposed Lihue Debris-Recycling Station, as described in the EA, the facility should not attract the birds commonly associated with refuse operations.

Runoff Settling Basin

Increased wildlife hazards can be expected from the proposed settling basin that you described to me over the telephone. Any water feature at the departure end of Runway 3 will attract birds unless it is designed to discourage bird use. Ducks from the Westin Lagoons can be expected to fly across Runway 3 and affect aircraft on takeoff. Migratory shorebirds, and resident wading birds can be expected to use the water and create additional hazards. If birds are able to drink from the basin we can expect possible hazards from non-waterfowl species as well. We understand that specifications for the settling basin have not been made. We would like to offer these general recommendations now, and would appreciate being allowed to review more formal specifications when they are developed.

1. The water basin should not be of earthen substrate. Earthen sides and bottom provide conditions for higher invertebrate productivity and growth of emergents, submergents and other wetland plants. In effect, these conditions create waterfowl habitat. We suggest specifications that would cover the sides and bottom with material that would not allow plant growth. A butyl lining may be appropriate.

2. The sides of the basin should be vertical or nearly vertical. Vertical sides will not allow wading birds or non-waterfowl access to the water from land.

3. Water depth should be maintained at 3 feet or more to discourage use by flocks of shorebirds, or wading birds such as black-crowned night herons, black-necked stilts and egrets.

4. Posts should be constructed around the perimeter of the water basin to allow the installation of a grid of stainless steel cable over the entire water basin. This cable grid is a deterent to birds that access the water by air.

5. The operator of the settling basin should provide trained personnel year-round to actively haze birds from the basin to discourage its use. Note: The USDA provides this service on a user-pay basis.

6. Vegetation around the settling basin should be well maintained. No trees should be allowed around the basin.

7. A barrier to toads should surround the entire settling basin. Toads will attract cattle egrets.

While it is preferable not to put a settling basin in the proposed location, the above recommendations should discourage bird use to a manageable level. Please let me know when more specifications are available.

Sincerely,

TIM J. OHASHI
Assistant State Director

Harding Lawson Associates

December 7, 1994

23045.202
0527LA

Mr. Timothy E. Johns, Vice President & General Manager
Amfac/JMB Hawaii, Inc.
Real Estate Division, Oahu/Kauai Development
700 Bishop Street
P.O. Box 3230
Honolulu, Hawaii 96801

Response to Comments
Draft Environmental Assessment
Lihue Debris-Recycling Station (LDRS)
Lihue, Kauai, Hawaii

Dear Mr. Johns:

On behalf of the County of Kauai, Solid Waste Section, we would like to take this opportunity to thank you for your comments in your September 7, 1994, letter and to provide you with our response.

Comment 1 - Page 2, Paragraph 3, Sentence 2

The materials collected at the LDRS will be removed from the site once a month or more frequently, if necessary. Green waste, once chipped, will be removed from the site within 48 hours. The maximum volume that can be collected at the site prior to removal will be dictated by the height of the piles, which is not to exceed 15 feet. During pre-hurricane conditions (once a hurricane watch has been declared), the LDRS operators will be required to secure the debris by covering the piles with chain-link fencing or wire mesh materials and anchoring the fencing/mesh material to the ground. The county will store sufficient quantities of fencing/mesh onsite for use as needed.

Comment 2 - Section 2.2.1, Green Waste Diversion

According to the letter we received from the U.S. Department of Agriculture, Animal Damage Control (ADC), dated August 30, 1994, "as long as composting does not occur at the proposed LDRS, as described in the EA, the facility should not attract the birds commonly associated with refuse operations." This statement does not assume that birds may not be attracted to the proposed stormwater pond, which is addressed in our response to Comment 9. A copy of the ADC letter is enclosed. If birds are attracted to the LDRS operations, the county will take proper mitigative action and consult the ADC.

Comment 3 - Section 2.2.2, Construction and Demolition Debris Diversion

Construction and Demolition (C&D) Debris, specifically, aggregates and wood, may or may not be crushed onsite, depending on the operator of the facility (county or privately operated) and/or the contractor hired to crush the material and to transport it offsite. The most probable scenario is for all volume reduction activities to occur at the LDRS, including crushing, to reduce the volume of material to be transported offsite (which would reduce transportation costs).

Comment 4 - Page 7, Paragraph 2, First Sentence

We will revise "AMFAC/JMB Hawaii, Inc." to "The Lihue Plantation Company, Limited, a subsidiary of Amfac/JMB Hawaii, Inc."

Comment 5 - Section 3.1.7.2, Fauna

The list of endangered birds observed within the vicinity of the Lihue airport was referenced from the *Lihue Airport Land Acquisition Final Environmental Assessment and Negative Declaration*, prepared by Wilson Okamoto and Associates, Inc. (WOA) and Edward K. Noda and Associates (ENA), dated 1993. The fifth bird listed, the nene goose, was inadvertently added, as it was not stated in the reference. The reference has also stated that the preferred habitat is the former Lihue Mill Settling Basin. However, in the final Environmental Assessment (EA), we will include the opinions of the state Department of Transportation, Airports Division (DOT-A) and the ADC that more birds are attracted to the Kauai Lagoons project than to the former Lihue Mill Settling Basin.

Since the preparation of the draft EA for the LDRS, an avifaunal survey, which included the LDRS site, was conducted. The survey report, *Avifaunal and Feral Mammal Survey of Molokoa Lands for Amfac's Lihue - Hanamaulu Master Plan, Kauai*, was prepared by Mr. Phillip Bruner in August 1994, and will be referenced in the final EA for the LDRS. The report stated that two endangered bird species (Hawaiian Koloa duck and common moorhen) were observed at the Hanamaulu Gulch wetlands and that three other endangered bird species (black-necked stilts, Hawaiian coot, and nene goose) may also be seen at the Hanamaulu Gulch wetlands. The Hanamaulu Gulch wetlands are approximately 2,000 feet away from the proposed LDRS site.

We would like to thank Amfac/JMB Hawaii, Inc. for providing the above-mentioned avifaunal survey, which will assist us in the planning and design of the proposed LDRS.

Comment 6 - Page 12, Last Paragraph, First Sentence

We will revise "(part of AMFAC)" to "(a subsidiary of Amfac)".

Comment 7 - Section 3.2.3.3

From our discussions with the county Planning Department, we understand that the Special Management Area (SMA) line follows the conservation line. Thus, according to the county Planning Department, the county needs to obtain a Special Management Area Permit for the proposed facility. Also, a Conservation District Use Permit (CDUP) will be required if the county is to construct within the conservation district. The subject EA will be used for the SMA permit and the CDUP. We will include this information in the final EA.

Comment 8 - Section 3.2.6

We will revise the EA to state that Kapule Highway is a limited access highway and that permanent access to the LDRS from Kapule Highway will be coordinated with Amfac/JMB Hawaii Inc.'s development plans.

Comment 9 - Section 4.3

The design of the water storage basin will include mitigative controls to reduce the potential of attracting birds. As recommended by the ADC, mitigative controls such as lining the basin, creation of near-vertical walls, and construction of a stainless-steel cable grid over the basin will be incorporated into the design if the water surface is to be exposed. Alternatively, the water storage pond will be fully covered, not exposing the water surface; or the stormwater will be completely discharged offsite, if possible. The ADC will also be consulted on the basin design as it progresses, as well as on the appropriate landscaping vegetation to be used at the LDRS.

Comment 10 - Section 4.4

Comments provided by the ADC indicate that bird activity or attraction caused by the proposed LDRS activities should not be significant. However, there is concern that the proposed water storage pond may be a bird attractant and should be designed with mitigative measures to reduce the potential for bird activity, as described in our response to Comment 9.

Comment 11 - Section 4.5, Fire

To reduce the potential for combustion of green waste material, the green waste will be removed from the site within 48 hours from the time the green waste is chipped. We do not anticipate significant potential for combustion of green waste before the material is chipped because the volume of air circulating through the piles reduces the heat accumulated within the piles. Once the green waste is chipped, however, the heat generated within the piles can easily escalate because the volume of the material is reduced. We have been in contact with the county Fire Department for guidance in our design of the fire protection system. We are currently uncertain as to which county Fire Station will service the LDRS.

Your comments will be incorporated into the final EA. Please feel free to call if you have any additional questions or concerns.

Sincerely yours,

HARDING LAWSON ASSOCIATES

Russell C.H. Leong
Associate Engineer

QC: PBC PBC

RCHL/LKI/hl

Enclosure

cc: County of Kauai, Solid Waste Section/Mr. Dale Burton

United States Department of Agriculture

Animal and Plant Health Inspection Service

Animal Damage Control

August 30, 1994

Mr. Russell C.H. Leong
Harding Lawson Associates
Engineering and Environmental Services
235 Pearlridge Center, Phase 1
98-1005 Moanalua Rd.
Aiea, HI 96701

Dear Mr. Leong,

Thank you for allowing us to comment on the Draft Environmental Assessment for the Lihue Debris-Recycling Station. The Animal Damage Control Program of the U.S. Department of Agriculture cooperates with the State of Hawaii, Department of Transportation, Airports Division to manage wildlife hazards at Lihue Airport. A wildlife hazard can be defined as the potential for a damaging aircraft collision with wildlife on or near an airport. Birds are the most common hazard. Collisions between aircraft and birds can be serious, especially if a bird is ingested by a jet engine. Birds and other wildlife are attracted to the aerodrome environment for food, water, or shelter. Any proposed development near an airport should be carefully examined to determine whether it may create conditions that attract birds or other wildlife and result in increased hazards.

Debris Recycling Station

We have examined the EA and have made some observations at existing debris recycling stations on Kauai. We have come to the conclusion that as long as composting does not occur at the proposed Lihue Debris-Recycling Station, as described in the EA, the facility should not attract the birds commonly associated with refuse operations.

Runoff Settling Basin

Increased wildlife hazards can be expected from the proposed settling basin that you described to me over the telephone. Any water feature at the departure end of Runway 3 will attract birds unless it is designed to discourage bird use. Ducks from the Westin Lagoons can be expected to fly across Runway 3 and affect aircraft on takeoff. Migratory shorebirds, and resident wading birds can be expected to use the water and create additional hazards. If birds are able to drink from the basin we can expect possible hazards from non-waterfowl species as well. We understand that specifications for the settling basin have not been made. We would like to offer these general recommendations now, and would appreciate being allowed to review more formal specifications when they are developed.

1. The water basin should not be of earthen substrate. Earthen sides and bottom provide conditions for higher invertebrate productivity and growth of emergents, submergents and other wetland plants. In effect, these conditions create waterfowl habitat. We suggest specifications that would cover the sides and bottom with material that would not allow plant growth. A butyl lining may be appropriate.

2. The sides of the basin should be vertical or nearly vertical. Vertical sides will not allow wading birds or non-waterfowl access to the water from land.

3. Water depth should be maintained at 3 feet or more to discourage use by flocks of shorebirds, or wading birds such as black-crowned night herons, black-necked stilts and egrets.

4. Posts should be constructed around the perimeter of the water basin to allow the installation of a grid of stainless steel cable over the entire water basin. This cable grid is a deterent to birds that access the water by air.

5. The operator of the settling basin should provide trained personnel year-round to actively haze birds from the basin to discourage its use. Note: The USDA provides this service on a user-pay basis.

6. Vegetation around the settling basin should be well maintained. No trees should be allowed around the basin.

7. A barrier to toads should surround the entire settling basin. Toads will attract cattle egrets.

While it is preferable not to put a settling basin in the proposed location, the above recommendations should discourage bird use to a manageable level. Please let me know when more specifications are available.

Sincerely,

TIM J. OHASHI
Assistant State Director

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Final Environmental Assessment
Lihue Debris-Recycling Station
Lihue, Kauai, Hawaii

December 12, 1994

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Copy 15 - 32: Mr. Steve Tagawa
State of Hawaii
Department of Land and Natural Resources
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Honolulu, Hawaii 96809

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Quality Control Reviewer

Philip B. Crispell

Philip B. Crispell
Civil Engineer - 8011 (Hawaii)

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