

## **APPENDIX C**

### Phase 1 Environmental Site Assessment

February 2008

KAUAI ENVIRONMENTAL, INC.

**PHASE 1 ENVIRONMENTAL SITE ASSESSMENT**



**ENVIRONMENTAL SITE ASSESSMENT**

***Proposed Alignment of the Nawiliwili/Civic  
Center/Ahukini Bicycle and Pedestrian Path Project,  
Nawiliwili Bay to Ahukini Point***

February, 2008

***Proposed Alignment of the Nawiliwili/Civic  
Center/Ahukini Bicycle and Pedestrian Path Project,  
Nawiliwili Bay to Ahukini Point***

***Lihue, Kauai***

*Prepared For:*

R. M. Towill Corporation  
2024 N. King Street, Suite 200  
Honolulu, HI 96819

*Prepared by:*

Kauai Environmental, Inc.  
P.O. Box 1280  
Kilauea, Hawaii 96754

*Prepared for:*

R. M. Towill Corporation  
2024 N. King Street, suite 200  
Honolulu, HI 96819

*Prepared by:*

Kauai Environmental, Inc.  
P.O. Box 1280  
Kilauea, Hawaii 96754

TABLE OF CONTENTS

PAGE

EXECUTIVE SUMMARY ..... i

1.0 INTRODUCTION ..... 1

1.1 Purpose ..... 1

1.2 Scope of Work ..... 2

1.3 Limitations and Exceptions ..... 3

2.0 SITE DESCRIPTION ..... 4

2.1 Location and Legal Description ..... 4

2.2 Site and Vicinity Characteristics ..... 4

2.2.1 Geologic Settings and Soils ..... 4

2.2.2 Groundwater ..... 5

2.2.3 Surface Waters ..... 5

2.2.4 Site Flood Boundaries ..... 5

2.3 General Site Setting ..... 5

2.3.1 Current Uses of Subject Properties ..... 6

2.3.2 Past Uses of Subject Properties ..... 6

2.3.3 Current Uses of Adjacent Properties ..... 6

2.3.4 Past Uses of Adjacent Properties ..... 7

3.0 REVIEW OF ENVIRONMENTAL AND HISTORICAL RECORDS ..... 7

3.1 Standard Environmental Record Sources ..... 7

3.1.1 Federal Database Search Results ..... 8

3.1.2 State and Local Database Search Results ..... 10

3.2 Standard Historical Use Information Sources ..... 15

3.2.1 Aerial Photographs ..... 15

3.2.2 Sanborn Fire Insurance Maps ..... 16

3.2.3 Historical Topographic Maps ..... 16

3.3 Additional Environmental Record Sources ..... 17

3.3.1 Previous Environmental Reports ..... 17

3.3.2 Hawaii State Department of Health Records ..... 18

4.0 SITE RECONNAISSANCE ..... 19

4.1 Methodology and Limiting Conditions ..... 19

4.2 Observations ..... 20

4.2.1 TMK Parcel (4)-3-5-001: 005 ..... 20

4.2.2 TMK Parcel (4)-3-5-001: 008 ..... 20

4.2.3 TMK Parcel (4)-3-5-001: 102 ..... 20

4.2.4 TMK Parcel (4)-3-5-001: 128 ..... 21

4.2.5 TMK Parcel (4)-3-5-001: 160 ..... 21

4.2.6 TMK Parcel (4)-3-5-002: 002 ..... 21

5.0 INTERVIEWS ..... 23

TABLE OF CONTENTS (Continued)

6.0 FINDINGS AND OPINION ..... 24

7.0 CONCLUSIONS ..... 26

8.0 SIGNATURE ..... 29

9.0 REFERENCES ..... 30

APPENDICES

A: Figures

B: Photographs

C: Sanborn Fire Insurance Map Report

D: Historic Topographic Map Report

E: Qualifications of Environmental Professionals

## ENVIRONMENTAL SITE ASSESSMENT

### *Proposed Alignment of the Nawiliwili/Civic Center/ Ahukini Bicycle and Pedestrian Path Project Nawiliwili Bay to Ahukini Point*

#### EXECUTIVE SUMMARY

Kauai Environmental Inc. performed a Phase I Environmental Site Assessment (ESA) for the properties along the proposed route for a section of the Nawiliwili-Civic Center-Ahukini Bicycle and Pedestrian Path (Lihue Bike Path). This study looks at the section from Nawiliwili Bay to the Ahukini Landing. The exact route for this section of the Lihue Bike Path has not yet been determined, however the proposed alignment will traverse portions of several properties including: TMK Nos. (4) 3-5-001; Parcels 005, 008, 102, 128 and 160. This ESA covers those sections of these properties which encompass the proposed alignment, as shown in Figure 1 (Appendix A). Portions of (4) 3-5-002; Parcel 002 were also inspected for the presence of any potential environmental concerns. While the bike path alignment will only be constructed on a small portion of the referenced parcels, the entire area defined in Figure 1 was evaluated in order to allow planners to assess the impact of the different possible routes for the project.

This assessment was conducted in conformance with the 2000 ASTM Standard for Phase I Environmental Site Assessments to determine whether conditions or situations on the properties in question might result in real or potential hazards, or environmental liabilities, that might impact or complicate construction of the bike path. Specific items investigated included: present and historical uses of the subject properties and adjacent properties; signs of gross surface contamination; the presence of hazardous materials and wastes; above ground and underground storage tanks (ASTs and USTs), and other indications of the presence of chemical contamination.

A review of State and Federal environmental regulatory databases indicated the following:

- No sites listed by the U.S. EPA on the NPL (Superfund) or delisted NPL databases were identified within the recommended search distances from properties which include the proposed bike path corridor.
- No CERCLIS (or CERC-NFRAP) sites were identified within the recommended search distance from properties which include the proposed bike path corridor.
- No RCRA corrective action sites or treatment, storage, and disposal facilities were identified within the recommended search distances from properties which include the proposed bike path corridor.
- Two (2) RCRA hazardous waste generators were identified within the recommended search distance from properties which include the proposed bike path corridor. No impacts to the bike path corridor are anticipated due to the locations of these sites relative to the bike path route, and the fact that no violations have been reported at either site.

- Six (6) state-recognized hazardous waste sites were identified within one mile of the properties which include the proposed bike path corridor. No impacts to the bike path project are anticipated due to the fact that site cleanups have been completed at all of the sites that are in close proximity to the proposed bike path corridor.
  - Eighteen (18) registered underground storage tank (UST) sites were identified within the recommended search distance from properties which include the proposed bike path corridor. No impacts to the bike path project are anticipated as none of these sites are in close proximity to the proposed bike path corridor.
  - Nine (9) leaking underground storage tank (LUST) sites were identified within the recommended search distance from properties which include the proposed bike path corridor. No impacts to the bike path project are anticipated as none of these sites are in close proximity to the proposed bike path corridor.
  - No active landfills were identified within the recommended search distance from properties which include the proposed bike path corridor.
  - There have been no spill incidents connected with the subject properties that were reported to the HEER office or entered on the ERNS database.
  - No Brownsfields sites, or sites with institutional or engineering controls, were identified within the recommended search distances from properties which include the proposed bike path corridor.
- A review of relevant State and Federal databases did not identify any institutional controls, engineering controls, or activity and use limitations associated with the subject properties or adjacent properties.
- A site reconnaissance at the subject properties was performed during November and December, 2007. The environmental issues identified during this inspection are listed below.
- A large, historic dump site was identified along the shoreline to the east of the Lihue Airport. This dump site covers an estimated 5-10 acres and contains an estimated 50,000-100,000 cubic yards of solid waste. The exposed face of the dump eroding into the ocean.
  - A second historic dump site was also noted further south, where debris had apparently been used as fill material. This site contains an estimated 200 cubic yards of solid waste.
  - Numerous abandoned vehicles and other miscellaneous debris were identified at various smaller sites along the shoreline between Ninini Point and Ahukini Point. The total quantity of debris at these additional sites (listed in Table 8) is estimated to be between 350 and 400 cubic yards of material.
- A review of historical land use information including aerial photographs, fire insurance maps, historical topographic maps, previous environmental reports, and interviews with persons familiar with the history of the property has indicated the following:

**ENVIRONMENTAL SITE ASSESSMENT**  
**PROPOSED ALIGNMENT OF THE NAWILIWILI/CIVIC CENTER/AHUKINI**  
**BICYCLE AND PEDESTRIAN PATH PROJECT,**  
**NAWILIWILI BAY TO AHUKINI POINT**

**1.0 INTRODUCTION**

Kauai Environmental Inc. (KEI) performed a Phase I Environmental Site Assessment (ESA) for property along the proposed route for a section of the Nawiliwili - Civic Center - Ahukini Bicycle and Pedestrian Path (Lihue Bike Path) between Nawiliwili Bay and Ahukini Point. The exact route for this section of the Lihue Bike Path has not yet been determined, however the proposed alignment will likely traverse portions of several properties including, TMK Nos. (4) 3-5-001; Parcels 005, 008, 102, 128 and 160 and (4) 3-5-002; Parcel 002. This ESA has been conducted for portions of the above-referenced properties, including all areas that may be traversed by the alignment as currently proposed. The locations of the properties included in this assessment are shown in Figure 1 (Appendix A). Throughout this report, the properties included in this assessment, as shown in Figure 1, will be referred to collectively as *the subject properties or the properties*.

This assessment was performed in accordance with the guidelines established in the American Society for Testing and Materials (ASTM) 2000 Standard: E 1527-00, "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process."

**1.1 Purpose**

This investigation has been performed for R. M. Towill Corporation, on behalf of The County of Kauai, to identify any potential environmental hazards or liabilities that might be encountered during the construction of this section of the Lihue Bike Path. As such, the purpose of this assessment was to investigate past and present land uses of the subject properties and surrounding areas to determine if the potential exists for hazardous materials contamination or other significant, adverse environmental liabilities associated with the properties. These conditions may affect the selection of the best route for the bike path and may affect the cost or construction methods required to complete the path in some areas.

As defined by the 2000 ASTM Standard, the objective of the Phase I ESA process is to identify any "recognized environmental conditions" associated with a Parcel of commercial real estate. A "recognized environmental condition" is defined as: "*the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, ground water, or surface water of the property.*" The term may include hazardous substances or petroleum products even when stored under conditions in compliance with applicable laws and regulations, but is not intended to include *de minimis* conditions that would not require enforcement action if brought to the attention of the appropriate government agencies.

• Much of the subject property was historically used for sugar cane production.

• Prior to the 1950's, a permanent workers' colony known as Ahukini Camp was located on Parcel 160, southeast of Ahukini Road. This camp was associated with Ahukini Landing, which was a port facility used by the local sugar mills. Ahukini Landing was also used for military purposes during World War II.

• The large, abandoned dump site along the shoreline was the original Lihue municipal dump, and is known as the Lihue Open Dump or Ahukini Landfill. The site originally predates World War Two and was closed in 1975. The State Department of Health issued a temporary permit for the site prior to its closure in 1975, and currently classifies the site as an "Inactive Landfill." DOH is not currently pursuing actions to characterize or stabilize the site.

• Past construction efforts in the vicinity of the Lihue Airport have been complicated by unexpected encounters with unregistered USTs, abandoned cesspools and undocumented wells filled with petroleum product. None of these sites are located within the proposed alignment of the bike path.

In summary, the following environmental conditions have been identified in association with the subject properties:

• A historic municipal dump site was identified along the shoreline to the east of the Lihue Airport. This dump site covers an estimated 5-10 acres and contains an estimated 50,000 to 100,000 CY of solid waste. DOH records do not indicate that a characterization of this site has ever been performed. The existence of this unregulated dump site is considered a recognized environmental condition.

• A second historic dump site containing an estimated 200 cubic yards of solid waste was also noted further south. The existence of this site is also considered a recognized environmental condition since the source or nature of the dumped material has not been determined.

• Numerous abandoned vehicles and other miscellaneous debris were identified along the shoreline between Ninini Point and Ahukini Point. The total quantity of debris at these sites is estimated to be between 350 and 400 cubic yards. The presence of this debris is considered a recognized environmental condition.

• The historical presence of a permanent laborer's camp on Parcel 160 is considered a historic recognized environmental condition.

No other recognized environmental conditions or historical recognized environmental conditions have been identified in association with the subject properties during the process of completing this Phase I Environmental Site Assessment.

## 1.2 Scope of Work

The exact route for this section of the Lihue Bike Path has not yet been determined; therefore, a corridor encompassing the areas where the path may be built was defined in consultation with R.M. Towill Corporation, the prime contractor for this project. This Phase 1 ESA is limited to this corridor, the full extent of which is shown in Figure 1.

The 2000 ASTM Standard defines the four components of the Phase 1 ESA process as follows:

- Records Review
- Site Reconnaissance
- Interviews
- Report

These ASTM Standard states that these four components are to be used in concert, with each component providing information that may be used to inform the other components.

In the process of completing this Phase 1 ESA, KEI has performed the following tasks:

- Conducted a review of available environmental records including State and Federal regulatory databases, and contacted local and State agencies to determine the regulatory history associated with the properties, as well as other properties in the vicinity where current or historical commercial or industrial activities might impact the subject properties;
- Reviewed available sources of historical information for the subject properties and surrounding areas, including historical fire insurance maps, topographic maps, aerial photographs to assess past land use in the vicinity of the subject properties;
- Conducted a thorough site reconnaissance to assess current uses and condition of the subject properties and adjacent properties;
- Interviewed persons familiar with the properties and the history of the area for information on current and past uses of the subject properties and other properties in the surrounding areas;
- Reviewed information on site geology, soils, and hydrogeology of the area; and
- Prepared this Environmental Site Assessment Report which documents the findings of this evaluation.

A review of historical and environmental records pertaining to the subject properties and surrounding properties is documented in Section 4.0. Site reconnaissance, performed by a qualified environmental professional, is documented in Section 5.0. Interviews, also conducted by a qualified environmental professional, are documented in Section 6.0.

## 1.3 Limitations and Exceptions

KEI has completed this Phase 1 ESA for portions of the properties identified by the TMK Nos. (4) 3-5-001, Parcels 005, 008, 102, 128 and 160, and (4) 3-5-002; Parcel 002 as delineated in Figure 1 (the "Subject Property"). KEI's findings and conclusions in this Phase 1 ESA are professional opinions based solely upon visual observations and interviews conducted by KEI, KEI's interpretation of the available environmental records and historical information, information provided by the Designated Users of this report, and KEI's interpretation of other documents reviewed during this Phase 1 ESA process. Requests for information resources are made by KEI to collect relevant data on current and past practices at the Subject Property. KEI may not receive all information requested or be able to verify or confirm received information during the Phase 1 ESA process. Therefore, KEI shall not be held responsible for errors, omissions, or misrepresentations resulting from missing documentation or from inaccurate information provided by such sources.

Limitations encountered during the physical inspection of the subject properties included: many areas within the subject properties are overgrown or inaccessible, and physical access for visual inspection was limited. Limitations to physical inspection included tall, thick grasses in the inland portions of Parcels 005 and 102, thick trees and shrubbery in some areas along the coast (Parcels 008, 102 and 160), and a thick layer of pine needles and branches that covers the ground in much of the accessible area along the shoreline. The presence of thick fill materials was also a limitation in some areas of the site.

KEI has performed its services for this project with the degree of care, skill and diligence ordinarily exercised by professional consultants performing the same or similar services. No warranty or representation, either expressed or implied, is included or intended in KEI's proposals, contracts, or reports.

Opinions stated in this report do not apply to changes that may have occurred after services were performed. Opinions and recommendations presented herein apply to site conditions existing at the time of our investigation. They do not apply to site changes of which KEI is not aware and has not had the opportunity to evaluate.

This Phase 1 ESA is limited to the scope of ASTM Standard E 1527-00. No additional services were contracted in conjunction with this Phase 1 ESA.

Designated Users of this Phase 1 ESA include: R.M. Towill Corporation and The County of Kauai. This report is intended for the sole use of these Users on this Project. This report shall not be reused and is not intended or represented to be suitable for reuse by any other person or entity, whether on this project or any other project, or by the Designated Users on any other project. Any reuse of this document or the findings, conclusions, or recommendations presented herein will be at the user's sole risk and without liability or legal exposure to KEI.

**2.0 SITE DESCRIPTION**

**2.1 Location and Legal Description**

This assessment was performed for a corridor that includes the proposed alignment of the Lihue Bike Path, from Nawiliwili Harbor to Ahukini Point, as shown in Figure 1. Included are portions of the following properties: TMK Parcels (4) 3-5-001: 005, 008, 102, 128 and 160. Also inspected for the presence of any potential environmental concerns were portions of TMK Parcel (4) 3-5-002: 002, the Kauai Marriott resort hotel. A list of the Parcels included in this assessment is included below in Table 1. This assessment is limited to the proposed bike path corridor and does not include the entire extent of the Parcels listed above.

**Table 1: Properties Included in this Phase 1 ESA**

Parcel (TMK No.)	Area (acres)	Location / Property Description	Owner
(4) 3-5-001: 005	20	Strip between Lihue Airport and Parcel 102 (Kauai Lagoons property on coast)	State of Hawaii
(4) 3-5-001: 008	720	Lihue Airport property (note: only coastal areas outside perimeter fence included)	State of Hawaii
(4) 3-5-001: 102	116	Coastal property between airport and ocean, north of lighthouse at Ninini Point.	Kauai Lagoons Resort Co. Ltd.
(4) 3-5-001: 128	3.1	Parcel surrounding lighthouse (located on Parcel 004)	State of Hawaii
(4) 3-5-001: 160	7.5	Coastal property at end of the Lihue Airport landing strip, between Ahukini Road and the coast, to the east of the coastal access road.	State of Hawaii
(4) 3-5-002: 002	32.8	Kauai Marriott Resort	Kauai Marriott Resort

**2.2 Site and Vicinity Characteristics**

**2.2.1 Geologic Setting and Soils**

The subject properties are located on the southeast corner of the Island of Kauai between the Nawiliwili Harbor and Hanamault Bay. The island was formed by volcanic activity over several million years. The subject properties are located along a strip of land along the ocean east of the Lihue Airport. This area of the island was formed from the erosion of the large shield volcano to the west and the deposition of the soils over the coastal areas. The site is subject to erosion from the ocean waves and from rainfall carrying water from upland areas through the properties.

The general soils located in the study area are of the Lihue-Puhi Association. This soil association refers to deep, nearly level to steep well drained soils that have a fine textured or

moderately fine textured subsoil. The specific soil types found on the subject properties include rRo (stony rocky lands on the coastline), KvD and B (Koloa stony silty clays on the exposed hillsides), and LhB and C (Lihue silty clays on the flat uplands along the airport property and the Ahukini Landing sites). These soils are suitable for building foundation, however the erosion potential on steeper hillsides is extreme.

**2.2.2 Groundwater**

The subject property is located makai or toward the ocean of the Hawaii Department of Health Underground Injection Control line. The groundwater at the site is considered to be brackish and not of any useful drinking water or irrigation uses. DOH groundwater protection regulations are less stringent for sites below the UIC line since the resource is not usable. The depth to ground water is expected to be approximately 10 - 12 feet below ground level.

Based on the history of the site as a long standing agricultural field, it is possible that activities on the property have impacted the ground water quality, however this impact is expected to be minimal since the water is not usable. Any development of the property will likely use county supplied drinking water, therefore the impacts to groundwater will not affect the use or value of the property.

**2.2.3 Surface Waters**

There are no pools or ponds of standing water on the subject property. There are a few permanent streams or washes that carry surface waters from the west across the property. The nearest body of water is the Pacific Ocean, which is located on the eastern edge of the subject properties. On the southern portion of the properties, near the southeast corner of the airport property, a wetland identified in the National Wetland Inventory is located.

**2.2.4 Site Flood Boundaries**

According to the Flood Insurance Rate Map (FIRM) #150002-0202C, the coastal areas of subject properties from Nawiliwili to Ahukini are considered to be within the 500 year flood plain. At the Kauai Marriott, a small area along the Nawiliwili Stream is also considered within the 500 year flood plain. All other areas are considered to be outside of the 100 year flood plains.

**2.3 General Site Setting**

This section summarizes general information about the subject properties as derived from various sources including information from review of historical use and environmental records (Section 3.0), observations made during site reconnaissance (Section 4.0), and information obtained during interviews (Section 5.0).

### 2.3.1 Current Uses of Subject Properties

The subject properties (other than the Kauai Marriott on Parcel (4) 3-5-002: 002) are largely open, undeveloped areas which are not currently in use for any active purpose. With the exception of the lighthouse on Parcel 128 and the radar station on Parcel 102, the only current use for any of the subject properties are several staging areas for short-term storage of materials from ongoing Airport construction projects. Materials at these sites include boulders, soil and asphalt. Staging areas for these materials are located on Parcels 008 and 160.

Several areas along the coastline between Ninini Point and Ahukini Point are in use or have recently been used as camp sites or semi-permanent encampments. These areas typically include some or all of the following features: fire rings, abandoned vehicles, tents, trash, and debris. Other areas are commonly used for illegally dumping household trash by local residents.

### 2.3.2 Past Uses of Subject Properties

Historically, the subject properties were largely used for agricultural sugar cane production. Prior to the expansion of the runways at the Lihue Airport in the early 1980s, Parcels 005, 008 and 102 were in agricultural use nearly up to the coastline. Only the coastal areas and drainages were not cultivated.

Historical aerial photographs (described in Section 3.2.1) show a large camp on Parcel 160 which was present until at least the 1950s. This camp was presumably associated with Ahukini Landing, which was originally used as a port for the nearby Lihue Plantation Co., servicing the sugar mills in Lihue and Hanamaulu. Ahukini Landing may also have been used for military purposes during World War 2 (see below, Section 2.3.4). When this camp was originally built is not known, nor is the final closing or the method of disposition of the construction materials. Several concrete foundations and drain structures remain on the property at this time.

Physical inspection of the subject properties identified a large dump site on Parcel 008 (see Section 4.2). Dept. of Health records indicate that this site is a historic landfill which pre-dated State regulations for solid waste management and disposal. The full extent of the fill materials at the site are unknown, as are the types of material that the dump contains. DOH records do not indicate that any characterization of this site has ever been performed. The dump site is currently eroding into the ocean, with trash, metal, concrete and glass exposed along the ocean. Additional information regarding this site can be found in Section 4.2.2.

### 2.3.3 Current Uses of Adjacent Properties

Properties adjacent to the subject properties include the Kauai Marriott Resort, Kauai Lagoons (a residential, commercial and resort subdivision currently under development), the Lihue Airport run by the Hawaii Department of Transportation, and the abandoned Ahukini Landing facility.

### 2.3.4 Past Uses of Adjacent Properties

The Kauai Marriott has been a resort development dating back to the 1960s. The properties now under development as Kauai Lagoons were originally agricultural lands, later developed into a golf course. Much of the property occupied by the Lihue Airport was also used for agricultural production of sugar cane.

At the Ahukini Road terminus of the corridor, the adjacent properties have a long history of agricultural, military, residential, and industrial use. Ahukini Landing was once a major port facility associated with the Lihue Plantation Co. sugar mills at Lihue and Hanamaulu. The site was also a major military port for troops and supplies arriving and departing from Kauai during World War 2. Several large buildings were located in the area, including a warehouse used to store fertilizer and pesticides and a locomotive maintenance shop. In addition, a large housing camp was located in the area as described in Section 2.3.2.

In later years, the northwestern portion of Ahukini Landing was the site of the Masterworks facility, an auto salvage and wrecking yard. This site may also have been used as an open dump. The site has undergone extensive remediation including the removal of several unregistered USTs, the closure of several contaminated cesspools, and the removal of large quantities of petroleum contaminated soils.

### 3.0 REVIEW OF ENVIRONMENTAL AND HISTORICAL RECORDS

In order to identify the presence of recognized environmental conditions at the subject properties, several published sources of environmental records were searched, including databases maintained for this purpose by state and federal regulatory agencies. This section lists the environmental databases that were searched, and describes the results of each search.

#### 3.1 Standard Environmental Record Sources

The 2000 ASTM Standard for the Practice of Conducting Phase 1 ESAs (ASTM E 1527-00) defines a list of Federal and State regulatory databases as "Standard Environmental Record Sources" to be searched for relevant information as part of the Phase 1 ESA process. These databases record reported environmental incidents, conditions, and permitted or regulated operations that have the potential to impact the subject properties.

A summary of standard environmental database records was provided to KEI by Environmental Data Resources, Inc on December 20, 2007 (EDR, 2007a). This summary included the most recent versions available at that time for all required database records, as described below. Federal environmental databases reviewed for this report are detailed in Section 3.1.1. State environmental databases are detailed in Section 3.1.2. Tribal databases were also reported in EDR's summary, however these results are not included here since, at this time, there are no tribal lands in the State of Hawaii.



3.1.1 Federal Database Search Results

Table 2 lists the major Federal database records that were searched for this report. The ASTM methodology (ASTM Standard: E 1527-00) specifies a minimum search distance for each database, and also mandates that each database record used must have been updated by the source within 90 days of the search. The dates of the most recent update for each Federal database source are also listed in Table 2, along with the ASTM-mandated search distance for each database and the number of hits, or listed sites identified from each database within the recommended search distance. Results from each database search are described individually below.

Table 2: Federal Environmental Databases Reviewed

Database	Source Category (Gov't Agency)	Updated by Source	Search Distance	Hits
NPL	National Priority List (Superfund) Sites (USEPA)	8/29/07	1 mile	0
DELISTED NPL	National Priority List Deletions	8/29/07	0.5 mile	0
CERCLIS	CERCLIS Site Event List (USEPA)	12/06/07	0.5 mile	0
CERC-NFRAP	CERCLIS -No Further Remedial Action Planned	12/06/07	0.5 mile	0
CORRACTS	RCRA Corrective Action List (USEPA)	12/03/07	1 mile	0
RCRA	TSD Facility List (USEPA)	10/16/07	0.5 mile	0
RCRA	Generators Facility List (USEPA)	10/16/07	0.25 miles	2
US ENG CONTROLS	Engineering Controls Sites List	11/16/07	0.5 mile	0
US INST CONTROL	Sites with Institutional Controls	11/16/07	0.5 mile	0
ERNS	Emergency Response Notification System (USEPA)	10/19/07	Site only	0

NPL = National Priority List  
 CERCLIS = Comprehensive Environmental Response, Compensation, and Liability Information System  
 CORRACTS = Corrective Action Report  
 RCRA = Resource Conservation and Recovery Act  
 RCRIS = Resource Conservation and Recovery Information System  
 TSD = Transport, Storage and Disposal

USEPA National Priorities List (NPL)

The National Priorities List compiled by the U.S. Environmental Protection Agency lists the Superfund Hazardous Waste Sites as required by federal law. The identification of the hazardous waste sites presenting the greatest risk to human health and the environment is mandated by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) passed in

1980. This list is prioritized according to the severity of the risk to public health and the environment. No NPL sites were identified within one mile of the properties which include the proposed bike path corridor.

USEPA National Priorities List Deletions (DELISTED NPL)

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(c) sites may be deleted from the NPL when no further response is appropriate. No De-listed NPL sites were identified within one half mile of the properties which include the proposed bike path corridor.

USEPA CERCLIS List (CERCLIS)

The CERCLIS List, or Comprehensive Environmental Response, Compensation, and Liability Information System database, contains data on potentially hazardous waste sites that have been reported to the EPA by states, municipalities, private companies, and private persons. These sites are considered for possible clean up activities or inclusion onto the NPL. No CERCLIS sites were identified within one half mile of the properties which include the proposed bike path corridor.

USEPA CERCLIS List-No Further Remedial Action Planned (CERC-NFRAP)

The CERC-NFRAP List contains sites that have been removed from the CERCLIS list and archived. Archived status indicates that, to the best of the EPA's knowledge, assessment at a site has been completed and the EPA has determined that no further steps will be taken to list the site on the NPL at this time. This decision does not necessarily mean that there is no hazard associated with a given site, it only means that, based upon available information, the location is not judged to be a potential NPL site. No CERC-NFRAP sites were identified within one half mile of the properties which include the proposed bike path corridor.

USEPA RCRA CORRACTS List (CORRACTS)

The RCRA CORRACTS or Corrective Action Report database lists those facilities that generate, treat, store, or dispose of hazardous wastes that have undergone remediation activity. These sites have experienced spills or releases of hazardous chemicals prompting the need for clean up action. The extent and type of contamination is listed in this report as well as the status of the corrective actions. No hazardous waste facilities that have undergone corrective action were identified within one mile of the properties which include the proposed bike path corridor.

USEPA RCRA TSD Facilities List (RCRA)

The EPA maintains a list of Treatment, Storage, and Disposal (TSD) Facilities that either handle or dispose of hazardous waste as defined by the hazardous waste regulations published by the EPA according to the Resource Conservation and Recovery Act (RCRA). This information is contained in the Resource Conservation and Recovery Information System (RCRIS). No TSD facilities were identified within one half mile of the properties which include the proposed bike path corridor.

**USEPA RCRA Generators Lists (RCRA)**

The EPA tracks all facilities that generate hazardous wastes in excess of threshold quantities set in the RCRA regulations. RCRA large quantity generators (LQG) are those that produce in excess of 1000 kilograms of hazardous waste per month, and small quantity generators (SQG) are those that produce greater than 100 kg per month but less than 1000 kg per month. This information is also contained in the Resource Conservation and Recovery Information System (RCRIS). Two hazardous waste generators were identified within one quarter mile of the properties which include the proposed bike path corridor. These properties are identified below in Table 3. No impacts to the bike path corridor are anticipated due to the locations of these sites relative to the bike path route, and the fact that no violations have been reported at either site.

**Table 3: RCRA Generator Sites within One Quarter Mile**

Facility	Location	Regulatory Status
Century Aviation	Old Terminal (Ahukini Road)	LQG - No violations reported.
TSA at Lihue Airport	3901 Mokualele Loop	SQG - No violations reported.

**USEPA Engineering Controls Sites Lists (US ENG CONTROLS)**

The EPA maintains this list of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to prevent regulated or hazardous substances from entering environmental media or effecting human health. No sites with engineering controls were identified within one half mile of the properties which include the proposed bike path corridor.

**USEPA Institutional Controls Sites Lists (US INST CONTROL)**

The EPA maintains this list of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of institutional controls. No sites with institutional controls were identified within one half mile of the properties which include the proposed bike path corridor.

**USEPA ERNS Lists (ERNS)**

The Emergency Release Notification System list, compiled by the US EPA, lists the locations and other data on reported releases of oil and hazardous substances. All releases in excess of threshold quantities are required to be reported and included in this list. No entries on the ERNS database were identified for the subject properties.

**3.1.2 State and Local Database Search Results**

Table 4 lists the major State database records that were searched for this report. These records are maintained by the State Department of Health. The ASTM methodology (ASTM: E 1527-00) specifies a minimum search distance for each database, and also mandates that each database

record used must have been updated by the source within 90 days of the search. Table 4 lists the dates of the most recent update for each State database source, along with the ASTM-mandated search distance for each database and the number of hits, or listed sites identified from each database within the recommended search distance. Results from each database search are described individually below.

**Table 4: State Environmental Databases Reviewed**

Database	Source Category	Updated by Source	Search Distance	Hits
SHWS	State-recognized Hazardous Waste Sites (Hawaii DOH)	10/05/07	1 mile	6
SWFELF	Permitted Solid Waste Facilities and Landfills (Hawaii DOH)	10/23/07	0.5 mile	0
UST	Registered Underground Storage Tank sites (Hawaii DOH)	9/26/07	0.25 mile	9
LUST	Leaking UST sites (Hawaii DOH)	9/26/07	0.5 mile	18
SPILLS	HEER Release Notifications (Hawaii DOH)	10/05/07	site only	0
INST CONTROLS	Sites with Institutional Controls	10/05/07	site only	0
VCP	Voluntary Response Program Sites	10/05/07	0.5 mile	0
DRYCLEANERS	Permitted Dry Cleaning Facilities	10/26/07	0.5 mile (not required)	0
BROWNSFIELDS	Brownsfields Sites	10/05/07	0.5 mile	0

DOH = Hawaii State Department of Health  
HEER = Hazard Evaluation and Emergency Response

**State of Hawaii Hazardous Waste Sites (SHWS)**

This list includes all facilities, sites, or areas in which the Office of Hazard Evaluation and Emergency Response has an interest, has investigated, or may investigate under Hawaii Revised Statutes. Six (6) state-recognized hazardous waste sites were identified within one mile of the properties which include the proposed bike path corridor. These sites are identified below in Table 5. No impacts to the bike path project are anticipated due to the fact that site cleanups have been completed at all of the sites that are in close proximity to the proposed bike path corridor.

**Table 5: SHWS Sites within One Mile**

Facility	Location	Regulatory Status
Lihue Airport A-Gas	3901 Mokualele Loop	No further action required.
Kaunoi Marriott	3610 Rice Street	No further action required.

Facility	Location	Regulatory Status
Kaui Marriott	3500 Rice Street	No further action required.
Masterworks	3130 Ahukini Road	No further action required.
Honsador Lumber	3371 Wilcox Road	Voluntary Response Program; cleanup ongoing
Naviliwili Fuel Distributors	3145 Waapa Road	site cleanup ongoing

**State of Hawaii Landfill Sites (SWF/LF)**

The state list of Solid Waste Facilities and Landfill Sites contains an inventory of solid waste disposal facilities or landfills in the state. These facilities may be active or inactive or open dumps that failed to meet RCRA criteria for proper solid waste landfills. No state recognized landfills or disposal sites were identified within a half mile of the properties which include the proposed bike path corridor.

**State of Hawaii UST List (UST)**

This list of registered underground storage tanks is administered by the State of Hawaii Underground Storage Tank (UST) division. All tanks that are registered as required by the federal RCRA regulations are contained on this list. The database also includes the number and types of tanks registered, the regulatory status of the tanks, and whether they have been removed and closed according to state law. A total of eighteen (18) registered underground storage tank sites were identified within a quarter mile of the properties which include the proposed bike path corridor. These sites are identified below in Table 6. No impacts to the bike path project are anticipated as none of the sites identified in the database report are in close proximity to the proposed bike path corridor.

Table 6:  
List of UST Sites Located Within a Quarter-Mile of the Subject Properties

Facility	Location	Regulatory Status
State of Hawaii PMID 51401	Lihue Airport	Tank permanently out of use No problems identified
Kaui Island Tours, Inc.	Ahukini Rd. Lihue Airport	Tanks closed in 1996 No problems identified
	Ahukini Rd. Lihue Airport	Tank permanently out of use No problems identified
Lihue Airport Renovation	Lihue Airport	Tanks closed in 1991 No problems identified
Kenai Air Hawaii	Lihue Airport	Tanks closed in 1990 No problems identified
DOT - Airports Division Budget Rent-A-Car	Ahukini Rd. Lihue Airport	Tanks closed in 1996 No problems identified

Table 7:  
List of Leaking UST Sites Located Within a Half-mile of the Subject Properties

Facility	Location	Regulatory Status
Lihue Airport	3901 Mokulele Loop	Site Cleanup Completed, No further action required
DOT - Airport Division Avis Rental Car	3629 Ahukini St.	Site Cleanup Completed, No further action required
Budget Rent A Car Lihue Airport	3285 Hoolimalima Pl. Lihue Airport	Site Cleanup Completed, No further action required
Alamo Rent-A-Car, Inc	3272 Hoolimalima Pl. Lihue Airport	Site Cleanup Completed, No further action required
Avis Rent-A-Car	3259 Hoolimalima Pl. Lihue Airport	Site Cleanup Completed, No further action required
Kaui Marriott Resort and Beach Hotel	Kalapaki Beach 3610 Rice Street	Site Cleanup Completed, No further action required
	Westin Kauai Sewage Pump Station	Kalapaki Beach 3610 Rice Street
JJR Inc. (AKA: The Little Gas Station)	3416 Rice St. Lihue, Hawaii	Site Cleanup Completed, No further action required

**State of Hawaii Hazard Evaluation and Emergency Response Spills List (SPILLS)**

The Department of Health HEER office maintains a record of all spills and releases of chemicals and petroleum products above the regulatory threshold quantity that have been reported to the HEER office since 1988. These records are used to track all incidents to ensure that they are properly cleaned up. No record of any spills on the subject properties that have been reported to the HEER office was identified in the database report.

**State of Hawaii Institutional Controls Sites List (INST CONTROLS)**

The Department of Health maintains this list of Voluntary Response Program and Brownsfields sites with institutional controls in place. The subject properties were not identified as sites with institutional controls in place.

**State of Hawaii Voluntary Response Program Sites List (VCP)**

The Department of Health maintains this list of Voluntary Response Program sites, which are sites where voluntary clean-up projects are underway or have been completed by current or former owners. No Voluntary Response Program sites were identified within a half mile of the properties which include the proposed bike path corridor.

**State of Hawaii Drycleaners Sites List (DRYCLEANERS)**

The Department of Health maintains this list of permitted dry cleaning facilities in the state, which are common sources of groundwater contamination. This search is not required by the ASTM standard but is included due to the prevalence of contamination associated with dry cleaning

facilities. No dry cleaners were identified within a half mile of the properties which include the proposed bike path corridor.

**State of Hawaii Brownsfields Sites List (BROWNSFIELDS)**

The Department of Health maintains this list of Brownsfields sites.

No Brownsfields sites were identified within a half mile of the properties which include the proposed bike path corridor.

**3.2 Standard Historical Use Information Sources**

The following information was reviewed pertaining to the historical uses of the subject properties and the surrounding area.

**3.2.1 Aerial Photographs**

Aerial photographs of the subject properties and the surrounding area were obtained from the Photogrammetry Department at R. M. Towill Corporation in Honolulu, HI. Aerial photographs covering the subject properties were available from the years 1967, 1970, 1974, 1978, 1984, 1991 and 1995. These photographs were examined for evidence of previous site usage. The following discussion describes the apparent uses of the subject properties and the adjacent areas noted in each of the photos reviewed.

**1953 Photo:** In this black and white photo taken from an altitude of 20,000 feet, the shoreline from Ninini Point to Ahukini Landing appears as a heavily vegetated area along the shore with agricultural lands covering all of the inland level areas. The only development visible along the shoreline is the lighthouse tower at Ninini Point and the worker's camp near Ahukini Point. There are also some larger buildings associated with Ahukini Landing. The airport is visible to the SW of Ahukini Point. Also visible in the photo are several access roads connecting the camp at Ahukini to Lihue, the airport, and Hanamaulu. The historic dump site along the shoreline behind the airport is also visible as a clearing in the otherwise heavily vegetated shoreline.

**1960 Photo:** In this black and white photo taken from an altitude of 20,000 feet, there is very little change from the 1953 photo.

**1969 Photo:** In this black and white photo taken from an altitude of 12,000 feet, the camp Ahukini appears to be gone, and the airport appears to be undergoing an expansion. The dump site is still visible as a clearing along the otherwise forested shoreline.

**1974 Photo:** In this black and white photo taken from an altitude of 12,000 feet, the airport expansion has been completed and the former camp area at Ahukini Point has been re-forested. The Kauai Lagoons golf course above Kalapaki Beach is now in place. Most of the land currently occupied by the airport remains in agricultural use. The

dump site along the shoreline is still visible but does not appear to be as open or free of vegetation as was the case in previous photos.

**1982 Photo:** In this black and white photo taken from an altitude of 7,300 feet, only the southern portion of the subject properties is visible. The Lihue airport is again under expansion, with grading underway for additional runways running north to south. No additional development along the shoreline is visible.

**1992 Photos:** In this series of color photos taken from an altitude of 5,400 feet, the shoreline appears in much greater detail than in previous photos. Various access roads are also visible. The current airport runway configuration has been completed, and the Kauai Lagoons golf course has expanded between the runways. The masterworks facility at Ahukini Point is visible in the area formerly occupied by several large structures associated with the landing and the workers' camp. There is no longer any sign of the camp. The dump site along the shoreline remains the only large stretch visible along the coast where trees are not growing.

**2003 Photos:** In this series of color photos taken from an altitude of 5,400 feet, the only additional development visible along the shoreline is a new radar tower that has been constructed approximately halfway between Ninini Point and Ahukini Point.

**3.2.2 Sanborn Fire Insurance Maps**

The Sanborn Library includes a large collection of historical fire insurance maps dating back to the late 1800's. These maps show all insurable structures in a given area at a specific point in time, and are thus useful indicators of historical land use and changes in land use over time.

A Sanborn Map Report, including copies of all Sanborn Fire Insurance Maps available from the Sanborn Library for the vicinity of the subject properties, was provided to KEI by Environmental Data Resources, Inc on December 20, 2007 (EDR, 2007b). No fire insurance maps were available for the vicinity of the subject properties. A copy of EDR's Sanborn Map Report is included here as Appendix C.

**3.2.3 Historical Topographic Maps**

A Historical Topographic Map Report, including copies of all historical USGS topographic maps available for the site and vicinity of the subject properties, was provided to KEI by Environmental Data Resources, Inc on December 20, 2007 (EDR, 2007c). Historical topographic maps of the Lihue Quadrangle, which include the subject properties and the surrounding area, were available from the years 1963, 1983 and 1996. These maps were examined for evidence of historic land use patterns. The following discussion describes the apparent uses of the subject properties and the adjacent areas noted in each of the maps provided by EDR. A copy of EDR's Historical Topographic Map Report is included here as Appendix D.

**1963 Topo Map:** The USGS Topographic Map of the Lihue Quadrangle from 1963 shows the Lihue Airport in its original configuration. At the end of Ahukini Road

is the Ahukini Camp, presumably associated with Ahukini Landing and the Lihue Plantation Co. Sugar Mill in Hanama'ūhi. This camp is the only development between Ahukini Point and Ninini Point. The lighthouse at Ninini Point is visible, and is labeled on the map as the Nawiliwili Light Station. There is no development between Ninini Point and Kukii Point, at the entrance to Nawiliwili Bay.

**1983 Topo Map:** The USGS Topographic Map of the Lihue Quadrangle from 1983 shows an expanded Lihue Airport, in which the runways have been extended but the modern terminal buildings have not yet been constructed. The Ahukini Camp is no longer present, and there has been no additional development between Ahukini Point and Ninini Point. There has been additional development at Kalapaki Beach and along the edges of Nawiliwili Bay. A "Country Club" is noted between Kukii Point and Ninini Point, but there is no sign of the modern-day Kauai Lagoons and the associated golf course.

**1996 Topo Map:** The USGS Topographic Map of the Lihue Quadrangle from 1996 shows the current layout of the Lihue Airport, including the modern terminal buildings. The Kauai Lagoons and the associated golf course are also present. For the first time, the access road below the airport from Ahukini Road to the lighthouse at Ninini Point is visible. There are no other signs of development along the proposed route of the Lihue bike path.

### 3.3 Additional Environmental Record Sources

This section documents information obtained from additional sources of environmental records not required by the ASTM E 1527-00 standard.

#### 3.3.1 Previous Environmental Reports

**Draft EIS for Lihue Airport Improvements (January, 2007)**  
The Draft Environmental Impact Statement for Lihue Airport Master Plan Improvements (prepared in January 2007 for DOT-A by Wilson Okamoto Corporation) was reviewed for information related to potential environmental issues on DOT-A property that might impact the subject properties along the proposed alignment for the Lihue Bike Path. The Draft EIS itself does not contain any relevant environmental information, however included as an appendix to the Draft EIS is a Hazardous Materials Survey prepared for DOT-A by Masa Fujitoka & Associates in September 2006. This document was also reviewed.

**Hazardous Materials Survey, Lihue Airport Master Plan Improvements (September, 2006)**  
A Hazardous Materials Survey (HMS) was performed for DOT-A covering areas to be affected by improvements included in the Lihue Airport Master Plan. Although the bike path corridor is not within those areas, a portion of the proposed alignment is in close proximity to the Perimeter Access Road, which was one of the planned improvements included in the Master Plan for the airport. Also, the HMS includes general information which may be relevant to the subject properties and the Bike Path project. Relevant findings from this report are listed below.

SHWB issued a temporary permit for the county to operate the previously un-permitted site for 6 months, pending the availability of the newly permitted sanitary landfill site.

The Ahukini Open Dump was closed by grading the area and capping the site with 2 feet of topsoil. Correspondence from DOH, the County of Kauai, US EPA and the Army Corps of Engineers indicates that these agencies were aware of the landfill's existence and the State requirements for closure of the site, which consisted of covering the site with two feet of clean material. DOH also recommended grading these sites with a 2:1 grade to minimize erosion. The Ahukini site was one of two coastal landfill sites where the County was not able to meet this grading recommendation.

The SHWB lists the site as "Ahukini Landfill" in its database of Hawaii Inactive Landfills, and has classified the site as one of low potential impact.

#### Masterworks Site

The SHWB maintains extensive files related to the closure of the former Masterworks (aka Towmaster) site, which was located on Parcel 159, adjacent to Ahukini Road, just north of the subject properties. This site, which is currently a grassy meadow, was formerly a salvage yard for abandoned vehicles. Photographs taken during closure activities show dozens of wrecked cars and hundreds (if not thousands) of abandoned used tires. The site has been extensively remediated, with the closure of contaminated cesspools and removal of a large quantity of petroleum contaminated soils. The excavated area was partially backfilled with used tires that were compacted and bundled, and then buried in layers on the site.

### 4.0 SITE RECONNAISSANCE

A visual inspection of the subject properties and surrounding areas was performed by Benjamin Owen and Dave Gerow of KEI. Photographs of the property taken at the time of the inspection are included in Appendix E.

#### 4.1 Methodology and Limiting Conditions

Inspection of the subject properties was performed during November and December, 2007. Methodology for these inspection consisted of walking all accessible areas of the subject properties and noting all observable features. A handheld GPS unit was used to mark the locations of debris and other physical features as noted in this section.

Some areas of the site are open and level; however many areas are overgrown or inaccessible, and physical access for visual inspection was limited. Limitations to physical inspection included tall, thick grasses in the inland portions of Parcels 005 and 102, thick trees and shrubbery in some areas along the coast (Parcels 008, 102 and 160), and a thick layer of pine needles and branches that covers the ground in much of the accessible area along the shoreline. The presence of thick fill materials was also a limitation in some areas of the site.

#### 4.2 Observations

This section documents observations recorded at the time of the physical inspection of the subject properties and the adjacent properties. An inventory of all trash and debris identified on the subject properties is provided in Table 8. This inventory includes GPS locations of all materials identified, as well as estimated quantities of the debris to be removed from each site, should this debris require removal.

##### 4.2.1 TMK Parcel (4)-3-5-001:005

Parcel 005 is a long, thin strip of property between Parcel 008 and Parcel 102. This area was inaccessible for inspection due to cattle fencing and tall grasses and shrubs throughout most of the area. The area appears to have been used for cattle ranching at one time but does not appear to be currently in use.

##### 4.2.2 TMK Parcel (4)-3-5-001:008

Parcel 008 is a large Parcel which includes the Lihue Airport. This assessment included only the portion of Parcel 008 to the east of the perimeter fence, between the airport and the Pacific Ocean. As seen in Figure 1, Parcel 008 includes several coastline sections: one near the lighthouse at Ninini Point, the other near Ahukini Point. In between these sections, Parcel 008 is separated from the coastline by Parcel 005 and Parcel 102.

The inland section of Parcel 008 (to the west of Parcels 005 and 102) is largely inaccessible due to fencing and tall grasses and brush. The accessible paths and roads in this area were inspected. No signs of any debris or other potential sources of contamination was observed in the accessible portions of the inland areas.

Numerous abandoned vehicles, debris piles and small dump sites were observed along the coastal sections of Parcels 008, 120 and 160. On Parcel 008, most of these sites were located along the coast on the southern portion of the property. An inventory of the various sites noted along the coast is provided in Table 8. A handheld GPS device was used to record the locations of these sites, which are shown in Figure 2.

Also noted on Parcel 008 was a large historic dump site or landfill. This dump site appears to cover an area of approximately 5-10 acres along the shoreline. Though not visible from the airport perimeter road, visual inspection of the coastal bluffs reveals a mass of fill materials (dirt and debris) including metal, concrete, plastic and glass. The debris field is over 40 feet deep in some areas and extends along the shoreline for a distance of at least one quarter mile. The dump is gradually eroding into the ocean as evidenced by the beach below, which is littered with a significant amount of glass, plastic, and metal debris from the landfill. The location and extent of this historic landfill site are shown in Figure 3.

##### 4.2.3 TMK Parcel (4)-3-5-001:102

Parcel 102 includes a large portion of the coastline between Ninini Point and Ahukini Point, and is traversed by several unpaved access roads. The coastal areas were largely accessible for inspection, however large portions of the inland area was fenced off and overgrown.

Table 8: Inventory of Sites Along Shoreline

Site ID	Site Description	Latitude (°N)	Longitude (°W)	Estimated Quantity of Debris
A	South end: near lighthouse, rusted car by camp site	21° 57.407'	159° 20.089'	4 CY
B	Camp site with small amount of trash	21° 57.443'	159° 20.066'	1 CY
C	Large piece of fiberglass from boat	21° 57.488'	159° 19.953'	1 CY
D	Concrete pad near ocean with some trash	21° 57.491'	159° 19.924'	10 CY
E	Camp site with 3 cars and other trash, washing machine and car batteries	21° 57.537'	159° 19.915'	20 CY
F	Campsite with 2 large tires, glass pile, boat parts	21° 57.583'	159° 19.882'	5 CY
G	Large camp, fairly recent with small amount of trash	21° 57.689'	159° 19.820'	5 CY
H	8' x 20' concrete foundation	21° 57.727'	159° 19.877'	20 CY
I	Pit with concrete slab and debris	21° 57.764'	159° 19.873'	12 CY
J	Remnants of large metal tank (8' high 12' long)	21° 57.770'	159° 19.840'	10 CY
K	2 large concrete chunks (each 2 CY)	21° 57.831'	159° 19.861'	4 CY
L	Large campsite, debris pile, car	21° 57.900'	159° 19.852'	10 CY
M	30 scattered wooden pallets	21° 58.015'	159° 19.856'	10 CY
N	2 - Rusted cars	21° 58.021'	159° 19.864'	10 CY
O	Debris pile	21° 58.075'	159° 19.880'	5 CY
P	Dump, campsite, cars, debris, misc trash (large area)	21° 58.233' - 21° 58.165'	159° 19.858' - 159° 19.865'	30 CY
Q	Old antenna site: concrete slabs falling into the ocean, fill dirt, rock, trash	21° 58.479'	159° 19.935'	100 CY
R	Dump site - miscellaneous trash, cars, debris	21° 58.933'	159° 20.032'	40 CY
S	Concrete pad, lots of trash and debris	21° 59.252'	159° 20.013'	10 CY
T	Ahukini Camp area, appliances, cars, fill dirt, trash, concrete (large area)	21° 59.237' - 21° 59.278'	159° 20.013' - 159° 19.994'	30 CY
U	Concrete slabs, trash and debris	21° 59.481'	159° 19.857'	20 CY
V	Three concrete drains running from old Ahukini Camp site toward ocean	21° 59.497'	159° 19.854'	5 CY
1	Radar site - 500 gal AST	21° 58.482'	159° 20.021'	N/A
2	DOT-A Staging area (on top of historic landfill site)	21° 58.966'	159° 20.075'	N/A
3	Large area of fill over historic dump site. Green waste, appliances, glass, metal, construction debris, etc. The site appears to have been burned and occasionally covered. Dump site is eroding with debris falling into the ocean.	21° 58.724' - 21° 58.972'	159° 20.014' - 159° 20.071'	50,000 to 100,000 CY

## 5.0 INTERVIEWS

This section documents interviews conducted in the process of conducting this Phase I ESA. All interviews conducted for this assessment were conducted by Benjamin Owen of KEI.

### Chris Laletin, Director of Operations, Kauai Marriott Hotel

Mr. Laletin was interviewed regarding any potential environmental concerns that might impact the construction of the Lihue Bike Path as it passes through the Kauai Marriott property. Mr. Laletin indicated that, due to the constraints of hotel operations and guest traffic, the bike path would have to pass through a relatively undeveloped area where there is little infrastructure and no environmental concerns.

### Kevin Showe

Kevin Showe is a part owner of the Kauai Lagoons development, which owns parcel 102, and a former partner in the Kauai Marriott. Repeated attempts were made to interview Mr. Showe by telephone. Several voicemail messages were left for him, with no response.

### Michael Goshima, DOT-A Environmental Manager for Kauai District

Mr. Goshima was contacted regarding environmental conditions along the shoreline boundary of the Lihue Airport, including the historic dump site which was identified during the sight inspection. Mr. Goshima was aware of the site, but referred all questions to Joe Balignasay, who he said was much more familiar with DOT-A's plans to stabilize the landfill and clean up the area.

### Joe Balignasay, Environmental Health Specialist, DOT-A

Mr. Balignasay was interviewed regarding the historic dump site identified along the shoreline to the east of the Lihue Airport. Mr. Balignasay was aware of and familiar with the site. He indicated that the dump site was the original Lihue Dump, and that the site pre-dates World War Two. According to Mr. Balignasay, DOT-A has a plan to stabilize the dump site and stop it from eroding into the ocean. Mr. Balignasay explained that during the process of developing this plan, he consulted with the State Department of Health, and was told that the site is not regulated by State landfill regulations since the site pre-dates statehood.

### Todd Nichols, DOH-SHWB

A request was made to review any records on file at the State Department of Health's Solid and Hazardous Waste Branch in Honolulu regarding the historic dump site identified on Parcel 008. Todd Nichols of DOH-SHWB, was contacted regarding this request. Mr. Nichols indicated that he had heard rumors of this site, but that the SHWB office has no record of it. Mr. Nichols further indicated that the SHWB may not have any jurisdiction over this site due to its age, but deferred to the Branch Director for clarification on that issue.

In response to a request for documents filed by KEI with the SHWB office, Mr. Nichols eventually produced a file identifying the site as the Ahukini Landfill, a former County landfill that was issued a temporary DOH permit in 1975. The site is listed by DOH on the Hawaii

Inactive Landfills database. Mr. Nichols had not been previously aware of the existence of this database.

Mr. Nichols was also interviewed regarding the presence of numerous abandoned vehicles along the coastline. He indicated that SHWB would require that these abandoned vehicles be removed.

### Lynn Bailey DOH-HEER

A request was also made to review any records on file at the State Department of Health's Hazard Evaluation and Emergency Response Office in Honolulu regarding the historic dump site identified on Parcel 008. Lynn Bailey, a contractor assisting DOH-HEER, was contacted regarding this request. Ms. Bailey indicated that the HEER office has no record of this site.

## 6.0 FINDINGS AND OPINION

This section lists findings of fact, which may include known or suspected recognized environmental conditions, historical recognized environmental conditions, and *de minimis* conditions associated with the subject properties that have been identified during the course of this Phase I ESA, as well as KEI's assessment of the potential impact on the subject properties from the conditions identified here.

**FINDING:** A historic landfill is located along the shoreline to the east of the Lihue Airport. This dump site, known as the Lihue Open Dump or Ahukini Landfill, covers an estimated 5-10 acres and contains an estimated 50,000 to 100,000 CY of solid waste, which is gradually eroding into the ocean.

**OPINION:** The existence of this unregulated dump site is considered a recognized environmental condition. However, the site may be exempt from State environmental regulations, and may not violate any federal regulations. Whether or not the site contains any hazardous materials is unknown.

**FINDING:** A second historic dump site was also noted further south, where debris had apparently been used as fill material. This site contains an estimated 200 cubic yards of solid waste.

**OPINION:** The existence of this smaller dump site is also considered a recognized environmental condition. Again, the site may be exempt from State environmental regulations, and may not violate any federal regulations. Whether or not the site contains any hazardous materials is unknown.

**FINDING:** Numerous abandoned vehicles and other miscellaneous debris were identified along the shoreline between Nirimi Point and Ahukini Point. The total quantity of debris at these sites (listed in Table 8) is estimated to be between 350 and 400 cubic yards of material.

**OPINION:** The presence of this debris is considered a recognized environmental condition. Although the presence of abandoned vehicles and other trash does not necessarily

which was a port facility used by the local sugar mills. Ahukimi Landing was also by the military during World War Two.

- The historic landfill site along the shoreline is the original Lihue Dump, also known as Ahukimi Landfill. The landfill was officially closed in 1975, however the use of this site as an open dump likely predates World War Two. Due to its historic nature, this site may be exempt from State environmental regulation.
- Past construction efforts in the vicinity of the Lihue Airport have been complicated by unexpected encounters with unregistered USTs, abandoned cesspools and undocumented wells filled with petroleum product.

In summary, the following environmental conditions have been identified in association with the subject properties:

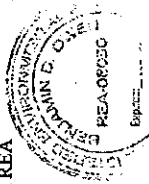
- A historic landfill was identified along the shoreline to the east of the Lihue Airport. This dump site covers an estimated 5-10 acres and contains an estimated 50,000 to 100,000 CY of solid waste, which has never been characterized. The existence of this unregulated dump site is considered a recognized environmental condition.
- A second historic dump site containing an estimated 200 cubic yards of solid waste was also noted further south. The existence of this site is also considered a recognized environmental condition.
- Numerous abandoned vehicles and other miscellaneous debris were identified along the shoreline between Ninini Point and Ahukimi Point. The total quantity of debris at these sites is estimated to be between 350 and 400 cubic yards. The presence of this debris is considered a recognized environmental condition.
- The historical presence of a permanent laborer's camp on Parcel 160 is considered a historic recognized environmental condition.

No other recognized environmental conditions or historical recognized environmental conditions have been identified in association with the subject properties during the process of completing this Phase I Environmental Site Assessment.

## 8.0 SIGNATURE

This Phase I Environmental Site Assessment was performed by Benjamin Owen of Kauai Environmental, Inc., a Registered Environmental Assessor (CA Certification # 08030). A copy of Mr. Owen's qualifications is included in Appendix E. Mr. Owen performed the site reconnaissance and interviews personally and performed or supervised and reviewed all remaining elements of this Phase I ESA.

  
Benjamin Owen, MS, REA  
Date 2/4/08





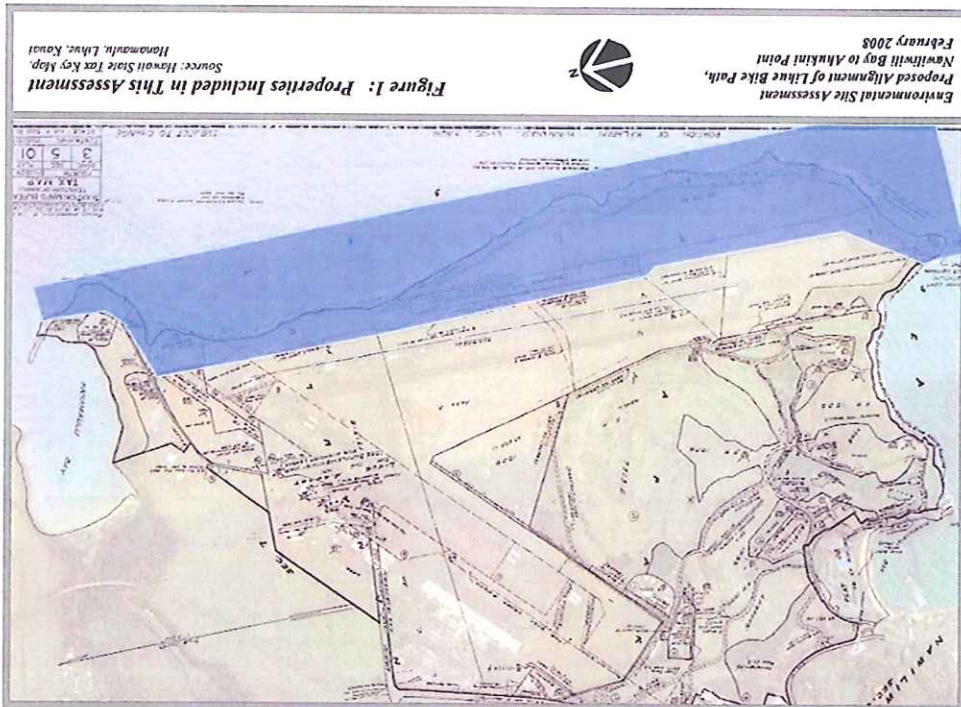
## 9.0 REFERENCES

- American Society for Testing and Materials (ASTM); "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process," ASTM 2005 Standard: E 1527-05
- Environmental Data Resources, Inc. (EDR); *Environmental Database Search Results for Lihue Bike Path Properties, Aukele St., Lihue, HI* (December 20, 2007).
- EDR; *Historical Topographic Map Report for Lihue Bike Path Properties, Aukele St., Lihue, HI* (December 20, 2007).
- EDR; *Sanborn Map Report for Lihue Bike Path Properties, Aukele St., Lihue, HI* (December 20, 2007).
- Masa Fujjoka & Associates; *Hazardous Materials Survey, Lihue Airport Master Plan Improvements* (September, 2006).
- Sato, Ikeda, Paeth, Smythe, and Takehiro; *Soil Survey of the Island of Hawaii, State of Hawaii* (December, 1973).
- U.S. Environmental Protection Agency; *All Appropriate Inquiries Final Rule* (40 CFR part 312).
- Wilson Okamoto Corporation; *Draft Environmental Impact Statement for Lihue Airport Improvements* (January, 2007).

## APPENDIX A: FIGURES



Figure 2: GPS Locat



APPENDIX B:  
PHOTOGRAPHS





Photo 1: Perimeter road and security fence along eastern edge of Lihue Airport.



Photo 2: View of Lihue Airport drainage culvert as seen from perimeter road.



Photo 5: Typical campsite area amongst trees along coastline with debris, abandoned vehicles, etc.



Photo 6: Remains of abandoned vehicles that have been burned in place along coastline.

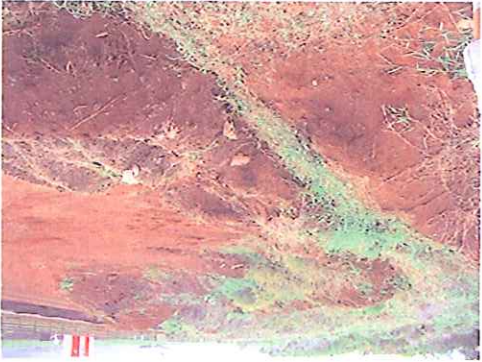


Photo 3: Topsoil stored in DOT-A staging area on top of historic landfill site.



Photo 4: Asphalt and rock stored in DOT-A staging area.



Photo 7: Remnants of vehicle abandoned along coastline.



Photo 8: Green waste debris and thick blanket of pine needles limits visual inspection of many coastal areas.

APPENDIX C:  
SANBORN FIRE INSURANCE MAP  
REPORT

Photo 12: Eroding face of historic landfill extends for more than one quarter mile along shoreline of Pacific Ocean.



Photo 10: Buried debris at historic landfill site is up to 40 feet thick along coastline.



Photo 11: Beach at base of historic landfill site is littered with eroding debris.



Photo 9: Historic landfill site along coastal bluff is eroding into the ocean.





# Certified Sanborn® Map Report



Sanborn® Library search results  
Certification # 06C9-4BE6-9EF2

Lihue Bikepath  
Aukole St.  
Lihue, HI 96766

Inquiry Number 2105496.3

December 20, 2007

## The Standard in Environmental Risk Information

440 Wheelers Farms Rd  
Milford, Connecticut 06461

### Nationwide Customer Service

Telephone: 1-800-352-0050  
Fax: 1-800-231-6802  
Internet: [www.edrmet.com](http://www.edrmet.com)

## Certified Sanborn® Map Report

12/20/07

**Site Name:**  
Lihue Bikepath  
Aukole St.  
Lihue, HI 96766

**Client Name:**  
Kauai Environmental  
P.O. Box 1280  
Kilauea, HI 96754

**EDR Inquiry #** 2105496.3      **Contact:** David Gerow



The complete Sanborn Library collection has been searched by EDR, and fire insurance maps covering the target property location provided by Kauai Environmental were identified for the years listed below. The certified Sanborn Library search results in this report can be authenticated by visiting [www.edrmet.com/sanborn](http://www.edrmet.com/sanborn) and entering the certification number. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by Sanborn Library LLC, the copyright holder for the collection.

### Certified Sanborn Results:

**Site Name:** Lihue Bikepath  
**Address:** Aukole St.  
**City, State, Zip:** Lihue, HI 96766  
**Cross Street:**  
**P.O. #**  
**Project:** Lihue Bikepath  
**Certification #** 06C9-4BE6-9EF2



Sanborn® Library search results  
Certification # 06C9-4BE6-9EF2

The Sanborn Library includes more than 1.2 million Sanborn fire insurance maps, including historical maps covering more than 10,000 American cities and towns. Collections searched:

- Library of Congress
- University Publications of America
- EDR Private Collection

Total Maps: 0

### Limited Permission To Make Copies

Kauai Environmental (the client) is permitted to make up to THREE photocopies of this Sanborn Map (transmittal and each fire insurance map accompanying this report solely for the limited use of its customer. No one other than the client is authorized to make copies. Upon request made directly to an EDR Account Executive, the client may be permitted to make a limited number of additional photocopies. This permission is conditioned upon compliance by the client, its customer and their agents with EDR's copyright policy; a copy of which is available upon request.

### Disclaimer - Copyright and Trademark notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. NO WARRANTY EXPRESSED OR IMPLIED IS MADE BY ENVIRONMENTAL DATA RESOURCES, INC. FOR THE ACCURACY, COMPLETENESS, OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL INFORMATION IS PROVIDED "AS IS" WITHOUT WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. THE USER ASSUMES ALL RISK IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF NEGLIGENCE, ACCIDENT OR OTHERWISE, FOR ANY LOSS OF DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO THE REPAIR OR REPLACEMENT OF THE SERVICE PROVIDED. ENVIRONMENTAL DATA RESOURCES, INC. DOES NOT INTEND TO PROVIDE OR GUARANTEE ANY FACTS OR RISK CODES PROVIDED IN THIS REPORT are provided for illustrative purposes only, and are not intended to provide, nor should they be intended as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice. Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc., or its affiliates, is prohibited without prior written permission. EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, Inc. or its affiliates. All other trademarks used herein are the property of their respective owners.



**EDR Historical  
Topographic Map  
Report**

Lihue Bikepath  
Aukele St.  
Lihue, HI 96766

Inquiry Number: 2105496.4

December 20, 2007

**The Standard in  
Environmental Risk  
Information**

440 Wheelers Farms Rd  
Milford, Connecticut 06461

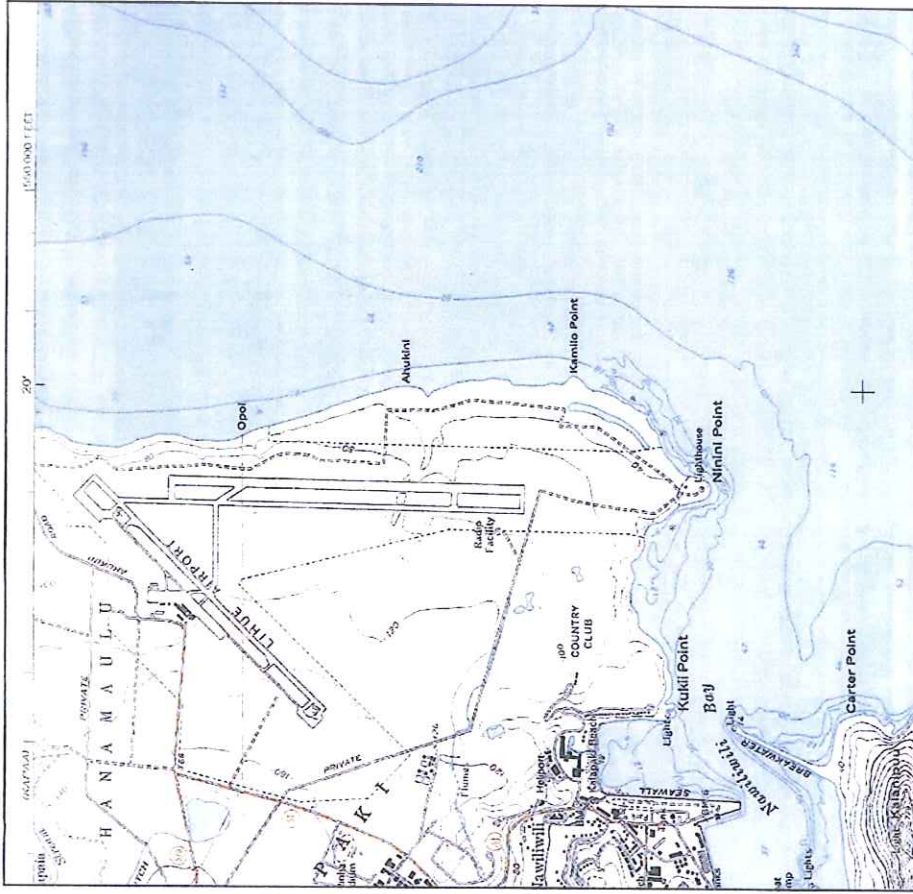
**Nationwide Customer Service**

Telephone: 1-800-352-0050  
Fax: 1-800-231-6802  
Internet: [www.edrnet.com](http://www.edrnet.com)

APPENDIX D:

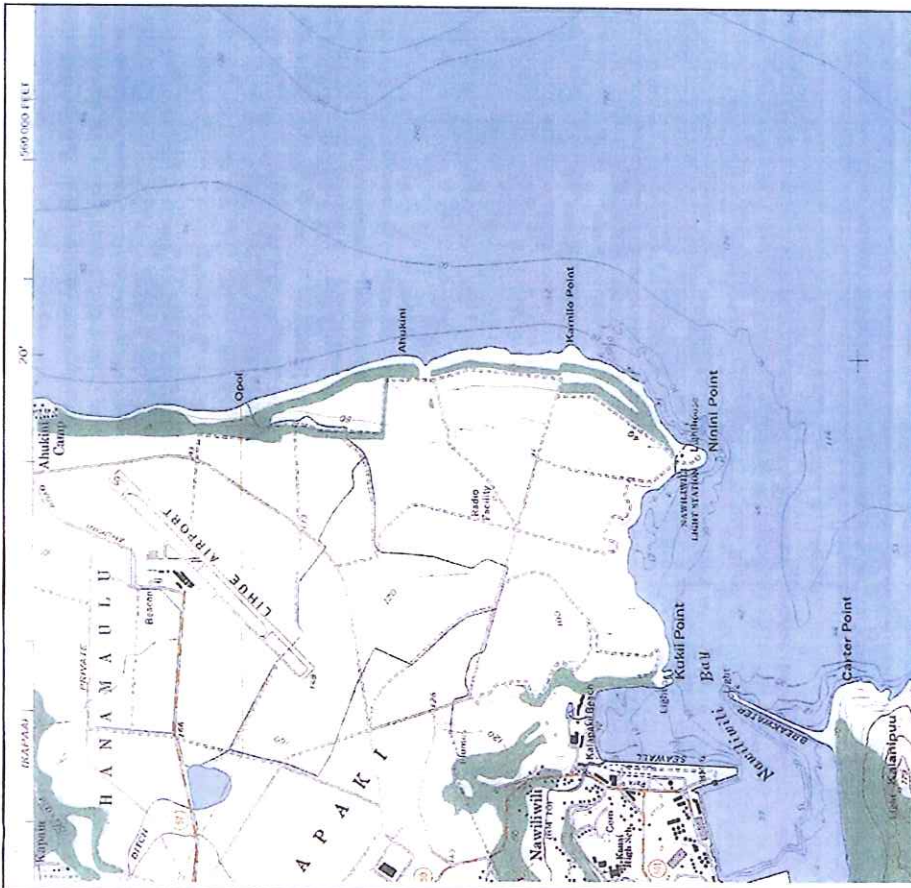
**HISTORIC TOPOGRAPHIC MAP  
REPORT**

Historical Topographic Map



<p>TARGET QUAD NAME: LIHUE, HI MAP YEAR: 1983 SERIES: 7.5 SCALE: 1:24,000</p>	<p>SITE NAME: Lihue Bikerpath ADDRESS: Aukole St. LIHUE, HI 96768 LAT/LONG: 21.9715 / 159.332</p>	<p>CLIENT: Kauai Environmental CONTACT: David Gerow INQUIRY#: 2105496.4 RESEARCH DATE: 12/20/2007</p>
---	---	---

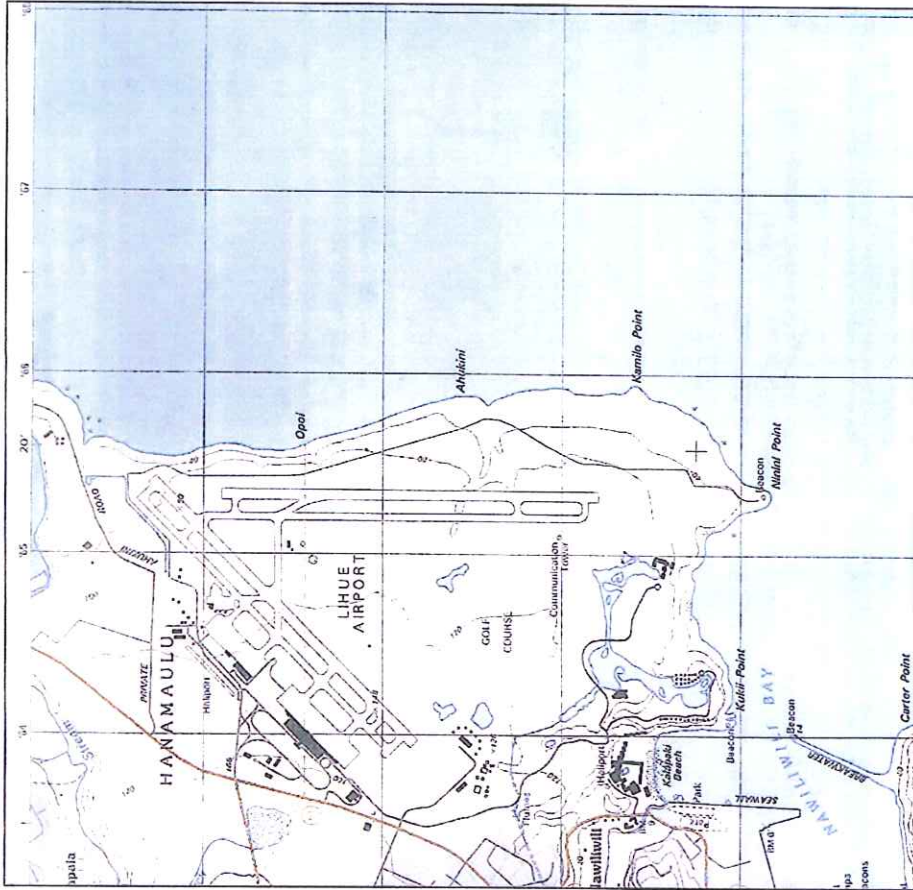
Historical Topographic Map



<p>TARGET QUAD NAME: LIHUE, HI MAP YEAR: 1983 SERIES: 7.5 SCALE: 1:24,000</p>	<p>SITE NAME: Lihue Bikerpath ADDRESS: Aukole St. LIHUE, HI 96768 LAT/LONG: 21.9715 / 159.332</p>	<p>CLIENT: Kauai Environmental CONTACT: David Gerow INQUIRY#: 2105496.4 RESEARCH DATE: 12/20/2007</p>
---	---	---



Historical Topographic Map



<p>TARGET QUAD NAME: LIHUE, HI MAP YEAR: 1986 SERIES: 7.5 SCALE: 1:24,000</p>	<p>SITE NAME: Lihue Bikepath ADDRESS: Aukole St. Lihue, HI 96766 LAT/LONG: 21.9715 / 159.532</p>	<p>CLIENT: Kauai Environmental CONTACT: David Gerow INQUIRY#: 2105496.4 RESEARCH DATE: 12/20/2007</p>
---	--	---

APPENDIX E:

QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONAL

## **BENJAMIN OWEN, MS, REA** **Project Manager**

### **EDUCATION**

- M.S. Marine Science, University of California at Santa Cruz, 1996
- B.A. Anthropology, The University of Chicago, 1992

### **ACTIVE REGISTRATIONS**

- AHERA Asbestos Inspector
- AHERA Asbestos Project Designer
- Registered Environmental Assessor

### **PROFESSIONAL EXPERIENCE**

Mr. Owen has over 10 years experience in chemistry, toxicology, environmental science and industrial hygiene. His background includes trace metal and trace organic sampling and analysis, sediment toxicology, project management, hazardous materials assessments and occupational health and safety.

Since joining Kauai Environmental in 2002, Mr. Owen has gained considerable experience in the field of industrial hygiene, performing numerous asbestos inspections and hazardous materials surveys throughout the state; conducting environmental site assessments in residential, commercial, and industrial settings; designing, managing and monitoring asbestos abatement projects, and writing emergency response, environmental protection, and health and safety plans for various construction, demolition, and remediation projects.

### **PROJECT EXPERIENCE**

**Statewide Airports Asbestos Inventory for DOT-Airports**, with R.M. Towill Corporation. Mr. Owen is the assistant project manager and for this effort to identify and inventory all asbestos containing materials in all DOT-Airports buildings. Under this ongoing project KEI has reviewed and verified historical inspection data, surveyed DOT-A facilities statewide, created a GIS database to be linked to DOT-A's GIS system, and assisted with abatement management and planning, and operations and maintenance as related to asbestos containing materials. Mr. Owen is responsible for coordinating and performing all inspections and maintaining the GIS database.

**Risk Assessment and Emergency Response, International Arrivals Building, Honolulu International Airport**. When asbestos-containing materials were released in the IAB due to heavy rains in the winter of 2003-04, Kauai Environmental was called upon to manage the situation under the DOT contract listed above. Kauai Environmental coordinated emergency abatements of the damaged materials, performed a human health risk assessment for the entire building and designed an emergency response program to minimize any future releases of asbestos fibers.

**Sand Island WWTP Site Investigation, City and County of Honolulu**. Mr. Owen coordinated this extensive site investigation to identify subsurface contamination of soils to be disturbed during the Primary Treatment Expansion Project. The project required sampling soils and groundwater at 150 locations with analysis for a wide variety of potential contaminants.

**Ewa Mill Environmental Site Remediation, City and County of Honolulu**. Mr. Owen supervised remediation field work at this historic sugar mill and mixed use industrial site. The project included removal and disposal of lead and PCB contaminated soils, air monitoring, subsurface investigations, excavation of buried waste drums, closure and removal of surps, AST's and UST's. Mr. Owen helped develop and implement a health and safety program for the project, and compiled an extensive report documenting all environmental work and results of all sampling for submission to DOH.

**Hazardous Materials Surveys**. Mr. Owen has performed or assisted with many comprehensive hazardous materials surveys for facilities undergoing demolition and/or renovation, including: Guam Naval Hospital, Guam; Pier 1 Cargo Facility, Honolulu, HI; Frear Hall Dormitory, UH Manoa, Honolulu, HI; Bank of Hawaii, Lihue, Kauai.

**Environmental Site Assessments**. Mr. Owen is a Registered Environmental Assessor (REA) and has performed over 40 Phase I and Phase II site assessments over the past 5 years.