Limited Phase I Environmental Site Assessment at Kuhio Park Terrace Brownfields Site

Honolulu, Hawaii

Prepared for:

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LIST OF ACRONYMS

ACM	Asbestos-Containing Material
AMEC	AMEC Earth and Environmental, Inc.
ASTM	American Society for Testing and Materials
bgs	Below Ground Surface
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CERC-NFRAP	CERCLIS No Further Remedial Action Planned
CONSENT	Superfund (CERCLA) Consent Decrees
CORRACTS	Corrective Actions
DDT	Dichlorodiphenyltrichloroethane
DOD	Federal Lands - administered by the Department of Defense
DOH	State of Hawaii Department of Health
EA	Environmental Assessment
EDR	Environmental Data Resources, Inc.
ERNS	Emergency Response Notification System
FIFRA	Federal Insecticide, Fungicide, & Rodenticide Act
FINDS	Facility Index System / Facility Identification Initiative Program Summary Report
FPHA	United States of America Federal Public Housing Authority
FONSI	Finding of No Significant Impact
HCDCH	Housing and Community Development Corporation of Hawaii
HEER	Hazard Evaluation and Emergency Response
HHA	Hawaii Housing Authority
HMIRS	Hazardous Materials Information Reporting System
LBP	Lead-Based Paint
LQG	Large Quantity Generators
LUST	Leaking Underground Storage Tank
MINES	Mines Master Index Files
MLTS	Material Licensing Tracking System

MSL	Mean Sea Level
NPL	National Priorities List
PADS	PCB Activity Database System
PCB	Polychlorinated Biphenyl
PRG	Preliminary Remediation Goal
RAATS	RCRA Administrative Action Tracking System
RCRA	Resource Conservation and Recovery Act
RCRIS	Resource Conservation and Recovery Information System
ROD	Records of Decision
SARA	Superfund Amendments and Reauthorization Act
SHWS	State Hazardous Waste Sites List
SPILLS	DOH Hazard Evaluation and Emergency Response (HEER) Office State Spills List
SQG	Small Quantity Generators
SSTS	Section Seven Tracking Systems
SWF/LF	Facilities permitted as solid waste landfills, incinerators, or transfer stations in the State of Hawaii
TMK	Tax Map Key
TRIS	Toxic Chemical Release Inventory System
TSCA	Toxic Substance Control Act
TSD	Treatment Storage and Disposal
UIC	Underground Injection Control Line
USDA	United States Department of Agriculture
USGS	United States Geological Survey
UST	Underground Storage Tank

SECTION 1
INTRODUCTION

This report, prepared by AMEC Earth and Environmental, Inc. (AMEC), presents the results of a limited Phase I Environmental Site Assessment at Kuhio Park Terrace (herein referred to as the "site") located in Kalihi, Hawaii. This document was prepared under a non-emergency response contract (ASO Log No. 02-131), to support the State of Hawaii Department of Health (DOH) in performing a Site Assessment at the site. The long-term goal for the Site is redevelopment for residential and community use.

1.1 PURPOSE

This report was prepared to document the activities conducted to date by AMEC, and to present the findings and recommendations for investigation or further assessment activities, as deemed appropriate. Research materials gathered to date include an Environmental Data Resources, Inc. (EDR) review of: federal, state, and local lists of known hazardous waste sites, a United States Geological Survey (USGS) 7.5-minute series topographic map, several aerial photographs from 1949 through 1997, and Sanborn Fire Insurance maps dated 1927, 1950, 1973, and 1993. A review of the State of Hawaii Bureau of Conveyance ownership records was also performed. AMEC has not completed a thorough site reconnaissance or inspection to assess any potential exposure of residents and/or employees to lead-based paint (LBP), asbestos containing materials (ACM), or Polychlorinated Biphenyls (PCBs) (often found in old transformers).

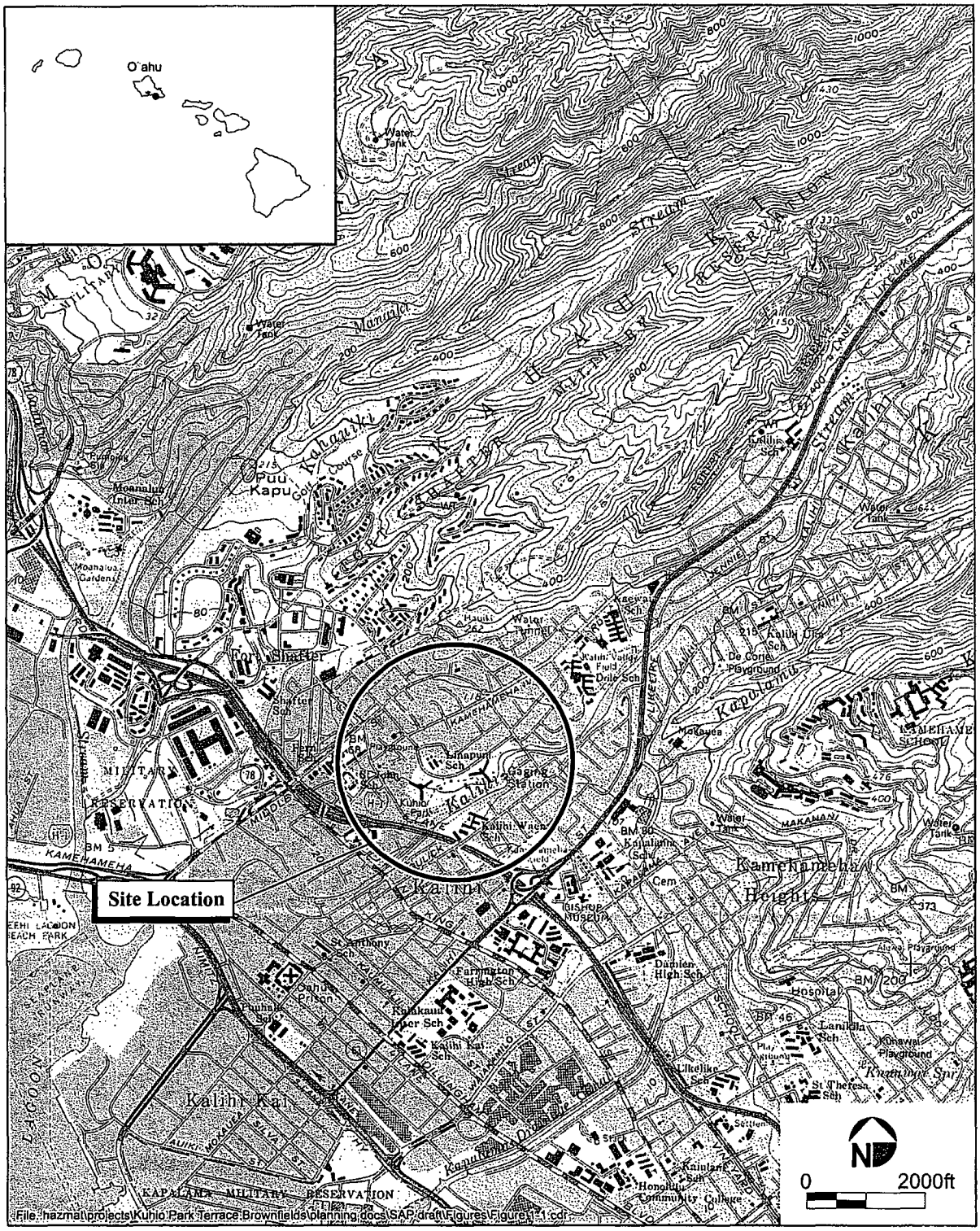
Under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), owners and operators of real estate where there is hazardous substance contamination may be held strictly liable for the costs of cleaning up contamination found on their property. No evidence linking the owner/operator with the placement of the hazardous substances on the property is required.

Congress, in response to pressure from business and academic groups, established the "innocent landowner defense" in the 1986 amendments to CERCLA known as the Superfund Amendments and Reauthorization Act (SARA). To establish innocent landowner status, the landowner "must have undertaken, at the time of acquisition, all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial and customary practice in an effort to minimize liability."

In an effort to clarify what constitutes "all appropriate inquiry," the American Society for Testing and Materials (ASTM) has developed a standard that provides specific definition of the steps one should take when conducting a "due diligence" Phase I environmental site assessment for commercial real estate. The site assessment documented herein complies with the current ASTM E1527-00 Standard Practice for Environmental Site Assessments.

1.3 Site Location

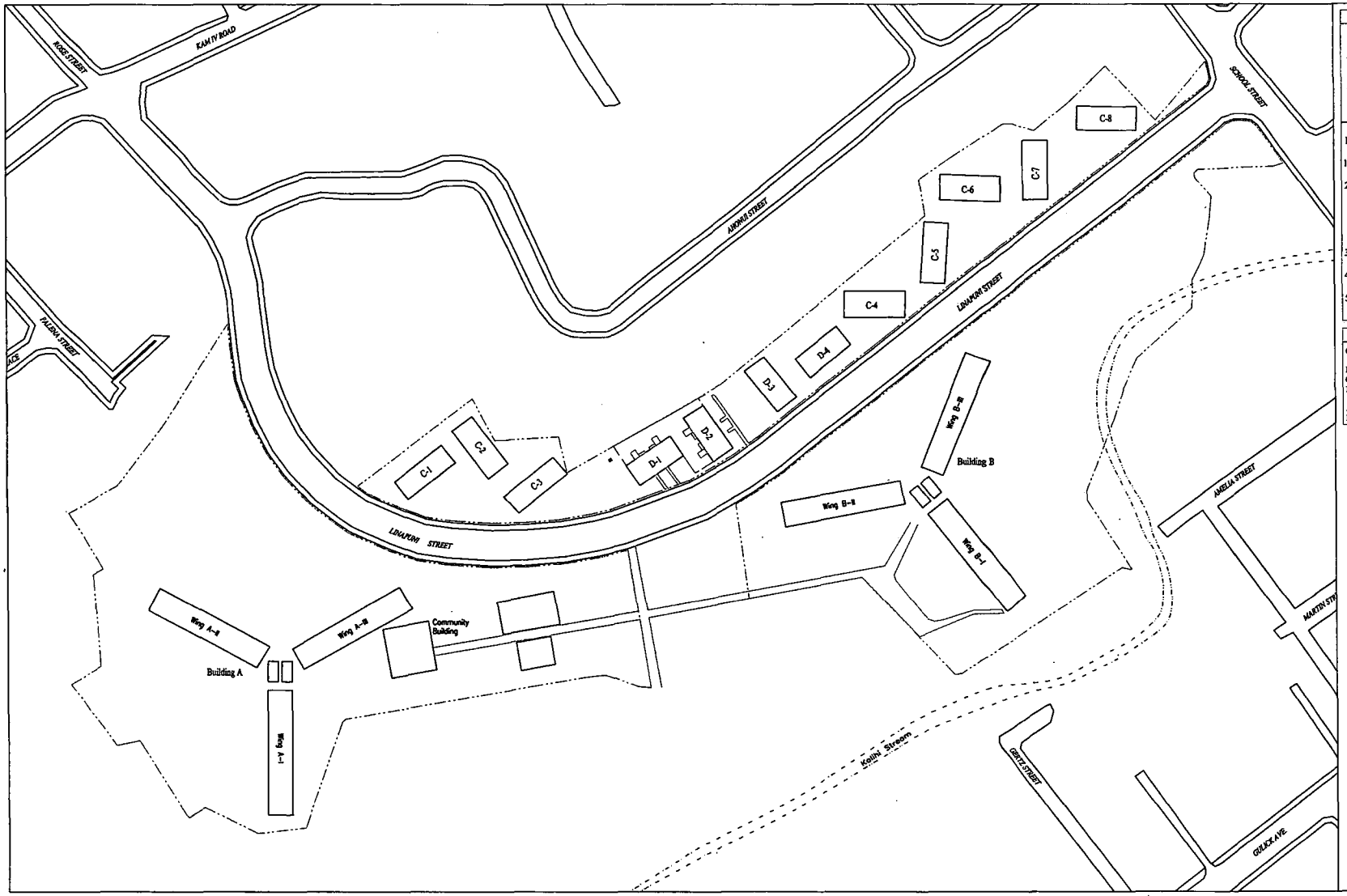
The Site is located on the south side of the island of Oahu, in Kalihi, Hawaii (Figure 1-1). The Site consists of an irregularly shaped 15.2-acre parcel of land (Tax Map Key (TMK) 1-3-39:01). The Kuhio Park Terrace development includes two 16-story reinforced concrete towers with three wings radiating from a central service core and 14 low-rise townhouse buildings. The Site is bound by School Street to the northeast, Kalihi Stream to the southeast, and the Kuhio Homes development to the west (Figure 1-2). The Site is located in a heavily developed residential area.



FIGURE

SITE LOCATION MAP
Kuhio Park Terrace Site
Honolulu, Hawaii

1-1



SITE LAYOUT
Kuhio Park Terrace
Honolulu, Hawaii

FIGURE
1-2

SECTION 2
HISTORICAL LAND USE

Research on historical land use was conducted for the purpose of evaluating whether past or current practices involving the use, storage, treatment, generation, and/or disposal of hazardous substances or petroleum products may have taken place on the site or if contamination on properties in the site vicinity may have impacted the subject site.

2.1 HISTORICAL INFORMATION SOURCES

Various resources were used to evaluate the historical use of the site and the adjacent land. AMEC reviewed a United States Geological Survey (USGS) 7.5-minute series historic topographic map dated 1983, several aerial photographs from 1949 through 1997, and Sanborn Fire Insurance maps dated 1927, 1950, 1973, and 1993. A review of the State of Hawaii Bureau of Conveyance ownership records was also performed for the parcel of land on which the site is located.

2.1.1 Review of Aerial Photographs

A search of historical aerial photographs showed that the property was used for public housing since the mid-1940's. Approximately 62 low-rise townhouse buildings can be seen in an aerial photograph of the Site from February 16, 1949 (RM Towill, 1949). Successive photographs show that the Site remained the same through August 1962. In an aerial photograph dated November 20, 1963, these low-rise townhouses were gone and the two 16-story high-rises currently onsite were under construction. New low-rise townhouses were also depicted in the same photograph, presumably the current Buildings C, D, and E series. The structures onsite today appear the same as in the November 1963 photograph. Only landscaping and smaller, non-residential structures have changed since 1963.

2.1.2 Review of Historical Topographic Map

AMEC reviewed a USGS topographic map of the area dated 1983 (USGS, *Honolulu Quadrant*, 1983). As indicated on the USGS map, the site is relatively flat, but slopes gently toward Kalihi Stream with surface water drainage flowing in a southeasterly direction. Elevations over the site

range from about +90 feet above mean sea level (MSL) in the northwestern corner to approximately +70 feet near the southeastern corner.

2.1.3 Review of Sanborn Fire Insurance Maps

AMEC reviewed four Sanborn fire insurance maps, dated 1927, 1950, 1973, and 1993. The 1927 Sanborn map shows the site before major development with only a few small structures present. Linapuni and School Street were not present in the 1927 map. Kamehameha IV Road was the only roadway west of Kalihi Stream at that time near the site. The 1950 Sanborn map shows 62 townhouse structures onsite, each of which contained four separate apartments. These townhouses were collectively called the Kalihi War Homes, a federal housing project built during World War II. By 1950, both Linapuni and School Street had been constructed. Kuhio Homes, Linapuni Elementary School, and Ahonui Street are some of the major developments in the vicinity of the site that do not show up on the 1950 Sanborn map. The 1973 and 1993 Sanborn maps look the same, both showing the same structures that are currently on and near the site.

2.2 HISTORICAL USE OF THE SITE

The subject site is located on a parcel of land designated as TMK number 1-3-039:001, which currently occupies an area of approximately 15.2 acres. All research indicates that the site has been used for public housing since the mid-1940's. No evidence of agricultural use of the land was documented, but it is believed that the entire Kalihi area was used for agriculture before any major development in the early 1900's.

The first available real property tax record available at the Bureau of Conveyance for this parcel, dated February 8, 1946, indicated that the United Sates of America Federal Public Housing Authority (FPHA) owned the parcel. The FPHA constructed 62 low-rise townhouses, collectively named the Kalihi War Homes, on this parcel. The project was managed by the Hawaii Housing Authority (HHA) and the units were occupied on February 19, 1945, according to the Star Bulletin newspaper. The next change in ownership occurred on January 7, 1954 when the FPHA sold the parcel to the HHA. As determined from aerial photographs, the Kalihi War Homes were demolished sometime between August 1962 and November 1963 for redevelopment of the property. Construction of two (2) high-rise apartment complexes and 14 associated low-rise townhouses began in 1963.

In 1998, the HHA was restructured and renamed the Housing and Community Development Corporation of Hawaii (HCDCH). The HCDCH is the current owner of the property. Currently the Kuhio Park Terrace complex includes two 16-story reinforced concrete towers with three wings radiating from a central service core. Each of the two high-rises contains 48 one-bedroom units, 318 two-bedroom units, and 206 three-bedroom units for a total of 572 units each (HCDCH 1999). The two high-rises are referred to as Buildings A and B. In addition to the two high-rises, the Site also contains 14 one-story concrete townhouse buildings.

2.3 PREVIOUS INVESTIGATIONS

Certified Industrial Hygiene & Safety collected soil samples in February 1997 at Buildings D-1 and D-2 (low-rise townhouses) at the request of HCDCH. The soil samples were analyzed by EPA Method 8080, a broad screen analytical technique for a number of pesticides. One organochlorine compound, Dieldrin, was detected in six out of eight samples collected. The two non-detect samples were background samples. Dieldrin belongs to the family of compounds in which Dichlorodiphenyltrichloroethane (DDT) and Chlordane are members. Dieldrin is a water insoluble, persistent, non-systemic insecticide. Current suggested EPA Region 9 Preliminary Remediation Goals (PRG) for Dieldrin in residential soil is 0.03 mg/kg. Levels found on the Site in 1997 ranged from 0.97 to 6.4 mg/kg. Laboratory results were provided by HCDCH, but the specific locations of the soil samples were not identified.

An Environmental Assessment (EA) was performed by HCDCH for the adjacent parcel of land (TMK 1-3-39:07) in 1999 as a prerequisite for redevelopment of the property into a community service center. The EA addressed positive and negative impacts that the redevelopment might have on the local environment, including Kuhio Park Terrace complex. The HCDCH determined that the action would result in a "Finding of No Significant Impact (FONSI)" on the environment. The community service center is currently in the final stages of construction.

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SECTION 3
SITE CONDITIONS

The following discussion presents the conditions of the subject site and adjacent properties.

3.1 General Observations of the Site

The Kuhio Park Terrace complex is located in a heavily developed residential area of Kalihi, Hawaii. The Kuhio Park Terrace development includes two 16-story reinforced concrete towers with three wings radiating from a central service core. Each of the two high-rises contains 48 one-bedroom units, 318 two-bedroom units, and 206 three-bedroom units for a total of 572 units each (HCDCH 1999). The two high-rises are referred to as Buildings A and B. In addition to the two high-rises, the Site also contains 14 one-story concrete townhouse buildings. The rest of the property was comprised of landscaping, lawn, parking lots, and sidewalks.

3.2 Geology and Hydrogeology

The Site is located on the seaward side of the Honolulu Plain on the southern flank of the Koolau Mountains. Overlying the Koolau basalt, is a thick wedge of coastal marine sediments inter-layered and intermingled with alluvial material, cinder and ash, and near shore sediments, which is collectively referred to as caprock.

According to the United States Department of Agriculture (USDA) *Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii*, the Site is underlain with two types of soil. The soil in the northern half of the Site is classified as Kaena clay and Makiki stony clay loam in the southern half. Both of these soils developed from the material weathering of the Koolau lavas. The Kaena clay is typically very deep, poorly drained soil. The soil is slightly acid to neutral. Permeability is slow; runoff is slow; and the erosion hazard is slight. The Makiki stony clay loam is a well-drained soil. The surface layer typically contains more stones that the subsoil. Depth to basalt or cinders varies from 20 to 60 inches. The soil is neutral to slightly acid. Permeability is moderately rapid; runoff is slow; and the erosion hazard is slight (USDA 1972).

The Site is bordered by Kalihi Stream to the south and east. The stream flows from the northeast to the southwest and discharges at approximately 4 cubic feet per second on average. Surface

water runoff drains from the property in a southeasterly direction and discharges into Kalihi Stream. There are also several storm water drains on the property.

The Site receives an average annual rainfall of about 50 inches per year, with much of the rain falling in the winter months. According to the Atlas of Hawaii, approximately 36% of the rainfall infiltrates the soil layers to recharge the groundwater for the Island of Oahu. Approximately 24% of rainfall is lost to surface runoff and 40% is lost to evapotranspiration (Atlas of Hawaii 1983).

The Site is located above the Honolulu Aquifer, which is separated into upper and lower aquifer types. The upper aquifer, within the caprock sediments, is classified by Mink and Lau as unconfined, basal, and flank. The status is listed as a moderately saline potential groundwater source that is replaceable and has a high vulnerability to contamination. The lower aquifer is considered to be confined, basal, and flank. The status is listed as an irreplaceable, currently used, fresh drinking water source that has a low vulnerability to contamination (Mink and Lau 1990). However, the type of groundwater most likely to be impacted by Site activities is the caprock water contained in the shallow marine sediments, alluvium, and fill that collectively make up the caprock beneath the Site. Although the brackish caprock water is not potable, it may be used for industrial purposes.

The Site is mauka or up-gradient of the Hawaii State Underground Injection Control Line (UIC). Public drinking water wells are located hydraulically up-gradient and cross-gradient of the Site. The closest drinking water well is approximately 2500 feet to the north of the Site and pumps water from the deeper, basal aquifer. Based on nearby observation well measurements, groundwater is approximately 60 feet below ground surface (bgs).

3.3 TOPOGRAPHY

The Site is relatively flat, but slopes gently toward Kalihi Stream with surface water drainage flowing in a southeasterly direction. There are several storm drains on the property as well. Elevations over the Site range from about +90 feet above mean sea level (MSL) in the northwestern corner to approximately +70 feet near the southeastern corner.

3.4 ADJACENT PROPERTIES

The Kuhio Park Terrace complex is in the middle of the largest concentration of public housing in the state. Kuhio and Hauiki Homes are situated to the west, Kalihi Valley Homes to the north,

Pauhala Homes I, II, III, and IV to the east, and Kamehameha and Kaahumanu Homes to the south (HCDCH, 1999).

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SECTION 4
REVIEW OF FEDERAL, STATE, AND LOCAL LISTS AND AVAILABLE FILES OF REPORTED HAZARDOUS SUBSTANCE/PETROLEUM PRODUCT SOURCES AND RELEASES

This section includes results of a review of federal, state, and local lists and available files of reported hazardous waste sites and hazardous substance/petroleum product sources and releases. Environmental Data Resources, Inc. (EDR) provided the federal and state environmental release listings. EDR's database is continually updated and is considered one of the most comprehensive in the industry. This information is provided in Appendix A and is summarized below.

4.1 Databases and Regulatory Files Reviewed

A list of the Federal Sources and Hawaii State Regional Sources databases reviewed is provided below:

Federal ASTM Standard Databases:

- National Priorities List (NPL)
- Proposed NPL
- Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS)
- CERCLIS No Further Remedial Action Planned (CERC-NFRAP)
- RCRA Corrective Actions (CORRACTS)
- Resource Conservation and Recovery Information System - treatment, storage, and disposal facilities (RCRIS-TSD)
- Resource Conservation and Recovery Information System – large quantity generators (RCRIS-LQG)
- Resource Conservation and Recovery Information System – small quantity generators (RCRIS-SQG)
- Emergency Response Notification System (ERNS)

Federal ASTM Supplemental Databases:

- Superfund (CERCLA) Consent Decrees (CONSENT)
- Records of Decision (ROD)
- National Priority List Deletions (Delisted NPL)

- Facility Index System / Facility Identification Initiative Program Summary Report (FINDS)
- Hazardous Materials Information Reporting System (HMIRS)
- Material Licensing Tracking System (MLTS)
- Mines Master Index Files (MINES)
- Federal Superfund Liens (NPL Liens)
- PCB Activity Database System (PADS)
- Federal Lands - administered by the Department of Defense (DOD)
- RCRA Administrative Action Tracking System (RAATS)
- Toxic Chemical Release Inventory System (TRIS)
- Toxic Substance Control Act (TSCA)
- Section 7 Tracking Systems (SSTS)
- Federal Insecticide, Fungicide, & Rodenticide Act (FIFRA) / Toxic Substances Control Act (TSCA) Tracking System

State ASTM Standard Databases:

- State Hazardous Waste Sites List (SHWS)
- Facilities permitted as solid waste landfills, incinerators, or transfer stations (SWF/LF)
- State of Hawaii Department of Health (DOH) Leaking Underground Storage Tank (LUST) Database
- DOH Registered Underground Storage Tanks (UST) Database

State or Local ASTM Supplemental Databases:

- DOH Hazard Evaluation and Emergency Response (HEER) Office State Spills List (SPILLS)

A summary of the contents of each of these lists is provided in Appendix A. These lists are reviewed to document the location of known federal and state Superfund sites, or other known hazardous waste sites in proximity to the site following ASTM search distance guidelines. AMEC uses most current ASTM Standard E1527-00 as the basis for delineating a study area during the database review (ASTM, 2000).

4.2 SUMMARY OF DATABASE REVIEW AND REGULATORY AGENCY CONTACTS

The results of the regulatory database review produced by EDR are summarized in Table 4-1. The summary results are presented below.

4.2.1 Subject Site

The subject site, located at 1475 Linapuni Street, is listed in the SHWS database. The SHWS database references a letter dated November 24, 1998 from DOH to HCDCH regarding pesticide contamination near Buildings D1 and D2 (Appendix B). According to the DOH letter, the pesticide contamination is a result of legal application practices, and therefore not regulated. The letter further identifies that there may be potential for exposure if the soils are disturbed. No further records were found with regard to the subject site during the database review.

4.2.2 Properties within the Vicinity of the Subject Site

Based on the database search provided by EDR, there are two facilities in the immediate vicinity of the site (<¼-mile) listed in the DOH UST database. All of the USTs related to the Shell Service Station are listed as permanently out of service and the USTs related to the Arco facility are listed as temporarily out of service. The Arco facility is also listed in the DOH LUST database, however site cleanup activities are listed as being complete. Also within a ¼-mile radius of the site, one facility is listed in the RCRIS-SQG database, but had no listed violations. There is no evidence that this site has contributed to any environmental impacts at the subject site.

A total of nine facilities located within a ¼ to ½-mile radius of the site are listed in the DOH LUST database. Site cleanup activities and closure activities have been initiated or completed at all of the sites. There is no evidence that any of these sites have contributed to environmental impacts at the subject site.

Based on the EDR's database search, there is one DoD facility in the vicinity of the site (<1/2-mile) listed in the Federal Lands database. Fort Shafter is approximately ½-mile to the west of the site. Also within a ½-mile radius of the site, one facility is listed in the RCRIS-TSD database, but had no listed violations. There is also one facility listed in the CERCLIS database, Chemwood Treatment Co., within ½-mile of the site. This facility is listed as awaiting the start of a Site Investigation.

Table 4-1

REGULATORY DATABASE REVIEW
PROPERTIES WITH POTENTIAL ENVIRONMENTAL ISSUES/CONCERNS

	Establishment Name and Address	Distance from Site (mi.)	Direction from Site	Agency Data Source	State or Federal Site ID	Status	Environmental Issue or Concern	Evidence of Environmental Impacts to Subject Site
	DOH UST Sites - Property and Adjacent Areas - Within 1/4 Mile Radius							
1	Shell Service Station 2239 North School Street Honolulu, HI 96819	0.24	NE	UST	9-101027	Out of Service Out of Service Out of Service Out of Service Out of Service	4000-gal gasoline UST 5000-gal gasoline UST 5000-gal gasoline UST 8000-gal gasoline UST 550-gal used oil UST	No
2	Arco (82113) 2314 North School Street Honolulu, HI 96819	0.25	NE	UST	9-101867	Temp. Out of Service Temp. Out of Service Temp. Out of Service	10,000-gal gasoline UST 10,000-gal gasoline UST 10,000-gal gasoline UST	No
	DOH LUST Sites in the Surrounding Area - Within 1/2 Mile Radius							
1	Arco (82113) 2314 North School Street Honolulu, HI 96819	0.25	NE	LUST	9-101867 950035	Site Cleanup Completed	NA	No
2	Kane's Auto Repair 1325 Middle Street Honolulu, HI 96819	0.26	NW	LUST	9-102478 920086	Site Cleanup Completed Out of Service USTs	1000-gal gasoline UST 1000-gal gasoline UST	No
3	Benton's Middle Street Chevron 1305 Middle Street Honolulu, HI 96819	0.26	NW	LUST	9-101110 970009	Site Cleanup Completed Out of Service USTs	1000-gal used oil UST	No
4	Kalihi Stream Chevron 2160 North King Street Honolulu, HI 96819	0.33	SW	LUST	9-101225 950050	Site Cleanup Completed Out of Service USTs	1000-gal used oil UST	No
5	KSC Service L-4210 2295 North King Street Honolulu, HI 96819	0.37	WSW	LUST	9-100031 920008	Site Cleanup Completed Out of Service USTs	10,000-gal gasoline UST 10,000-gal gasoline UST 7000-gal gasoline UST 5000-gal gasoline UST 550-gal used oil UST	No
6	Kalihi Corporation Yard 2442 Kini Place Honolulu, HI 96819	0.40	SW	LUST	9-100119 890027	Site Cleanup Completed Out of Service USTs	5000-gal gasoline UST 1000-gal diesel UST	No
7	Pacific Tire 1955 North King Street Honolulu, HI 96819	0.41	S	LUST	9-101450 930133	Site Cleanup Completed Out of Service USTs	6000-gal gasoline UST 6000-gal gasoline UST 4000-gal diesel UST 4000-gal used oil UST 550-gal used oil UST	No

Table 4-1

REGULATORY DATABASE REVIEW
PROPERTIES WITH POTENTIAL ENVIRONMENTAL ISSUES/CONCERNS

	Establishment Name and Address	Distance from Site (mi.)	Direction from Site	Agency Data Source	State or Federal Site ID	Status	Environmental Issue or Concern	Evidence of Environmental Impacts to Subject Site
8	Island Mini-Mart North King 1860 North King Street. Honolulu, HI 96819	0.47	S	LUST	9-101186 020036	LUST Cleanup Initiated Out of Service USTs	8000-gal gasoline UST 6000-gal gasoline UST 3800-gal gasoline UST 1000-gal used oil UST 550-gal used oil UST 550-gal used oil UST 550-gal gasoline UST	No
9	Morris Angelo 905 Factory Street Honolulu, HI 96819	0.47	SSW	LUST	9-103511 990189	Site Cleanup Completed Out of Service UST	1000-gal gasoline UST 1000-gal diesel UST	No
10	Rakuyo Ken U.S.A. 804 Gulick Avenue Honolulu, HI 96819	0.48	SSW	LUST	9-103254 970014	Site Cleanup Completed Out of Service UST	1000-gal gasoline UST 500-gal other UST 500-gal other UST	No
	Resource Conservation and Recovery Information System - small quantity generators (RCRIS-SQG) - Within 1/4 Mile Radius							
1	Kuhio Homes Public Housing Project 1410 through 1529 Ahonui Street Honolulu, HI 96819	0.09	NNW	RCRIS-SQG	HID984469478	No violations found	NA	No
	Resource Conservation and Recovery Information System - treatment, storage, and disposal facilities (RCRIS-TSD) - Within 1/2 Mile Radius							
1	Safety Kleen Corp. 718304 723 Umi Street Honolulu, HI 96819	0.49	SW	RCRIS-TSD	HIT000614008	No violations found	Handler transports wastes	No
	Federal Lands administered by the Department of Defense (DOD) - Within 1/2 Mile Radius							
1	Fort Shafter Honolulu, HI	<1/2	W	DOD	NA	NA	NA	No
	Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) - Within 1/2 Mile Radius							
1	Chemwood Treatment Co., Inc. 2024 North King Street Honolulu, HI 96706	0.39	SSW	CERCLIS	HID981424138	SI Start Needed	NA	No
	Corrective Action Report (CORRACTS) - Within 1 Mile Radius							
1	Chemwood Treatment Co., Inc. 2024 North King Street Honolulu, HI 96706	0.39	SSW	CORRACTS	HID981424138	NA	NA	No
	State Hazardous Waste Sites List (SHWS) - Within 1 Mile Radius							

Table 4-1

REGULATORY DATABASE REVIEW
PROPERTIES WITH POTENTIAL ENVIRONMENTAL ISSUES/CONCERNS

	Establishment Name and Address	Distance from Site (mi.)	Direction from Site	Agency Data Source	State or Federal Site ID	Status	Environmental Issue or Concern	Evidence of Environmental Impacts to Subject Site
1	Kuhio Park Terrace Housing Linapuni Street Honolulu, HI 96719	TP	NA	SHWS	S104534262	Soils undisturbed	Dieldrin contamination confirmed in soils near Buildings D-1 and D-2	Yes
2	Factory Street Lead 2003 north King Street Honolulu, HI 96719	0.40	SSW	SHWS	HI0000049775	Lead contamination capped	NA	No
3	Farrington High School 1564 North King Street Honolulu, HI 96717	0.62	SSE	SHWS	HID984467050	NA	NA	No
4	Thoht Construction, Inc. 636 Laumaka Street Honolulu, HI 96719	0.65	SW	SHWS	U001235485	NA	NA	No
5	Hawaii Meat Co. Ltd. 711 Middle Street Honolulu, HI 96719	0.71	WSW	SHWS	U003541741	NA	NA	No
6	Yee Hop Property 621 Middle Street Honolulu, HI 96719	0.78	WSW	SHWS	S104534439	NA	NA	No
7	Gaspro Inc. 2305 Kamehameha Hwy Honolulu, HI 96719	0.82	WSW	SHWS	HID097695456 HID980817712	NA	NA	No
8	Takamiya Property 850 Moowaa Street Honolulu, HI 96717	0.94	SSE	SHWS	HID984468371	NA	NA	No
	Notes:							
	Only databases that listed concerned property within the ASTM search distance guidelines were listed here.							
	TP = Target Property							
	NA = Not Available							

The Chemwood Treatment Co. is also listed in the CORRACTS database for facilities within 1-mile of the site. The CORRACTS database contained 11 records for this property. There were eight facilities, including the target property, listed in the SHWS database within 1-mile of the site.

There were no listings in any other databases searched within ASTM proximity guidelines. None of the listings for surrounding properties in any of these databases poses an environmental concern for the site. The only record found in the database search that would influence the site is the SHWS listing for the target property discussed above in Section 4.2.1.

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SECTION 5
SUMMARY OF FINDINGS AND RECOMMENDATIONS

AMEC has performed a limited Phase I Environmental Site Assessment of the subject site to identify and evaluate evidence that may indicate environmental hazards exist at the Site due to past or current management of chemicals or other materials that, if released or not properly controlled, could present a risk to human health or the environment. This report has been prepared solely for use by DOH. Third parties must obtain written consent by AMEC prior to using the information contained within this report (see Section 6).

5.1 FINDINGS

A summary of AMEC's findings, based on this limited site investigation, is presented below:

- The subject site is located at 1475 Linapuni Street, Honolulu, Hawaii. Dieldrin contamination has been confirmed near Buildings D-1 and D-2. A letter from DOH to HCDCH states that the dieldrin contamination is a result of legal pesticide applications and is therefore not regulated by DOH. The letter further states that there is potential for exposure if the soil is disturbed and best management practices should be employed during demolition activities. The soil has not been disturbed at this time.

- All research indicates that the site has been used for public housing since the mid-1940's. No evidence of agricultural use of the land prior to that was documented.

- None of the surrounding facilities listed in the regulatory databases reviewed are a contributing environmental concern for the site.

5.2 RECOMMENDATIONS

AMEC recommends a thorough inspection of the buildings and property to assess any LBP, ACM, or PCB exposure to residents and employees. AMEC also recommends collecting surface soil samples around Buildings A, B, D-1, and D-2 and analyze them for pesticides, metals, and herbicides to characterize any potential hazards during the future redevelopment of the Site.

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SECTION 6
LIMITATIONS

The findings, observations, conclusions, and recommendations of this report are limited by the technical requirements specified in the non-emergency response contract (ASO Log No. 02-131) between the State of Hawaii Department of Health (DOH) and AMEC Earth and Environmental (AMEC) effective December 4, 2001. The findings, observations, conclusions, and recommendations presented herein solely identify and evaluate evidence that may indicate that environmental hazards exist at the Site due to past or current management of chemicals or other materials that, if released or not properly controlled, could present a risk to human health or the environment.

In preparing this report, AMEC relied on information derived from visual reconnaissance, governmental agencies, computer databases, and personal interviews. Except as set forth in this report, AMEC made no independent investigations as to the accuracy and completeness of the information derived from the listed sources. AMEC assumed that all information obtained during the course of the investigation is accurate and complete.

All findings, observations, conclusions, and recommendations stated in this report are based on facts; circumstances; applicable federal, state and local laws, rules, and regulations; and generally accepted national standards for such services in existence at the time that the report was prepared. Topics not explicitly discussed within this report should not be assumed to have been investigated or tested. This service does not guarantee current compliance with federal, state, or local laws, rules, or regulations.

This report is prepared for the sole use and benefit of DOH. Reliance upon this report by any third party shall be (1) at such third party's sole risk, (2) strictly limited to the terms and conditions of the contract between AMEC and DOH and the limitations set forth above and in other sections of this report, and (3) conditioned upon such third party executing AMEC's secondary client agreement and making payment to AMEC as consideration for such reliance.

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SECTION 7
REFERENCES

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APPENDIX A

EDR Inquiry Report:
Kuhio Park Terrace

APPENDIX B

DOH Letter to HCDCH

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

FILE

LAWRENCE MIIKE
DIRECTOR OF HEALTH

Nov 27 2 33 PM '98

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

In reply, please refer to:
HEER OFFICE

RECEIVED
DEC 0 2 1998
HCDCH
CONST. MGMT.

November 24, 1998

98-401-SO

Mr. Stanley T. Fujimoto
Housing and Community Development
Corporation of Hawaii
677 Queen Street, Suite 300
Honolulu, Hawaii 96813

RE: Kuhio Park Terrace Housing, Units D1 and D2: Dieldrin Contaminated Soil

Dear Mr. Fujimoto,

The Department of Health (DOH), Hazard Evaluation and Emergency Response (HEER) Office does not regulate pesticide contamination that is the result of legal application practices. Therefore, we do not regulate the dieldrin contaminated soil at the subject site. If the soils are disturbed, however, there is potential for exposure. Best management practices should be employed during demolition activities at the subject site. In addition, potential worker safety and occupational exposure concerns should also be addressed. Finally, land use restrictions should be attached to the subject site to alert all future owner/operators of the environmental concerns for the property.

If you have any questions regarding this matter, please contact me at (808)586-4249.

Sincerely,

Steven K. Okoji
Environmental Health Specialist

Post-it® Fax Note 7671	Date DEC 14 1998	# of pages ▶ 1
To Shelley Fujikane	From S.T. Fujimoto	
Co./Dept. Pac Arch	Co. HCDCH-CMS	
Phone # 949-1601	Phone # 587-3179	
Fax # 942-0054	Fax # 587-0600	

Post-it® Fax Note 7671	Date DEC 14 1998	# of pages ▶ 1
To Vernon Hoo	From S.T. Fujimoto	
Co./Dept. CIH	Co. HCDCH-CMS	
Phone # 235-2677	Phone # 587-3179	
Fax # 236-0645	Fax # 587-0600	