Appendix 6 (continued)

Environmental Site Assessments Phase 1

APPENDIX E

SANBORN FIRE INSURANCE MAPS

6.315-Acre Property

Airport Road

Kahului, HI 96732

Inquiry Number: 4953403.3

June 01, 2017

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

06/01/17

Site Name:	Client Name:
6.315-Acre Property Airport Road Kahului, HI 96732 EDR Inquiry # 4953403.3	Ford Canty Associates, Inc. 928 Nuuanu Avenue, Suite 505 Honolulu, HI 96813 Contact: Tim Swartz

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Ford Canty Associates, Inc. were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # 9365-4BDE-B7CB

PO # NA

Project 17-1209

UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

Sanborn® Library search results

Certification #: 9365-4BDE-B7CB

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

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

The Sanborn Library LLC Since 1866™

Limited Permission To Make Copies

Ford Canty Associates, Inc. (the client) is permitted to make up to FIVE 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.

APPENDIX F

TITLE REPORT

6.315-ACRE PROPERTY
AIRPORT ROAD
KAHULUI, HI 96732

Inquiry Number: 4953403.7S
JUNE 7, 2017

EDR Environmental Lien and AUL Search

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Environmental Lien and AUL Search

The EDR Environmental Lien Search Report provides results from a search of available current land title records for environmental cleanup liens and other activity and use limitations, such as engineering controls and institutional controls.

A network of professional, trained researchers, following established procedures, uses client supplied address information to:

- search for parcel information and/or legal description;
- search for ownership information;
- research official land title documents recorded at jurisdictional agencies such as recorders' offices, registries of deeds, county clerks' offices, etc.;
- access a copy of the deed;
- search for environmental encumbering instrument(s) associated with the deed;
- provide a copy of any environmental encumbrance(s) based upon a review of key words in the instrument(s) (title, parties involved, and description); and
- provide a copy of the deed or cite documents reviewed.

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

EDR Environmental Lien and AUL Search

TARGET PROPERTY INFORMATION

ADDRESS

6.315-ACRE PROPERTY
AIRPORT ROAD
KAHULUI, HI 96732

RESEARCH SOURCE

Source 1: MAUI COUNTY RECORDER OF DEEDS

Source 2: HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES

Source 3: UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

PROPERTY INFORMATION

Deed 1

Type of Deed:	LIMITED WARRANTY DEED WITH RESERVATIONS AND COVENANTS
Title is vested in:	HUBER POOLS, INC.
Title received from:	ALEXANDER & BALDWIN, LLC
Date Executed:	12/21/2016
Date Recorded:	12/28/2016
Book:	NA
Page:	NA
Volume:	NA
Instrument#:	A-62060420
Docket:	NA
Land Record Comments:	NA
Miscellaneous Comments:	NA

Legal Description: AS RECORDED IN THE DEED BELOW

Current Owner: HUBER POOLS, INC.

Property Identifiers: 2-3-8-079-013-0000

Comments: NA

ENVIRONMENTAL LIEN

Environmental Lien: Found ☐ Not Found ☒

If Found:

1st Party:	NA
2nd Party:	NA
Dated:	NA
Recorded:	NA
Book:	NA
Page:	NA
Docket:	NA

Volume: NA
Instrument #: NA
Comments:
Miscellaneous:

OTHER ACTIVITY AND USE LIMITATIONS (AULS)

Other AUL's: Found [X] Not Found [ ]

If Found:

1st Party: A&B PROPERTIES
2nd Party: NA
Dated: 4/19/2004
Recorded: 4/20/2004
Book: NA
Page: NA
Docket: NA
Volume: NA
Instrument #: 2004-078771
Comments: DECLARATION OF COVENANTS
Miscellaneous:

1st Party: NA
2nd Party: NA
Dated:
Recorded: NA
Book: NA
Page: NA
Docket: NA
Volume: NA
Instrument #: NA
Comments:
Miscellaneous:

EDR Environmental Lien and AUL Search

MISCELLANEOUS

Type of Instrument: NONE IDENTIFIED

1st Party:

2nd Party:

Date Recorded:

Instrument #:

Book:

Page:

Comments:

DEED EXHIBIT

STATE OF HAWAII
BUREAU OF CONVEYANCES
RECORDED
December 28, 2016 8:01 AM
Doc No(s) A-62060420

/s/ LESLIE T. KOBATA
REGISTRAR

1 1/2 ICL
B-32921903

Conveyance Tax: $1,903.00

Return by Mail (✓) Pickup ( ) To:

HUBER POOLS, INC.
PO Box 1580
Kihei, HI. 96753

TG: 201637222 P
TGE : T4-161-0015-0035-0
Jeremy R. Trueblood

Document contains 16 pages.

Tax Map Key No. (2) 3-8-079-013 (por.); Lot 17-A-8 of the Airport Industrial Subdivision (Subdivision File No. 3.2257)

LIMITED WARRANTY DEED
WITH RESERVATIONS AND COVENANTS

THIS LIMITED WARRANTY DEED WITH RESERVATIONS AND COVENANTS ("**Deed**") is made this DEC 2 1 2016, 2016 by **ALEXANDER & BALDWIN, LLC**, a Delaware limited liability company, whose address is 822 Bishop Street, Honolulu, Hawaii 96813 ("**Grantor**") to **HUBER POOLS INC.**, a Hawaii corporation, whose address is P.O. Box 1580, Kihei, Hawaii 96753 ("**Grantee**").

A. LIMITED WARRANTY DEED

For and in consideration of the sum of Ten Dollars ($10.00) and other good and valuable consideration, the receipt and sufficiency of which are acknowledged, Grantor does hereby grant, bargain, sell and convey, unto Grantee, as a tenant in severalty, absolutely and in fee simple, all of Grantor's right, title, and interest in and to:

> ALL of the land and premises more fully described in Exhibit "A" attached to and made a part of this instrument (the "**Property**"), subject, however, to the encumbrances mentioned in Exhibit "A";

AND their reversions, remainders, rents, issues and profits thereof, together with all improvements, tenements, rights, easements, privileges and appurtenances to the same belonging or appertaining or held and enjoyed therewith, and all of the estate, right, title and interest of the Grantor both at law and in equity therein and thereto;

TO HAVE AND TO HOLD the same to Grantee and its successors and assigns, subject to the encumbrances mentioned in Exhibit "A" and the agreements of Grantee contained in this Deed.

Grantor covenants with Grantee that Grantor has good right to grant and convey the Property and that the same are free and clear of all encumbrances that may have been made or suffered by the Grantor except as mentioned in this Deed, which includes Exhibit "A," and that Grantor will warrant and defend the same unto Grantee.

B. RESERVATIONS IN FAVOR OF GRANTOR

Grantor reserves to itself, its successors and assigns, the right to designate, grant to third parties, relocate, delete and realign easements, licenses and rights-of-way over, under and across the Property for electrical, gas, communications, cable and television, and other utility purposes, for sewer, drainage, flowage, irrigation, storage and water purposes or facilities, for landscaping, planting, and screening purposes, for subdivision identification signage purposes and for sight distances over, under, along, across, and through the Property, together with all such customary and reasonable rights of access, construction, use, maintenance, repair and replacement in accordance with the specific purpose of the easement granted. Grantor expressly reserves all such easements and the right to grant the same to any appropriate governmental agency or private or public utility or corporations of the owner or owners of other lots within the subdivision or land adjacent to or in the vicinity of the subdivision under the usual terms and conditions required by the grantee for such easement rights, without joinder or consent of Grantee or Grantee's mortgagee. In connection with the foregoing reservations, Grantee irrevocably appoints Grantor its attorney-in-fact to file maps designating such easements and to grant such easements and rights and to do all things necessary or convenient in connection with such easements, which power of attorney shall be assignable to a designee of Grantor and, being coupled with an interest shall be irrevocable and shall run with the Property. Grantee agrees to join in and execute all documents designating and conveying such easements. If the foregoing reservation shall be unlawful, void, or voidable for violation of the rule against perpetuities, then such provisions shall continue only until twenty-one (21) years after the death of the last survivor of the now living descendants of the late Senator Robert F. Kennedy.

C. COVENANTS OF GRANTEE

Grantee, for itself, its successors and assigns, acknowledges, covenants and agrees with and to Grantor, its successors and assigns, as follows:

1. **Compliance with Maui Business Park II Covenants**. Grantee will observe, perform, comply with and abide by the Declaration of Covenants and Restrictions Maui Business Park Phase II dated ---(acknowledged September 13, 2012) and recorded in the Bureau of Conveyances of the State of Hawaii ("**Bureau**") as Document No. A-46400709 and more fully described in Exhibit "A", as the same may be amended or restated from time to time (the

"**Declaration**") and which terms include, without limitation, regulations of improvements, operations and use, reservations of rights and easements, disclosures, assumption of risks, waivers and indemnities.

2. **"As-Is" Conveyance**. Except for the limited warranties of title set forth above and for those representations and warranties of the Grantor set forth in that certain Disposition Agreement between Grantor and Grantee dated effective July 19, 2016, for the conveyance and acquisition of the Property which expressly survive the closing of the transaction thereunder, Grantee agrees that (a) it is purchasing the Property on an "AS IS" basis and based on its own investigations of the Property, and (b) Grantor is not making and has not at any time made any warranties or representations of any kind or character, expressed or implied, with respect to the Property, including, but not limited to, any warranties or representations as to habitability, merchantability, fitness for a particular purpose, title, zoning, tax consequences, latent or patent physical or environmental condition, utilities, operating history or projections, valuation, governmental approvals, the compliance of the Property with governmental laws (including, without limitation, accessibility for handicapped persons), the truth, accuracy or completeness of the Property documents or any the information provided by or on behalf of Grantor to Grantee, or any other matter or thing regarding the Property.

D. MUTUAL COVENANTS

1. **Grantor and Grantee**. Except as otherwise provided in this Deed the term "Grantor" as and when used in this Deed shall mean and include Grantor named above and Grantor's successors and assigns, and the term "Grantee" as and when used in this Deed shall mean and include the Grantee named above and Grantee's successors and assigns; where there is more than one Grantee, the use of the singular shall be construed to include the plural wherever the context shall so require and the obligations of Grantee shall be joint and several, and the use of any gender shall include all genders.

2. **Counterparts**. This instrument may be executed in counterparts, each of which shall be deemed an original, and said counterparts shall together constitute one and the same agreement, binding all of the parties, even though all of the parties are not signatory to the original or the same counterparts. For all purposes, including, without limitation, recordation, filing and delivery of this instrument, duplicate unexecuted and unacknowledged pages of the counterparts may be discarded and the remaining pages assembled as one document.

[Signature page follows.]

IN WITNESS WHEREOF, Grantor and Grantee have executed this Deed as of the date first written above.

ALEXANDER & BALDWIN, LLC
a Delaware limited liability company

By_____
Name: Nelson N. S. Chun
Its Senior Vice President

By_____
Name: Charles W. Loomis
Its Assistant Secretary

Grantor

HUBER POOLS INC.,
a Hawaii corporation

By_____
Name: Hans Huber
Its President

Grantee

IN WITNESS WHEREOF, Grantor and Grantee have executed this Deed as of the date first written above.

ALEXANDER & BALDWIN, LLC
a Hawaii limited liability company

By_____
Name: Nelson N. S. Chun
Its Senior Vice President

By_____
Name: Charles W. Loomis
Its Assistant Secretary

Grantor

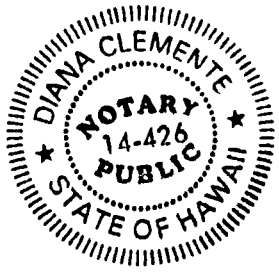
HUBER POOLS INC.,
a Hawaii corporation

By_____
Name: Hans Huber
Its President

Grantee

STATE OF HAWAII)
) SS:
CITY AND COUNTY OF HONOLULU)

On this 29 day of December, 2016, before me appeared NELSON N. S. CHUN, to me personally known, who, being by me duly sworn or affirmed did say that such person executed the foregoing instrument as the free act and deed of such person, and if applicable, in the capacity shown, having been duly authorized to execute such instrument in such capacity.



(Official Stamp or Seal)

Diana Clemente
Notary Public, State of Hawaii

Printed Name: DIANA CLEMENTE

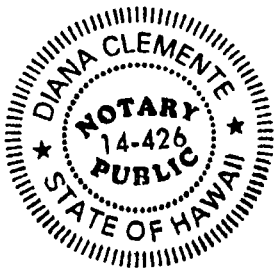
My commission expires: DEC 14 2018

NOTARY CERTIFICATION STATEMENT

Document Identification or Description:
Limited Warranty Deed with Reservations and Covenants
TMK: (2)3-8-079-013 (por); Lot 17-A-8 of Airport Industrial Subdivision (Subdivision File No. 3.2257)

Doc. Date: _____ or ☒ undated at the time of execution

No. of Pages: 14 Jurisdiction: First Circuit
(in which notarial act is performed)

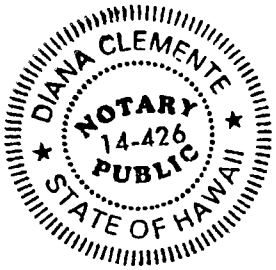


Diana Clemente December 21, 2016
Signature of Notary Date of Notarization and Certification Statement

DIANA CLEMENTE (Official Stamp or Seal)
Printed Name of Notary

STATE OF HAWAII)
) SS:
CITY AND COUNTY OF HONOLULU)

On this 21st day of December, 2016, before me appeared CHARLES W. LOOMIS, to me personally known, who, being by me duly sworn or affirmed did say that such person executed the foregoing instrument as the free act and deed of such person, and if applicable, in the capacity shown, having been duly authorized to execute such instrument in such capacity.



Notary Public, State of Hawaii

Printed Name: DIANA CLEMENTE

My commission expires: DEC 14 2018

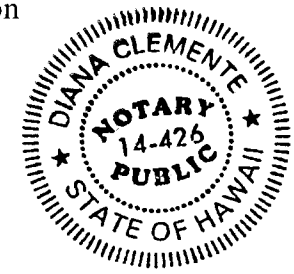
(Official Stamp or Seal)

NOTARY CERTIFICATION STATEMENT

Document Identification or Description:
Limited Warranty Deed with Reservations and Covenants
TMK: (2)3-8-079-013 (por); Lot 17-A-8 of Airport Industrial Subdivision (Subdivision File No. 3.2257)

Doc. Date: _____ or ☒ undated at the time of execution

No. of Pages: 14 Jurisdiction: First Circuit
(in which notarial act is performed)



Signature of Notary December 21, 2016
Date of Notarization and
Certification Statement

DIANA CLEMENTE
Printed Name of Notary

(Official Stamp or Seal)

STATE OF HAWAII)
) SS:
COUNTY OF MAUI)

On this 10th day of December, 2016, before me appeared **Hans Huber**, to me personally known, who, being by me duly sworn or affirmed did say that such person executed the foregoing instrument as the free act and deed of such person, and if applicable, in the capacity shown, having been duly authorized to execute such instrument in such capacity.

TAMARA Y. CABANILLA-ARICAYOS NOTARY 2000-606 PUBLIC STATE OF HAWAII

Notary Public, State of Hawaii

Printed Name: Tamara Y. Cabanilla-Aricayos

My commission expires: Expiration Date: February 22, 2017

(Official Stamp or Seal)

NOTARY CERTIFICATION STATEMENT

Document Identification or Description:
Limited Warranty Deed with Reservations and Covenants

Doc. Date: _____ or ☒ undated at the time of execution

No. of Pages: 14 Jurisdiction: Second Circuit
(in which notarial act is performed)

Signature of Notary

Dec 10 2016
Date of Notarization and Certification Statement

TAMARA Y. CABANILLA-ARICAYOS NOTARY 2000-606 PUBLIC STATE OF HAWAII

Tamara Y Cabanilla-Aricayos
Printed Name of Notary

(Official Stamp or Seal)

EXHIBIT A

All of that certain parcel of land (being portion(s) of the land(s) described in and covered by Royal Patent Grant Number 3343 to Claus Spreckels) situate, lying and being at Kahului, Island and County of Maui, State of Hawaii, being LOT 17-A-8 of the "AIRPORT INDUSTRIAL SUBDIVISION", as shown on map prepared by Ken T. Nomura, Licensed Professional Land Surveyor with A&B Properties, Inc., approved by the Director of Public Works, dated May 3, 2010, last revised on October 16, 2012, and amended final on February 11, 2013 (Subdivision File Number 3.2257), approved on December 31, 2015 (the "**Subdivision Map**"), and being more particularly described as follows:

Beginning at a pipe at the northwesterly corner of this lot, on the southeasterly side of Lau'o Loop, said pipe being also the northeasterly corner of Lot 17-A-7 of the Airport Industrial Subdivision, the coordinates of said point of beginning referred to Government Survey Triangulation Station "LUKE" being 2,050.99 feet North and 16,843.96 feet East and running by azimuths measured clockwise from True South:

1.	233°	45'	52"	110.17	feet along the southeasterly side of Lau'o Loop to a pipe;
2.	323°	45'	52"	203.65	feet along Lot 17-A-9 of the Airport Industrial Subdivision to a pipe;
3.	51°	42'	52"	110.24	feet along the northwesterly side of the Kahului Airport Access Road to a pipe;
4.	143°	45'	52"	207.59	feet along Lot 17-A-7 of the Airport Industrial Subdivision to the point of beginning and containing an Area of 0.520 Acre.

Together with easements for vehicular and pedestrian access purposes over and across the following roadway and road widening lots, provided that such easements shall terminate automatically upon dedication of such lots to the County of Maui, State of Hawaii or other governmental entity:

a) AIRPORT INDUSTRIAL SUBDIVISION
LOT 17-A-31
LAU'O LOOP (ROADWAY)

All of that certain parcel of land (being portion(s) of the land(s) described in and covered by Royal Patent Grant Number 3343 to Claus Spreckels) situate, lying and being at Kahului, Island and County of Maui, State of Hawaii, being LOT 17-A-31 (Lau'o Loop) of the "AIRPORT INDUSTRIAL SUBDIVISION", as shown on the Subdivision Map, and being more particularly described as follows:

Beginning at a pipe at the northeasterly corner of this lot, on the southerly side of Haleakala Highway (F. A P. No. 5-C), said pipe being also the northwesterly corner of Lot 17-A-28 of the Airport Industrial Subdivision, the coordinates of said point of beginning referred to Government Survey Triangulation Station "LUKE" being 2,752.72 feet North and 16,574.30 feet East and running by azimuths measured clockwise from True South:

1. Along Lot 17-A-28 of the Airport Industrial Subdivision on a curve to the left with a radius of 30.00 feet, the chord azimuth and distance being:
   42° 34' 04.5" 42.41 feet to a pipe;

2. 357° 35' 17" 151.17 feet along Lot 17-A-28 of the Airport Industrial Subdivision to a pipe;

3. Thence along same and along Lot 17-A-27 of the Airport Industrial Subdivision on a curve to the right with a radius of 665.00 feet, the chord azimuth and distance being:
   8° 58' 42.5" 262.67 feet to a pipe;

4. 20° 22' 08" 28.96 feet along Lot 17-A-27 of the Airport Industrial Subdivision to a pipe;

5. Thence along same and along Lot 17-A-26 of the Airport Industrial Subdivision on a curve to the left with a radius of 180.00 feet, the chord azimuth and distance being:
   338° 07' 04" 242.06 feet to a pipe;

6. 295° 52' 0.38 feet along Lot 17-A-26 of the Airport Industrial Subdivision to a pipe;

7. Thence along same on a curve to the left with a radius of 180.00 feet, the chord azimuth and distance being:
   264° 48' 56" 185.69 feet to a pipe;

8. 233° 45' 52" 607.26 feet along Lots 17-A-25 to 17-A-20, inclusive of the Airport Industrial Subdivision to a pipe;

9. Thence along Lots 17-A-20 and 17-A-19 of the Airport Industrial Subdivision on a curve to the left with a radius of 344.50 feet, the chord azimuth and distance being:
   202° 45' 21.5" 354.95 feet to a pipe;

10. 171° 44' 51" 59.13 feet along Lot 17-A-19 of the Airport Industrial Subdivision to a pipe;

11. Thence along same on a curve to the left with a radius of 31.30 feet, the chord azimuth

and distance being:
126° 32' 21.5" 44.43 feet to a pipe;

12. 261° 19' 52" 124.29 feet along the southerly side of Haleakala Highway (being along Road widening Lot 17-A-32 of the Airport Industrial Subdivision) to a pipe;

13. Thence along Lot 17-A-18 of the Airport Industrial Subdivision on a curve to the left with a radius of 33.00 feet, the chord azimuth and distance being:
36° 32' 21.5" 46.50 feet to a pipe;

14. 351° 44' 51" 58.33 feet along Lot 17-A-18 of the Airport Industrial Subdivision to a pipe;

15. Thence along same and along Lots 17-A-15 to 17-A-13, inclusive of the Airport Industrial Subdivision on a curve to the right with a radius of 404.50 feet, the chord azimuth and distance being:
22° 45' 21.5" 416.77 feet to a pipe;

16. 53° 45' 52" 607.26 feet along Lots 17-A-13 to 17-A-7, inclusive of the Airport Industrial Subdivision to a pipe;

17. Thence along Lots 17-A-7 to 17-A-5, inclusive of the Airport Industrial Subdivision on a curve to the right with a radius of 240.00 feet, the chord azimuth and distance being:
84° 48' 56" 247.59 feet to a pipe;

18. 115° 52' 0.38 feet along Lot 17-A-5 of the Airport Industrial Subdivision to a pipe;

19. Thence along same and along Lots 17-A-2 and 17-A-1 of the Airport Industrial Subdivision on a curve to the right with a radius of 240.00 feet, the chord azimuth and distance being:
158° 07' 04" 322.74 feet to a pipe;

20. 200° 22' 08" 28.96 feet along Lot 17-A-1 of the Airport Industrial Subdivision to a pipe;

21. Thence along same on a curve to the left with a radius of 605.00 feet, the chord azimuth and distance being:
188° 58' 42.5" 238.97 feet to a pipe;

22. 177° 35' 17" 151.09 feet along Lot 17-A-1 of the Airport Industrial Subdivision to a pipe;

23. Thence along same on a curve to the left with a radius of 30.00 feet, the chord azimuth and distance being:
132° 34' 04.5" 42.44 feet to a pipe;

24. 267° 32' 52" 120.00 feet along the southerly side of Haleakala Highway (being along Road widening Lot 17-A-32) of the Airport Industrial Subdivision) to the point of beginning and containing an Area of 2.917 Acres.

b) AIRPORT INDUSTRIAL SUBDIVISION
LOT 17-A-32
(ROAD WIDENING LOT)

All of that certain parcel of land (being portion(s) of the land(s) described in and covered by Royal Patent Grant Number 3343 to Claus Spreckels) situate, lying and being at Kahului, Island and County of Maui, State of Hawaii, being LOT 17-A-32 (Road Widening Lot) of the "AIRPORT INDUSTRIAL SUBDIVISION", as shown on the Subdivision Map, and being more particularly described as follows:

Beginning at a pipe at the southwesterly corner of this lot, on the southerly side of Haleakala Highway (F. A. P. No. 5-C), said pipe being also the northeasterly corner of Lot 21-A of the Airport Industrial Subdivision, the coordinates of said point of beginning referred to Government Survey Triangulation Station "LUKE" being 2,736.65 feet North and 16,199.04 feet East and running by azimuths measured clockwise from True South:

1. 214° 24' 11.25 feet along the southerly side of Haleakala Highway to a point;

2. 267° 32' 52" 442.36 feet along same to a point;

3. Thence along same on a curve to the left with a radius of 2,892.93 feet, the radial azimuth to the point of curve being 357° 32' 52" and the radial azimuth to the point of tangent being 351° 19' 52", the chord azimuth and distance being:
264° 26' 22" 313.73 feet to a point;

4. 261° 19' 52" 594.40 feet along the southerly side of Haleakala Highway to a point;

5. Thence along same on a curve to the right with a radius of 1,882.08 feet, the radial azimuth to the point of curve being 171° 19' 52" and the radial azimuth to the point of tangent being 182° 22' 52", the chord azimuth and distance being:
266° 51' 22" 362.41 feet to a point;

6. 272° 22' 52" 270.09 feet along the southerly side of Haleakala Highway to a point;

7. Thence along the northwesterly side of the Kahului Airport Access Road on a curve to the right with a radius of 40.00 feet, the radial azimuth to the point of curve being 182° 22' 52" and the radial azimuth to the point of tangent being 221° 34' 40", the chord azimuth and distance being: 291° 58' 46" 26.83 feet to a pipe;

8. 92° 22' 52" 295.37 feet along Lot 17-A-16 of the Airport Industrial Subdivision to a pipe;

9. Thence along same and along Lots 17-A-17 and 17-A-18 of the Airport Industrial Subdivision on a curve to the left with a radius of 1,873.08 feet, the radial azimuth to the point of curve being 182° 22' 52" and the radial azimuth to the point of tangent being 171° 19' 52", the chord azimuth and distance being: 86° 51' 22" 360.68 feet to a pipe;

10. 81° 19' 52" 594.40 feet along Lot 17-A-18 of the Airport Industrial Subdivision, the northerly side of Lau'o Loop and along Lots 17-A-19, 17-A-30 and 17-A-29 of the Airport Industrial Subdivision to a pipe;

11. Thence along Lots 17-A-29 and 17-A- 28 of the Airport Industrial Subdivision on a curve to the right with a radius of 2,901.93 feet, the radial azimuth to the point of curve being 351° 19' 52" and the radial azimuth to the point of tangent being 357° 32' 52", the chord azimuth and distance being: 84° 26' 22" 314.71 feet to a pipe;

12. 87° 32' 52" 449.11 feet along Lot 17-A-28 of the Airport Industrial Subdivision, the northerly side of Lau'o Loop and Lot 17-A-1 of the Airport Industrial Subdivision to the point of beginning and containing an Area of 0.414 Acre.

Being the same premises conveyed to Grantor herein by:

1. Deed dated effective December 31, 1926, recorded in the Bureau of Conveyances of the State of Hawaii (the "**Bureau**") in Liber 865 at Page 008; and

2. Quitclaim Deed dated September 23, 2016, recorded in the Bureau as Document No. A-61141073.

SUBJECT, HOWEVER to the following:

1. Mineral and water rights of any nature in favor of the State of Hawaii.

2. Lease dated August 5, 1960, recorded in the Bureau in Liber 3906 at Page 64 in favor of Maui Electric Company, Limited and Hawaiian Telephone Company, now known as Hawaiian Telcom, Inc., leasing rights-of-way, each twenty-five (25) feet in width, over, across and under all lands owned by Hawaiian Commercial and Sugar Company, Limited, a Hawaii corporation, for a term of thirty-five (35) years from the date thereof and thereafter from year to year.

3. Terms, provisions, covenants, conditions and reservations contained in Declaration of Conditions dated acknowledged on April 19, 2004, recorded in the Bureau as Document No. 2004-078771.

Joinder by Alexander & Baldwin, Inc., dated ---(acknowledged on April 9, 2004), recorded in the Bureau as Document No. 2004-078772.

4. Terms, provisions, covenants, conditions and reservations contained in Unilateral Agreement and Declaration for Conditional Zoning dated April 7, 2008, recorded in the Bureau as Document No. 2008-057029, by Alexander & Baldwin, Inc., a Hawaii corporation, as "Declarant".

5. Utility Easement dated November 30, 2011, recorded in the Bureau as Document No. A-44570936, in favor or Maui Electric Company, Limited and Hawaiian Telcom, Inc., granting a perpetual right and easement for utility purposes, said easement being more particularly described in Exhibit "A" attached thereto.

6. Terms, provisions, covenants, conditions and reservations contained in Declaration of Covenants and Restrictions Maui Business Park Phase II dated ---(acknowledged September 13, 2012), recorded in the Bureau as Document No. A-46400709.

Said Declaration was amended by instruments dated November 8, 2013, recorded in the Bureau as Document No. A-50600297, dated May 29, 2015, recorded in the Bureau as Document No. A-56300886, and dated September 27, 2016, recorded in the Bureau as Document No. A-61141075.

7. Terms, provisions, covenants, conditions and reservations contained in Sewer Service Billing Agreement dated October 7, 2013, recorded in the Bureau as Document No. A-50420868, by and between County of Maui ("County"), Alexander & Baldwin, LLC, a Hawaii limited liability company ("A&B"), and Maui Business Park Phase II Association, a Hawaii non-profit corporation ("Association"), as may be amended.

Clarification of Sewer Service Billing Agreement dated December 31, 2013,

recorded in the Bureau as Document Nos. A-51290700A thru A-51290700B.

8. Designation of Easement "U-3", as shown on map prepared by Ken T. Nomura, Licensed Professional Land Surveyor with A&B Properties, Inc., approved by the Director of Public Works, dated May 3, 2010, last revised on October 16, 2012, and amended final on February 11, 2013 (Subdivision File Number 3.2257), approved on December 31, 2015,for utility and waterline purposes.

9. Restriction of Vehicular Access Rights as shown on map prepared by Ken T. Nomura, Licensed Professional Land Surveyor with A&B Properties, Inc., approved by the Director of Public Works, dated May 3, 2010, last revised on October 16, 2012, and amended final on February 11, 2013 (Subdivision File Number 3.2257), approved on December 31, 2015.

R-915 STATE OF HAWAII
BUREAU OF CONVEYANCES
RECORDED
APR 20, 2004 10:00 AM
Doc No(s) 2004-078771 Thru 2004-078772

/s/ CARL T. WATANABE
REGISTRAR OF CONVEYANCES

20 1/1 Z2

LAND COURT REGULAR SYSTEM

AFTER RECORDATION, RETURN BY: MAIL ( ) PICK-UP ( )

BENJAMIN M. MATSUBARA, ESQ.
Matsubara, Lee & Kotake
888 Mililani Street, Eighth Floor
Honolulu, Hawai'i 96813

TYPE OF DOCUMENT: DECLARATION OF CONDITIONS
Document contains 18 pages.

DECLARATION OF CONDITIONS

A&B PROPERTIES, INC. , a Hawaii corporation, the business address of which is 822 Bishop Street, Honolulu, Hawaii, 96813, as Petitioner of that certain Petition For District Boundary Amendment in Docket No. A03-739 of the Land Use Commission of the State of Hawaii, affecting those certain lands, approximately 138.158 acres, situate at Kahului, Island of Maui, State of Hawaii, Tax Map Key Nos. 3-8-01: 2 (portion), 3-8-06: 4

(portion) and 3-8-79: 13 (portion), as shown on map marked Exhibit "A" attached hereto and incorporated herein by reference (hereinafter referred to as "Property"), does hereby certify pursuant to Section 15-15-92 , Hawaii Administrative Rules, as follows:

THAT by Findings Of Fact, Conclusions Of Law, And Decision And Order, entered March 25, 2004, in Docket No. A03-739, the Land Use Commission reclassified approximately 138.158 acres of land in the State Land Use Agricultural District at Kahului, Maui, Hawaii, identified as Tax Map Key Nos. 3-8-01: 2 (portion), 3-8-06: 4 (portion) and 3-8-79: 13 (portion), as shown on Exhibit "A" to the State Land Use Urban District.

AND THAT by Findings Of Fact, Conclusions Of Law, And Decision And Order, entered March 25, 2004, it was further ordered that the reclassification from Agricultural District to the Urban District shall be subject to the following conditions:

1a. **Housing Study.** Within one hundred eighty days (180) of this decision and order, the Petitioner shall complete and submit to and for the approval of the Commission, with copies to the Department of Planning, the Department of Housing and Human Concerns and the Office of Planning, a housing study that addresses the following:

i. The impact the Project will have on the current labor force;

ii. The type of employee/affordable housing demands that will be created by the Project;

iii. Any employee/affordable housing policy adopted and in place by the County for commercial and industrial developments;

iv. The proposed mitigation measures to alleviate the impact on both the labor market and the employee/affordable housing situation, including, but not limited to, the acreage, siting, timing, type of housing and eligibility for the employee/affordable housing project and the identity of potential developers and recipient of land to be contributed and conveyed by Petitioner for affordable/employee housing (collectively, the "Proposed Mitigation Measures"); and

v. Recommendations and timeframe for implementing any applicable county housing policy (in place at the time of this study) or requirements and/or the Petitioner's proposed mitigation measures, including the minimum contribution of land described in Condition 1b immediately herein below (collectively, the "Proposed Timeline").

The reclassification of the Petition Area, as described in this Decision and Order, shall be subject to the further condition of Petitioner's compliance with the Proposed Mitigation Measures and Proposed Timeline, as modified and/or approved by the Commission (the "Approved Mitigation Measures and Timeline").

1b. **Minimum Contribution of Land by the Petitioner.** In compliance and consistent with the Approved Mitigation Measures and Timeline, Petitioner shall contribute, no later than one (1) year after any Maui County zoning approval

authorizing the use of the Property for light industrial and/or commercial use, to the County of Maui or a non-profit housing entity or other appropriate entity, a minimum of ten (10) acres of land useable for residential development within the Central Maui region reasonably acceptable to the County of Maui towards development of employee/affordable housing or satisfy such more stringent employee/affordable housing requirements for the Project as may be imposed by the Maui County Council. The Approved Mitigation Measures and Timeline shall be an obligation of the recipient of the land conveyed for affordable housing purposes, as memorialized in the conveyance document from the Petitioner to such recipient.

2. **Water Facilities.** Petitioner shall participate in the funding and construction of adequate water source, storage and transmission facilities and improvements or remit applicable fees for water source, storage and transmission facilities and improvements to accommodate projected water usage generated by the Project. Water facilities and improvements, including adequate storage facilities, should surface water sources be developed, or the payment of applicable fees, shall be coordinated and approved by the County of Maui, Department of Water Supply and, if applicable, the Commission on Water Resources Management of the Department of Land and Natural Resources. Adequate water source shall be made available prior to the issuance of any occupancy permits for buildings developed on the Property.

3. **Aircraft Operations.** Petitioner shall implement procedures to address notification and liability issues which arise from the potential adverse impacts from noise, right of flight, emissions, vibrations and other incidences of aircraft operations upon the present and future Owners and future lessees or occupants of the Property resulting from the adjacent Kahului Airport operations. The following covenant shall encumber the Property and be included in any transfer of any interest in the Property.

> "The Property is located in the vicinity of Kahului Airport, a commercial airport, and each Owner is aware that there is a likelihood of noise from aircraft passing overhead or nearby and other potential adverse impacts from other incidence of aircraft operation. Each Owner hereby assumes the risk of any potential adverse impacts from such noise, right of flight, emissions, vibrations or other incidents of aircraft operations upon the Owner's lot or uses thereon. Each Owner shall be responsible for appropriate mitigation measures to address the abovementioned potential adverse impacts. Each Owner shall indemnify and hold harmless Declarant and the State of Hawaii from and against all claims, liability and losses that arise out of noise, right of flight, emissions, vibrations and other incidences of aircraft operations, unless such claim, liability or loss arises out of the State of Hawaii's willful misconduct in the operation of Kahului Airport or violating any applicable federal, state or county

requirement governing aircraft safety and noise abatement measures, in which case, the indemnification of the State of Hawaii will be inapplicable."

4. **FAA Form 7460-1, Notice of Proposed Construction or Alteration.** Petitioner shall impose a covenant encumbering the Property and be included in any transfer of any interest in the Property requiring the submittal of Federal Aviation Administration (FAA) Form 7460-1, Notice of Proposed Construction or Alteration, to the FAA's Hawaii District Office when or if required under applicable FAA Regulations with a copy to DOT's Airports Division.

5. **Runway Protection Zone.** Petitioner acknowledges that a portion of Petition Area A overlaps the runway protection zone (hereinafter "RPZ") for a proposed extension of the Kahului Airport runway of up to 9,600 feet in length, as further described in the State Office of Planning's Exhibits Nos. 9 and 10 and the testimony of DOT Airports Division witness Benjamin Schlapak. Petitioner agrees to restrict uses in the RPZ to light industrial, parking, roadway and other infrastructure uses that do not entail the congregation of people, provided all such uses are approved by the Federal Aviation Administration. This restriction on uses within the RPZ shall automatically terminate if the State Department of Transportation (DOT) does not attain all governmental approvals for the extension of the Kahului Airport runway within a period of five (5) years from the date of the Commission's decision and order.

Notwithstanding the foregoing, and for good cause shown, the Commission may grant an extension of time for the DOT if DOT during such five-year period has been using its best efforts, in good faith, to attain all governmental approvals for the extension of the Kahului Airport runway. The size of the RPZ shall be adjusted if the runway length sought by the DOT is less than 9,600 feet. Should the DOT desire to acquire an easement or the fee simple interest in the RPZ, the fair market value of the land shall be based on its current Agricultural District classification and present zoning designation by the County of Maui provided that: a) the acquisition occurs within a period of five (5) years from the date of the Commission's decision and order; and b) the DOT during such five-year period has been using its best efforts, in good faith, to attain all governmental approvals for the extension of the Kahului Airport runway.

6. **Traffic Impact Analysis Report.** Prior to obtaining County zoning, Petitioner shall revise or supplement its traffic impact analysis report (hereafter TIAR) dated May 2003 to the satisfaction of the DOT. The TIAR shall identify the impact of Petitioner's project on the transportation system and recommend any required mitigation measures. Conditions and assumptions reflected in the TIAR shall be developed in consultation with DOT, including but not limited to, various proportions of retail and light industrial uses to be developed at the Property, plans for the proposed airport access road, permitted accesses, trip generation rates, and traffic projections. Petitioner shall obtain the DOT's prior written approval of the final TIAR

and Petitioner may not proceed with the development of Petitioner's project unless and until the DOT approves the TIAR. As development occurs within the Property, the TIAR shall be revised or supplemented as may be requested and required by the DOT. Petitioner shall be responsible for constructing, implementing and/or contributing its fair share of the cost of those improvements or mitigation measures as recommended or required by the TIAR and as dictated by the actual proportion of light industrial and retail uses developed at the Property. The TIAR shall also address the impact to County of Maui roadways and shall be submitted to the County of Maui, Department of Planning for the County's review and consideration in the zoning approval process.

7. **Regional Transportation Improvements.** Petitioner shall contribute Petitioner's fair share of the cost of regional transportation improvements in the area, as such fair share shall be determined by the DOT based on appropriate transportation planning methodologies to establish a rational nexus.

8. **Best Management Practices.** The Petitioner shall coordinate with the County of Maui, the State Department of Land and Natural Resources and the State Department of Health to establish Best Management Practices to contain spills, and prevent materials associated with light industrial uses such as petroleum products, chemicals, and other pollutants from leaching or draining into the ground or the storm drain system.

9. **Hazardous Materials.** Storage and/or disposal of hazardous materials shall be approved by the State Department of Health prior to their establishment on the subject Property.

10. **Wastewater Facilities.** Petitioner shall provide a sewer impact study to the County Department of Public Works and Environmental Management evaluating the wastewater system requirements for the Project. Petitioner shall fund and develop, as required by the County of Maui and the State Department of Health, wastewater transmission and treatment facilities to accommodate the additional wastewater generated by the Project.

11. **Drainage.** Petitioner shall fund, design and construct any drainage system improvements required to mitigate the additional runoff resulting from the project without creating adverse effects on adjacent and downstream properties. The master drainage plan for Maui Business Park shall be constructed to mitigate the additional runoff resulting from this development.

12. **Aircraft Operation Hazards.** Petitioner shall fund and implement a program to control any bird nesting or occupation and any insect, pest or wildlife infestation, in any drainage retention basins serving the Property to minimize the hazards to aircraft operations, as deemed necessary by the DOT.

13. **Provisions of the Hawai'i Right to Farm Act.** Petitioner shall inform all prospective occupants of possible odor, noise, and dust pollution resulting from

adjacent Agricultural Districts lands, and that the Hawaii Right-to-Farm Act, Chapter 165, HRS, limits the circumstances under which preexisting farming activities may be deemed a nuisance.

14. **Solid Waste.** Petitioner shall develop a Solid Waste Management Plan in conformance with the Integrated Solid Waste Management Act, Chapter 342G, HRS. The Plan shall be approved by the County of Maui and shall address the need to divert the maximum amount of waste material caused by the development away from the County's landfills.

15. **Visual Analysis.** That as part of its zoning application submittal, the Petitioner shall submit a visual analysis study for the location of the Hookele Street Extension emphasizing the maintenance of a "view corridor" toward Haleakala.

16. **Visual Impacts.** That as part of its zoning application, the Petitioner shall submit design guidelines with renderings on how a landscaped aesthetic visual corridor along all adjacent highways and how a landscaped berm utilizing trees and shrubbery shall be constructed along the entire proposed collector road (Hookele Street Extension) to soften the visual impact of the buildings along the road. (Wailuku-Kahului Community Plan Update).

17. **Dual Water System.** Petitioner shall evaluate the feasibility of developing a dual water system for the Project, utilizing non-potable water for landscape irrigation purposes.

18. **Energy Conservation.** Petitioner shall implement energy conservation measures such as the use of solar energy and solar heating and incorporate such measures into the Project.

19. **Project Composition.** For a period of eight (8) years from the date of the County's approval of zoning for the Project a total of at least fifty percent (50%) of the Project acreage shall be (a) used and developed by Petitioner for non-retail, light industrial use and/or (b) sold or leased to and developed and used by third-party buyers for non-retail, light industrial use. For this same eight-year period, simultaneous with Petitioner's development or offer for sale or lease of the Property for retail use, Petitioner shall develop or offer for sale or lease an equal amount of acreage within the Property for non-retail, light industrial use. The phrase "light industrial", as used in this paragraph, includes warehousing and distribution types of activity as well as compounding, assembly, or treatment of articles or materials with the exception of heavy manufacturing and processing of raw materials. It is the intent of this paragraph that at the end of the above-described eight-year period, to the extent that the Project is developed or in the process of being developed by Petitioner or any third party, no less than fifty percent (50%) of such development or development in process shall be for non-retail, light industrial purposes.

20. **Compliance with Representations to the Commission.** Petitioner shall develop the Property in substantial compliance with the representations made to the

11

Commission. Failure to so develop the Property may result in reversion of the Property to its former classification, or change to a more appropriate classification.

21. **Notice of Change to Ownership Interests.** Petitioner shall give notice to the Commission of any intent to sell, lease, assign, place in trust, or otherwise voluntarily alter the ownership interests in the Property, prior to development of the Property.

22. **Annual Reports.** Petitioner shall timely provide without any prior notice, annual reports to the Commission, the Office of Planning, and the County of Maui Planning Department in connection with the status of the subject project and Petitioner's progress in complying with the conditions imposed herein. The annual report shall be submitted in a form prescribed by the Executive Officer of the Commission.

23. **Release of Conditions.** The Commission may fully or partially release the conditions provided herein as to all or any portion of the Property upon timely motion and upon the provision of adequate assurance of satisfaction of these conditions by Petitioner.

24. **Notice of Imposition of Conditions.** Within 7 days of the issuance of the Commission's Decision and Order for the subject reclassification, Petitioner shall (a) record with the Bureau of Conveyances a statement that the Property is subject to

conditions imposed herein by the Land Use Commission in the reclassification of the Property, and (b) shall file a copy of such recorded statement with the Commission.

25. **Recordation of Conditions.** Petitioner shall record the conditions imposed herein by the Commission with the Bureau of Conveyances pursuant to Section 15-15-92 Hawai'i Administrative Rules.

AND THAT the conditions imposed in the Findings Of Fact, Conclusions Of Law, And Decision And Order, entered March 25, 2004, affecting the Property shall run with the land and shall be binding upon the Petitioner and each and every subsequent owner, lessee, sub-lessee, transferee, grantee, assignee, or developer of the Property until such time that the State Land Use Commission removes or releases the conditions relating to the Property established through its order dated March 25, 2004 in Docket No. A03-739.

AND THAT ALEXANDER & BALDWIN, INC., holder of the fee simple interest and title in and to the Property, having duly authorized Petitioner to submit the Property as the subject of the Petition in Docket No. A03-739, has authorized this Declaration of Conditions and the recording thereof in the Bureau of Conveyances of the State of Hawaii by its Joinder attached hereto and made a part hereof.

This Declaration of Conditions shall supersede the Notice of Imposition of Conditions by the Commission dated April 1, 2004 upon the recordation at the Bureau of Conveyances of this Declaration of Conditions.

IN WITNESS WHEREOF, the undersigned has caused this instrument to be duly executed on _____.

A & B PROPERTIES, INC.

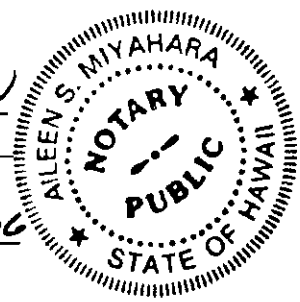
By _____
Stanley M. Kuriyama
Its Chief Executive Officer

STATE OF HAWAII)
) SS:
CITY & COUNTY OF HONOLULU)

On this 19TH day of APRIL, 2004, before me personally appeared STANLEY M. KURIYAMA, to me known, who, being by me duly sworn, did say that: he is the Chief Executive Officer of A&B PROPERTIES, INC., and that said instrument was signed on behalf of said corporation by authority of its Board of Directors, and said officer acknowledged said instrument to be the free act and deed of said corporation.

Aileen S. Miyahara

Name: AILEEN S. MIYAHARA
Notary Public, State of Hawaii
My Commission Expires: 7/15/06



JOINDER

ALEXANDER & BALDWIN, INC., a Hawaii corporation, whose business address is 822 Bishop Street, Honolulu, Hawaii, 96813, is the holder of the fee simple interest and title in and to the Property described in the Declaration of Conditions of A&B Properties, Inc., to which this Joinder is attached and made a part thereof, said Property being identified as Tax Map Key Nos. 3-8-01: 2 (portion), 3-8-06: 4 (portion) and 3-8-79: 13 (portion), insofar as its interest in the Property is concerned, does hereby join in the Declaration of Conditions and authorizes the recording of the Declaration of Conditions in the Bureau of Conveyances of the State of Hawaii.

IN WITNESS WHEREOF, the undersigned has caused this instrument to be duly executed on _____.

ALEXANDER & BALDWIN, INC.
a Hawaii corporation

By _____
Its VICE-PRESIDENT

By _____
Its ASST. SECRETARY

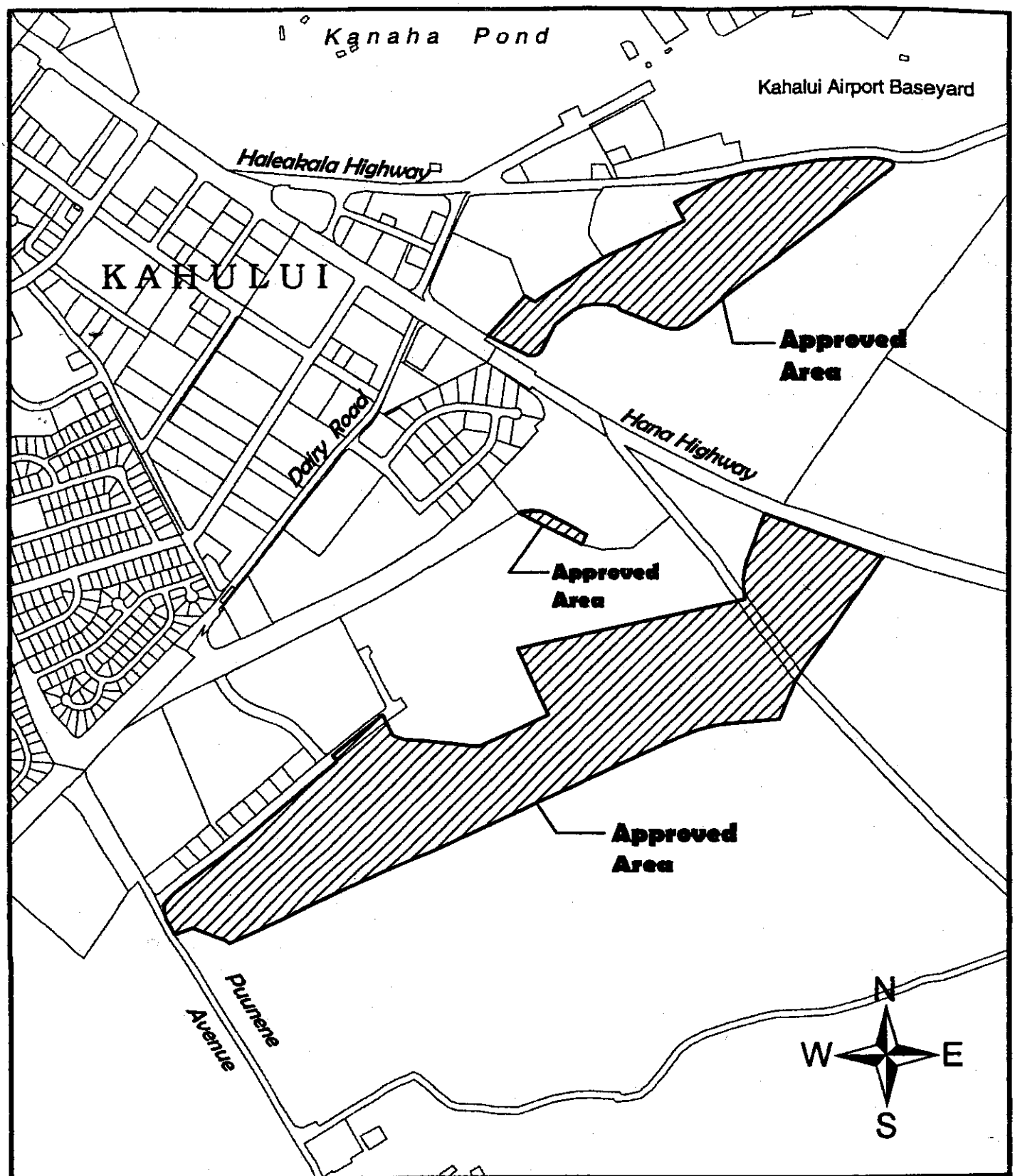
STATE OF HAWAII)
) SS:
CITY & COUNTY OF HONOLULU)

On this 19TH day of APRIL, 2004, before me personally appeared STANLEY M. KURIYAMA and CHARLES W. LOOMIS and who, being by me duly sworn, did say that they are the VICE-PRESIDENT and the ASST. SECRETARY respectively of ALEXANDER & BALDWIN, INC., a Hawaii corporation; that they executed the foregoing instrument in behalf of said corporation by authority of its Board of Directors; and acknowledged that they executed same as the free act and deed of said corporation.

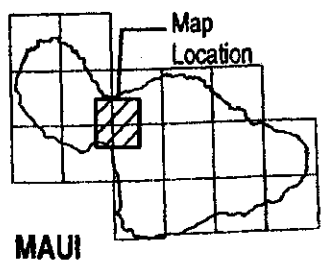
Aileen S. Miyahara

Name: AILEEN S. MIYAHARA
Notary Public, State of Hawaii
My Commission Expires: 7/15/06

AILEEN S. MIYAHARA NOTARY PUBLIC STATE OF HAWAII



A03-739 A&B PROPERTIES, INC.,
A Hawai`i Corporation
Map Location
Tax Map Key Nos: 3-8-01: por. 2, 3-8-06: por. 4, &
3-8-79: por. 13
Kahului, Maui, Hawai`i
Scale: 1"=1,000 ft.
EXHIBIT "A"



APPENDIX G

CITY DIRECTORY REPORT

6.315-Acre Property
Airport Road
Kahului, HI 96732

Inquiry Number: 4953403.5
June 02, 2017

The EDR-City Directory Image Report

EDR® Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Report is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Report includes a search of available city directory data at 5 year intervals.

RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. A check mark indicates where information was identified in the source and provided in this report.

Year	Target Street	Cross Street	Source
2013	☐	☑	Cole Information Services
2008	☐	☑	Cole Information Services
2003	☐	☑	Cole Information Services
1999	☐	☑	Cole Information Services
1995	☑	☑	Cole Information Services
1992	☐	☐	Cole Information Services

RECORD SOURCES

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FINDINGS

TARGET PROPERTY STREET

Airport Road
Kahului, HI 96732

Year	*CD Image*	*Source*	
AIRPORT RD			
2013	-	Cole Information Services	Target and Adjoining not listed in Source
2008	-	Cole Information Services	Target and Adjoining not listed in Source
2003	-	Cole Information Services	Target and Adjoining not listed in Source
1999	-	Cole Information Services	Target and Adjoining not listed in Source
1995	pg A9	Cole Information Services	
1992	-	Cole Information Services	Target and Adjoining not listed in Source

FINDINGS

CROSS STREETS

Year	*CD Image*	*Source*	
HALEAKALA HWY			
2013	pg. A2	Cole Information Services	
2008	pg. A4	Cole Information Services	
2003	pg. A6	Cole Information Services	
1999	pg. A8	Cole Information Services	
1995	pg. A10	Cole Information Services	
1992	-	Cole Information Services	Target and Adjoining not listed in Source
KAHULUI AIRPORT			
1995	pg. A11	Cole Information Services	
KAHULUI AIRPORT RD			
2013	pg. A3	Cole Information Services	
2008	pg. A5	Cole Information Services	
2003	pg. A7	Cole Information Services	
1999	-	Cole Information Services	Target and Adjoining not listed in Source
1995	pg. A12	Cole Information Services	
1992	-	Cole Information Services	Target and Adjoining not listed in Source

City Directory Images

Target Street	Cross Street	Source
-	✓	Cole Information Services

HALEAKALA HWY 2013

17	SHAWN STEADMAN
414	CORENA KANOHO
429	AARON BURKERT
472	M NATHAN
540	COSTCO WHOLESALE
	FERNANDEZ LORI CHAI DR OD
871	WORLDWIDE FLIGHT SERVICES

Target Street	Cross Street	Source
-	✓	Cole Information Services

KAHULUI AIRPORT RD 2013

1	AIR MAUI HELICOPTER TOURS
	ALEXAIR HELICOPTERS
	AMERICAN AIRLINES INC
	AVIS
	BLUE HAWAIIAN HELICOPTERS
	COURTYARD BY MARRIOTT MAUI
	DFS KAHULUI
	ELITE LINE SERVICES
	HAWAIIAN SUN TRAVEL
	HMS HOST AIRPORT RESTAURANT
	ISLAND SHOPPERS INC
	KAHULUI AIRPORT MAIN NUMBER
	KOOLAU AVIATION SERVICES INC
	MAUI AVIATORS
	PACIFIC HELICOPTER TOURS INC
	PACIFIC WINGS AIRLINES
	STANDARD PARKING
	STARBUCKS COFFEE
	SUNSHINE HELICOPTERS
	T M DESIGNERS INC
	TSR INC
108	ALEXAIR HELICOPTERS
	OCCUPANT UNKNOWN

Target Street	Cross Street	Source
-	✓	Cole Information Services

HALEAKALA HWY 2008

414	CORENA KANOHO
418	JOSEF LOSBERG
429	AARON BURKERT
458	PAUL SINGLETON
472	M NATHAN
497	R KAIAMA
540	COSTCO
	COSTCO WHOLESALE
	FERNANDEZ LORI CHAI DR OD
590	DAVID MILLER CO
	DING KINGS
	V 2 MAX LTD

Target Street	Cross Street	Source
-	✓	Cole Information Services

KAHULUI AIRPORT RD 2008

1
AIR MAUI
BLUE HAWAIIAN HELICOPTERS
DANA SMITH
KAHULUI AIRPORT
PACIFIC HELICOPTER TOURS INC
SUNSHINE HELICOPTERS INC

Target Street	Cross Street	Source
-	✓	Cole Information Services

HALEAKALA HWY 2003

540	JAMIE FERNANDEZ
	LORI FERNANDEZ CHAI OD
590	CUSTOM INTERIORS
	DAVID MILLER CO
	DING KINGS
	MARK RAAPHORST
685	OCCUPANT UNKNOWN

Target Street	Cross Street	Source
-	✓	Cole Information Services

KAHULUI AIRPORT RD 2003

1 ALIKA AVIATION INC
DANA SMITH
HAWAII HELICOPTERS
SUNSHINE HELICOPTERS JPNS LINE

Target Street	Cross Street	Source
-	✓	Cole Information Services

HALEAKALA HWY 1999

540 CHAI FERNANDEZ LORI DR OD
COSTCO WHOLESALE MEMBERSHIP & INFORMATION

Target Street	Cross Street	Source
✓	-	Cole Information Services

AIRPORT RD 1995

0 T SHIRT FACTORY

Target Street	Cross Street	Source
-	✓	Cole Information Services

HALEAKALA HWY 1995

0	DAVID PICO CESSPOOL DIGGING
102	KAHULUI CABINET SHOP
510	WELDRITE WELDING INC
544	LIN GO CONSTRUCTION INC
545	AHSING & ASSOC INC
	DONS REPAIR
571	ADVENTURES RENT A JEEP
590	HAWAIIAN FENCE CO
591	MAUI MOSS ROCKS & MASONRY INC
	ROJAC TRUCKING INC
	TRUCK & INDUSTRIAL SUPPLY
607	DUBOISEE, MAURICE
	PROTECTIVE COATINGS OF HAWAII
	WORD OF MOUTH RENT A CAR
617	AKAMAI AUTO
625	VALLEY ISLE MARINE CTR
635	MAUI FOREIGN AUTO WRECKING
	OCCUPANT UNKNOWNN
651	M & G CATERING
	MAUI BOAT WORKS
	MAUI QUICK LUBE
	MECH CON CO
661	ATLAS SALES CO
3341	CARREIRA, H

Target Street	Cross Street	Source
-	✓	Cole Information Services

KAHULUI AIRPORT 1995

0	AIR MAUI HELICOPTERS
	AIR MOLOKAI
	AIR REPAIR HAWAII
	ANDRES RENT A CAR INC
	BLUE HAWAIIAN HELICOPTERS
	HAWAIIAN CRUISE AVIATION INC
	HELI SERVICES HAWAII
	PACIFIC HELICOPTER TOURS INC
	SUNSHINE HELICOPTERS
	WINDWARD AVIATION

Target Street	Cross Street	Source
-	✓	Cole Information Services

KAHULUI AIRPORT RD 1995

0	ACTION FUEL INC
	ALOHA AIRLINES INC
	AMERICAN AIRLINES INC
	DELTA AIR LINES INC
	HAWAII STATE GVT DEPT TRANSPRT
	HAWAIIAN AIRLINES INC
	HOST INTERNATIONAL AIRPORT
	KAANAPALI TAXI
	KAHULUI AIRPORT
	KAHULUI WEATHER SVC
	M V ENTERPRISES
	MAUI DISCOUNT RENT A CAR
	REPUBLIC PARKING SYSTEMS
	S T AIRCRAFT SVC
	TIARE ENTERPRISES
	TRANSPORTATION DEPT
	UNITED AIRLINES
	US AGRICULTURE DEPT
	W H SMITH

APPENDIX H

STATE OF HAWAII DEPARTMENT OF HEALTH
"NO FURTHER ACTION" LETTERS

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

LORETTA J. FUDDY, A.C.S.W., M.P.H.
DIRECTOR OF HEALTH

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

In reply, please refer to:
File: 11-496-JP

August 26, 2011

Mr. Jeffrey Kermode, Environmental Manager
Maui Land & Pineapple Company, Inc.
870 Haliimaile Road
Makawao, Maui 96768

Sean O'Keefe, Director, Env. Affairs
Alexander & Baldwin, Inc.
PO Box 266
Puunene, Maui 96784

Facility/Site: Maui Pineapple Co. Ltd., Kane St. (former Seed Treatment site), TMK (2) 3-8-079: 013 (portion)

Subject: No Further Action (NFA) Determination at the former Maui Pineapple Company Seed Treatment facility, TMK (2) 3-8-079: 013 (portion), Kahului, Maui

Application: Limited to former Maui Pineapple Company seed treatment site operational areas

Dear Mr. Kermode and Mr. O'Keefe:

This letter is to inform you that the Hawaii Department of Health, (HDOH), Hazard Evaluation and Emergency Response Office (HEER) has reviewed Bureau Veritas and Maui Land & Pineapple Company reports dated June 24 and August 5, 2011 (respectively) describing the final response actions taken to address areas of Maui Pineapple Company's historic activities at the former Maui Pineapple Company (MPC) Seed Treatment facility, TMK (2) 3-8-079: 013 (portion), and has determined that the areas investigated at the site currently pose no threat to human health or the environment.

The latest response reports detail additional sampling for pesticides screen, carbamate herbicides, PAHs, metals, and TPH, as well as soil removal and follow-up confirmation sampling at one area. With the latest soil removal activity completed, all areas on the site that were sampled for past impacts from MPC activities were shown to be below applicable HDOH environmental action limits for unrestricted use.

The investigation was limited to areas that could have been impacted by MPC activities (from 1986 to 2007) while the site was under lease from A&B Properties. The reports noted the presence of a suspected former agricultural dump that may have impacted the deep soils on this mounded site, but did not evaluate this concern. Therefore, this NFA determination does not include the suspected agricultural dump area. The suspected dump area will be recorded in the HEER Office records as a separate environmental interest that must be resolved prior to any site activities that would disturb soils or increase risks of exposure to unknown materials in the dump.

Please be aware that if future information reveals that contaminant exposure at the above-mentioned site becomes a threat to public health, the environment, or natural resources, HDOH may require additional response actions to be taken.

Thank you. Should you have any questions concerning this site, please contact John Peard in our Hilo HEER Office at 933-9921, or john.peard@doh.hawaii.gov .

Sincerely,

Fenix Grange, Supervisor
Site Discovery, Assessment and Remediation Section
Hazard Evaluation and Emergency Response Office

DAVID Y. IGE
GOVERNOR OF HAWAII

VIRGINIA PRESSLER, M.D.
DIRECTOR OF HEALTH

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

In reply, please
refer to File:
17-180-JP

June 8, 2017

To: Mr. Sean O'Keefe, sokeefe@hcsugar.com
A&B Properties, Inc.
822 Bishop Street
Honolulu, Hawai'i 96814

Facility/Site: A&B Properties, Inc., Suspected Former Agriculture Deep Soil Dump

Subject: No Further Action (NFA) Determination for TMK (2) 3-8-79: Parcel 13, Lots 16, 17, 18, 19, and 20 (former Kahului Seed Plant and suspect agricultural dump site), Kahului, Maui (this NFA does not include Lot 6)

Dear Mr.O'Keefe:

This letter is to inform you that the Hawai'i Department of Health, (HDOH), Hazard Evaluation and Emergency Response Office (HEER Office) has reviewed the May 31, 2017 *Letter Report – Remedial Action Clearance Report* for the **Subject** site, describing the removal response actions taken at the former Kahului seed plant and suspect agricultural dump site, Kahului, Maui and has determined that Lots 16-20 at the site currently pose no threat to human health or the environment.

Thank you for your work in assessing and cleaning up lead and asbestos contamination discovered or stockpiled on these lots. Note that asbestos-impacted soils from Lots 16-20 was moved and capped on Lot 6 of this same site (TMK (2) 3-8-79: Parcel 13: Lot 6), but Lot 6 is not included in this NFA. We anticipate receiving a separate report on the reinternment and capping of contaminated soils on Lot 6, together with a long-term Environmental Hazard Management Plan (EHMP) for Lot 6 for review and decision regarding closure of this lot with institutional controls.

Please be aware that should any future information reveal that potential contaminant exposure at the site may represent a threat to public health, the environment, or natural resources, HDOH may require additional evaluation or response action.

If you have any questions regarding this letter or anticipated reporting needed for Lot 6, please contact John Peard, Remediation Project Manager, at 808-933-9921 or randall.peard@doh.hawaii.gov in Hilo. Thank you again for all your work over the last several years to address the soil contamination on Lots 16-20 of this site.

Sincerely,

P. Chng FOR S. MOW

Steven P. Mow, Site Discovery, Assessment, and Remediation Section Supervisor
Hazard Evaluation & Emergency Response Office
Hawai'i Department of Health

cc: Sharla Nakashima, ETC, LLC, sharla@gotoetc.com

APPENDIX I

REGULATORY DATABASE REPORT

6.315-Acre Property
Airport Road
Kahului, HI 96732

Inquiry Number: 4953403.2s
June 01, 2017

The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

TABLE OF CONTENTS

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

AIRPORT ROAD
KAHULUI, HI 96732

COORDINATES

Latitude (North):	20.8876370 - 20° 53' 15.49''
Longitude (West):	156.4444020 - 156° 26' 39.84''
Universal Tranverse Mercator:	Zone 4
UTM X (Meters):	765868.9
UTM Y (Meters):	2311690.8
Elevation:	46 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	5941605 PAIA, HI
Version Date:	2013
West Map:	5941607 WAILUKU, HI
Version Date:	2013

MAPPED SITES SUMMARY

Target Property Address:
AIRPORT ROAD
KAHULUI, HI 96732

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
1	HAWAII AIR NATIONAL	75 KULEANA ST BLDG 5	LUST, UST, Financial Assurance	Lower	371, 0.070, NNW
A2	PACIFIC AUTO MAINT &	603 HALEAKALA HWY	EDR Hist Auto	Lower	412, 0.078, WNW
A3	HI DOT HWY DIV (PMID	650 PALAPALA DR	UST	Lower	620, 0.117, WNW
A4	HAWAII STATE OF DEPA	650 PALAPALA DR	RCRA-SQG, FINDS, ECHO	Lower	620, 0.117, WNW
A5	FORMER CENTRAL POWER	590 HALEAKALA HWY	RCRA NonGen / NLR	Lower	647, 0.123, West
B6	D A G S CENTRAL SERV	755 MUA ST	RCRA NonGen / NLR, ECHO	Lower	677, 0.128, NW
B7	STATE OF HAWAII DEPA	755 MUA ST.	UST, Financial Assurance	Lower	677, 0.128, NW
8	DOTA BASE YARD (PMID	KAHULUI AIRPORT	UST, Financial Assurance	Lower	924, 0.175, North
9	DEPT OF WATER SUPPLY	614 PALAPALA DR WAIE	UST	Lower	949, 0.180, WNW
C10	DAVID PICO CESSPOOL	OLD HALEAKALA HWY	LUST, UST	Lower	1139, 0.216, WNW
D11	T SNIFFEN AND SONS L	687 KAHALE ST	RCRA NonGen / NLR, FINDS, ECHO	Lower	1193, 0.226, NW
D12	SHIMIZU & SONS CONST	685 KAHALE ST	UST, Financial Assurance	Lower	1194, 0.226, NW
C13	LENGO'S CONSTRUCTION	544 HALEAKALA HWY	UST	Lower	1303, 0.247, West
E14	ROBERTS TOURS AND TR	711 KAONAWAI PL	UST, Financial Assurance	Lower	1320, 0.250, NNW
E15	ROBERTS TOUR AND TRA	711 KAONAWAI PLACE	RCRA-CESQG, FINDS	Lower	1320, 0.250, NNW
16	ROBERT'S HAWAII (PMI	747 KAONAWAI ST (KAH	LUST, UST	Lower	1672, 0.317, North
17	COSTCO #119 MAUI ADD	540 HALEAKALA HWY	SHWS, VCP	Lower	1680, 0.318, West
18	NATIONAL CAR RENTAL	142 MOKUEA PL	LUST, UST, Financial Assurance	Lower	1957, 0.371, NNE
19	KAHULUI AIRPORT - MA	1 KAHULUI AIRPORT RO	LUST, UST, Financial Assurance	Lower	2047, 0.388, West
20	F & M CONTRACTORS, I	AMALA PLACE	SEMS	Lower	2182, 0.413, WNW
21	HI DOT AIRPORTS DIVI	KAHULUI AIRPORT	LUST, UST	Lower	2183, 0.413, NE
F22	HERTZ RENT-A-CAR FAC	KAHULUI AIRPORT 850	LUST, UST, Financial Assurance	Lower	2243, 0.425, North
G23	MECO TRANSFORMER 335	850 W MOKUEA PL	SHWS	Lower	2258, 0.428, NNE
G24	AVIS RENT-A-CAR SYST	884 W MOKUEA PL KAHU	LUST, UST, Financial Assurance	Lower	2276, 0.431, NNE
G25	BUDGET RENT-A-CAR SY	865 W MOKUEA PLACE	LUST, UST, Financial Assurance	Lower	2288, 0.433, NNE
26	SUNSHINE RENT-A-CAR	455 DAIRY RD	LUST, UST	Lower	2364, 0.448, West
F27	TRANS HAWAIIAN MAUI	845 PALAPALA DR	LUST, UST	Lower	2491, 0.472, North
G28	DISCOUNT RENT-A-CAR	935 E MOKUEA PL	LUST, UST	Lower	2493, 0.472, NNE
29	HAWTHORNE PACIFIC CO	470 HANA HWY	RCRA-CESQG, SHWS, LUST, UST, FINDS, ECHO	Lower	2553, 0.484, WSW
30	DAIRY ROAD SHELL	370 DAIRY RD	SHWS, LUST, UST, Financial Assurance	Lower	3044, 0.577, WSW
31	KAHULUI NAVAL AIR ST		FUDS	Lower	3747, 0.710, NE
32	HAWAII WOOD PRESERVI	356 HANAKAI ST	SHWS	Lower	3762, 0.712, West
33	ALII LINEN SERVICE (	312 ALAMAHA PL	SHWS, ENG CONTROLS, INST CONTROL	Lower	4227, 0.801, West
34	MAUI DISPOSAL COMPAN	221 LALO PL	SHWS, SPILLS	Lower	4653, 0.881, WSW
H35	KANAHA POND INDUSTRI	261 AMALA PL	SHWS	Lower	4759, 0.901, NW
H36	MAUI COUNTY WAILUKU	281 AMALA RD	SHWS, LUST, UST, Financial Assurance	Lower	4850, 0.919, WNW

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL ---------- National Priority List
Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL ---------- National Priority List Deletions

Federal CERCLIS list

FEDERAL FACILITY ---------- Federal Facility Site Information listing

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE ---------- Superfund Enterprise Management System Archive

Federal RCRA CORRACTS facilities list

CORRACTS ---------- Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF ---------- RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-LQG ---------- RCRA - Large Quantity Generators

Federal institutional controls / engineering controls registries

LUCIS ---------- Land Use Control Information System
US ENG CONTROLS ---------- Engineering Controls Sites List
US INST CONTROL ---------- Sites with Institutional Controls

Federal ERNS list

ERNS ---------- Emergency Response Notification System

State and tribal landfill and/or solid waste disposal site lists

SWF/LF ---- Permitted Landfills in the State of Hawaii

State and tribal leaking storage tank lists

INDIAN LUST ---- Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

FEMA UST ---- Underground Storage Tank Listing
INDIAN UST ---- Underground Storage Tanks on Indian Land

State and tribal institutional control / engineering control registries

ENG CONTROLS ---- Engineering Control Sites
INST CONTROL ---- Sites with Institutional Controls

State and tribal voluntary cleanup sites

INDIAN VCP ---- Voluntary Cleanup Priority Listing

State and tribal Brownfields sites

BROWNFIELDS ---- Brownfields Sites

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS ---- A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

INDIAN ODI ---- Report on the Status of Open Dumps on Indian Lands
DEBRIS REGION 9 ---- Torres Martinez Reservation Illegal Dump Site Locations
ODI ---- Open Dump Inventory
IHS OPEN DUMPS ---- Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL ---- Delisted National Clandestine Laboratory Register
CDL ---- Clandestine Drug Lab Listing
US CDL ---- National Clandestine Laboratory Register

Local Land Records

LIENS 2 ---- CERCLA Lien Information

Records of Emergency Release Reports

HMIRS ---- Hazardous Materials Information Reporting System
SPILLS ---- Release Notifications

SPILLS 90 ---- SPILLS 90 data from FirstSearch

Other Ascertainable Records

DOD ---- Department of Defense Sites
SCRD DRYCLEANERS ---- State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR ---- Financial Assurance Information
EPA WATCH LIST ---- EPA WATCH LIST
2020 COR ACTION ---- 2020 Corrective Action Program List
TSCA ---- Toxic Substances Control Act
TRIS ---- Toxic Chemical Release Inventory System
SSTS ---- Section 7 Tracking Systems
ROD ---- Records Of Decision
RMP ---- Risk Management Plans
RAATS ---- RCRA Administrative Action Tracking System
PRP ---- Potentially Responsible Parties
PADS ---- PCB Activity Database System
ICIS ---- Integrated Compliance Information System
FTTS ---- FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS ---- Material Licensing Tracking System
COAL ASH DOE ---- Steam-Electric Plant Operation Data
COAL ASH EPA ---- Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER ---- PCB Transformer Registration Database
RADINFO ---- Radiation Information Database
HIST FTTS ---- FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS ---- Incident and Accident Data
CONSENT ---- Superfund (CERCLA) Consent Decrees
INDIAN RESERV ---- Indian Reservations
FUSRAP ---- Formerly Utilized Sites Remedial Action Program
UMTRA ---- Uranium Mill Tailings Sites
LEAD SMELTERS ---- Lead Smelter Sites
US AIRS ---- Aerometric Information Retrieval System Facility Subsystem
US MINES ---- Mines Master Index File
ABANDONED MINES ---- Abandoned Mines
FINDS ---- Facility Index System/Facility Registry System
UXO ---- Unexploded Ordnance Sites
DOCKET HWC ---- Hazardous Waste Compliance Docket Listing
ECHO ---- Enforcement & Compliance History Information
FUELS PROGRAM ---- EPA Fuels Program Registered Listing
AIRS ---- List of Permitted Facilities
DRYCLEANERS ---- Permitted Drycleaner Facility Listing
Financial Assurance ---- Financial Assurance Information Listing
UIC ---- Underground Injection Wells Listing

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP ---- EDR Proprietary Manufactured Gas Plants
EDR Hist Cleaner ---- EDR Exclusive Historic Dry Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA HWS ---- Recovered Government Archive State Hazardous Waste Facilities List

EXECUTIVE SUMMARY

RGA LF ---------- Recovered Government Archive Solid Waste Facilities List
RGA LUST ---------- Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Federal CERCLIS list

SEMS: SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

A review of the SEMS list, as provided by EDR, and dated 02/07/2017 has revealed that there is 1 SEMS site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
F & M CONTRACTORS, I	AMALA PLACE	WNW 1/4 - 1/2 (0.413 mi.)	20	30

Federal RCRA generators list

RCRA-SQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

A review of the RCRA-SQG list, as provided by EDR, and dated 12/12/2016 has revealed that there is 1 RCRA-SQG site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
HAWAII STATE OF DEPA	***650 PALAPALA DR***	***WNW 0 - 1/8 (0.117 mi.)***	***A4***	***10***

RCRA-CESQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

A review of the RCRA-CESQG list, as provided by EDR, and dated 12/12/2016 has revealed that there is 1 RCRA-CESQG site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
ROBERTS TOUR AND TRA	***711 KAONAWAI PLACE***	***NNW 1/8 - 1/4 (0.250 mi.)***	***E15***	***23***

State- and tribal - equivalent CERCLIS

SHWS: The State Hazardous Waste Sites records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. The data come from the Department of Health.

A review of the SHWS list, as provided by EDR, and dated 09/23/2016 has revealed that there are 9 SHWS sites within approximately 1 mile of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
COSTCO #119 MAUI ADD	***540 HALEAKALA HWY***	***W 1/4 - 1/2 (0.318 mi.)***	***17***	***25***
MECO TRANSFORMER 335	850 W MOKUEA PL	NNE 1/4 - 1/2 (0.428 mi.)	G23	35
HAWTHORNE PACIFIC CO	***470 HANA HWY***	***WSW 1/4 - 1/2 (0.484 mi.)***	***29***	***42***
DAIRY ROAD SHELL	***370 DAIRY RD***	***WSW 1/2 - 1 (0.577 mi.)***	***30***	***47***
HAWAII WOOD PRESERVI	356 HANAKAI ST	W 1/2 - 1 (0.712 mi.)	32	50
ALII LINEN SERVICE (	***312 ALAMAHA PL***	***W 1/2 - 1 (0.801 mi.)***	***33***	***50***
MAUI DISPOSAL COMPAN	***221 LALO PL***	***WSW 1/2 - 1 (0.881 mi.)***	***34***	***52***
KANAHA POND INDUSTRI	261 AMALA PL	NW 1/2 - 1 (0.901 mi.)	H35	54
MAUI COUNTY WAILUKU	***281 AMALA RD***	***WNW 1/2 - 1 (0.919 mi.)***	***H36***	***55***

State and tribal leaking storage tank lists

LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the Department of Health's Active Leaking Underground Storage Tank Log Listing.

A review of the LUST list, as provided by EDR, and dated 11/18/2016 has revealed that there are 13 LUST sites within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
HAWAII AIR NATIONAL	***75 KULEANA ST BLDG 5***	***NNW 0 - 1/8 (0.070 mi.)***	***1***	***8***
Release ID: 980054				
Release ID: 980057				
Release ID: 980058				
Facility Id: 9-502879				
Facility Status: Site Cleanup Completed (NFA)				
DAVID PICO CESSPOOL	***OLD HALEAKALA HWY***	***WNW 1/8 - 1/4 (0.216 mi.)***	***C10***	***16***

Release ID: 940038
Facility Id: 9-501585
Facility Status: Site Cleanup Completed (NFA)

ROBERT'S HAWAII (PMI	***747 KAONAWAI ST (KAH***	***N 1/4 - 1/2 (0.317 mi.)***	***16***	***24***

Release ID: 990027
Facility Id: 9-501303
Facility Status: Site Cleanup Completed (NFA)

NATIONAL CAR RENTAL	***142 MOKUEA PL***	***NNE 1/4 - 1/2 (0.371 mi.)***	***18***	***26***

Release ID: 080045
Release ID: 880010
Facility Id: 9-501619
Facility Status: Site Cleanup Completed (NFA)

KAHULUI AIRPORT - MA	***1 KAHULUI AIRPORT RO***	***W 1/4 - 1/2 (0.388 mi.)***	***19***	***28***

Release ID: 980049
Facility Id: 9-500370
Facility Status: Site Cleanup Completed (NFA)

HI DOT AIRPORTS DIVI	***KAHULUI AIRPORT***	***NE 1/4 - 1/2 (0.413 mi.)***	***21***	***31***

Release ID: 950121
Facility Id: 9-503014
Facility Status: Site Cleanup Completed (NFA)

HERTZ RENT-A-CAR FAC	***KAHULUI AIRPORT 850***	***N 1/4 - 1/2 (0.425 mi.)***	***F22***	***32***

Release ID: 890026
Facility Id: 9-501591
Facility Status: Site Cleanup Completed (NFA)

AVIS RENT-A-CAR SYST	***884 W MOKUEA PL KAHU***	***NNE 1/4 - 1/2 (0.431 mi.)***	***G24***	***36***

Release ID: 880008
Release ID: 960091
Facility Id: 9-501890
Facility Status: Site Cleanup Completed (NFA)

BUDGET RENT-A-CAR SY	***865 W MOKUEA PLACE***	***NNE 1/4 - 1/2 (0.433 mi.)***	***G25***	***39***

Release ID: 910082
Release ID: 970006
Release ID: 060021
Facility Id: 9-502466
Facility Status: Site Cleanup Completed (NFA)

SUNSHINE RENT-A-CAR	***455 DAIRY RD***	***W 1/4 - 1/2 (0.448 mi.)***	***26***	***40***

Release ID: 040018
Facility Id: 9-501565
Facility Status: Site Cleanup Completed (NFA)

TRANS HAWAIIAN MAUI	***845 PALAPALA DR***	***N 1/4 - 1/2 (0.472 mi.)***	***F27***	***41***

Release ID: 940001
Facility Id: 9-501583
Facility Status: Site Cleanup Completed (NFA)

DISCOUNT RENT-A-CAR	***935 E MOKUEA PL***	***NNE 1/4 - 1/2 (0.472 mi.)***	***G28***	***41***

Release ID: 930058
Facility Id: 9-507014
Facility Status: Site Cleanup Completed (NFA)

HAWTHORNE PACIFIC CO	***470 HANA HWY***	***WSW 1/4 - 1/2 (0.484 mi.)***	***29***	***42***

Release ID: 940009
Release ID: 040044
Facility Id: 9-500668

Facility Status: Site Cleanup Completed (NFA)

State and tribal registered storage tank lists

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Department of Health's Listing of Underground Storage Tanks.

A review of the UST list, as provided by EDR, and dated 11/18/2016 has revealed that there are 9 UST sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
HAWAII AIR NATIONAL Tank Status: Permanently Out of Use Facility Id: 9-502879 Date Closed: 01/11/1996	***75 KULEANA ST BLDG 5***	***NNW 0 - 1/8 (0.070 mi.)***	***1***	***8***
HI DOT HWY DIV (PMID Tank Status: Permanently Out of Use Facility Id: 9-501578 Date Closed: 05/10/1994	650 PALAPALA DR	WNW 0 - 1/8 (0.117 mi.)	A3	9
STATE OF HAWAII DEPA Tank Status: Permanently Out of Use Tank Status: Currently In Use Facility Id: 9-503369 Date Closed: 01/01/1995	***755 MUA ST.***	***NW 1/8 - 1/4 (0.128 mi.)***	***B7***	***15***
DOTA BASE YARD (PMID Tank Status: Permanently Out of Use Facility Id: 9-503339 Date Closed: 07/29/1995	***KAHULUI AIRPORT***	***N 1/8 - 1/4 (0.175 mi.)***	***8***	***15***
DEPT OF WATER SUPPLY Tank Status: Permanently Out of Use Facility Id: 9-501741 Date Closed: 07/28/1994	614 PALAPALA DR WAIE	WNW 1/8 - 1/4 (0.180 mi.)	9	16
DAVID PICO CESSPOOL Tank Status: Permanently Out of Use Facility Id: 9-501585	***OLD HALEAKALA HWY***	***WNW 1/8 - 1/4 (0.216 mi.)***	***C10***	***16***
SHIMIZU & SONS CONST Tank Status: Permanently Out of Use Facility Id: 9-500412 Date Closed: 09/05/1995	***685 KAHALE ST***	***NW 1/8 - 1/4 (0.226 mi.)***	***D12***	***20***
LENGO'S CONSTRUCTION Tank Status: Permanently Out of Use Facility Id: 9-502719 Date Closed: 03/18/1993	544 HALEAKALA HWY	W 1/8 - 1/4 (0.247 mi.)	C13	21
ROBERTS TOURS AND TR Tank Status: Currently in Use Facility Id: 9-500675	***711 KAONAWAI PL***	***NNW 1/8 - 1/4 (0.250 mi.)***	***E14***	***22***

State and tribal voluntary cleanup sites

VCP: Voluntary Response Program Sites.

A review of the VCP list, as provided by EDR, and dated 09/23/2016 has revealed that there is 1 VCP site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
COSTCO #119 MAUI ADD	***540 HALEAKALA HWY***	***W 1/4 - 1/2 (0.318 mi.)***	***17***	***25***

ADDITIONAL ENVIRONMENTAL RECORDS

Other Ascertainable Records

RCRA NonGen / NLR: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 12/12/2016 has revealed that there are 3 RCRA NonGen / NLR sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
FORMER CENTRAL POWER	590 HALEAKALA HWY	W 0 - 1/8 (0.123 mi.)	A5	12
D A G S CENTRAL SERV	***755 MUA ST***	***NW 1/8 - 1/4 (0.128 mi.)***	***B6***	***13***
T SNIFFEN AND SONS L	***687 KAHALE ST***	***NW 1/8 - 1/4 (0.226 mi.)***	***D11***	***17***

FUDS: The Listing includes locations of Formerly Used Defense Sites Properties where the US Army Corps Of Engineers is actively working or will take necessary cleanup actions.

A review of the FUDS list, as provided by EDR, and dated 01/31/2015 has revealed that there is 1 FUDS site within approximately 1 mile of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
KAHULUI NAVAL AIR ST		NE 1/2 - 1 (0.710 mi.)	31	49

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR Hist Auto: EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not

limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

A review of the EDR Hist Auto list, as provided by EDR, has revealed that there is 1 EDR Hist Auto site within approximately 0.125 miles of the target property.

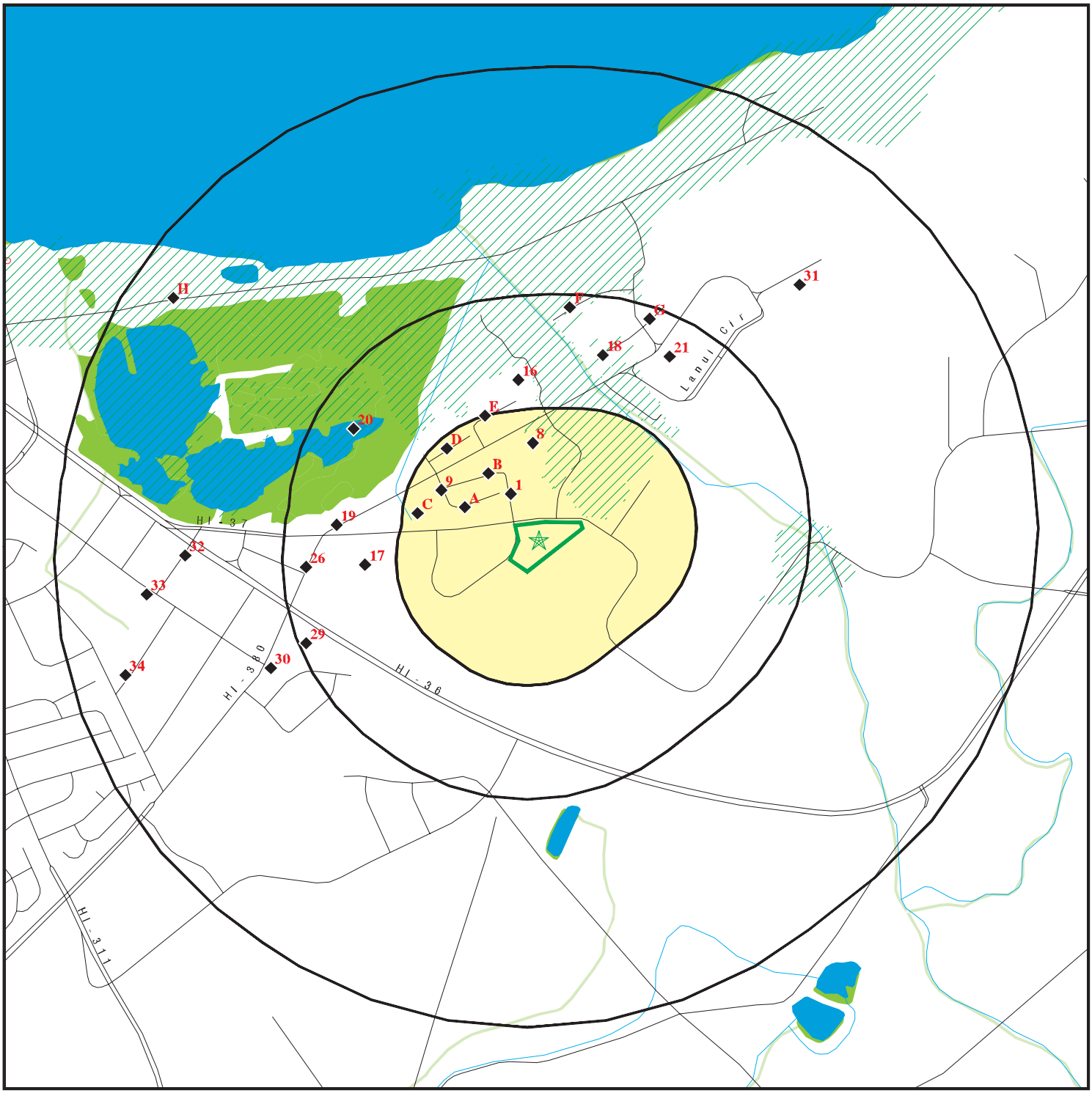
Lower Elevation	Address	Direction / Distance	Map ID	Page
PACIFIC AUTO MAINT &	603 HALEAKALA HWY	WNW 0 - 1/8 (0.078 mi.)	A2	9

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 8 records.

Site Name	Database(s)
KANAHA POND EAST	SEMS-ARCHIVE, SHWS
MECO STATION-CLASS TRANSFORMER NO.	SHWS, SPILLS
MECO PAD-MOUNT TRANSFORMER NO. 137	SHWS
CENTRAL POWER PLANT ELECTRICAL SUB	SHWS, INST CONTROL
MAUI PINEAPPLE CO LTD, SEED TREATM	SHWS
A&B CENTRAL POWER PLANT PIPELINES	SHWS
A&B PROPERTIES, INC., SUSPECTED FO	SHWS
A&B DUMP SITE	SHWS

OVERVIEW MAP - 4953403.2S



Target Property
Sites at elevations higher than or equal to the target property
Sites at elevations lower than the target property
Manufactured Gas Plants
National Priority List Sites
Dept. Defense Sites

0 1/4 1/2 1 Miles

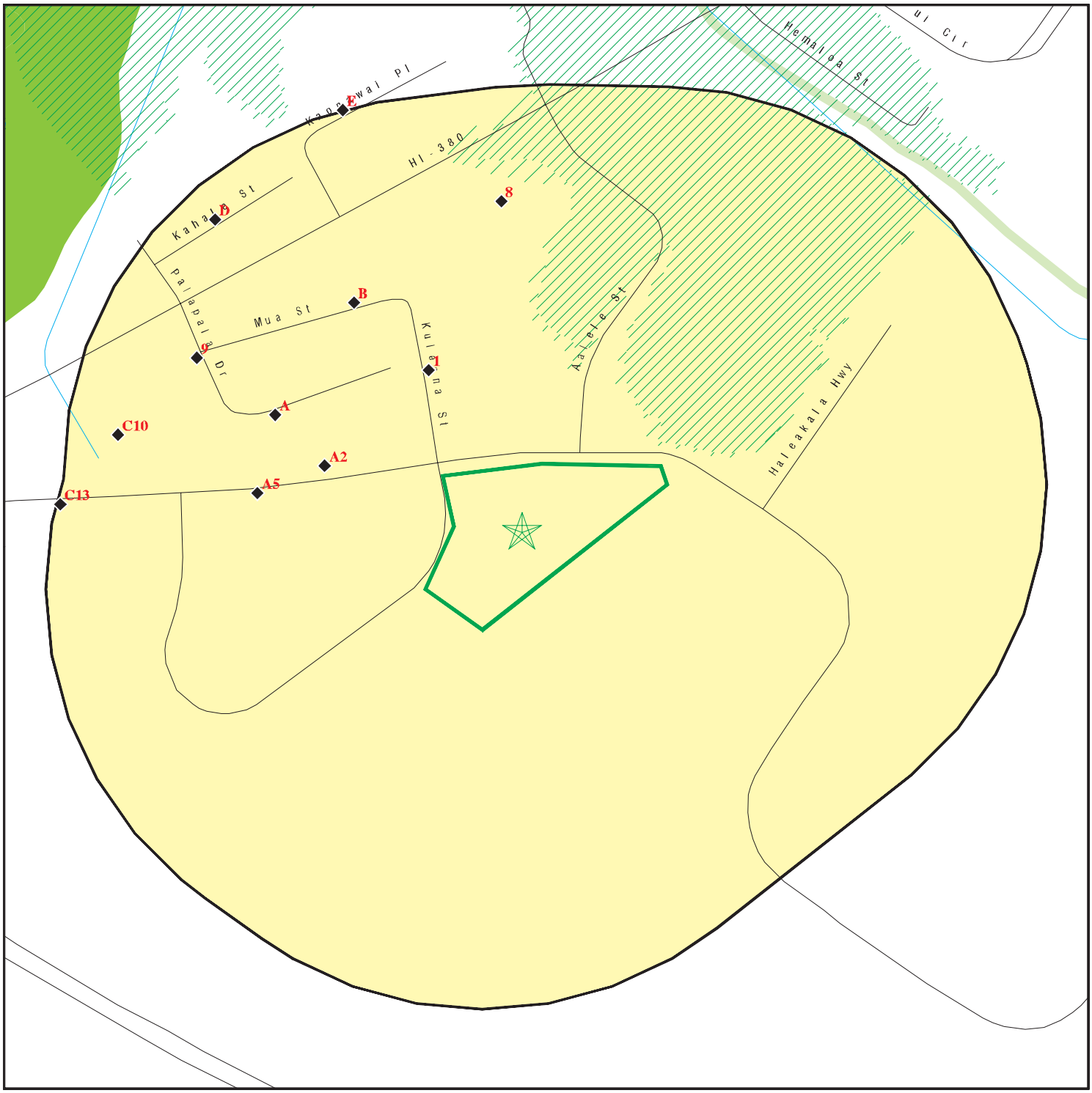
Indian Reservations BIA
Power transmission lines
100-year flood zone
500-year flood zone
National Wetland Inventory
State Wetlands

N

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	6.315-Acre Property	CLIENT:	Ford Canty Associates, Inc.
ADDRESS:	Airport Road Kahului HI 96732	CONTACT:	Tim Swartz
LAT/LONG:	20.887637 / 156.444402	INQUIRY #:	4953403.2s
		DATE:	June 01, 2017 1:55 pm

DETAIL MAP - 4953403.2S



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

Sensitive Receptors

National Priority List Sites

Dept. Defense Sites

0 1/16 1/8 1/4 Miles

Indian Reservations BIA

100-year flood zone

500-year flood zone

National Wetland Inventory

State Wetlands

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: 6.315-Acre Property ADDRESS: Airport Road Kahului HI 96732 LAT/LONG: 20.887637 / 156.444402	CLIENT: Ford Canty Associates, Inc. CONTACT: Tim Swartz INQUIRY #: 4953403.2s DATE: June 01, 2017 1:56 pm

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	0.001		0	NR	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	1	NR	NR	1
Federal CERCLIS NFRAP site list								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		1	0	NR	NR	NR	1
RCRA-CESQG	0.250		0	1	NR	NR	NR	1
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROL	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	0.001		0	NR	NR	NR	NR	0
State- and tribal - equivalent CERCLIS								
SHWS	1.000		0	0	3	6	NR	9
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	0.500		0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
LUST	0.500		1	1	11	NR	NR	13
INDIAN LUST	0.500		0	0	0	NR	NR	0
State and tribal registered storage tank lists								
FEMA UST	0.250		0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
UST	0.250		2	7	NR	NR	NR	9
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal institutional control / engineering control registries								
ENG CONTROLS	0.500		0	0	0	NR	NR	0
INST CONTROL	0.500		0	0	0	NR	NR	0
State and tribal voluntary cleanup sites								
INDIAN VCP	0.500		0	0	0	NR	NR	0
VCP	0.500		0	0	1	NR	NR	1
State and tribal Brownfields sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
INDIAN ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	0.001		0	NR	NR	NR	NR	0
CDL	0.001		0	NR	NR	NR	NR	0
US CDL	0.001		0	NR	NR	NR	NR	0
Local Land Records								
LIENS 2	0.001		0	NR	NR	NR	NR	0
Records of Emergency Release Reports								
HMIRS	0.001		0	NR	NR	NR	NR	0
SPILLS	0.001		0	NR	NR	NR	NR	0
SPILLS 90	0.001		0	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		1	2	NR	NR	NR	3
FUDS	1.000		0	0	0	1	NR	1
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	0.001		0	NR	NR	NR	NR	0
EPA WATCH LIST	0.001		0	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	0.001		0	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
TRIS	0.001		0	NR	NR	NR	NR	0
SSTS	0.001		0	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	0.001		0	NR	NR	NR	NR	0
RAATS	0.001		0	NR	NR	NR	NR	0
PRP	0.001		0	NR	NR	NR	NR	0
PADS	0.001		0	NR	NR	NR	NR	0
ICIS	0.001		0	NR	NR	NR	NR	0
FTTS	0.001		0	NR	NR	NR	NR	0
MLTS	0.001		0	NR	NR	NR	NR	0
COAL ASH DOE	0.001		0	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	0.001		0	NR	NR	NR	NR	0
RADINFO	0.001		0	NR	NR	NR	NR	0
HIST FTTS	0.001		0	NR	NR	NR	NR	0
DOT OPS	0.001		0	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	0.001		0	NR	NR	NR	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	0.001		0	NR	NR	NR	NR	0
US AIRS	0.001		0	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.001		0	NR	NR	NR	NR	0
FINDS	0.001		0	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
DOCKET HWC	0.001		0	NR	NR	NR	NR	0
ECHO	0.001		0	NR	NR	NR	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
AIRS	0.001		0	NR	NR	NR	NR	0
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
Financial Assurance	0.001		0	NR	NR	NR	NR	0
UIC	0.001		0	NR	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		1	NR	NR	NR	NR	1
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA HWS	0.001		0	NR	NR	NR	NR	0
RGA LF	0.001		0	NR	NR	NR	NR	0
RGA LUST	0.001		0	NR	NR	NR	NR	0
- Totals --		0	6	11	16	7	0	40

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

1
NNW
< 1/8
0.070 mi.
371 ft.

HAWAII AIR NATIONAL GUARD - 292 CBCS (PMID OGG0061
75 KULEANA ST BLDG 502 TANK 502-1 502-2 502-3
KAHULUI, HI 96732

LUST
UST
Financial Assurance

U003222266
N/A

Relative:
Lower

Actual:
33 ft.

LUST:

Facility ID:	9-502879
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	10/16/2000
Release ID:	980054
Project Officer:	Shaobin Li

Facility ID:	9-502879
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	11/01/2000
Release ID:	980057
Project Officer:	Shaobin Li

Facility ID:	9-502879
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	11/14/2000
Release ID:	980058
Project Officer:	Shaobin Li

UST:

Facility ID:	9-502879
Owner:	STATE DOD - HAWAII AIR NATIONAL GUARD
Owner Address:	3949 DIAMOND HEAD ROAD
Owner City,St,Zip:	Kahului, 96732 96732
Latitude:	20.889997
Longitude:	-156.445397
Horizontal Reference Datum Name:	NAD83
Horizontal Collection Method Name:	Map

Tank ID:	R-502-1
Date Installed:	12/01/1983
Tank Status:	**Permanently Out of Use**
Date Closed:	01/11/1996
Tank Capacity:	1000
Substance:	Gasoline

Tank ID:	R-502-2
Date Installed:	12/01/1983
Tank Status:	**Permanently Out of Use**
Date Closed:	01/11/1996
Tank Capacity:	1000
Substance:	Diesel

Tank ID:	R-502-3
Date Installed:	12/01/1983
Tank Status:	**Permanently Out of Use**
Date Closed:	01/11/1996
Tank Capacity:	550
Substance:	Used Oil

HAWAII AIR NATIONAL GUARD - 292 CBCS (PMID OGG006108) 292 CB (Continued) **U003222266**

HI Financial Assurance:

Alt Facility ID:	9-502879
Tank Id:	R-502-1
Tank Status:	Permanently Out of Use
FRTYPE:	Self Insured
Expiration Date:	Not reported
Alt Facility ID:	9-502879
Tank Id:	R-502-2
Tank Status:	Permanently Out of Use
FRTYPE:	Self Insured
Expiration Date:	Not reported
Alt Facility ID:	9-502879
Tank Id:	R-502-3
Tank Status:	Permanently Out of Use
FRTYPE:	Self Insured
Expiration Date:	Not reported

A2 **PACIFIC AUTO MAINT & REPR** **EDR Hist Auto** **1021514848**
WNW **603 HALEAKALA HWY** **N/A**
< 1/8 **KAHULUI, HI 96732**
0.078 mi.
412 ft. **Site 1 of 4 in cluster A**

Relative:
Lower

Actual:
21 ft.

EDR Hist Auto

Year:	Name:	Type:
1986	PACIFIC AUTO MAINTENANCE & RP	General Automotive Repair Shops
1987	PACIFIC AUTO MAINTENANCE & RP	General Automotive Repair Shops
1988	PACIFIC AUTO MAINT & REPR	General Automotive Repair Shops
1989	PACIFIC AUTO MAINT & REPR	General Automotive Repair Shops
1990	PACIFIC AUTO MAINT & REPR	General Automotive Repair Shops
1991	PACIFIC AUTO MAINT & REPR	General Automotive Repair Shops
1992	PACIFIC AUTO MAINT & REPR	General Automotive Repair Shops
1993	PACIFIC AUTO MAINT & REPR	General Automotive Repair Shops

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A3 **HI DOT HWY DIV (PMID OGG006111)** **UST** **U001236765**
WNW **650 PALAPALA DR** **N/A**
< 1/8 **KAHULUI, HI 96732**
0.117 mi.
620 ft. **Site 2 of 4 in cluster A**

Relative:
Lower

Actual:
16 ft.

UST:

Facility ID:	9-501578
Owner:	STATE DOT - HIGHWAYS DIVISION
Owner Address:	Not reported
Owner City,St,Zip:	Kahului, 96732 96732
Latitude:	Not reported
Longitude:	Not reported
Horizontal Reference Datum Name:	Not reported
Horizontal Collection Method Name:	Not reported
Tank ID:	R-1
Date Installed:	02/07/1980
Tank Status:	**Permanently Out of Use**

HI DOT HWY DIV (PMID OGG006111) (Continued) **U001236765**

Date Closed: 05/10/1994
Tank Capacity: 2000
Substance: Gasoline

Tank ID: R-2
Date Installed: 02/07/1980
Tank Status: **Permanently Out of Use**
Date Closed: 05/10/1994
Tank Capacity: 1000
Substance: Gasoline

Tank ID: R-3
Date Installed: 02/07/1980
Tank Status: **Permanently Out of Use**
Date Closed: 05/10/1994
Tank Capacity: 2000
Substance: Diesel

A4 **HAWAII STATE OF DEPARTMENT OF TRANSPORTA** **RCRA-SQG** **1004689046**
WNW **650 PALAPALA DR** **FINDS** **HIR000098517**
< 1/8 **KAHULUI, HI 96732** **ECHO**
0.117 mi.
620 ft. **Site 3 of 4 in cluster A**

Relative:
Lower

Actual:
16 ft.

RCRA-SQG:
Date form received by agency: 06/15/2001
Facility name: HAWAII STATE OF DEPARTMENT OF TRANSPORTA
Facility address: 650 PALAPALA DR
HIGHWAYS DIVISION MAUI DIST
KAHULUI, HI 96732
EPA ID: HIR000098517
Contact: DONNA FUJIOKA
Contact address: 650 PALAPALA DR HIGHWAYS DIVISION MAUI DIST
KAHULUI, HI 96732
Contact country: US
Contact telephone: (808) 873-3535
Contact email: Not reported
EPA Region: 09
Land type: State
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: HAWAII STATE OF DEPT OF TRANSPORTATION
Owner/operator address: KAHULUI AIRPORT TERMINAL BOX 1
KAHULUI, HI 96732
Owner/operator country: Not reported
Owner/operator telephone: (808) 872-3800
Legal status: State
Owner/Operator Type: Owner
Owner/Op start date: Not reported

HAWAII STATE OF DEPARTMENT OF TRANSPORTA (Continued) **1004689046**

Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

. Waste code: D035
. Waste name: METHYL ETHYL KETONE

Violation Status: No violations found

Evaluation Action Summary:
Evaluation date: 02/21/2007
Evaluation: FOLLOW-UP INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

FINDS:

Registry ID: 110012198870

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

STATE MASTER

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

HAWAII STATE OF DEPARTMENT OF TRANSPORTA (Continued) **1004689046**

Envid: 1004689046
Registry ID: 110012198870
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110012198870

A5
West
< 1/8
0.123 mi.
647 ft.

FORMER CENTRAL POWER PLANT **RCRA NonGen / NLR** **1014389622**
590 HALEAKALA HWY **HIP000139907**
KAHULUI, HI 96793

Site 4 of 4 in cluster A

Relative:
Lower

Actual:
19 ft.

RCRA NonGen / NLR:
Date form received by agency: 03/09/2015
Facility name: FORMER CENTRAL POWER PLANT
Facility address: 590 HALEAKALA HWY
KAHULUI, HI 96793
EPA ID: HIP000139907
Mailing address: PO BOX 266
PUUNENE, HI 96784
Contact: SEAN M O'KEEFE
Contact address: PO BOX 266
PUUNENE, HI 96784
Contact country: US
Contact telephone: (808) 877-2959
Contact email: SOKEEFE@HCSUGAR.COM
EPA Region: 09
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: ALEXANDER & BALDWIN, INC.
Owner/operator address: 822 BISHOP ST
HONOLULU, HI 96813
Owner/operator country: US
Owner/operator telephone: (808) 871-7663
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 01/01/1900
Owner/Op end date: Not reported

Owner/operator name: ALEXANDER & BALDWIN, INC.
Owner/operator address: 822 BISHOP ST
HONOLULU, HI 96813
Owner/operator country: US
Owner/operator telephone: (808) 871-7663
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 01/01/1900
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No

FORMER CENTRAL POWER PLANT (Continued) **1014389622**

Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 09/23/2010
Site name: FORMER CENTRAL POWER PLANT
Classification: Small Quantity Generator

. Waste code: D008
. Waste name: LEAD

Violation Status: No violations found

B6 **D A G S CENTRAL SERVICES MAUI** **RCRA NonGen / NLR** **1010316449**
NW **755 MUA ST** **ECHO** **HIP000109611**
1/8-1/4 **KAHULUI, HI 96732**
0.128 mi.
677 ft. **Site 1 of 2 in cluster B**

Relative:
Lower

Actual:
20 ft.

RCRA NonGen / NLR:
Date form received by agency: 05/29/2007
Facility name: D A G S CENTRAL SERVICES MAUI
Facility address: 755 MUA ST
KAHULUI, HI 967322346
EPA ID: HIP000109611
Contact: JERRY TAMANAHA
Contact address: 755 MUA ST
KAHULUI, HI 967322346
Contact country: US
Contact telephone: (808) 877-3305
Contact email: Not reported
EPA Region: 09
Land type: State
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: DEPT OF TRANSP MAUI
Owner/operator address: KAHULUI AIRPORT
KAHULUI, HI 96732
Owner/operator country: Not reported
Owner/operator telephone: (808) 872-3830
Legal status: State
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No

D A G S CENTRAL SERVICES MAUI (Continued) **1010316449**

Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Historical Generators:

Date form received by agency: 11/29/2001
Site name: D A G S CENTRAL SERVICES MAUI
Classification: Large Quantity Generator

. Waste code: F003
. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F005
. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Violation Status: No violations found

Evaluation Action Summary:

Evaluation date: 09/30/2005
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

ECHO:

Envid: 1010316449
Registry ID: 110014050472
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110014050472

B7
NW
1/8-1/4
0.128 mi.
677 ft.

STATE OF HAWAII DEPARTMENT OF GENERAL SERVICES
755 MUA ST.
KAHULUI, HI 96732

Site 2 of 2 in cluster B

UST **U003346421**
Financial Assurance **N/A**

Relative:
Lower

Actual:
20 ft.

UST:

Facility ID:	9-503369
Owner:	STATE Of HAWAII - DAGS
Owner Address:	P.O. BOX 1030
Owner City,St,Zip:	Kahului, 96732 96732
Latitude:	20.890680
Longitude:	-156.445530
Horizontal Reference Datum Name:	NAD83
Horizontal Collection Method Name:	GPS
Tank ID:	1
Date Installed:	10/01/1993
Tank Status:	**Currently In Use**
Date Closed:	Not reported
Tank Capacity:	6000
Substance:	Gasoline
Tank ID:	R-2
Date Installed:	Not reported
Tank Status:	**Permanently Out of Use**
Date Closed:	01/01/1995
Tank Capacity:	6000
Substance:	Not Listed

HI Financial Assurance:

Alt Facility ID:	9-503369
Tank Id:	1
Tank Status:	Currently In Use
FRTYPE:	Other
Expiration Date:	Not reported
Alt Facility ID:	9-503369
Tank Id:	R-2
Tank Status:	Permanently Out of Use
FRTYPE:	Other
Expiration Date:	Not reported

8
North
1/8-1/4
0.175 mi.
924 ft.

DOTA BASE YARD (PMID OGG005115)
KAHULUI AIRPORT
KAHULUI, HI 96732

UST **U003402945**
Financial Assurance **N/A**

Relative:
Lower

Actual:
22 ft.

UST:

Facility ID:	9-503339
Owner:	ALAMO RENT A CAR
Owner Address:	KEAHOLE U DRIVE BASEYARD LOT 002115A
Owner City,St,Zip:	Kahului, 96732 96732
Latitude:	20.890783
Longitude:	-156.444610
Horizontal Reference Datum Name:	NAD83
Horizontal Collection Method Name:	GPS

DOTA BASE YARD (PMID OGG005115) (Continued) **U003402945**

Tank ID:	R-1
Date Installed:	Not reported
Tank Status:	**Permanently Out of Use**
Date Closed:	07/29/1995
Tank Capacity:	1500
Substance:	Diesel

HI Financial Assurance:

Alt Facility ID:	9-503339
Tank Id:	R-1
Tank Status:	Permanently Out of Use
FRTYPE:	Not Listed
Expiration Date:	Not reported

---

9 **DEPT OF WATER SUPPLY (PMID OGG008102)** **UST** **U003402932**
WNW **614 PALAPALA DR WAIEHU HEIGHTS** **N/A**
1/8-1/4 **KAHULUI, HI 96732**
0.180 mi.
949 ft.

Relative:
Lower

Actual:
13 ft.

UST:

Facility ID:	9-501741
Owner:	COUNTY OF MAUI - DEPT OF WATER SUPPLY
Owner Address:	614 PALAPALA DR
Owner City,St,Zip:	Kahului, 96732 96732
Latitude:	Not reported
Longitude:	Not reported
Horizontal Reference Datum Name:	Not reported
Horizontal Collection Method Name:	Not reported

Tank ID:	R-1
Date Installed:	Not reported
Tank Status:	**Permanently Out of Use**
Date Closed:	07/28/1994
Tank Capacity:	1000
Substance:	Diesel

C10 **DAVID PICO CESSPOOL DIGGING** **LUST** **U001236769**
WNW **OLD HALEAKALA HWY** **UST** **N/A**
1/8-1/4 **KAHULUI, HI 96732**
0.216 mi.
1139 ft. **Site 1 of 2 in cluster C**

Relative:
Lower

Actual:
13 ft.

LUST:

Facility ID:	9-501585
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	05/09/1994
Release ID:	940038
Project Officer:	Steven Okoji

UST:

Facility ID:	9-501585
Owner:	DAVID PICO
Owner Address:	343 ALU RD
Owner City,St,Zip:	Kahului, 96732 96732

DAVID PICO CESSPOOL DIGGING (Continued) **U001236769**

Latitude:	20.888547
Longitude:	-156.448515
Horizontal Reference Datum Name:	Not reported
Horizontal Collection Method Name:	Not reported
Tank ID:	R-1
Date Installed:	Not reported
Tank Status:	**Permanently Out of Use**
Date Closed:	Not reported
Tank Capacity:	2000
Substance:	Diesel

D11 **T SNIFFEN AND SONS LLC** **RCRA NonGen / NLR** **1005904975**
NW **687 KAHALE ST** **FINDS** **HIR000122275**
1/8-1/4 **KAHULUI, HI 96732** **ECHO**
0.226 mi.
1193 ft. **Site 1 of 2 in cluster D**

Relative:
Lower

Actual:
20 ft.

RCRA NonGen / NLR:

Date form received by agency:	04/10/2012
Facility name:	T SNIFFEN AND SONS LLC
Facility address:	687 KAHALE ST KAHULUI, HI 96732
EPA ID:	HIR000122275
Mailing address:	PO BOX 874 WAILUKU, HI 96793
Contact:	THEODORE A SNIFFEN
Contact address:	PO BOX 874 WAILUKU, HI 96793
Contact country:	US
Contact telephone:	808-871-7781
Telephone ext.:	301
Contact email:	Not reported
EPA Region:	09
Land type:	State
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	THEODORE A SNIFFEN
Owner/operator address:	Not reported Not reported
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	01/01/2007
Owner/Op end date:	Not reported
Owner/operator name:	SCOTT SNIFFEN
Owner/operator address:	NOT REQUIRED NOT REQUIRED, HI 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(999) 999-9999
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported

T SNIFFEN AND SONS LLC (Continued) **1005904975**

Owner/Op end date: Not reported

Owner/operator name: STATE OF HAWAII
Owner/operator address: 400 RODGERS BLVD STE 700
HONOLULU, HI 96819
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: State
Owner/Operator Type: Owner
Owner/Op start date: 01/01/1955
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 03/06/2008
Site name: T SNIFFEN AND SONS LLC
Classification: Not a generator, verified

Date form received by agency: 09/19/2002
Site name: T SNIFFEN AND SONS L L C
Classification: Not a generator, verified

Facility Has Received Notices of Violations:
Regulation violated: Not reported
Area of violation: TSD IS-Container Use and Management
Date violation determined: 10/27/2003
Date achieved compliance: 11/10/2010
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 10/27/2003
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Used Oil - Dust Suppressant and Disposal
Date violation determined: 10/27/2003

T SNIFFEN AND SONS LLC (Continued) **1005904975**

Date achieved compliance: 11/10/2010
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 10/27/2003
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Federal or State Statute
Date violation determined: 10/27/2003
Date achieved compliance: 11/10/2010
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 10/27/2003
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Used Oil - Generators
Date violation determined: 10/27/2003
Date achieved compliance: 11/10/2010
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 10/27/2003
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Evaluation Action Summary:
Evaluation date: 08/25/2003
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD IS-Container Use and Management
Date achieved compliance: 11/10/2010
Evaluation lead agency: State

Evaluation date: 08/25/2003
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Federal or State Statute
Date achieved compliance: 11/10/2010
Evaluation lead agency: State

Evaluation date: 08/25/2003
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Used Oil - Dust Suppressant and Disposal
Date achieved compliance: 11/10/2010
Evaluation lead agency: State

T SNIFFEN AND SONS LLC (Continued) **1005904975**

Evaluation date: 08/25/2003
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Used Oil - Generators
Date achieved compliance: 11/10/2010
Evaluation lead agency: State

FINDS:

Registry ID: 110012576499

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

STATE MASTER

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:
Envid: 1005904975
Registry ID: 110012576499
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110012576499

D12 **SHIMIZU & SONS CONSTRUCTION, INC** **UST** **U001236662**
NW **685 KAHALE ST** **Financial Assurance** **N/A**
1/8-1/4 **KAHULUI, HI 96732**
0.226 mi.
1194 ft. **Site 2 of 2 in cluster D**

Relative:
Lower

Actual:
20 ft.

UST:
Facility ID: 9-500412
Owner: SHIMIZU & SONS CONSTRUCTION, INC
Owner Address: 685 KAHALE ST
Owner City,St,Zip: Kahului, 96732 96732
Latitude: Not reported
Longitude: Not reported
Horizontal Reference Datum Name: Not reported
Horizontal Collection Method Name: Not reported

Tank ID: R-1
Date Installed: 04/12/1971
Tank Status: **Permanently Out of Use**
Date Closed: 09/05/1995
Tank Capacity: 6300
Substance: Diesel

Tank ID: R-2
Date Installed: 04/12/1971
Tank Status: **Permanently Out of Use**
Date Closed: 09/05/1995
Tank Capacity: 2500

SHIMIZU & SONS CONSTRUCTION, INC (Continued) **U001236662**

Substance: Gasoline

HI Financial Assurance:
Alt Facility ID: 9-500412
Tank Id: R-2
Tank Status: Permanently Out of Use
FRTYPE: Self Insured
Expiration Date: Not reported

Alt Facility ID: 9-500412
Tank Id: R-1
Tank Status: Permanently Out of Use
FRTYPE: Self Insured
Expiration Date: Not reported

C13 **LENGO'S CONSTRUCTION** **UST** **U003541900**
West **544 HALEAKALA HWY** **N/A**
1/8-1/4 **KAHULUI, HI 96732**
0.247 mi.
1303 ft. **Site 2 of 2 in cluster C**

Relative:
Lower

Actual:
19 ft.

UST:
Facility ID: 9-502719
Owner: LENGO CONSTRUCTION
Owner Address: 37 MAKAWAO AVE / P.O. BOX 297
Owner City,St,Zip: Kahului, 96732 96732
Latitude: Not reported
Longitude: Not reported
Horizontal Reference Datum Name: Not reported
Horizontal Collection Method Name: Not reported

Tank ID: R-1
Date Installed: Not reported
Tank Status: **Permanently Out of Use**
Date Closed: 03/18/1993
Tank Capacity: 2500
Substance: Gasoline

Tank ID: R-2
Date Installed: Not reported
Tank Status: **Permanently Out of Use**
Date Closed: 03/18/1993
Tank Capacity: 5000
Substance: Diesel

E14
NNW
1/8-1/4
0.250 mi.
1320 ft.

ROBERTS TOURS AND TRANSPORTATION, INC.
711 KAONAWAI PL
KAHULUI, HI 96732

Site 1 of 2 in cluster E

UST **U003155102**
Financial Assurance **N/A**

Relative:
Lower

Actual:
19 ft.

UST:

Facility ID:	9-500675
Owner:	STATE DOT - AIRPORTS DIVISION
Owner Address:	Not reported
Owner City,St,Zip:	Kahului, 96732 96732
Latitude:	20.892310
Longitude:	-156.445730
Horizontal Reference Datum Name:	NAD83
Horizontal Collection Method Name:	GPS

Tank ID:	1A
Date Installed:	03/30/1993
Tank Status:	**Currently in Use**
Date Closed:	Not reported
Tank Capacity:	6000
Substance:	Diesel

Tank ID:	1B
Date Installed:	03/30/1993
Tank Status:	**Currently in Use**
Date Closed:	Not reported
Tank Capacity:	6000
Substance:	Diesel

HI Financial Assurance:

Alt Facility ID:	9-500675
Tank Id:	1A
Tank Status:	Currently in Use
FRTYPE:	nsurance
Expiration Date:	06/20/2007

Alt Facility ID:	9-500675
Tank Id:	1B
Tank Status:	Currently in Use
FRTYPE:	nsurance
Expiration Date:	06/20/2007

Alt Facility ID:	9-500675
Tank Id:	1A
Tank Status:	Currently in Use
FRTYPE:	Insurance
Expiration Date:	04/20/2016

Alt Facility ID:	9-500675
Tank Id:	1B
Tank Status:	Currently in Use
FRTYPE:	Insurance
Expiration Date:	04/20/2016

E15 **ROBERTS TOUR AND TRANSPORTATION** **RCRA-CESQG** **1004688815**
NNW **711 KAONAWAI PLACE** **FINDS** **HID981695802**
1/8-1/4 **KAHULUI, HI 96732**
0.250 mi.
1320 ft. **Site 2 of 2 in cluster E**

Relative:
Lower

Actual:
19 ft.

RCRA-CESQG:

Date form received by agency:	08/19/1993
Facility name:	TRANS HAWAIIAN MAVI
Facility address:	711 KAONAWAI KAHULUI, HI 96732
EPA ID:	HID981695802
Mailing address:	KAONAWAI KAHULUI, HI 96732
Contact:	HAROLD HAMADA
Contact address:	711 KAONAWAI KAHULUI, HI 96732
Contact country:	US
Contact telephone:	(808) 877-7308
Contact email:	Not reported
EPA Region:	09
Classification:	Conditionally Exempt Small Quantity Generator
Description:	Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:

Owner/operator name:	NOT REQUIRED
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	TRANS HAWAIIAN MAUI
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

ROBERTS TOUR AND TRANSPORTATION (Continued) **1004688815**

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

FINDS:

Registry ID: 110056158232

Environmental Interest/Information System

ICIS (Integrated Compliance Information System) is the Integrated Compliance Information System and provides a database that, when complete, will contain integrated Enforcement and Compliance information across most of EPA's programs. The vision for ICIS is to replace EPA's independent databases that contain Enforcement data with a single repository for that information. Currently, ICIS contains all Federal Administrative and Judicial enforcement actions. This information is maintained in ICIS by EPA in the Regional offices and it Headquarters. A future release of ICIS will replace the Permit Compliance System (PCS) which supports the NPDES and will integrate that information with Federal actions already in the system. ICIS also has the capability to track other activities occurring in the Region that support Compliance and Enforcement programs. These include; Incident Tracking, Compliance Assistance, and Compliance Monitoring.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

16
North
1/4-1/2
0.317 mi.
1672 ft.

ROBERT'S HAWAII (PMID OGG002105) **LUST U003346417**
747 KAONAWAI ST (KAHULUI AIRPORT) **UST N/A**
KAHULUI, HI 96732

Relative:
Lower

Actual:
16 ft.

LUST:

Facility ID:	9-501303
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	10/12/1999
Release ID:	990027
Project Officer:	Renato Maniulit

UST:

ROBERT'S HAWAII (PMID OGG002105) (Continued) **U003346417**

Facility ID:	9-501303
Owner:	MAUI ISLAND TOURS, LTD.
Owner Address:	747 KAONAWAI ST. KAHULUI AIRPORT
Owner City,St,Zip:	Kahului, 96732 96732
Latitude:	20.891973
Longitude:	-156.446606
Horizontal Reference Datum Name:	NAD83
Horizontal Collection Method Name:	GPS
Tank ID:	R-1
Date Installed:	04/28/1981
Tank Status:	**Permanently Out of Use**
Date Closed:	06/24/1998
Tank Capacity:	6000
Substance:	Diesel
Tank ID:	R-2
Date Installed:	04/28/1981
Tank Status:	**Permanently Out of Use**
Date Closed:	06/24/1998
Tank Capacity:	6000
Substance:	Gasoline
Tank ID:	R-3
Date Installed:	04/28/1981
Tank Status:	**Permanently Out of Use**
Date Closed:	06/24/1998
Tank Capacity:	5000
Substance:	Diesel

17
West
1/4-1/2
0.318 mi.
1680 ft.

COSTCO #119 MAUI ADDITION LOT 21A **SHWS S111704705**
540 HALEAKALA HWY **VCP N/A**
KAHULUI, HI 96732

Relative:
Lower

Actual:
16 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Maui
Environmental Interest:	Costco #119 Maui Addition Lot 21A
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Program:	Voluntary Response Program
Project Manager:	Steve Mow
Hazard Priority:	NFA
Potential Hazards And Controls:	Hazard Present
Island:	Maui
SDAR Environmental Interest Name:	Costco #119 Maui Addition Lot 21A
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Potential Hazard And Controls:	Hazard Present
Priority:	NFA
Assessment:	Response Necessary

COSTCO #119 MAUI ADDITION LOT 21A (Continued) **S111704705**

Response:	Response Complete
Nature of Contamination:	Not reported
Nature of Residual Contamination:	Not reported
Use Restrictions:	Controls Required to Manage Contamination
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	Letter of Completion - Restricted Use
Document Date:	04/21/2015
Document Number:	2015-170-JQN
Document Subject:	Letter of Completion pursuant to the Voluntary Response Program Agreement, Dec 2010 between Costco Wholesale Corporation and the State of Hawaii, Department of Health
Project Manager:	Steve Mow
Contact Information:	(808) 586-4249 919 Ala Moana Blvd, Honolulu, HI 96814

VCP:

Program:	Voluntary Response Program
Zip Suffix:	Not reported
Supplemental Location:	Not reported
Island:	Maui

18
NNE
1/4-1/2
0.371 mi.
1957 ft.

Relative:
Lower

Actual:
14 ft.

NATIONAL CAR RENTAL SYSTEM INC (PMID OGG002121) **LUST U001236785**
142 MOKUEA PL **UST N/A**
KAHULUI, HI 96732 **Financial Assurance**

LUST:

Facility ID:	9-501619
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	09/16/2008
Release ID:	080045
Project Officer:	Josh Nagashima

Facility ID:	9-501619
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	08/27/1997
Release ID:	880010
Project Officer:	Josh Nagashima

UST:

Facility ID:	9-501619
Owner:	Vanguard Car Rental USA Inc.
Owner Address:	c/o Paul, Hastings, .. 875 15th Street NW
Owner City,St,Zip:	Kahului, 96732 96732
Latitude:	20.894331
Longitude:	-156.441637
Horizontal Reference Datum Name:	NAD83
Horizontal Collection Method Name:	GPS

Tank ID:	R-08201-1
Date Installed:	01/01/1968
Tank Status:	**Permanently Out of Use**
Date Closed:	01/01/1998
Tank Capacity:	6000

NATIONAL CAR RENTAL SYSTEM INC (PMID OGG002121) (Continued) **U001236785**

Substance: Gasoline

Tank ID: R-1
Date Installed: 05/16/1975
Tank Status: **Permanently Out of Use**
Date Closed: 01/01/1988
Tank Capacity: 8000
Substance: Gasoline

Tank ID: r-87
Date Installed: 01/01/1968
Tank Status: **Permanently out of Use**
Date Closed: 07/07/2008
Tank Capacity: 6000
Substance: Gasoline

HI Financial Assurance:
Alt Facility ID: 9-501619
Tank Id: R-08201-1
Tank Status: Permanently Out of Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-501619
Tank Id: r-87
Tank Status: Permanently out of Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-501619
Tank Id: R-1
Tank Status: Permanently Out of Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-501619
Tank Id: r-87
Tank Status: Permanently out of Use
FRTYPE: Insurance
Expiration Date: 06/30/2008

Alt Facility ID: 9-501619
Tank Id: R-08201-1
Tank Status: Permanently Out of Use
FRTYPE: Insurance
Expiration Date: 06/30/2008

Alt Facility ID: 9-501619
Tank Id: R-1
Tank Status: Permanently Out of Use
FRTYPE: Insurance
Expiration Date: 06/30/2008

19
West
1/4-1/2
0.388 mi.
2047 ft.

KAHULUI AIRPORT - MAINTENANCE BASEYARD
1 KAHULUI AIRPORT ROAD, UNIT 5 KAHULUI INTERNATIONAL AIRPORT
KAHULUI, HI 96732

LUST **U004251601**
UST **N/A**
Financial Assurance

Relative:
Lower

Actual:
13 ft.

LUST:
Facility ID: 9-500370
Facility Status: Site Cleanup Completed (NFA)
Facility Status Date: 06/15/2009
Release ID: 980049
Project Officer: Darren Park

UST:
Facility ID: 9-500370
Owner: Kahului Airport
Owner Address: 1 Kahului Airport Road
Owner City,St,Zip: Kahului, 96732 96732
Latitude: 20.890860
Longitude: -156.444650
Horizontal Reference Datum Name: NAD83
Horizontal Collection Method Name: GPS

Tank ID: 6
Date Installed: 03/01/1998
Tank Status: **Currently In Use**
Date Closed: Not reported
Tank Capacity: 6000
Substance: Gasoline

Tank ID: 7
Date Installed: 03/01/1998
Tank Status: **Currently In Use**
Date Closed: Not reported
Tank Capacity: 6000
Substance: Diesel

Tank ID: R-1
Date Installed: 02/28/1980
Tank Status: **Permanently Out of Use**
Date Closed: 02/11/1998
Tank Capacity: 500
Substance: Gasoline

Tank ID: R-2
Date Installed: 02/28/1980
Tank Status: **Permanently Out of Use**
Date Closed: 02/11/1998
Tank Capacity: 500
Substance: Diesel

Tank ID: R-3
Date Installed: 02/28/1980
Tank Status: **Permanently Out of Use**
Date Closed: 02/11/1998

KAHULUI AIRPORT - MAINTENANCE BASEYARD (Continued) **U004251601**

Tank Capacity: 1000
Substance: Gasoline

Tank ID: R-5
Date Installed: Not reported
Tank Status: **Permanently Out of Use**
Date Closed: 07/29/1995
Tank Capacity: 1500
Substance: Diesel

HI Financial Assurance:
Alt Facility ID: 9-500370
Tank Id: R-5
Tank Status: Permanently Out of Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-500370
Tank Id: 6
Tank Status: Currently In Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-500370
Tank Id: 7
Tank Status: Currently In Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-500370
Tank Id: R-1
Tank Status: Permanently Out of Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-500370
Tank Id: R-2
Tank Status: Permanently Out of Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-500370
Tank Id: R-3
Tank Status: Permanently Out of Use
FRTYPE: Other
Expiration Date: Not reported

20 WNW 1/4-1/2 0.413 mi. 2182 ft. | **F & M CONTRACTORS, INC.**
AMALA PLACE
KAHULUI, HI 96732 | **SEMS** | **1000816951** **HID984470062**

Relative: Lower

Actual: 3 ft.

SEMS:

Site ID:	904875
EPA ID:	HID984470062
Federal Facility:	N
NPL:	Not on the NPL
Non NPL Status:	Addressed as Part of Another non-NPL Site

Following information was gathered from the prior CERCLIS update completed in 10/2013:

Site ID:	0904875
EPA ID:	HID984470062
Facility County:	MAUI
Short Name:	F & M CONTRACTORS, INC.
Congressional District:	02
IFMS ID:	Not reported
SMSA Number:	Not reported
USGC Hydro Unit:	Not reported
Federal Facility:	Not a Federal Facility
DMNSN Number:	0.00000
Site Orphan Flag:	N
RCRA ID:	Not reported
USGS Quadrangle:	Not reported
Site Init By Prog:	Not reported
NFRAP Flag:	Not reported
Parent ID:	0905464
RST Code:	Not reported
EPA Region:	09
Classification:	Not reported
Site Settings Code:	Not reported
NPL Status:	Not on the NPL
DMNSN Unit Code:	Not reported
RBRAC Code:	Not reported
RResp Fed Agency Code:	Not reported
Non NPL Status:	Addressed as Part of Another non-NPL Site
Non NPL Status Date:	08/15/07
Site Fips Code:	15009
CC Concurrence Date:	/ /
CC Concurrence FY:	Not reported
Alias EPA ID:	Not reported
Site FUDS Flag:	Not reported

CERCLIS Site Contact Name(s):

Contact ID:	9000059.00000
Contact Name:	Eugenia Chow
Contact Tel:	(415) 972-3160
Contact Title:	Site Assessment Manager (SAM)
Contact Email:	Not reported

Alias Comments:	Not reported

Site Description: Not reported

CERCLIS Assessment History:

Action Code:	001

F & M CONTRACTORS, INC. (Continued) **1000816951**

Action:	DISCOVERY
Date Started:	/ /
Date Completed:	07/20/93
Priority Level:	Not reported
Operable Unit:	SITEWIDE
Primary Responsibility:	State, Fund Financed
Planning Status:	Not reported
Urgency Indicator:	Not reported
Action Anomaly:	Not reported

Action Code:	001
Action:	PRELIMINARY ASSESSMENT
Date Started:	/ /
Date Completed:	05/11/95
Priority Level:	Higher priority for further assessment
Operable Unit:	SITEWIDE
Primary Responsibility:	State, Fund Financed
Planning Status:	Not reported
Urgency Indicator:	Not reported
Action Anomaly:	Not reported

Action Code:	001
Action:	SITE INSPECTION
Date Started:	/ /
Date Completed:	09/25/01
Priority Level:	NFRAP-Site does not qualify for the NPL based on existing information
Operable Unit:	SITEWIDE
Primary Responsibility:	State, Fund Financed
Planning Status:	Not reported
Urgency Indicator:	Not reported
Action Anomaly:	Not reported

21
NE
1/4-1/2
0.413 mi.
2183 ft.

HI DOT AIRPORTS DIVISION MCA YARD (PMID OGG821105) **LUST U003541903**
KAHULUI AIRPORT **UST N/A**
KAHULUI, HI 96732

Relative:
Lower

Actual:
32 ft.

LUST:

Facility ID:	9-503014
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	01/14/2002
Release ID:	950121
Project Officer:	Mark Sutterfield

UST:

Facility ID:	9-503014
Owner:	ALAMO RENT A CAR
Owner Address:	KEAHOLE U DRIVE BASEYARD LOT 002115A
Owner City,St,Zip:	Kahului, 96732 96732
Latitude:	20.893541
Longitude:	-156.439966
Horizontal Reference Datum Name:	Not reported
Horizontal Collection Method Name:	Not reported

HI DOT AIRPORTS DIVISION MCA YARD (PMID OGG821105) (Continued) **U003541903**

Tank ID: R-5
Date Installed: Not reported
Tank Status: **Permanently Out of Use**
Date Closed: 07/29/1995
Tank Capacity: 2000
Substance: Not Listed

Tank ID: R-6
Date Installed: Not reported
Tank Status: **Permanently Out of Use**
Date Closed: 07/29/1995
Tank Capacity: 3000
Substance: Not Listed

Tank ID: R-7
Date Installed: Not reported
Tank Status: **Permanently Out of Use**
Date Closed: 07/29/1995
Tank Capacity: 50000
Substance: Not Listed

F22 **HERTZ RENT-A-CAR FACILITY (RAC #2612-10)** **LUST** **U003402929**
North **KAHULUI AIRPORT 850 MOKUEA PLACE** **UST** **N/A**
1/4-1/2 **KAHULUI, HI 96732** **Financial Assurance**
0.425 mi.
2243 ft. **Site 1 of 2 in cluster F**

Relative:
Lower

Actual:
8 ft.

LUST:
Facility ID: 9-501591
Facility Status: Site Cleanup Completed (NFA)
Facility Status Date: 03/11/1998
Release ID: 890026
Project Officer: Not reported

UST:
Facility ID: 9-501591
Owner: THE HERTZ CORPORATION
Owner Address: 225 Brae Blvd
Owner City,St,Zip: Kahului, 96732 96732
Latitude: 20.894430
Longitude: -156.443510
Horizontal Reference Datum Name: NAD83
Horizontal Collection Method Name: GPS

Tank ID: 1
Date Installed: 08/31/1989
Tank Status: **Currently In Use**
Date Closed: Not reported
Tank Capacity: 12000
Substance: Gasoline

Tank ID: 1
Date Installed: 08/31/1989
Tank Status: **Currently In Use**

HERTZ RENT-A-CAR FACILITY (RAC #2612-10) (Continued) **U003402929**

Date Closed: Not reported
Tank Capacity: 12000
Substance: Gasoline

Tank ID: 2
Date Installed: 08/31/1989
Tank Status: **Currently in Use**
Date Closed: Not reported
Tank Capacity: 550
Substance: Used Oil

Tank ID: 2
Date Installed: 08/31/1989
Tank Status: **Currently in Use**
Date Closed: Not reported
Tank Capacity: 550
Substance: Used Oil

Tank ID: R-1
Date Installed: 05/05/1973
Tank Status: **Permanently Out of Use**
Date Closed: 08/01/1989
Tank Capacity: 10000
Substance: Gasoline

Tank ID: R-1
Date Installed: 05/05/1973
Tank Status: **Permanently Out of Use**
Date Closed: 08/01/1989
Tank Capacity: 10000
Substance: Gasoline

Tank ID: R-2
Date Installed: 05/05/1973
Tank Status: **Permanently Out of Use**
Date Closed: 08/01/1989
Tank Capacity: 600
Substance: Used Oil

Tank ID: R-2
Date Installed: 05/05/1973
Tank Status: **Permanently Out of Use**
Date Closed: 08/01/1989
Tank Capacity: 600
Substance: Used Oil

HI Financial Assurance:
Alt Facility ID: 9-501591
Tank Id: 1
Tank Status: Currently In Use
FRTYPE: Other

HERTZ RENT-A-CAR FACILITY (RAC #2612-10) (Continued) **U003402929**

Expiration Date: Not reported

Alt Facility ID: 9-501591
Tank Id: R-2
Tank Status: Permanently Out of Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-501591
Tank Id: 2
Tank Status: Currently in Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-501591
Tank Id: R-1
Tank Status: Permanently Out of Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-501591
Tank Id: R-1
Tank Status: Permanently Out of Use
FRTYPE: Self Insured
Expiration Date: 04/27/2008

Alt Facility ID: 9-501591
Tank Id: R-2
Tank Status: Permanently Out of Use
FRTYPE: Self Insured
Expiration Date: 04/27/2008

Alt Facility ID: 9-501591
Tank Id: 2
Tank Status: Currently in Use
FRTYPE: Self Insured
Expiration Date: 04/27/2008

Alt Facility ID: 9-501591
Tank Id: 1
Tank Status: Currently In Use
FRTYPE: Self Insured
Expiration Date: 04/27/2008

Alt Facility ID: 9-501591
Tank Id: R-1
Tank Status: Permanently Out of Use
FRTYPE: Surety Bond
Expiration Date: 04/28/2015

Alt Facility ID: 9-501591
Tank Id: 1
Tank Status: Currently In Use
FRTYPE: Surety Bond
Expiration Date: 04/28/2015

Alt Facility ID: 9-501591

HERTZ RENT-A-CAR FACILITY (RAC #2612-10) (Continued) **U003402929**

Tank Id:	R-2
Tank Status:	Permanently Out of Use
FRTYPE:	Surety Bond
Expiration Date:	04/28/2015
Alt Facility ID:	9-501591
Tank Id:	2
Tank Status:	Currently in Use
FRTYPE:	Surety Bond
Expiration Date:	04/28/2015

G23 **MECO TRANSFORMER 3357** **SHWS** **S113230502**
NNE **850 W MOKUEA PL** **N/A**
1/4-1/2 **KAHULUI, HI 96753**
0.428 mi.
2258 ft. **Site 1 of 4 in cluster G**

Relative:
Lower

Actual:
18 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Kahului Airport
Island:	Maui
Environmental Interest:	MECO Transformer 3357
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	EPA TSCA
Program:	State
Project Manager:	Paul Chong
Hazard Priority:	NFA
Potential Hazards And Controls:	No Hazard
Island:	Maui
SDAR Environmental Interest Name:	MECO Transformer 3357
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	EPA TSCA
Potential Hazard And Controls:	No Hazard
Priority:	NFA
Assessment:	Response Necessary
Response:	Self Implementing TSCA Cleanup
Nature of Contamination:	Found: PCBs in soil
Nature of Residual Contamination:	Not reported
Use Restrictions:	No Hazard Present For Unrestricted Residential Use
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action Letter - Unrestricted Residential Use
Document Date:	02/17/2011
Document Number:	2011-096-PC
Document Subject:	No Further Action Determination for MECO Pad-Mount Transformer No. 3357 located at Hertz Rental Car 850 Mokuea Pl, Kahului, Maui 96732, Jan 21, 2011
Project Manager:	Paul Chong
Contact Information:	(808) 586-4249 919 Ala Moana Blvd, Honolulu, HI 96814

G24
NNE
1/4-1/2
0.431 mi.
2276 ft.

AVIS RENT-A-CAR SYSTEM INC (PMID OGG002117)
884 W MOKUEA PL KAHULUI AIRPORT
KAHULUI, HI 96732

Site 2 of 4 in cluster G

LUST
UST
Financial Assurance

U003222249
N/A

Relative:
Lower

Actual:
18 ft.

LUST:

Facility ID:	9-501890
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	03/23/1999
Release ID:	880008
Project Officer:	Janet Sherrer

Facility ID:	9-501890
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	03/17/1997
Release ID:	960091
Project Officer:	Janet Sherrer

UST:

Facility ID:	9-501890
Owner:	AVIS RENT A CAR
Owner Address:	6 SYLVAN WAY DEPT 29-093-36
Owner City,St,Zip:	Kahului, 96732 96732
Latitude:	20.893256
Longitude:	-156.441734
Horizontal Reference Datum Name:	NAD83
Horizontal Collection Method Name:	Map

Tank ID:	1
Date Installed:	02/25/1987
Tank Status:	**Currently in Use**
Date Closed:	Not reported
Tank Capacity:	12000
Substance:	Gasoline

Tank ID:	2
Date Installed:	02/25/1987
Tank Status:	**Currently in Use**
Date Closed:	Not reported
Tank Capacity:	1000
Substance:	Other

Tank ID:	3
Date Installed:	02/25/1987
Tank Status:	**Currently in Use**
Date Closed:	Not reported
Tank Capacity:	550
Substance:	Used Oil

Tank ID:	R-1
Date Installed:	04/22/1976
Tank Status:	**Permanently Out of Use**
Date Closed:	01/01/1987
Tank Capacity:	10000
Substance:	Gasoline

AVIS RENT-A-CAR SYSTEM INC (PMID OGG002117) (Continued) **U003222249**

Tank ID: R-2
Date Installed: 04/22/1976
Tank Status: **Permanently Out of Use**
Date Closed: 01/01/1987
Tank Capacity: 10000
Substance: Gasoline

Tank ID: R-3
Date Installed: 04/22/1976
Tank Status: **Permanently Out of Use**
Date Closed: 01/01/1987
Tank Capacity: 3000
Substance: Gasoline

Tank ID: R-4
Date Installed: 05/08/1977
Tank Status: **Permanently Out of Use**
Date Closed: Not reported
Tank Capacity: 10000
Substance: Gasoline

HI Financial Assurance:
Alt Facility ID: 9-501890
Tank Id: R-1
Tank Status: Permanently Out of Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-501890
Tank Id: R-4
Tank Status: Permanently Out of Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-501890
Tank Id: R-3
Tank Status: Permanently Out of Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-501890
Tank Id: R-2
Tank Status: Permanently Out of Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-501890
Tank Id: 3
Tank Status: Currently in Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-501890
Tank Id: 1
Tank Status: Currently in Use

AVIS RENT-A-CAR SYSTEM INC (PMID OGG002117) (Continued) **U003222249**

FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-501890
Tank Id: 2
Tank Status: Currently in Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-501890
Tank Id: 1
Tank Status: Currently in Use
FRTYPE: Insurance
Expiration Date: 04/12/2017

Alt Facility ID: 9-501890
Tank Id: R-2
Tank Status: Permanently Out of Use
FRTYPE: Insurance
Expiration Date: 04/12/2017

Alt Facility ID: 9-501890
Tank Id: R-4
Tank Status: Permanently Out of Use
FRTYPE: Insurance
Expiration Date: 04/12/2017

Alt Facility ID: 9-501890
Tank Id: 3
Tank Status: Currently in Use
FRTYPE: Insurance
Expiration Date: 04/12/2017

Alt Facility ID: 9-501890
Tank Id: 2
Tank Status: Currently in Use
FRTYPE: Insurance
Expiration Date: 04/12/2017

Alt Facility ID: 9-501890
Tank Id: R-3
Tank Status: Permanently Out of Use
FRTYPE: Insurance
Expiration Date: 04/12/2017

Alt Facility ID: 9-501890
Tank Id: R-1
Tank Status: Permanently Out of Use
FRTYPE: Insurance
Expiration Date: 04/12/2017

G25
NNE
1/4-1/2
0.433 mi.
2288 ft.

BUDGET RENT-A-CAR SYSTEMS INC. 2108 (PMID OGG00212
865 W MOKUEA PLACE
KAHULUI, HI 96732

Site 3 of 4 in cluster G

LUST **U003402939**
UST **N/A**
Financial Assurance

Relative:
Lower

Actual:
17 ft.

LUST:

Facility ID:	9-502466
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	01/02/1997
Release ID:	910082
Project Officer:	Shaobin Li

Facility ID:	9-502466
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	01/02/1997
Release ID:	970006
Project Officer:	Shaobin Li

Facility ID:	9-502466
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	10/16/2006
Release ID:	060021
Project Officer:	Shaobin Li

UST:

Facility ID:	9-502466
Owner:	AVIS RENT A CAR SYSTEM LLC
Owner Address:	6 Sylvan Way Dept 29-C93-36
Owner City,St,Zip:	Kahului, 96732 96732
Latitude:	20.894870
Longitude:	-156.442110
Horizontal Reference Datum Name:	NAD83
Horizontal Collection Method Name:	GPS

Tank ID:	1
Date Installed:	01/01/1987
Tank Status:	**Currently in Use**
Date Closed:	Not reported
Tank Capacity:	12000
Substance:	Gasoline

Tank ID:	2
Date Installed:	01/01/1987
Tank Status:	**Currently in Use**
Date Closed:	Not reported
Tank Capacity:	12000
Substance:	Gasoline

Tank ID:	R-3
Date Installed:	01/01/1987
Tank Status:	**Permanently Out of Use**
Date Closed:	10/09/1996
Tank Capacity:	1000
Substance:	Used Oil

BUDGET RENT-A-CAR SYSTEMS INC. 2108 (PMID OGG002120) (Continued) **U003402939**

Tank ID:	R-4
Date Installed:	01/01/1987
Tank Status:	**Permanently Out of Use**
Date Closed:	10/09/1996
Tank Capacity:	1000
Substance:	Other

HI Financial Assurance:

Alt Facility ID:	9-502466
Tank Id:	1
Tank Status:	Currently in Use
FRTYPE:	Insurance
Expiration Date:	04/12/2016

Alt Facility ID:	9-502466
Tank Id:	2
Tank Status:	Currently in Use
FRTYPE:	Insurance
Expiration Date:	04/12/2016

Alt Facility ID:	9-502466
Tank Id:	R-3
Tank Status:	Permanently Out of Use
FRTYPE:	Insurance
Expiration Date:	04/12/2016

Alt Facility ID:	9-502466
Tank Id:	R-4
Tank Status:	Permanently Out of Use
FRTYPE:	Insurance
Expiration Date:	04/12/2016

26
West
1/4-1/2
0.448 mi.
2364 ft.

SUNSHINE RENT-A-CAR **LUST U003222228**
455 DAIRY RD **UST N/A**
KAHULUI, HI 96732

Relative:
Lower

Actual:
7 ft.

LUST:

Facility ID:	9-501565
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	02/04/2004
Release ID:	040018
Project Officer:	Richard Takaba

UST:

Facility ID:	9-501565
Owner:	A & B PROPERTIES, INC.
Owner Address:	Not reported
Owner City,St,Zip:	Kahului, 96732 96732
Latitude:	19.735224
Longitude:	-156.037402
Horizontal Reference Datum Name:	NAD83
Horizontal Collection Method Name:	GPS

Tank ID:	R-1
Date Installed:	07/30/1981

SUNSHINE RENT-A-CAR (Continued) **U003222228**

Tank Status:	**Permanently Out of Use**
Date Closed:	03/15/1990
Tank Capacity:	1875
Substance:	Gasoline

F27 **TRANS HAWAIIAN MAUI (PMID OGG008125)** **LUST 1000319259**
North **845 PALAPALA DR** **UST N/A**
1/4-1/2 **KAHULUI, HI 96732**
0.472 mi.
2491 ft. **Site 2 of 2 in cluster F**

Relative:
Lower

Actual:
13 ft.

LUST:

Facility ID:	9-501583
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	04/17/2007
Release ID:	940001
Project Officer:	Darren Park

UST:

Facility ID:	9-501583
Owner:	TRANS HAWAIIAN MAUI
Owner Address:	845 PALAPALA DRIVE
Owner City,St,Zip:	Kahului, 96732 96732
Latitude:	20.891957
Longitude:	-156.444340
Horizontal Reference Datum Name:	NAD83
Horizontal Collection Method Name:	Address Matching
Tank ID:	R-1
Date Installed:	06/19/1976
Tank Status:	**Permanently Out of Use**
Date Closed:	07/27/1993
Tank Capacity:	6000
Substance:	Diesel
Tank ID:	R-2
Date Installed:	06/19/1976
Tank Status:	**Permanently Out of Use**
Date Closed:	07/27/1993
Tank Capacity:	4000
Substance:	Gasoline

G28 **DISCOUNT RENT-A-CAR (PMID OGG002112)** **LUST U001237445**
NNE **935 E MOKUEA PL** **UST N/A**
1/4-1/2 **KAHULUI, HI 96732**
0.472 mi.
2493 ft. **Site 4 of 4 in cluster G**

Relative:
Lower

Actual:
27 ft.

LUST:

Facility ID:	9-507014
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	03/15/1993
Release ID:	930058
Project Officer:	Not Assigned

DISCOUNT RENT-A-CAR (PMID OGG002112) (Continued) **U001237445**

UST:

Facility ID:	9-507014
Owner:	ARAKI TAXI & U-DRIVE, INC.
Owner Address:	234 BEACHWALK
Owner City,St,Zip:	Kahului, 96732 96732
Latitude:	20.895007
Longitude:	-156.440456
Horizontal Reference Datum Name:	NAD83
Horizontal Collection Method Name:	Address Matching
Tank ID:	R-1
Date Installed:	08/06/1974
Tank Status:	**Permanently Out of Use**
Date Closed:	01/07/1993
Tank Capacity:	3500
Substance:	GASOLINE

29
WSW
1/4-1/2
0.484 mi.
2553 ft.

Relative:
Lower

Actual:
11 ft.

HAWTHORNE PACIFIC CORPORATION **RCRA-CESQG** **1000252021**
470 HANA HWY **SHWS** **HID981637754**
KAHULUI, HI 96732 **LUST**
UST
FINDS
ECHO

RCRA-CESQG:

Date form received by agency:	02/12/2014
Facility name:	HAWTHORNE PACIFIC CORPORATION
Facility address:	470 HANA HWY KAHULUI, HI 96732
EPA ID:	HID981637754
Contact:	RICHARD E LENTES
Contact address:	FARRINGTON HWY WAIPAHU, HI 96797
Contact country:	US
Contact telephone:	(808) 676-0290
Contact email:	RLENTES@HAWTHORNECAT.COM
EPA Region:	09
Land type:	Private
Classification:	Conditionally Exempt Small Quantity Generator
Description:	Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:

Owner/operator name:	HAWTHORNE MACHINERY COMPANY
Owner/operator address:	CAMINO SAN BERNARDO

HAWTHORNE PACIFIC CORPORATION (Continued) **1000252021**

SAN DIEGO, CA 92127
Owner/operator country: US
Owner/operator telephone: (858) 674-7000
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 05/05/2004
Owner/Op end date: Not reported

Owner/operator name: HAWTHORNE PACIFIC CORPORATION
Owner/operator address: Not reported
HI
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 05/05/2004
Owner/Op end date: Not reported

Owner/operator name: NOT REQUIRED
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: (415) 555-1212
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

. Waste code: D008
. Waste name: LEAD

. Waste code: U103
. Waste name: DIMETHYL SULFATE (OR) SULFURIC ACID, DIMETHYL ESTER

HAWTHORNE PACIFIC CORPORATION (Continued) **1000252021**

. Waste code: U359
. Waste name: ETHANOL, 2-ETHOXY- (OR) ETHYLENE GLYCOL MONOETHYL ETHER

Historical Generators:
Date form received by agency: 02/17/1987
Site name: PACIFIC MACHINERY
Classification: Small Quantity Generator

Facility Has Received Notices of Violations:
Regulation violated: F - 279.20-24
Area of violation: Used Oil - Generators
Date violation determined: 06/11/2001
Date achieved compliance: 06/13/2002
Violation lead agency: EPA
Enforcement action: Not reported
Enforcement action date: 07/11/2001
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 279.20-24
Area of violation: Used Oil - Generators
Date violation determined: 06/11/2001
Date achieved compliance: 06/13/2002
Violation lead agency: EPA
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 08/06/2001
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Evaluation Action Summary:
Evaluation date: 06/13/2001
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Used Oil - Generators
Date achieved compliance: 06/13/2002
Evaluation lead agency: EPA

SHWS:
Organization: Not reported
Supplemental Location: Not reported
Island: Maui
Environmental Interest: Pacific Machinery Inc Maui
HID Number: Not reported
Facility Registry Identifier: Not reported
Lead Agency: HEER
Program: State
Project Manager: Eric Sadoyama
Hazard Priority: NFA
Potential Hazards And Controls: Hazard Undetermined

HAWTHORNE PACIFIC CORPORATION (Continued) **1000252021**

Island:	Maui
SDAR Environmental Interest Name:	Pacific Machinery Inc Maui
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Potential Hazard And Controls:	Hazard Undetermined
Priority:	NFA
Assessment:	Response Not Necessary
Response:	Not reported
Nature of Contamination:	Found: Selenium confined to a small portion of the site groundwater.
Nature of Residual Contamination:	Not reported
Use Restrictions:	Undetermined
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action Letter - Unrestricted Residential Use
Document Date:	05/17/2016
Document Number:	2016-290-ES
Document Subject:	No Further Action Determination for Pacific Machinery, Inc Maui, a.k.a. Hawthorne Machinery, based on review of Limited Phase II Environmental Investigation, 470 S Hana Hwy, TMK 2 3-8-065-001 (por), Kahului, Maui, Hawaii, (2/5/2016)
Project Manager:	Eric Sadoyama
Contact Information:	(808) 586-4249 919 Ala Moana Blvd, Honolulu, HI 96814
Organization:	Not reported
Supplemental Location:	Not reported
Island:	Maui
Environmental Interest:	Pacific Machinery, Inc Maui
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Program:	State
Project Manager:	Mark Sutterfield
Hazard Priority:	NFA
Potential Hazards And Controls:	No Hazard
Island:	Maui
SDAR Environmental Interest Name:	Pacific Machinery, Inc Maui
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Potential Hazard And Controls:	No Hazard
Priority:	NFA
Assessment:	Response Necessary
Response:	Response Complete
Nature of Contamination:	Not reported
Nature of Residual Contamination:	Petroleum contaminated soil.
Use Restrictions:	No Hazard Present for Unrestricted Residential Use
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action Letter - Unrestricted Residential Use
Document Date:	08/03/2004
Document Number:	2004-310-MS
Document Subject:	NFA for 4 areas at the Pacific Machinery Maui site

HAWTHORNE PACIFIC CORPORATION (Continued) **1000252021**

Project Manager: Mark Sutterfield
Contact Information: (808) 586-4249 919 Ala Moana Blvd, Honolulu, HI 96814

LUST:
Facility ID: 9-500668
Facility Status: Site Cleanup Completed (NFA)
Facility Status Date: 04/24/1996
Release ID: 940009
Project Officer: Haven Westerman

Facility ID: 9-500668
Facility Status: Site Cleanup Completed (NFA)
Facility Status Date: 04/28/2005
Release ID: 040044
Project Officer: Haven Westerman

UST:
Facility ID: 9-500668
Owner: PACIFIC MACHINERY
Owner Address: Not reported
Owner City,St,Zip: Kahului, 96732 96732
Latitude: 20.884563
Longitude: -156.451955
Horizontal Reference Datum Name: NAD83
Horizontal Collection Method Name: Address Matching

Tank ID: R-1
Date Installed: 03/27/1976
Tank Status: **Permanently Out of Use**
Date Closed: 01/27/1994
Tank Capacity: 1000
Substance: Used Oil

FINDS:

Registry ID: 110005724225

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

STATE MASTER

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:
Envid: 1000252021
Registry ID: 110005724225
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110005724225

30
WSW
1/2-1
0.577 mi.
3044 ft.

DAIRY ROAD SHELL
370 DAIRY RD
KAHULUI, HI 96732

SHWS **U003222218**
LUST **N/A**
UST
Financial Assurance

Relative:
Lower

Actual:
13 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Maui
Environmental Interest:	Maui Business Park Oil Contamination
HID Number:	Not reported
Facility Registry Identifier:	110013767227
Lead Agency:	HEER
Program:	State
Project Manager:	Mark Sutterfield
Hazard Priority:	NFA
Potential Hazards And Controls:	No Hazard
Island:	Maui
SDAR Environmental Interest Name:	Maui Business Park Oil Contamination
HID Number:	Not reported
Facility Registry Identifier:	110013767227
Lead Agency:	HEER
Potential Hazard And Controls:	No Hazard
Priority:	NFA
Assessment:	Response Necessary
Response:	Response Complete
Nature of Contamination:	Found: petroleum distillates - gasoline
Nature of Residual Contamination:	Not reported
Use Restrictions:	No Hazard Present For Unrestricted Residential Use
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action Letter - Unrestricted Residential Use
Document Date:	08/10/2005
Document Number:	2005-409-MS
Document Subject:	NFA letter for oil contamination
Project Manager:	Mark Sutterfield
Contact Information:	(808) 586-4249 919 Ala Moana Blvd, Honolulu, HI 96814

LUST:

Facility ID:	9-501300
Facility Status:	Suspected release
Facility Status Date:	08/26/2014
Release ID:	suspected
Project Officer:	Randall Heu

Facility ID:	9-501300
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	08/02/1995
Release ID:	950110
Project Officer:	Randall Heu

UST:

Facility ID:	9-501300
Owner:	DAIRY ROAD PARTNERS
Owner Address:	370 DAIRY ROAD

DAIRY ROAD SHELL (Continued) **U003222218**

Owner City,St,Zip: Kahului, 96732 96732
Latitude: 20.883794
Longitude: -156.453318
Horizontal Reference Datum Name: NAD83
Horizontal Collection Method Name: GPS

Tank ID: 1
Date Installed: 04/15/1985
Tank Status: **Currently in Use**
Date Closed: Not reported
Tank Capacity: 10000
Substance: Gasohol

Tank ID: 2
Date Installed: 04/15/1985
Tank Status: **Currently in Use**
Date Closed: Not reported
Tank Capacity: 10000
Substance: Gasohol

Tank ID: 3
Date Installed: 04/15/1985
Tank Status: **Currently in Use**
Date Closed: Not reported
Tank Capacity: 10000
Substance: Gasohol

HI Financial Assurance:
Alt Facility ID: 9-501300
Tank Id: 1
Tank Status: Currently in Use
FRTYPE: Not reported
Expiration Date: Not reported

Alt Facility ID: 9-501300
Tank Id: 2
Tank Status: Currently in Use
FRTYPE: Not reported
Expiration Date: Not reported

Alt Facility ID: 9-501300
Tank Id: 3
Tank Status: Currently in Use
FRTYPE: Not reported
Expiration Date: Not reported

Alt Facility ID: 9-501300
Tank Id: 3
Tank Status: Currently in Use
FRTYPE: Insurance
Expiration Date: 10/14/2013

Alt Facility ID: 9-501300
Tank Id: 1
Tank Status: Currently in Use

DAIRY ROAD SHELL (Continued) **U003222218**

FRTYPE:	Insurance
Expiration Date:	10/14/2013
Alt Facility ID:	9-501300
Tank Id:	2
Tank Status:	Currently in Use
FRTYPE:	Insurance
Expiration Date:	10/14/2013

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31 NE 1/2-1 0.710 mi. 3747 ft. **KAHULUI NAVAL AIR STATION** **FUDS** **1007212726 N/A**

KAHULUI, HI

Relative: Lower

Actual: 39 ft.

FUDS:

EPA Region:	09
Congressional District:	02
FUDS Number:	H09HI0247
State:	HI
Facility Name:	KAHULUI NAVAL AIR STATION
Fiscal Year:	2013
City:	KAHULUI
Federal Facility ID:	HI9799F3981
Telephone:	808-835-4004
INST ID:	54327
County:	MAUI
RAB:	Not reported
CORPS_DIST:	Honolulu District (POH)
NPL Status:	Not Listed
CTC:	526.89999999999998
Current Owner:	State Government
Future Prog:	Not reported
Description:	The site encompasses 1,335.083 acres and consists of two parcels. It is located at the current Kahului Airport on the island of Maui. It was used by the Navy as an air station and consisted of an airfield, a construction plant, 12 barracks, two mess halls, and a bakery. The 39th Construction Battalion constructed a malfunction range, a moving target range, a sewage disposal plant, bunkers, aboveground tanks, three underground storage tanks, nose hangars, warehouses, theaters, and supply buildings. A site visit on 2 November 1993 and 22 July 1993 found concrete structures currently in use, concrete foundations, concrete building pads, aboveground tanks/reservoir, concrete vaults, and remnant concrete stanchion pedestals. Other evidence of military use has been replaced by the current users within the project area. The site is owned by the State of Hawaii and multiple private companies or individuals.
Current Program:	Not reported
History:	The Kahului Naval Air Station was established on 13 March 1943 through a lease with HCandS Company. The site was turned over to the State of Hawaii in May 1956. The site is highly developed with commercial activities.
Latitude Degree:	20
Latitude Minute:	54
Latitude Second:	45
Latitude Direction:	N
Longitude Degree:	-156
Longitude Minute:	26

KAHULUI NAVAL AIR STATION (Continued) **1007212726**

Longitude Second: 8
Longitude Direction: E

32
West
1/2-1
0.712 mi.
3762 ft.

HAWAII WOOD PRESERVING CO. **SHWS** **1000146664**
356 HANAKAI ST **N/A**
KAHULUI, HI 96732

Relative:
Lower

Actual:
7 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Maui
Environmental Interest:	Hawaii Wood Preserving Co. (Osmose)
HID Number:	HID980883185
Facility Registry Identifier:	110000486386
Lead Agency:	SHWB
Program:	State
Project Manager:	Eric Sadoyama
Hazard Priority:	NFA
Potential Hazards And Controls:	No Hazard
Island:	Maui
SDAR Environmental Interest Name:	Hawaii Wood Preserving Co. (Osmose)
HID Number:	HID980883185
Facility Registry Identifier:	110000486386
Lead Agency:	SHWB
Potential Hazard And Controls:	No Hazard
Priority:	NFA
Assessment:	Response Necessary
Response:	Response Complete
Nature of Contamination:	Found: CCA in soil
Nature of Residual Contamination:	Not reported
Use Restrictions:	No Hazard Present for Unrestricted Residential Use
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action Letter - Unrestricted Residential Use
Document Date:	12/29/2008
Document Number:	Not reported
Document Subject:	Hazardous Waste Closure Certification Approval, Former Hawaii Wood Preserving Company Treatment Plant, 356 Hanakai St, Kahului, Hawaii (Maui), EPA HID 900883185
Project Manager:	Eric Sadoyama
Contact Information:	(808) 586-4249 919 Ala Moana Blvd, Honolulu, HI 96814

33
West
1/2-1
0.801 mi.
4227 ft.

ALII LINEN SERVICE (FKA SNOW WHITE LINEN) **SHWS** **S106816121**
312 ALAMAHA PL **ENG CONTROLS** **N/A**
KAHULUI, HI 96732 **INST CONTROL**

Relative:
Lower

Actual:
12 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Maui

ALII LINEN SERVICE (FKA SNOW WHITE LINEN) (Continued) **S106816121**

Environmental Interest:	Snow White Linen Solvent Contamination
HID Number:	Not reported
Facility Registry Identifier:	110013771374
Lead Agency:	HEER
Program:	State
Project Manager:	Cal Miyahara
Hazard Priority:	NFA
Potential Hazards And Controls:	Hazard Managed With Controls
Island:	Maui
SDAR Environmental Interest Name:	Snow White Linen Solvent Contamination
HID Number:	Not reported
Facility Registry Identifier:	110013771374
Lead Agency:	HEER
Potential Hazard And Controls:	Hazard Managed With Controls
Priority:	NFA
Assessment:	Response Necessary
Response:	Response Complete
Nature of Contamination:	Found: Dry cleaning solvents and propane in soil and groundwater.
Nature of Residual Contamination:	Vapor intrusion hazard. Operating Sub-Slab Vapor Depressurization system.
Use Restrictions:	Controls Required to Manage Contamination
Engineering Control:	Engineering Control Required
Description of Restrictions:	Prohibit Any Activity That May Disturb the Integrity of the Capping or Monitoring System
Institutional Control:	Government - Hawaii Dept. of Health Letter Issued
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action Letter - Restricted Use
Document Date:	11/09/2011
Document Number:	2011-653-KO
Document Subject:	No Further Action Determination with Institutional Controls
Project Manager:	Cal Miyahara
Contact Information:	(808) 586-4249 919 Ala Moana Blvd, Honolulu, HI 96814

ENG CONTROLS:

Supplemental Location Text:	Not reported
Zip Suffix:	Not reported
Island:	Maui
Potential Hazards And Controls:	Hazard Managed With Controls
Engineering Control:	Engineering Control Required

INST CONTROL:

Potential hazards and controls:	Hazard Managed With Controls
Supplemental Location:	Not reported
Zip Suffix:	Not reported
Island:	Maui
Institutional Control:	Government - Hawaii Dept. of Health Letter Issued

34
WSW
1/2-1
0.881 mi.
4653 ft.

MAUI DISPOSAL COMPANY
221 LALO PL
KAHULUI, HI 96732

SHWS **S106818999**
SPILLS **N/A**

Relative:
Lower

Actual:
20 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Maui
Environmental Interest:	Opala Partners Diesel Release
HID Number:	Not reported
Facility Registry Identifier:	110013767218
Lead Agency:	HEER
Program:	State
Project Manager:	Melody Calisay
Hazard Priority:	NFA
Potential Hazards And Controls:	No Hazard
Island:	Maui
SDAR Environmental Interest Name:	Opala Partners Diesel Release
HID Number:	Not reported
Facility Registry Identifier:	110013767218
Lead Agency:	HEER
Potential Hazard And Controls:	No Hazard
Priority:	NFA
Assessment:	Response Necessary
Response:	Response Complete
Nature of Contamination:	Not reported
Nature of Residual Contamination:	TPH-Diesel, TPH-Oil, Acenaphthene
Use Restrictions:	No Hazard Present For Unrestricted Residential Use
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action Letter - Unrestricted Residential Use
Document Date:	02/14/2002
Document Number:	2002-029-MGC
Document Subject:	Priority Letter for Opala Partners LLC
Project Manager:	Melody Calisay
Contact Information:	(808) 586-4249 919 Ala Moana Blvd, Honolulu, HI 96814

HI SPILLS:

Island:	Maui
Supplemental Loc. Text:	Not reported
Case Number:	20000320-0954
HID Number:	Not reported
Facility Registry Id:	110013767218
Lead and Program:	HEER EP&R
ER:	Not reported
Units:	Lalo St-release
Substances:	Diesel Fuel
Less Or Greater Than:	<
Numerical Quantity:	25
Units:	Gallons
Activity Type:	Response
Activity Lead:	Bill Perry
Assignment End Date:	Not reported
Result:	Refer to ISST
File Under:	Maui Disposal Company, Inc.

MAUI DISPOSAL COMPANY (Continued) **S106818999**

Latitude:	20.88337
Longitude:	-156.458842
Island:	Maui
Supplemental Loc. Text:	Not reported
Case Number:	20000320-0954
HID Number:	Not reported
Facility Registry Id:	110013767218
Lead and Program:	HEER EP&R
ER:	Not reported
Units:	Lalo St-release
Substances:	Oil Lubricating
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Bill Perry
Assignment End Date:	Not reported
Result:	Refer to ISST
File Under:	Maui Disposal Company, Inc.
Latitude:	20.88337
Longitude:	-156.458842
Island:	Maui
Supplemental Loc. Text:	Not reported
Case Number:	19950227
HID Number:	Not reported
Facility Registry Id:	110013767218
Lead and Program:	HEER EP&R
ER:	Not reported
Units:	Maui Disposal Company
Substances:	Oil, Waste
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Chris Takeno
Assignment End Date:	Not reported
Result:	SOSC NFA
File Under:	Maui Disposal Company, Inc.
Latitude:	20.88337
Longitude:	-156.458842
Island:	Maui
Supplemental Loc. Text:	Not reported
Case Number:	19950227
HID Number:	Not reported
Facility Registry Id:	110013767218
Lead and Program:	HEER EP&R
ER:	Not reported
Units:	Maui Disposal Company
Substances:	Paint
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Chris Takeno

MAUI DISPOSAL COMPANY (Continued) **S106818999**

Assignment End Date:	Not reported
Result:	SOSC NFA
File Under:	Maui Disposal Company, Inc.
Latitude:	20.88337
Longitude:	-156.458842

H35 **KANAHA POND INDUSTRIAL WEST SITE** **SHWS** **1006820799**
NW **261 AMALA PL** **N/A**
1/2-1 **KAHULUI, HI 96732**
0.901 mi.
4759 ft. **Site 1 of 2 in cluster H**

Relative:
Lower

Actual:
3 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Maui
Environmental Interest:	Kanaha Pond Industrial West Site
HID Number:	HISFN0905463
Facility Registry Identifier:	110013788115
Lead Agency:	ACOE
Program:	State
Project Manager:	Richard Palmer
Hazard Priority:	NFA
Potential Hazards And Controls:	No Hazard
Island:	Maui
SDAR Environmental Interest Name:	Kanaha Pond Industrial West Site
HID Number:	HISFN0905463
Facility Registry Identifier:	110013788115
Lead Agency:	ACOE
Potential Hazard And Controls:	No Hazard
Priority:	NFA
Assessment:	Response Not Necessary
Response:	Not reported
Nature of Contamination:	Found: Natural background copper is above ecological contaminant benchmark levels in surface water. Sediment sampling showed no exceedances or source area.
Nature of Residual Contamination:	Not reported
Use Restrictions:	No Hazard Present For Unrestricted Residential Use
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Kanaha Pond Industrial
Site Closure Type:	No Further Action Letter - Unrestricted Residential Use
Document Date:	10/07/2010
Document Number:	2010-641-RP
Document Subject:	Jul 20, 2010 Sampling of Opportunity at Kanaha Pond, Maui, as an addendum to the Mar 2005 Kanaha Pond West Site Inspection Report
Project Manager:	Richard Palmer
Contact Information:	(808) 586-4249 919 Ala Moana Blvd, Honolulu, HI 96814

H36 **MAUI COUNTY WAILUKU SPS** **SHWS** **U003222225**
WNW **281 AMALA RD** **LUST** **N/A**
1/2-1 **KAHULUI, HI 96732** **UST**
0.919 mi. **Financial Assurance**
4850 ft. **Site 2 of 2 in cluster H**

Relative:
Lower

Actual:
3 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Maui
Environmental Interest:	Kahului Wastewater Reclaimation Facility 30 Gallon Diesel Release
HID Number:	Not reported
Facility Registry Identifier:	110013788883
Lead Agency:	HEER
Program:	State
Project Manager:	Amy Playdon
Hazard Priority:	NFA
Potential Hazards And Controls:	No Hazard
Island:	Maui
SDAR Environmental Interest Name:	Kahului Wastewater Reclaimation Facility 30 Gallon Diesel Release
HID Number:	Not reported
Facility Registry Identifier:	110013788883
Lead Agency:	HEER
Potential Hazard And Controls:	No Hazard
Priority:	NFA
Assessment:	Response Necessary
Response:	Response Complete
Nature of Contamination:	Not reported
Nature of Residual Contamination:	Diesel-contaminated gravel/soil
Use Restrictions:	No Hazard Present For Unrestricted Residential Use
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action Letter - Unrestricted Residential Use
Document Date:	02/28/2001
Document Number:	2001-065-AP
Document Subject:	No Further Action Determination
Project Manager:	Amy Playdon
Contact Information:	(808) 586-4249 919 Ala Moana Blvd, Honolulu, HI 96814

LUST:

Facility ID:	9-501353
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	09/05/2000
Release ID:	990117
Project Officer:	Shaobin Li

UST:

Facility ID:	9-501353
Owner:	COUNTY OF MAUI - PUBLIC WORKS & WASTE MANAGEMENT
Owner Address:	200 S HIGH ST
Owner City,St,Zip:	Kahului, 96732 96732
Latitude:	20.895387
Longitude:	-156.457650
Horizontal Reference Datum Name:	NAD83
Horizontal Collection Method Name:	Address Matching

MAUI COUNTY WAILUKU SPS (Continued) **U003222225**

Tank ID: R-M-1
Date Installed: 05/05/1977
Tank Status: **Permanently Out of Use**
Date Closed: 12/12/1998
Tank Capacity: 12000
Substance: Diesel

Tank ID: R-M-1
Date Installed: 05/05/1977
Tank Status: **Permanently Out of Use**
Date Closed: 12/11/1998
Tank Capacity: 3000
Substance: Diesel

Tank ID: R-M-2
Date Installed: 05/05/1977
Tank Status: **Permanently Out of Use**
Date Closed: 08/17/1998
Tank Capacity: 700
Substance: Used Oil

HI Financial Assurance:
Alt Facility ID: 9-501352
Tank Id: R-M-1
Tank Status: Permanently Out of Use
FRTYPE: Self Insured
Expiration Date: Not reported

Alt Facility ID: 9-501353
Tank Id: R-M-1
Tank Status: Permanently Out of Use
FRTYPE: Self Insured
Expiration Date: Not reported

Alt Facility ID: 9-501353
Tank Id: R-M-2
Tank Status: Permanently Out of Use
FRTYPE: Self Insured
Expiration Date: Not reported

Count: 8 records. ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
KAHULUI	1001475719	KANAHA POND EAST	AMALA PLACE	96732	SEMS-ARCHIVE, SHWS
KAHULUI	S113230501	MECO STATION-CLASS TRANSFORMER NO.	DAIRY RD SE CORNER OF HANA HWY	96732	SHWS, SPILLS
KAHULUI	S113230485	MECO PAD-MOUNT TRANSFORMER NO. 137	DAIRY RD & HANA HWY	96732	SHWS
KAHULUI	S110061386	CENTRAL POWER PLANT ELECTRICAL SUB	HALEAKALA HWY		SHWS, INST CONTROL
KAHULUI	S111704793	MAUI PINEAPPLE CO LTD, SEED TREATM	HALEAKALA HWY		SHWS
KAHULUI	S111704662	A&B CENTRAL POWER PLANT PIPELINES	HALEAKALA HWY		SHWS
KAHULUI	S115488672	A&B PROPERTIES, INC., SUSPECTED FO	HALEAKALA ST	96732	SHWS
KAHULUI	1006820345	A&B DUMP SITE	W PAPA AVE	96732	SHWS

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 04/05/2017
Date Data Arrived at EDR: 04/21/2017
Date Made Active in Reports: 05/12/2017
Number of Days to Update: 21

Source: EPA
Telephone: N/A
Last EDR Contact: 04/21/2017
Next Scheduled EDR Contact: 07/17/2017
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 04/05/2017
Date Data Arrived at EDR: 04/21/2017
Date Made Active in Reports: 05/12/2017
Number of Days to Update: 21

Source: EPA
Telephone: N/A
Last EDR Contact: 04/21/2017
Next Scheduled EDR Contact: 07/17/2017
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Federal Delisted NPL site list

Delisted NPL: National Priority List Deletions

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.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 04/05/2017
Date Data Arrived at EDR: 04/21/2017
Date Made Active in Reports: 05/12/2017
Number of Days to Update: 21

Source: EPA
Telephone: N/A
Last EDR Contact: 04/21/2017
Next Scheduled EDR Contact: 07/17/2017
Data Release Frequency: Quarterly

Federal CERCLIS list

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 11/07/2016
Date Data Arrived at EDR: 01/05/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 92

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 04/07/2017
Next Scheduled EDR Contact: 07/17/2017
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 02/07/2017
Date Data Arrived at EDR: 04/19/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 16

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 04/21/2017
Next Scheduled EDR Contact: 07/31/2017
Data Release Frequency: Quarterly

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The 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 potential NPL site.

Date of Government Version: 02/07/2017
Date Data Arrived at EDR: 04/19/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 16

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 04/25/2017
Next Scheduled EDR Contact: 07/31/2017
Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 12/12/2016
Date Data Arrived at EDR: 12/28/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 44

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 05/02/2017
Next Scheduled EDR Contact: 04/10/2017
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 12/12/2016
Date Data Arrived at EDR: 12/28/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 44

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 05/02/2017
Next Scheduled EDR Contact: 04/10/2017
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 12/12/2016
Date Data Arrived at EDR: 12/28/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 44

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 05/02/2017
Next Scheduled EDR Contact: 04/10/2017
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 12/12/2016
Date Data Arrived at EDR: 12/28/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 44

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 05/02/2017
Next Scheduled EDR Contact: 04/10/2017
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 12/12/2016
Date Data Arrived at EDR: 12/28/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 44

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 05/02/2017
Next Scheduled EDR Contact: 04/10/2017
Data Release Frequency: Varies

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 12/28/2016
Date Data Arrived at EDR: 01/04/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 93

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 05/15/2017
Next Scheduled EDR Contact: 08/28/2017
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 11/15/2016
Date Data Arrived at EDR: 11/29/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 66

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 05/31/2017
Next Scheduled EDR Contact: 09/11/2017
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing 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 the institutional controls.

Date of Government Version: 11/15/2016
Date Data Arrived at EDR: 11/29/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 66

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 05/31/2017
Next Scheduled EDR Contact: 09/11/2017
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 09/26/2016
Date Data Arrived at EDR: 09/29/2016
Date Made Active in Reports: 11/11/2016
Number of Days to Update: 43

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 03/29/2017
Next Scheduled EDR Contact: 07/10/2017
Data Release Frequency: Annually

State- and tribal - equivalent CERCLIS

SHWS: Sites List

Facilities, sites or areas in which the Office of Hazard Evaluation and Emergency Response has an interest, has investigated or may investigate under HRS 128D (includes CERCLIS sites).

Date of Government Version: 09/23/2016
Date Data Arrived at EDR: 11/22/2016
Date Made Active in Reports: 12/21/2016
Number of Days to Update: 29

Source: Department of Health
Telephone: 808-586-4249
Last EDR Contact: 05/26/2017
Next Scheduled EDR Contact: 09/04/2017
Data Release Frequency: Semi-Annually

State and tribal landfill and/or solid waste disposal site lists

SWF/LF: Permitted Landfills in the State of Hawaii

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 09/17/2012
Date Data Arrived at EDR: 04/03/2013
Date Made Active in Reports: 05/10/2013
Number of Days to Update: 37

Source: Department of Health
Telephone: 808-586-4245
Last EDR Contact: 03/31/2017
Next Scheduled EDR Contact: 07/10/2017
Data Release Frequency: Varies

State and tribal leaking storage tank lists

LUST: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 12/02/2016
Date Made Active in Reports: 12/21/2016
Number of Days to Update: 19

Source: Department of Health
Telephone: 808-586-4228
Last EDR Contact: 03/17/2017
Next Scheduled EDR Contact: 06/12/2017
Data Release Frequency: Semi-Annually

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 10/17/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 04/28/2017
Next Scheduled EDR Contact: 08/07/2017
Data Release Frequency: Quarterly

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 10/01/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99
Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 04/28/2017
Next Scheduled EDR Contact: 08/07/2017
Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 10/07/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99
Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 04/28/2017
Next Scheduled EDR Contact: 08/07/2017
Data Release Frequency: Quarterly

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 10/06/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99
Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 04/28/2017
Next Scheduled EDR Contact: 08/07/2017
Data Release Frequency: Quarterly

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 09/01/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99
Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 04/28/2017
Next Scheduled EDR Contact: 08/07/2017
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 11/14/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99
Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 04/28/2017
Next Scheduled EDR Contact: 08/07/2017
Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 11/14/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99
Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 04/28/2017
Next Scheduled EDR Contact: 08/07/2017
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 10/14/2016
Date Data Arrived at EDR: 01/27/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 98
Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 04/28/2017
Next Scheduled EDR Contact: 08/07/2017
Data Release Frequency: Semi-Annually

State and tribal registered storage tank lists

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 01/01/2010
Date Data Arrived at EDR: 02/16/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 55
Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 04/11/2017
Next Scheduled EDR Contact: 07/24/2017
Data Release Frequency: Varies

UST: Underground Storage Tank Database
Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 12/02/2016
Date Made Active in Reports: 01/27/2017
Number of Days to Update: 56
Source: Department of Health
Telephone: 808-586-4228
Last EDR Contact: 03/17/2017
Next Scheduled EDR Contact: 06/12/2017
Data Release Frequency: Semi-Annually

INDIAN UST R1: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 11/14/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99
Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 04/28/2017
Next Scheduled EDR Contact: 08/07/2017
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 10/14/2016
Date Data Arrived at EDR: 01/27/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 98
Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 04/28/2017
Next Scheduled EDR Contact: 08/07/2017
Data Release Frequency: Semi-Annually

INDIAN UST R5: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 01/14/2017
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99
Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 04/28/2017
Next Scheduled EDR Contact: 08/07/2017
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 10/01/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99
Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 04/28/2017
Next Scheduled EDR Contact: 08/07/2017
Data Release Frequency: Semi-Annually

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 09/01/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 04/28/2017
Next Scheduled EDR Contact: 08/07/2017
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 10/17/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 04/28/2017
Next Scheduled EDR Contact: 08/07/2017
Data Release Frequency: Quarterly

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 10/06/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 04/28/2017
Next Scheduled EDR Contact: 08/07/2017
Data Release Frequency: Quarterly

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 10/07/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 04/28/2017
Next Scheduled EDR Contact: 08/07/2017
Data Release Frequency: Quarterly

State and tribal institutional control / engineering control registries

ENG CONTROLS: Engineering Control Sites

A listing of sites with engineering controls in place.

Date of Government Version: 09/23/2016
Date Data Arrived at EDR: 11/22/2016
Date Made Active in Reports: 12/21/2016
Number of Days to Update: 29

Source: Department of Health
Telephone: 404-586-4249
Last EDR Contact: 05/26/2017
Next Scheduled EDR Contact: 09/04/2017
Data Release Frequency: Varies

INST CONTROL: Sites with Institutional Controls

Voluntary Remediation Program and Brownfields sites with institutional controls in place.

Date of Government Version: 09/23/2016
Date Data Arrived at EDR: 11/22/2016
Date Made Active in Reports: 12/21/2016
Number of Days to Update: 29

Source: Department of Health
Telephone: 808-586-4249
Last EDR Contact: 05/26/2017
Next Scheduled EDR Contact: 09/04/2017
Data Release Frequency: Varies

State and tribal voluntary cleanup sites

VCP: Voluntary Response Program Sites
Sites participating in the Voluntary Response Program. The purpose of the VRP is to streamline the cleanup process in a way that will encourage prospective developers, lenders, and purchasers to voluntarily cleanup properties.

Date of Government Version: 09/23/2016
Date Data Arrived at EDR: 11/22/2016
Date Made Active in Reports: 12/21/2016
Number of Days to Update: 29
Source: Department of Health
Telephone: 808-586-4249
Last EDR Contact: 05/26/2017
Next Scheduled EDR Contact: 09/04/2017
Data Release Frequency: Varies

INDIAN VCP R1: Voluntary Cleanup Priority Listing
A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142
Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 03/27/2017
Next Scheduled EDR Contact: 07/10/2017
Data Release Frequency: Varies

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng
A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27
Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

State and tribal Brownfields sites

BROWNFIELDS: Brownfields Sites
With certain legal exclusions and additions, the term 'brownfield site' means real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant.

Date of Government Version: 09/23/2016
Date Data Arrived at EDR: 11/22/2016
Date Made Active in Reports: 12/21/2016
Number of Days to Update: 29
Source: Department of Health
Telephone: 808-586-4249
Last EDR Contact: 05/26/2017
Next Scheduled EDR Contact: 09/04/2017
Data Release Frequency: Varies

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites
Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 03/02/2017
Date Data Arrived at EDR: 03/02/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 36
Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 03/02/2017
Next Scheduled EDR Contact: 07/03/2017
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands
Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52
Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 05/01/2017
Next Scheduled EDR Contact: 08/14/2017
Data Release Frequency: Varies

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations
A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137
Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 04/24/2017
Next Scheduled EDR Contact: 08/07/2017
Data Release Frequency: No Update Planned

ODI: Open Dump Inventory
An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39
Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land
A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176
Source: Department of Health & Human Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 05/05/2017
Next Scheduled EDR Contact: 08/14/2017
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register
A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 09/30/2016
Date Data Arrived at EDR: 01/05/2017
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 36
Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 02/28/2017
Next Scheduled EDR Contact: 06/12/2017
Data Release Frequency: No Update Planned

CDL: Clandestine Drug Lab Listing
A listing of clandestine drug lab site locations.

Date of Government Version: 08/04/2010
Date Data Arrived at EDR: 09/10/2010
Date Made Active in Reports: 10/22/2010
Number of Days to Update: 42
Source: Department of Health
Telephone: 808-586-4249
Last EDR Contact: 05/24/2017
Next Scheduled EDR Contact: 09/11/2017
Data Release Frequency: Varies

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 09/30/2016
Date Data Arrived at EDR: 12/05/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 67

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 05/31/2017
Next Scheduled EDR Contact: 09/11/2017
Data Release Frequency: Quarterly

Local Land Records

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 02/18/2014
Date Data Arrived at EDR: 03/18/2014
Date Made Active in Reports: 04/24/2014
Number of Days to Update: 37

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 04/21/2017
Next Scheduled EDR Contact: 08/07/2017
Data Release Frequency: Varies

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 12/28/2016
Date Data Arrived at EDR: 12/28/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 37

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 03/29/2017
Next Scheduled EDR Contact: 07/10/2017
Data Release Frequency: Annually

SPILLS: Release Notifications

Releases of hazardous substances to the environment reported to the Office of Hazard Evaluation and Emergency Response since 1988.

Date of Government Version: 01/14/2016
Date Data Arrived at EDR: 02/24/2016
Date Made Active in Reports: 04/06/2016
Number of Days to Update: 42

Source: Department of Health
Telephone: 808-586-4249
Last EDR Contact: 05/26/2017
Next Scheduled EDR Contact: 09/04/2017
Data Release Frequency: Varies

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 03/10/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/11/2013
Number of Days to Update: 39

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 12/12/2016
Date Data Arrived at EDR: 12/28/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 44

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 05/02/2017
Next Scheduled EDR Contact: 04/10/2017
Data Release Frequency: Varies

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 01/31/2015
Date Data Arrived at EDR: 07/08/2015
Date Made Active in Reports: 10/13/2015
Number of Days to Update: 97

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 02/24/2017
Next Scheduled EDR Contact: 06/05/2017
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 04/14/2017
Next Scheduled EDR Contact: 07/24/2017
Data Release Frequency: Semi-Annually

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 02/06/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 339

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 04/14/2017
Next Scheduled EDR Contact: 07/24/2017
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 01/01/2017
Date Data Arrived at EDR: 02/03/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 05/19/2017
Next Scheduled EDR Contact: 08/28/2017
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 02/13/2017
Date Data Arrived at EDR: 02/15/2017
Date Made Active in Reports: 05/12/2017
Number of Days to Update: 86

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 05/17/2017
Next Scheduled EDR Contact: 08/28/2017
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 05/08/2017
Next Scheduled EDR Contact: 08/21/2017
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 04/22/2013
Date Data Arrived at EDR: 03/03/2015
Date Made Active in Reports: 03/09/2015
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 05/05/2017
Next Scheduled EDR Contact: 08/21/2017
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 01/15/2015
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 14

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 03/24/2017
Next Scheduled EDR Contact: 07/03/2017
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 11/24/2015
Date Made Active in Reports: 04/05/2016
Number of Days to Update: 133

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 05/26/2017
Next Scheduled EDR Contact: 09/04/2017
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 12/10/2010
Date Made Active in Reports: 02/25/2011
Number of Days to Update: 77
Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 04/26/2017
Next Scheduled EDR Contact: 08/07/2017
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 11/25/2013
Date Data Arrived at EDR: 12/12/2013
Date Made Active in Reports: 02/24/2014
Number of Days to Update: 74
Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 03/06/2017
Next Scheduled EDR Contact: 06/19/2017
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 02/01/2017
Date Data Arrived at EDR: 02/09/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 57
Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 04/21/2017
Next Scheduled EDR Contact: 08/07/2017
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35
Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 10/25/2013
Date Data Arrived at EDR: 10/17/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 3
Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 05/09/2017
Next Scheduled EDR Contact: 08/21/2017
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 01/20/2016
Date Data Arrived at EDR: 04/28/2016
Date Made Active in Reports: 09/02/2016
Number of Days to Update: 127

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 04/10/2017
Next Scheduled EDR Contact: 07/24/2017
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 04/10/2017
Next Scheduled EDR Contact: 07/24/2017
Data Release Frequency: Quarterly

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 05/19/2017
Next Scheduled EDR Contact: 09/04/2017
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 05/19/2017
Next Scheduled EDR Contact: 09/04/2017
Data Release Frequency: Quarterly

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 08/30/2016
Date Data Arrived at EDR: 09/08/2016
Date Made Active in Reports: 10/21/2016
Number of Days to Update: 43

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 05/08/2017
Next Scheduled EDR Contact: 08/21/2017
Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data

A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 08/07/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 76

Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 03/06/2017
Next Scheduled EDR Contact: 06/19/2017
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List

A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 07/01/2014
Date Data Arrived at EDR: 09/10/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 03/06/2017
Next Scheduled EDR Contact: 06/19/2017
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 02/01/2011
Date Data Arrived at EDR: 10/19/2011
Date Made Active in Reports: 01/10/2012
Number of Days to Update: 83
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 04/28/2017
Next Scheduled EDR Contact: 08/07/2017
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 01/04/2017
Date Data Arrived at EDR: 01/06/2017
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 35
Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 04/06/2017
Next Scheduled EDR Contact: 07/17/2017
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data
Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 07/31/2012
Date Data Arrived at EDR: 08/07/2012
Date Made Active in Reports: 09/18/2012
Number of Days to Update: 42
Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 05/02/2017
Next Scheduled EDR Contact: 08/14/2017
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 09/30/2016
Date Data Arrived at EDR: 11/18/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 77

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 03/27/2017
Next Scheduled EDR Contact: 07/10/2017
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 02/24/2015
Date Made Active in Reports: 09/30/2015
Number of Days to Update: 218

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 05/26/2017
Next Scheduled EDR Contact: 09/04/2017
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 04/14/2017
Next Scheduled EDR Contact: 07/24/2017
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 12/23/2016
Date Data Arrived at EDR: 12/27/2016
Date Made Active in Reports: 02/17/2017
Number of Days to Update: 52

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 05/05/2017
Next Scheduled EDR Contact: 08/21/2017
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 09/14/2010
Date Data Arrived at EDR: 10/07/2011
Date Made Active in Reports: 03/01/2012
Number of Days to Update: 146

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 05/22/2017
Next Scheduled EDR Contact: 09/04/2017
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 12/05/2016
Date Data Arrived at EDR: 01/05/2017
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 36

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 04/21/2017
Next Scheduled EDR Contact: 07/17/2017
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 03/07/2017
Next Scheduled EDR Contact: 07/10/2017
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 03/07/2017
Next Scheduled EDR Contact: 04/10/2017
Data Release Frequency: Annually

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 02/08/2017
Date Data Arrived at EDR: 02/28/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 38

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 05/31/2017
Next Scheduled EDR Contact: 09/11/2017
Data Release Frequency: Semi-Annually

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 12/05/2005
Date Data Arrived at EDR: 02/29/2008
Date Made Active in Reports: 04/18/2008
Number of Days to Update: 49

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 05/31/2017
Next Scheduled EDR Contact: 09/11/2017
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 03/03/2017
Next Scheduled EDR Contact: 06/12/2017
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 03/14/2017
Date Data Arrived at EDR: 03/17/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 21

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 03/13/2017
Next Scheduled EDR Contact: 06/26/2017
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 04/04/2017
Date Data Arrived at EDR: 04/07/2017
Date Made Active in Reports: 05/12/2017
Number of Days to Update: 35

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 04/07/2017
Next Scheduled EDR Contact: 06/19/2017
Data Release Frequency: Quarterly

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 03/19/2017
Date Data Arrived at EDR: 03/21/2017
Date Made Active in Reports: 05/12/2017
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 03/21/2017
Next Scheduled EDR Contact: 07/03/2017
Data Release Frequency: Quarterly

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 06/02/2016
Date Data Arrived at EDR: 06/03/2016
Date Made Active in Reports: 09/02/2016
Number of Days to Update: 91

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 05/24/2017
Next Scheduled EDR Contact: 09/11/2017
Data Release Frequency: Varies

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 10/25/2015
Date Data Arrived at EDR: 01/29/2016
Date Made Active in Reports: 04/05/2016
Number of Days to Update: 67

Source: Department of Defense
Telephone: 571-373-0407
Last EDR Contact: 05/22/2017
Next Scheduled EDR Contact: 07/31/2017
Data Release Frequency: Varies

FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 02/22/2017
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 05/12/2017
Number of Days to Update: 79

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 05/24/2017
Next Scheduled EDR Contact: 09/04/2017
Data Release Frequency: Quarterly

AIRS: List of Permitted Facilities
A listing of permitted facilities in the state.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 01/04/2017
Date Made Active in Reports: 03/02/2017
Number of Days to Update: 57

Source: Department of Health
Telephone: 808-586-4200
Last EDR Contact: 03/31/2017
Next Scheduled EDR Contact: 07/17/2017
Data Release Frequency: Varies

DRYCLEANERS: Permitted Drycleaner Facility Listing
A listing of permitted drycleaner facilities in the state.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 01/04/2017
Date Made Active in Reports: 03/08/2017
Number of Days to Update: 63

Source: Department of Health
Telephone: 808-586-4200
Last EDR Contact: 03/31/2017
Next Scheduled EDR Contact: 07/17/2017
Data Release Frequency: Varies

Financial Assurance: Financial Assurance Information Listing
A listing of financial assurance information for underground storage tank facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 12/16/2016
Date Data Arrived at EDR: 12/20/2016
Date Made Active in Reports: 01/27/2017
Number of Days to Update: 38

Source: Department of Health
Telephone: 808-586-4226
Last EDR Contact: 03/13/2017
Next Scheduled EDR Contact: 06/26/2017
Data Release Frequency: Varies

UIC: Underground Injection Wells Listing
A listing of underground injection well locations.

Date of Government Version: 02/07/2013
Date Data Arrived at EDR: 02/12/2013
Date Made Active in Reports: 04/09/2013
Number of Days to Update: 56

Source: Department of Health
Telephone: 808-586-4258
Last EDR Contact: 05/24/2017
Next Scheduled EDR Contact: 09/11/2017
Data Release Frequency: Varies

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants
The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historic Gas Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historic Dry Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA HWS: Recovered Government Archive State Hazardous Waste Facilities List

The EDR Recovered Government Archive State Hazardous Waste database provides a list of SHWS incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Health in Hawaii.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/08/2014
Number of Days to Update: 191

Source: Department of Health
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Health in Hawaii.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/17/2014
Number of Days to Update: 200

Source: Department of Health
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Health in Hawaii.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/03/2014
Number of Days to Update: 186

Source: Department of Health
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

Oil/Gas Pipelines
Source: PennWell Corporation
Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Electric Power Transmission Line Data
Source: PennWell Corporation
This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetlands Inventory
Source: Office of Planning
Telephone: 808-587-2895

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

6.315-ACRE PROPERTY
AIRPORT ROAD
KAHULUI, HI 96732

TARGET PROPERTY COORDINATES

Latitude (North):	20.887637 - 20° 53' 15.49''
Longitude (West):	156.444402 - 156° 26' 39.85''
Universal Tranverse Mercator:	Zone 4
UTM X (Meters):	765868.9
UTM Y (Meters):	2311690.8
Elevation:	46 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	5941605 PAIA, HI
Version Date:	2013
West Map:	5941607 WAILUKU, HI
Version Date:	2013

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principal investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

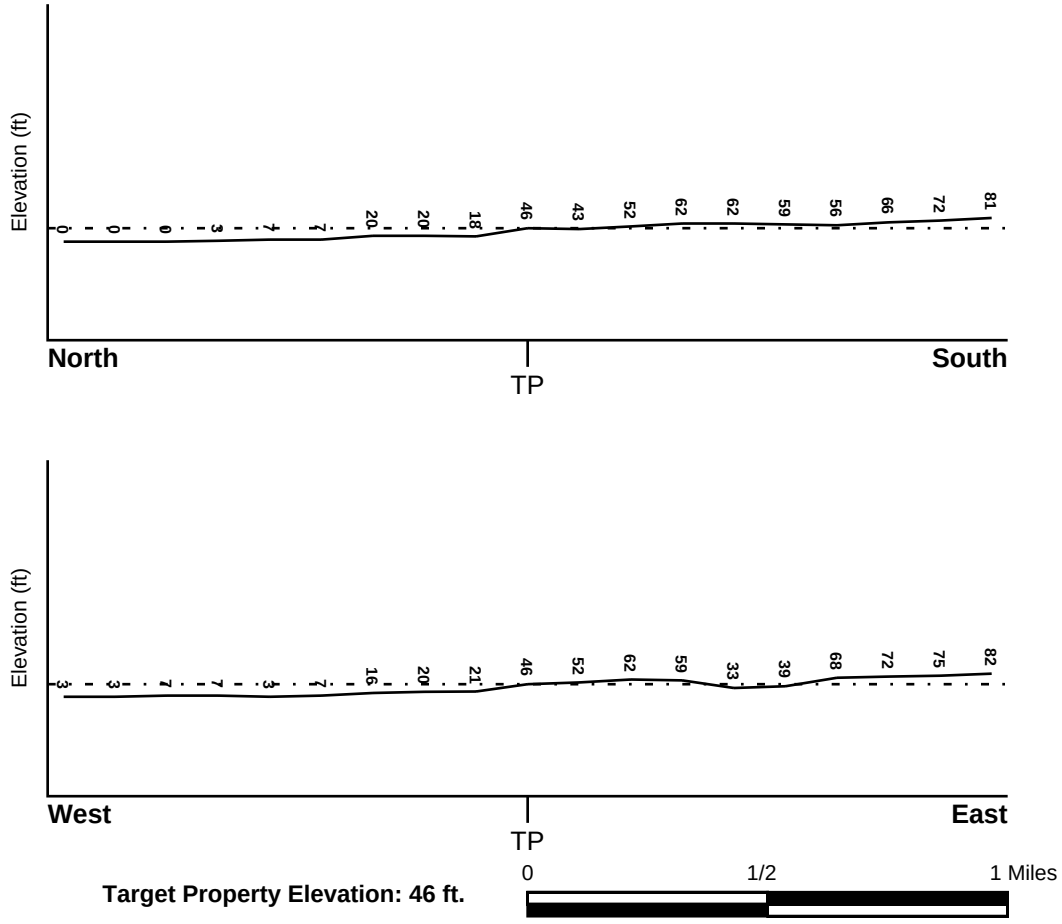
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General NW

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Target Property Elevation: 46 ft.

Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Flood Plain Panel at Target Property	FEMA Source Type
1500030411E	FEMA FIRM Flood data

Additional Panels in search area:	FEMA Source Type
1500030403E	FEMA FIRM Flood data
1500030392E	FEMA FIRM Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
NOT AVAILABLE	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

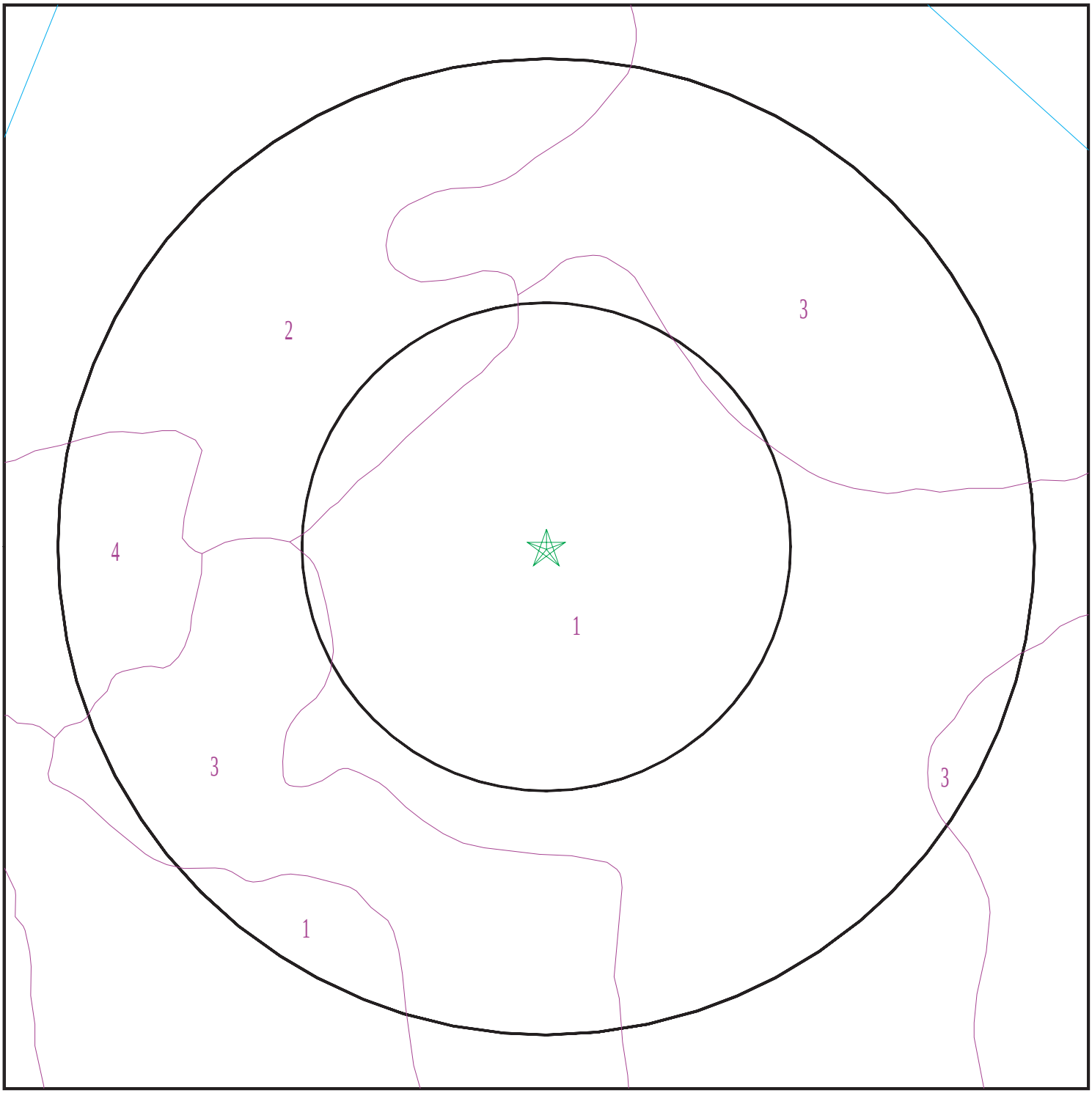
Era: -
System: -
Series: -
Code: N/A *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: -

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 4953403.2s



Target Property
SSURGO Soil
Water

0 1/16 1/8 1/4 Miles

N

SITE NAME:	6.315-Acre Property	CLIENT:	Ford Canty Associates, Inc.
ADDRESS:	Airport Road Kahului HI 96732	CONTACT:	Tim Swartz
LAT/LONG:	20.887637 / 156.444402	INQUIRY #:	4953403.2s
		DATE:	June 01, 2017 1:57 pm

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: Molokai

Soil Surface Texture: silty clay loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	14 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	ML-K (proposed)	Max: 14 Min: 4.23	Max: 7.8 Min: 6.6
2	14 inches	72 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	ML-K (proposed)	Max: 4.23 Min: 1.41	Max: 7.8 Min: 6.6

Soil Map ID: 2

Soil Component Name: Jaucas

Soil Surface Texture: sand

Hydrologic Group: Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.

Soil Drainage Class: Excessively drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 107 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	12 inches	sand	Granular materials (35 pct. or less passing No. 200), Fine Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141 Min: 42.34	Max: 8.4 Min: 7.9
2	12 inches	59 inches	sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141 Min: 42.34	Max: 8.4 Min: 7.9

Soil Map ID: 3

Soil Component Name: Molokai

Soil Surface Texture: silty clay loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	14 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4.23	Max: 7.8 Min: 6.6
2	14 inches	72 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 4.23 Min: 1.41	Max: 7.8 Min: 6.6

Soil Map ID: 4

Soil Component Name: Ewa

Soil Surface Texture: silty clay loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	18 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4.23	Max: 7.8 Min: 6.6
2	18 inches	59 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4.23	Max: 7.8 Min: 6.6

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 0.001 miles
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
A2	USGS40000269155	1/8 - 1/4 Mile ENE
4	USGS40000269130	1/4 - 1/2 Mile SE
C9	USGS40000269150	1/2 - 1 Mile West
D11	USGS40000269136	1/2 - 1 Mile WSW

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
A1	HI9000000003381	1/8 - 1/4 Mile ENE
3	HI9000000003388	1/4 - 1/2 Mile West
5	HI9000000003387	1/2 - 1 Mile WSW
6	HI9000000003380	1/2 - 1 Mile ESE
B7	HI9000000003318	1/2 - 1 Mile SSW
B8	HI9000000003319	1/2 - 1 Mile SSW
C10	HI9000000003391	1/2 - 1 Mile West
D12	HI9000000003386	1/2 - 1 Mile WSW

PHYSICAL SETTING SOURCE MAP - 4953403.2s

County Boundary
Major Roads
Contour Lines
Airports
Earthquake epicenter, Richter 5 or greater
Water Wells
Public Water Supply Wells
Cluster of Multiple Icons

0 1/4 1/2 1 Miles

Groundwater Flow Direction
GI Indeterminate Groundwater Flow at Location
GV Groundwater Flow Varies at Location

N

SITE NAME:	6.315-Acre Property	CLIENT:	Ford Canty Associates, Inc.
ADDRESS:	Airport Road Kahului HI 96732	CONTACT:	Tim Swartz
		INQUIRY #:	4953403.2s
LAT/LONG:	20.887637 / 156.444402	DATE:	June 01, 2017 1:57 pm

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

A1
ENE
1/8 - 1/4 Mile
Lower

HI WELLS **HI9000000003381**

Wid:	6-5326-002	Island:	Maui
Well name:	Kahului	Old name:	Not Reported
Yr drilled:	1956		
Driller:	Goodfellow Construction, Inc. Corporate		
Quad map:	7		
Long83dd:	-156.441667		
Lat83dd:	20.889167		
Gps:	0	Utm:	-1
Owner user:	Valley Isle Pumping, Inc.		
Land owner:	Not Reported		
Pump insta:	Not Reported		
Old number:	22-	Well type:	ROT
Casing dia:	6	Ground el:	15
Well depth:	50		
Solid case:	30	Perf case:	Not Reported
Use:	IRR - Irrigation (non-domestic, non-agriculture)		
Use year:	Not Reported		
Init head:	Not Reported	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	0		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	THO		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	-35
Bot solid:	-15	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	Not Reported
Aqui code:	60301		
Latest hd:	Not Reported	Wcr:	01-JAN-56
Pir:	Not Reported		
Surveyor:	Not Reported		
T:	Not Reported	Site id:	HI9000000003381

A2
ENE
1/8 - 1/4 Mile
Lower

FED USGS **USGS40000269155**

Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-205333156264001		
Monloc name:	6-5326-02 W22		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20020000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	20.8892912
Longitude:	-156.4416247	Sourcemap scale:	24000

Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	15.00
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19560101	Welldepth:	50
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

3
West
1/4 - 1/2 Mile
Lower

HI WELLS **HI9000000003388**

Wid:	6-5327-007	Island:	Maui
Well name:	Central Power Plant	Old name:	Not Reported
Yr drilled:	1894		
Driller:	Not Reported		
Quad map:	7		
Long83dd:	-156.448419		
Lat83dd:	20.887611		
Gps:	-1	Utm:	0
Owner user:	Hawaiian Commercial & Sugar Co. (HC&S)		
Land owner:	Not Reported		
Pump insta:	Not Reported		
Old number:	20-SH	Well type:	DUG
Casing dia:	439	Ground el:	20
Well depth:	14		
Solid case:	Not Reported	Perf case:	Not Reported
Use:	ABN - Sealed		
Use year:	Not Reported		
Init head:	Not Reported	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	0		
Test date:	10/29/2002	Test gpm:	520
Test ddown:	0.46	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	1000		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	Qa		
Pump yr:	2002		
Draft yr:	Not Reported	Bot hole:	Not Reported
Bot solid:	Not Reported	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	1.44		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	10	Tmk:	(2) 3-8-079:013
Aqui code:	60301		
Latest hd:	Not Reported	Wcr:	31-JUL-12
Pir:	Not Reported		
Surveyor:	Not Reported		
T:	138000	Site id:	HI9000000003388

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

4
SE | **FED USGS** | **USGS40000269130**
1/4 - 1/2 Mile
Higher

Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-205314156264001		
Monloc name:	6-5327-06 W23		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20020000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	20.8840138
Longitude:	-156.4416247	Sourcemap scale:	24000
Horiz Acc measure:	5	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	15.00
Vert measure units:	feet	Vertacc measure val:	3
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	42
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

5
WSW | **HI WELLS** | **HI9000000003387**
1/2 - 1 Mile
Lower

Wid:	6-5327-006	Island:	Maui
Well name:	Tmk 3-8-06-42	Old name:	Not Reported
Yr drilled:	0		
Driller:	Ocean View Drilling Co., Ltd.		
Quad map:	7		
Long83dd:	-156.451389		
Lat83dd:	20.883889		
Gps:	0	Utm:	-1
Owner user:	Maui Electric Company, Ltd., MECO		
Land owner:	Not Reported		
Pump insta:	Not Reported		
Old number:	23-	Well type:	Not Reported
Casing dia:	Not Reported	Ground el:	Not Reported
Well depth:	42		
Solid case:	Not Reported	Perf case:	Not Reported
Use:	Not Reported		
Use year:	Not Reported		
Init head:	Not Reported	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	0		
Test date:	Not Reported	Test gpm:	Not Reported

Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	THO		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	Not Reported
Bot solid:	Not Reported	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	(2) 3-8-006:042
Aqui code:	60301		
Latest hd:	Not Reported	Wcr:	30-DEC-99
Pir:	Not Reported		
Surveyor:	Not Reported		
T:	Not Reported	Site id:	HI9000000003387

6
ESE
1/2 - 1 Mile
Higher

HI WELLS **HI9000000003380**

Wid:	6-5326-001	Island:	Maui
Well name:	Old Pump 3	Old name:	Not Reported
Yr drilled:	1898		
Driller:	Not Reported		
Quad map:	7		
Long83dd:	-156.435833		
Lat83dd:	20.885278		
Gps:	0	Utm:	-1
Owner user:	Hawaiian Commercial & Sugar Co. (HC&S)		
Land owner:	Not Reported		
Pump insta:	Not Reported		
Old number:	21-SH	Well type:	TUN
Casing dia:	Not Reported	Ground el:	50
Well depth:	0		
Solid case:	Not Reported	Perf case:	Not Reported
Use:	ABN - Sealed		
Use year:	Not Reported		
Init head:	Not Reported	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	0		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	THO		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	Not Reported
Bot solid:	Not Reported	Bot perf:	Not Reported
Spec capac:	Not Reported		

Pump mgd:	0		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	Not Reported
Aqui code:	60301		
Latest hd:	Not Reported	Wcr:	30-DEC-99
Pir:	Not Reported		
Surveyor:	Not Reported		
T:	Not Reported	Site id:	HI9000000003380

B7
SSW
1/2 - 1 Mile
Higher

HI WELLS **HI9000000003318**

Wid:	6-5226-001	Island:	Maui
Well name:	MBPII Non-Potable	Old name:	Puunene-Pump 5
Yr drilled:	1899		
Driller:	Not Reported		
Quad map:	7		
Long83dd:	-156.446329		
Lat83dd:	20.878574		
Gps:	-1	Utm:	0
Owner user:	Maui Business Park Phase II Owner's Association		
Land owner:	A&B Properties, Inc., A&B		
Pump insta:	Blaise Clay (Water Resources International, Inc.)		
Old number:	19-SH	Well type:	SHF
Casing dia:	Not Reported	Ground el:	42.53
Well depth:	48		
Solid case:	Not Reported	Perf case:	Not Reported
Use:	AGR - Crops and Processing		
Use year:	Not Reported		
Init head:	Not Reported	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	0		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	26	Test unit:	C
Pump gpm:	450		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	Qkul		
Pump yr:	1970		
Draft yr:	Not Reported	Bot hole:	-5.47
Bot solid:	Not Reported	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	.648		
Draft mgd:	Not Reported	Pump elev:	-1.11
Pump depth:	43.64	Tmk:	(2) 3-8-006:004
Aqui code:	60301		
Latest hd:	Not Reported	Wcr:	16-JUN-14
Pir:	1/6/2014		
Surveyor:	Sherman Deponte		
T:	Not Reported	Site id:	HI9000000003318

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
B8 **SSW** **1/2 - 1 Mile** **Higher**	**HI WELLS**	**HI9000000003319**

Wid:	6-5226-002	Island:	Maui
Well name:	Puunene-Pump 6	Old name:	Pump 6A & 6B
Yr drilled:	1934		
Driller:	Not Reported		
Quad map:	7		
Long83dd:	-156.446329		
Lat83dd:	20.878573		
Gps:	-1	Utm:	0
Owner user:	Hawaiian Commercial & Sugar Co. (HC&S)		
Land owner:	Not Reported		
Pump insta:	Not Reported		
Old number:	18-SH	Well type:	SHF
Casing dia:	Not Reported	Ground el:	182
Well depth:	176		
Solid case:	Not Reported	Perf case:	Not Reported
Use:	AGR - Crops and Processing		
Use year:	Not Reported		
Init head:	Not Reported	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	0		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	23.5	Test unit:	C
Pump gpm:	16100		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	Qkul		
Pump yr:	1970		
Draft yr:	Not Reported	Bot hole:	6
Bot solid:	Not Reported	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	23		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	(2) 3-8-006:001
Aqui code:	60301		
Latest hd:	Not Reported	Wcr:	31-JUL-12
Pir:	Not Reported		
Surveyor:	Not Reported		
T:	Not Reported	Site id:	HI9000000003319

C9 **West** **1/2 - 1 Mile** **Lower**	**FED USGS**	**USGS40000269150**

Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-205330156272901		
Monloc name:	6-5327-10 T116		
Monloc type:	Well: Test hole not completed as a well		
Monloc desc:	Not Reported		
Huc code:	20020000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	20.8884579
Longitude:	-156.4552353	Sourcemap scale:	24000

Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	5.00
Vert measure units:	feet	Vertacc measure val:	2
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19620101	Welldepth:	86
Welldepth units:	ft	Wellholedepth:	86
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

C10
West
1/2 - 1 Mile
Lower

HI WELLS **HI9000000003391**

Wid:	6-5327-010	Island:	Maui
Well name:	Kanaha Pond	Old name:	Not Reported
Yr drilled:	1962		
Driller:	Samson & Zerbe		
Quad map:	7		
Long83dd:	-156.455278		
Lat83dd:	20.888333		
Gps:	0	Utm:	-1
Owner user:	Land Division Oahu, DLNR-LD		
Land owner:	Not Reported		
Pump insta:	Not Reported		
Old number:	116-TH	Well type:	PER
Casing dia:	14	Ground el:	5
Well depth:	86		
Solid case:	45	Perf case:	Not Reported
Use:	IRR - Habitat Maintenance		
Use year:	Not Reported		
Init head:	2.6	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	550		
Test date:	Not Reported	Test gpm:	800
Test ddown:	4	Test chlor:	530
Test temp:	26.4	Test unit:	C
Pump gpm:	1000		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	THO		
Pump yr:	1971		
Draft yr:	Not Reported	Bot hole:	-81
Bot solid:	-40	Bot perf:	Not Reported
Spec capac:	200		
Pump mgd:	1.43		
Draft mgd:	Not Reported	Pump elev:	-29
Pump depth:	33.6	Tmk:	(2) 3-8-001:019
Aqui code:	60301		
Latest hd:	Not Reported	Wcr:	01-JAN-62
Pir:	1/18/2012		
Surveyor:	Not Reported		
T:	Not Reported	Site id:	HI9000000003391

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

D11
WSW
1/2 - 1 Mile
Lower

FED USGS **USGS40000269136**

Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-205318156273701		
Monloc name:	6-5327-05 W21		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20020000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	20.8851249
Longitude:	-156.4574575	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	5.31
Vert measure units:	feet	Vertacc measure val:	.1
Vert accmeasure units:	feet		
Vertcollection method:	Level or other surveying method		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	Not Reported
Welldepth units:	Not Reported	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

D12
WSW
1/2 - 1 Mile
Lower

HI WELLS **HI9000000003386**

Wid:	6-5327-005	Island:	Maui
Well name:	Kahului	Old name:	Not Reported
Yr drilled:	0		
Driller:	Not Reported		
Quad map:	5		
Long83dd:	-156.4575		
Lat83dd:	20.885		
Gps:	0	Utm:	-1
Owner user:	Haleakala Dairy		
Land owner:	Not Reported		
Pump insta:	Not Reported		
Old number:	21-	Well type:	Not Reported
Casing dia:	14	Ground el:	5
Well depth:	0		
Solid case:	Not Reported	Perf case:	Not Reported
Use:	UNU - Unused		
Use year:	Not Reported		
Init head:	Not Reported	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	0		
Test date:	Not Reported	Test gpm:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	THO		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	Not Reported
Bot solid:	Not Reported	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	Not Reported
Aqui code:	60301		
Latest hd:	Not Reported	Wcr:	30-DEC-99
Pir:	Not Reported		
Surveyor:	Not Reported		
T:	Not Reported	Site id:	HI9000000003386

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

Federal EPA Radon Zone for MAUI County: 3

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 96732

Number of sites tested: 17

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	-0.271 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	0.200 pCi/L	100%	0%	0%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetlands Inventory
Source: Office of Planning
Telephone: 808-587-2895

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Well Index Database
Source: Commission on Water Resource Management
Telephone: 808-587-0214
CWRM maintains a Well Index Database to track specific information pertaining to the construction and installation of production wells in Hawaii

OTHER STATE DATABASE INFORMATION

RADON

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary faultlines, prepared in 1975 by the United State Geological Survey

PHYSICAL SETTING SOURCE RECORDS SEARCHED

STREET AND ADDRESS INFORMATION

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Persons Contacted

Mr. Sean O'Keefe, Director, Environmental Affairs, Alexander & Baldwin, Inc., June 7, 2017, phone number (808) 877-2959

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Phase II Environmental Investigation, Maui Pineapple Company Former Seed Treatment Facility (TMK: [2] 3-8-079: Parcel 013), Kahului, Maui, Hawaii, prepared by Bureau Veritas, dated June 24, 2011 (Bureau Veritas Project No. 17010-010167.01)

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Letter Report - Remedial Action Clearance Report, Former Kahului Seed Plant, Kahului, Maui, Hawaii, TMK (2) 3-8-79: Parcel 13, Lots 16, 17, 18, 19, and 20 only, prepared by EnviroServices, dated May 31, 2017 (ETC Project No. 11-2016)

Appendix 7

Environmental Site Assessments Phase 2

FORD CANTY & ASSOCIATES, INC.
ENVIRONMENTAL SCIENTISTS & ENGINEERS

Phase II
Environmental Site Assessment

6.315-Acre Property
(Tax Map Key [TMK]: [2] 3-8-079: Parcel 013)
Kahului, Maui, Hawaii 96732

Ford Canty Project No. 17-1226

July 21, 2017

Prepared for:

R.D. Olson Development
520 Newport Center Drive, Suite 600
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Prepared by:

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LIST OF ACRONYMS

ACM	Asbestos-Containing Material
bgs	below ground surface
C/I	Commercial/Industrial
COPC	Chemicals of potential concern
DU	Decision Unit
EAL	Environmental Action Level
EPA	Environmental Protection Agency
ESA	Environmental Site Assessment
Ford Canty	Ford Canty & Associates, Inc.
HDOH	State of Hawaii Department of Health
HEER	Hazard Evaluation and Emergency Response
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
MPC	Maui Pineapple Company
PVC	Polyvinyl Chloride
QA/QC	Quality Assurance/Quality Control
REC	Recognized Environmental Condition
RPD	Relative Percent Difference
RSD	Relative Standard Deviation
SOP	Standard Operating Procedure
TMK	Tax Map Key
UCL	Upper Confidence Level
UIC	Underground Injection Control
USGS	United States Geologic Survey

EXECUTIVE SUMMARY

R.D. Olson Development retained Ford Canty & Associates, Inc. (Ford Canty) to perform a Phase II Environmental Site Assessment (ESA) at a 6.315-acre property (Tax Map Key Number [TMK]: [2] 3-8-079: Parcel 013), located in Kahului, Maui, Hawaii (herein referred to as the "site").

The purpose of this investigation was to perform surface soil sampling with laboratory analysis to assess for the presence or absence of chemicals of potential concern (COPC) at the site. The site was formerly used as agricultural land for sugar cane cultivation; as such, this investigation is intended to address potential soil contamination as a result of historical pesticide/herbicide use.

On July 17, 2017, Ford Canty representatives mobilized to the site to conduct multi-increment surface soil sampling. Four Decision Units (DUs) were established at the site (identified as DU-1 through DU-4), and one multi-increment soil samples consisting of 50 individual increments was collected from each DU. Field QA/QC was performed during this investigation through the collection of one set of replicate samples from DU-1, which consisted of the primary sample and an associated duplicate and triplicate sample. The surface soil was collected from each individual increment at a depth of zero to three inches below ground surface (bgs). The samples were placed in a cooler containing wet ice, and logged on a chain-of-custody form for delivery to the laboratory.

The four primary multi-increment soil samples and two replicate multi-increment soil samples were submitted to Advanced Analytical Laboratory, located in Honolulu, Hawaii, and analyzed for the following:

- Arsenic using Environmental Protection Agency (EPA) Methods 6020/3050B.
- Organochlorine Pesticides using EPA Method 8081A.

Key findings from the analytical results of the multi-increment soil samples are as follows:

- Arsenic was detected in DU-1 through DU-4 at concentrations ranging from 1.2 to 2.4 milligrams per kilogram (mg/kg), which are below the State of Hawaii Department of Health (HDOH) Tier 1 Unrestricted Environmental Action Level (EAL) of 24 mg/kg.
- Organochlorine pesticides were not detected in DU-1 through DU-4 at concentrations greater than the laboratory reporting limits.
- The Relative Percent Differences (RPD) and Relative Standard Deviation (RSD) calculated from the replicate sample data are within the acceptable limits. Additionally, Upper Confidence Level (UCL) calculations indicate that there is 95% confidence that the true mean for arsenic does not exceed 2.52 mg/kg, which is below the HDOH Tier 1 Unrestricted EAL.

Based on these findings, surface soils at the site do not appear to be impacted with COPC.

1.0 INTRODUCTION AND PURPOSE

R.D. Olson Development retained Ford Canty & Associates, Inc. (Ford Canty) to perform a Phase II Environmental Site Assessment (ESA) at a 6.315-acre property (Tax Map Key Number [TMK]: [2] 3-8-079: Parcel 013), located in Kahului, Maui, Hawaii (herein referred to as the "site"). A Site Location Map showing the location of the site is included as Figure 1, located behind the *Figures* tab.

The purpose of this investigation was to perform surface soil sampling with laboratory analysis to assess for the presence or absence of chemicals of potential concern (COPC) at the site. The site was formerly used as agricultural land for sugar cane cultivation; as such, this investigation is intended to address potential soil contamination as a result of historical pesticide/herbicide use.

2.0 BACKGROUND

2.1 SITE DESCRIPTION

The site is an irregular-shaped, relatively flat, 6.315-acre property in Kahului, Maui. It is bounded by Haleakala Highway to the north, Airport Road to the south-southeast, and Lauʻo Loop to the west, as depicted on Figure 2. It is currently undeveloped, and covered with light to moderate vegetation. The County of Maui Real Property Tax Assessment database lists the site as consisting of a portion of TMK: (2) 3-8-079: Parcel 013.

2.2 PHYSICAL SETTING

2.2.1 Soils/Geology

According to the United States Geologic Survey (USGS), Paia, Hawaii, 7.5-minute topographic quadrangle map (USGS, 2013), the site lies at an elevation of approximately 40 to 45 feet above mean sea level. The general topography of the site and surrounding region is gently sloping down to the northwest.

According to the Soil Survey of the Islands of Kauai, Oahu, Maui, Molokai, and Lanai (Foote, D.E. et al., 1972), the types of soil underlying the site consists of Molokai silty clay loam, with 3 to 7 percent slopes. The Molokai series consists of well-drained soils on uplands on the islands of Maui, lanai, Molokai, and Oahu. The soil forms in material weathered from basic igneous rock.

2.2.2 Surface Water

The nearest surface water body is a drainage channel, which is located approximately 1,200 feet west of the site (USGS, 2013).

2.2.3 Groundwater

The Aquifer Identification and Classification for Maui: Groundwater Protection Strategy for Hawaii (Mink, J.F. and L.S. Lau, 1990), published by the Water Resources Research Center at the University of Hawaii, was reviewed for information on groundwater conditions below the site. The report describes the upper and lower aquifers below the subject property as part of the Kahului aquifer system of the Central aquifer sector, on the Island of Maui.

The upper aquifer is described as an unconfined basal aquifer of the sedimentary type, with nonvolcanic lithology. Its status is described as an irreplaceable water supply with low salinity (250-1,000 milligrams per liter [mg/L] Chloride) that is currently used and considered ecologically important; however, it is not used for drinking water purposes. This aquifer has a high vulnerability to contamination.

The lower aquifer is described as an unconfined basal aquifer of the flank type, occurring in horizontally extensive lavas. Its status is described as an irreplaceable water supply with low salinity that is currently used and considered ecologically important; however, it is not used for drinking water purposes. This aquifer has a moderate vulnerability to contamination.

The site is located below the State of Hawaii Department of Health (HDOH) defined Underground Injection Control (UIC) line. Areas above the UIC line denote potential underground drinking water sources. Areas below the UIC line generally denote groundwater that is unsuitable for drinking water purposes. Consequently, the underlying groundwater is not considered a potential drinking water source.

2.3 HISTORIC AND FUTURE LAND USE

Based on Ford Canty's Phase I ESA (Ford Canty, 2017), the site was used for sugar cane cultivation from at least 1947 to the 1990s. The north-central portion of the site was formerly occupied by the Maui Pineapple Company (MPC) Seed Treatment Plant, which was in operation from 1986 to 2007. The location of the MPC Seed Treatment Plant is depicted on Figure 2. From 2007 to 2011, several Phase II ESAs were completed in associated with the MPC Seed Treatment Plant (see Section 3.0).

It is Ford Canty's understanding that site is intended for redevelopment as a hotel that services Kahului Airport.

3.0 SUMMARY OF INVESTIGATION HISTORY

In June 2017, Fort Canty performed a Phase I ESA of the site (Ford Canty, 2017) to identify evidence of Recognized Environmental Conditions (RECs) associated with historical and current uses. Findings associated with this Phase I ESA included the following:

- The site was used for sugar cane cultivation from at least 1947 to the 1990s. Use of agricultural chemicals such as pesticides and herbicides on cane fields may be an environmental concern, and the HDOH recommends that sites where pesticides were regularly applied be evaluated for residual contamination prior to re-development. This Phase II ESA is intended to address this environmental concern.

- The north-central portion of the site was formerly occupied by the MPC Seed Treatment Plant, at the location shown on Figure 2. The MPC Seed Treatment Plant was the subject of several Phase II ESAs to investigate areas associated with a former diesel aboveground storage tank, two former dip tank/overflow areas, a former bin storage area, a cesspool, former hydraulic lifts, and a perimeter area. Bureau Veritas North America, Inc. (Bureau Veritas) collected soil samples from these areas and analyzed them for a variety of COPC. Based on laboratory analyses, the COPC were detected at concentrations below the HDOH Tier 1 Environmental Action Levels (EALs) for unrestricted and commercial/industrial (C/I) land use. The HDOH Hazard Evaluation and Emergency Response (HEER) Office issued a "No Further Action" determination for the MPC Seed Treatment Plant on August 26, 2011. Due to the "No Further Action" determination, the MPC Seed Treatment Plant was considered a historical REC in the Ford Canty Phase I ESA, and no additional investigations were warranted for this area. Consequently, this Phase II ESA does not address the area of the former MPC Seed Treatment Plant.

- The north-central portion of the site was identified as a former agricultural dump site, prior to its use as the MPC Seed Treatment Plant. In 2011, EnviroServices excavated exploratory trenches throughout the former dump site, which identified a top layer of broken glass, scrap metal, and other wastes such as asbestos-containing materials (ACM). Beneath this layer was a layer of burned material, which was subsequently sampled for organochlorine pesticides, dioxins, polynuclear aromatic hydrocarbons, arsenic, and lead. Based on laboratory analysis, lead was detected at concentrations above the HDOH Tier 1 EAL. Therefore, EnviroServices excavated asbestos-and lead-impacted soils across the former dump site in various stages until confirmation soil sampling and analysis indicated that the asbestos and lead concentrations were below the respective regulatory levels. The HDOH HEER Office subsequently issued a "No Further Action" determination for the former dump site on June 8, 2017. Due to the "No Further Action" determination, the former dump site was considered a historical REC in the Ford Canty Phase I ESA, and no additional investigations were warranted for this area. Consequently, this Phase II ESA does not address the area of the former agricultural dump site.

4.0 APPLICABLE ACTION LEVELS

The applicable action levels for this project were established using the HDOH guidance document entitled "Evaluation of Environmental Hazards at Sites with Contaminated Soil and Groundwater" (HDOH, 2016a), which is published by the HEER Office of the HDOH.

The site lies below the HDOH designated UIC line; therefore, the underlying groundwater would not be considered a potential drinking water source. Additionally, based on review of The Aquifer Identification and Classification for Maui: Groundwater Protection Strategy for Hawaii (Mink, J.F. and L.S. Lau, 1990), the upper and lower aquifers beneath the site are not considered drinking water sources. The nearest surface water body is a drainage channel, which is located approximately 1,200 feet west of the site. Therefore, the analytical results were compared to the HDOH Tier 1 Unrestricted (residential) and C/I EALs where groundwater is not a current or potential source of drinking water, and the nearest surface water body is greater than 150 meters from the site (HDOH, 2016a).

5.0 SCOPE OF WORK

5.1 DECISION UNIT LOCATIONS

A Decision Unit (DU) is an area where a decision is to be made regarding the extent and magnitude of contaminants identified within the unit, as well as the potential environmental hazards posed by the contaminants (HDOH, 2016b). The DU is actually a volume of soil that is comprised as the area of the DU multiplied by the depth of the sub-increments (i.e., zero to three inches in depth). Four DUs were established at the site at the locations depicted on Figure 3, located behind the *Figures* tab. Per the HDOH Technical Guidance Manual (HDOH, 2016b), for sites that are less than 59 acres in area, DUs of one-acre size are recommended. As such, each DU for this investigation measured approximately one acre.

5.2 SURFACE SOIL SAMPLING ACTIVITIES

The multi-increment soil sampling methodology, recommended by the HDOH, was employed during this investigation. On July 17, 2017, Ford Canty representatives mobilized to the site to conduct multi-increment surface soil sampling. Prior to collection of the samples, Ford Canty measured the boundaries of the DUs and former MPC Seed Treatment Plant, and delineated them using orange marker flags.

One multi-increment soil sample consisting of 50 individual increments was collected from each DU. The surface soil was collected from each individual increment at a depth of between zero to three inches below ground surface (bgs). The individual increments of soil collected were combined into a single soil sample (generally referred to as the "bulk sample") for laboratory analysis. The locations of each of the individual increments were selected using a systematic random approach. Initially, a random starting location was selected, and the remaining sub-sample locations were selected on a systematic basis, which consisted of pacing an equal distance around the DU.

For DU-1 through DU-4, each sample increment was collected primarily using a broad-headed, stainless steel trowel. An equal volume of soil was collected from each of the increment sub-sample locations, and done so by transferring the soil from the trowel to a polyvinyl chloride (PVC) cap of consistent volume. Each of the increments forming the bulk sample was temporarily stored in a plastic bucket during sampling, and eventually transferred to a dedicated plastic bag. The bulk sample was labeled and placed into a cooler with ice to begin the preservation process during delivery to the laboratory. The sample was logged on a chain-of-custody form, which accompanied the sample to the laboratory. In total, four multi-increment soil samples were collected from the DUs.

5.3 FIELD REPLICATE SAMPLING

Field Quality Assurance/Quality Control (QA/QC) was performed during this investigation through the collection of one set of replicate samples, which consisted of the primary sample and an associated duplicate and triplicate sample. The replicate samples were collected from DU-1, and identified as DU-1 Dup and DU-1 Trip.

The data from the replicate samples were used to calculate statistical measures, including Relative Percent Difference (RPD) and Relative Standard Deviation (RSD). A description of the calculations performed using the replicate analytical data is presented in Section 6.4.

5.4 DECONTAMINATION PROCEDURES

The majority of the equipment used for soil sampling was dedicated and disposable to prevent cross contamination between samples. In the field, new disposable gloves were donned prior to the collection of each sample. After the sample was collected, the disposable gloves were removed and discarded. Decontamination of field tools (i.e., soil probe, trowels, etc.) was conducted prior to, and after, sample collection as follows:

- Removed large clumps of soil or matter attached to sampling equipment
- Washed with Alconox™
- Double rinsed with distilled water
- Air dried

5.5 CHAIN-OF-CUSTODY PROCEDURES

A chain-of-custody was used for the tracking of the soil samples from the field to the laboratory until the time they are analyzed. Ford Canty retained one copy of the chain-of-custody form, while the original remained with the sample and the laboratory performing the analysis. The samples were hand-delivered to Advanced Analytical Laboratory, located in Honolulu, Hawaii, under standard chain-of-custody procedures.

The chain-of-custody form includes:

- Name, address and telephone number of sender
- Project number and name
- Sample identification number and number of containers
- Date sampled and sample matrix
- Requested analytes by Environmental Protection Agency (EPA) method
- Turnaround time information
- Any special instructions or explanation of preservatives
- Sign off on chain-of-custody (samplers' name/ initials)
- Authorized signature (samplers' or other signature shipping the samples)

6.0 LABORATORY ANALYTICAL RESULTS

The multi-increment soil samples collected as part of this investigation were submitted to Advanced Analytical Laboratory under Chain-of-Custody procedures. A copy of the analytical reports and Chain-of-Custody documents for the samples are presented in Appendix A. The laboratory analytical results for the soil samples are summarized in Tables 1 and 2, located behind the *Tables* tab. The multi-increment soil samples collected from the site were analyzed for the following:

- Arsenic using EPA Methods 6020/3050B.
- Organochlorine Pesticides using EPA Method 8081A.

6.1 SOIL SAMPLE ANALYTICAL RESULTS

A total of four primary multi-increment soil samples and two replicate multi-increment soil samples were collected from the site. Key findings of the laboratory analyses are as follows:

- Arsenic was detected in DU-1 through DU-4 at concentrations ranging from 1.2 to 2.4 milligrams per kilogram (mg/kg), which are below the HDOH Tier 1 Unrestricted EAL of 24 mg/kg.
- Organochlorine pesticides were not detected in DU-1 through DU-4 at concentrations greater than the laboratory reporting limits.

6.2 SUB-SAMPLING FOR LABORATORY ANALYSIS

The collection of each bulk sample for analysis resulted in approximately two to three pounds of soil, which is then processed for non-volatile testing using the multi-increment sub-sampling procedure, as recommended by the HDOH. For this procedure, the bulk sample is spread out and air dried, after which it is processed through a No. 10 (2-millimeter) sieve. The sample is then spread out in a thin, even layer. Using a small spatula, the lab then collects approximately 50 equal volume sub-samples of the fine fraction of soil from systematic random locations of the dried sample. The analyses are then performed on this representative sub-sample.

6.3 LABORATORY QUALITY CONTROL

The samples were submitted to Advanced Analytical Laboratory for laboratory analysis. Analytical data was generated following EPA methods (SW-846 protocols), and laboratory standard operating procedures (SOP) and QA/QC guidelines for sample analysis. Common laboratory QC checks include the use of Method Blank, Matrix Spike and Matrix Spike Duplicate, and Laboratory Control and Laboratory Control Duplicate samples. The complete laboratory analytical reports and chain-of-custody forms are presented in Appendix A. QA/QC notes are attached to the laboratory reports.

6.4 FIELD QUALITY CONTROL

As noted in Section 5.3, field QA/QC was performed through the collection of a set of replicate samples from DU-1, consisting of the primary sample and an associated duplicate and triplicate sample. Soil analytical results for the primary and replicate samples are summarized in Table 2. The statistical summaries were calculated for chemical constituents with detected concentrations in the primary, duplicate, and triplicate samples and are presented in Table 3.

Relative Percent Difference

The RPD, expressed as a percent, is a measure of precision between two sample values (the primary sample and the duplicate sample, as well as the primary sample and the triplicate sample).

The RPD is calculated as the positive difference between two measurements (primary and duplicate; primary and triplicate) divided by the average of the two measured values and multiplied by 100. Typically, if the RPD is less than or equal to 35%, then the quality of the data is acceptable. The goal for this investigation was 35% or less, unless an additional QC data review determined the data was acceptable.

Standard Deviation and Relative Standard Deviation

The standard deviation is a statistical measure of the scatter, or variability, of several sample values around their mean. The lower the standard deviation, the lower the variability of the sample values observed in the data.

The RSD, expressed as a percent, is a measure of precision between several sample values (the primary, duplicate, and triplicate samples). The RSD differs from the RPD in that it measures the precision between several sample values versus just two sample values. The RSD is calculated as the standard deviation divided by the mean (average). The RSD is useful for comparing the uncertainty between different measurements. Typically, if the RSD is less than or equal to 35%, then the quality of the data is acceptable. The goal for this investigation was 35% or less, unless an additional QC data review determines the data is acceptable.

As indicated on Table 3, the RPDs for the duplicate and triplicate samples exhibited minimal variability. For arsenic (which was the only analyte detected) the calculated RPDs between the primary and duplicate/triplicate samples were 0.0% and 18.2%, respectively, which are well below the goal of 35%.

Additionally, the RSDs for the duplicate and triplicate samples exhibited minimal variability. The calculated RSD for arsenic was 10.8%, which is well below the goal of 35%.
Calculations for the 95% Upper Confidence Level (UCL) indicate that there is 95% confidence that the true mean for arsenic does not exceed 2.52 mg/kg, which is well below the HDOH Tier 1 Unrestricted EAL. Therefore, results of the field QA/QC checks indicate that the data collected as part of this Phase II ESA is acceptable.

7.0 SUMMARY AND CONCUSIONS

The purpose of this investigation was to perform surface soil sampling with laboratory analysis to assess for the presence or absence of COPC at the site. The site was formerly used as agricultural land for sugar cane cultivation; as such, this investigation is intended to address potential soil contamination as a result of historical pesticide/herbicide use.

On July 17, 2017, Ford Canty representatives mobilized to the site to conduct multi-increment surface soil sampling. Four DUs were established at the site (identified as DU-1 through DU-4), and one multi-increment soil samples consisting of 50 individual increments was collected from each DU. Field QA/QC was performed during this investigation through the collection of one set of replicate samples from DU-1, which consisted of the primary sample and an associated duplicate and triplicate sample. The surface soil was collected from each individual increment at a depth of zero to three inches bgs. The samples were placed in a cooler containing wet ice, and logged on a chain-of-custody form for delivery to the laboratory.

The four primary multi-increment soil samples and two replicate multi-increment soil samples were submitted to Advanced Analytical Laboratory, located in Honolulu, Hawaii, and analyzed for the following:

- Arsenic using EPA Methods 6020/3050B.
- Organochlorine Pesticides using EPA Method 8081A.

Key findings from the analytical results of the multi-increment soil samples are as follows:

- Arsenic was detected in DU-1 through DU-4 at concentrations ranging from 1.2 to 2.4 mg/kg, which are below the HDOH Tier 1 Unrestricted EAL of 24 mg/kg.
- Organochlorine pesticides were not detected in DU-1 through DU-4 at concentrations greater than the laboratory reporting limits.
- The RPDs and RSD calculated from the replicate sample data are within the acceptable limit. Additionally, UCL calculations indicate that there is 95% confidence that the true mean for arsenic does not exceed 2.52 mg/kg, which is below the HDOH Tier 1 Unrestricted EAL.

Based on these findings, surface soils at the site do not appear to be impacted with COPC.

8.0 LIMITATIONS

This report is for the exclusive use of R.D. Olson Development and no other party shall have any right to rely on any service provided by Ford Canty without prior written consent. The information and opinions expressed in this report are given in response to a limited assignment and should be considered and implemented only in light of that assignment.

The services provided by Ford Canty in completing this project were consistent with normal standards of the profession. No other warranty, expressed or implied, is made. Ford Canty will not distribute or publish this report without consent except as required by law or court order.

This report prepared by: _____

Jeffrey Cruise
Project Engineer

This report reviewed by: _____

Daniel P. Ford, P.G.
Principal Geologist

REFERENCES

REFERENCES

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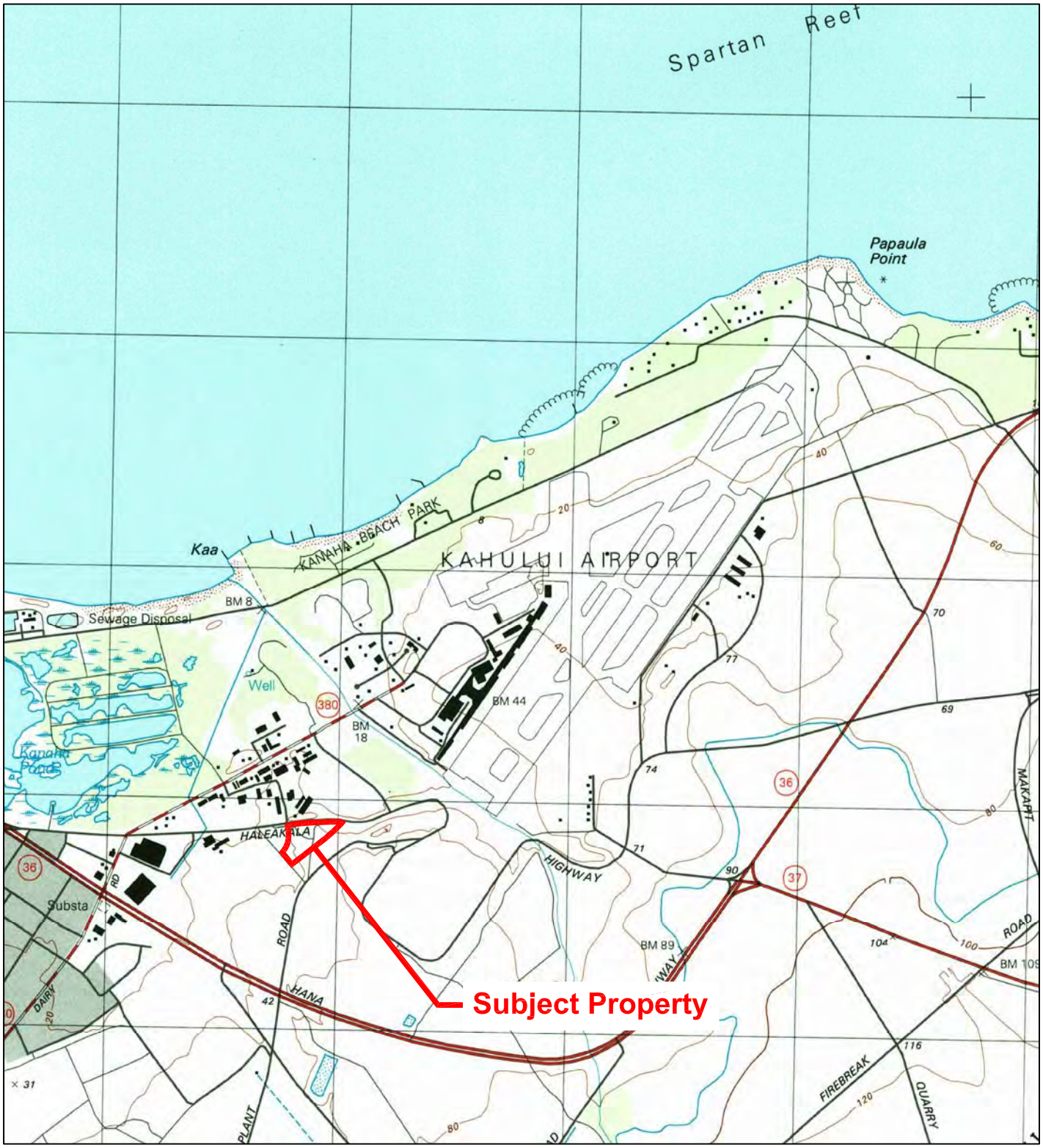
United States Department of the Interior Geological Survey (USGS), 2013. *7.5 Minute Topographic Maps, Paia, Hawaii Quadrangle.*

FIGURES



1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000

Scale in Feet

N

USGS Topographic Map
7.5-Minute Series
Paia Quandrangle
1997

FORD CANTY & ASSOCIATES, INC. ENVIRONMENTAL SCIENTISTS & ENGINEERS		Site Location Map	Figure 1
Job Number: 17-1226	Created by: JRC	Project: 6.315-Acre Property (TMK No.: [2] 3-8-079: Parcel 013) Kahului, Maui, Hawaii	
Date: 7/12/17	Reviewed By: DPF	Client: R.D. Olson Development	

Image Source: Google Earth 2016

0 120 240
Scale In Feet

N

FORD CANTY & ASSOCIATES, INC. ENVIRONMENTAL SCIENTISTS & ENGINEERS		Site Layout Map	Figure 2
Proposal Number: 17-1226	Created by: JRC	Project: 6.315-Acre Property (TMK No: [2] 3-8-079: Parcel 013) Kahului, Maui, Hawaii	
Date: 7/12/17	Reviewed By: DPF	Client: R.D. Olson Development	

Image Source: Google Earth 2016

0 120 240

Scale In Feet

N

FORD CANTY & ASSOCIATES, INC.
ENVIRONMENTAL SCIENTISTS & ENGINEERS

Proposal Number: 17-1226	Created by: JRC	
Date: 7/12/17	Reviewed By: DPF	

Decision Unit Location Map

Project: 6.315-Acre Property
(TMK No: [2] 3-8-079: Parcel 013)
Kahului, Maui, Hawaii

Client: R.D. Olson Development

Figure 3

TABLES

Table 1
Summary of Soil Analytical Results
6.315-Acre Property
Kahului, Maui, Hawaii

Project No. 17-1226

Sample ID:	DU-1	DU-2	DU-3	DU-4	HDOH Tier 1 EALs	
Sample Date:	07/17/17	07/17/17	07/17/17	07/17/17		
Depth (inches):	0 to 3	0 to 3	0 to 3	0 to 3	Unrest.	C/I
Analyte Units:	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Metals / EPA Method 6020A/3050B						
Arsenic	2.0	1.2	1.2	1.5	24	95
Organochlorine Pesticides / EPA Method 8081A						
a-BHC[1]	ND< 0.0010	ND< 0.0010	ND< 0.0010	ND< 0.0010	0.075	0.075
g-BHC (Lindane)	ND< 0.0010	ND< 0.0010	ND< 0.0010	ND< 0.0010	0.075	0.075
b-BHC[1]	ND< 0.0010	ND< 0.0010	ND< 0.0010	ND< 0.0010	0.075	0.075
Heptachlor	ND< 0.0010	ND< 0.0010	ND< 0.0010	ND< 0.0010	0.14	0.63
d-BHC[1]	ND< 0.0010	ND< 0.0010	ND< 0.0010	ND< 0.0010	0.075	0.075
Aldrin	ND< 0.0010	ND< 0.0010	ND< 0.0010	ND< 0.0010	3.9	18
Heptachlor epoxide	ND< 0.0010	ND< 0.0010	ND< 0.0010	ND< 0.0010	0.071	0.33
Endosulfan I	ND< 0.0010	ND< 0.0010	ND< 0.0010	ND< 0.0010	13	13
4,4'-DDE	ND< 0.0010	ND< 0.0010	ND< 0.0010	ND< 0.0010	2.0	9.3
Dieldrin	ND< 0.0010	ND< 0.0010	ND< 0.0010	ND< 0.0010	2.5	24
Endrin	ND< 0.0010	ND< 0.0010	ND< 0.0010	ND< 0.0010	3.8	30
4,4'-DDD	ND< 0.0010	ND< 0.0010	ND< 0.0010	ND< 0.0010	2.3	9.6
Endosulfan II[2]	ND< 0.0010	ND< 0.0010	ND< 0.0010	ND< 0.0010	13	13
4,4'-DDT	ND< 0.0010	ND< 0.0010	ND< 0.0010	ND< 0.0010	1.9	5.6
Endrin Aldehyde[3]	ND< 0.0010	ND< 0.0010	ND< 0.0010	ND< 0.0010	3.8	30
Methoxychlor	ND< 0.0010	ND< 0.0010	ND< 0.0010	ND< 0.0010	16	16
Endrin Ketone[3]	ND< 0.0010	ND< 0.0010	ND< 0.0010	ND< 0.0010	3.8	30
Endosulfan sulfate[2]	ND< 0.0010	ND< 0.0010	ND< 0.0010	ND< 0.0010	13	13
Chlordane (tech)	ND< 0.200	ND< 0.200	ND< 0.200	ND< 0.200	17	23

NOTES:

HDOH Tier 1 EAL	Hawaii State Department of Health (HDOH) Tier 1 Unrestricted Environmental Action Levels (EALs) at sites where drinking water is not threatened and the site is not located within 150 meters of a surface water body
Unrest.	Unrestricted Action Level
C/I	Commercial/Industrial Action Level
mg/kg	Milligrams per kilogram
EPA	Environmental Protection Agency
NS	No Standard
ND<	Analyte not detected. The value after the '<' is the laboratory Reporting Limit (RL).
	[1] While there is no EAL for this analyte, the EAL for g-BHC was used as a proxy value.
	[2] While there is no EAL for this analyte, the EAL for Endosulfan was used as a proxy value.
	[3] While there is no EAL for this analyte, the EAL for Endrin was used as a proxy value.
BOLD	Analyte detected at a concentration greater than the HDOH Tier 1 Unrestricted EAL.
BOLD	Analyte detected at a concentration greater than the HDOH Tier 1 C/I EAL.

Table 2
Summary of Replicate Sample Analytical Results
6.315-Acre Property
Kahului, Maui, Hawaii

Project No. 17-1226

Analyte	Sample ID: / Sample Date: / Depth (inches): / Units:	DU-1 07/17/17 0 to 3 (mg/kg)	DU-1 (Dup) 07/17/17 0 to 3 (mg/kg)	DU-1 (Trip) 07/17/17 0 to 3 (mg/kg)	HDOH Tier 1 EALs Unrest. (mg/kg)	HDOH Tier 1 EALs C/I (mg/kg)
Metals / EPA Method 6020A/3050B						
Arsenic		2.0	2.0	2.4	24	95
Organochlorine Pesticides / EPA Method 8081A						
a-BHC[1]		ND< 0.0010	ND< 0.0010	ND< 0.0010	0.075	0.075
g-BHC (Lindane)		ND< 0.0010	ND< 0.0010	ND< 0.0010	0.075	0.075
b-BHC[1]		ND< 0.0010	ND< 0.0010	ND< 0.0010	0.075	0.075
Heptachlor		ND< 0.0010	ND< 0.0010	ND< 0.0010	0.14	0.63
d-BHC[1]		ND< 0.0010	ND< 0.0010	ND< 0.0010	0.075	0.075
Aldrin		ND< 0.0010	ND< 0.0010	ND< 0.0010	3.9	18
Heptachlor epoxide		ND< 0.0010	ND< 0.0010	ND< 0.0010	0.071	0.33
Endosulfan I		ND< 0.0010	ND< 0.0010	ND< 0.0010	13	13
4,4'-DDE		ND< 0.0010	ND< 0.0010	ND< 0.0010	2.0	9.3
Dieldrin		ND< 0.0010	ND< 0.0010	ND< 0.0010	2.5	24
Endrin		ND< 0.0010	ND< 0.0010	ND< 0.0010	3.8	30
4,4'-DDD		ND< 0.0010	ND< 0.0010	ND< 0.0010	2.3	9.6
Endosulfan II[2]		ND< 0.0010	ND< 0.0010	ND< 0.0010	13	13
4,4'-DDT		ND< 0.0010	ND< 0.0010	ND< 0.0010	1.9	5.6
Endrin Aldehyde[3]		ND< 0.0010	ND< 0.0010	ND< 0.0010	3.8	30
Methoxychlor		ND< 0.0010	ND< 0.0010	ND< 0.0010	16	16
Endrin Ketone[3]		ND< 0.0010	ND< 0.0010	ND< 0.0010	3.8	30
Endosulfan sulfate[2]		ND< 0.0010	ND< 0.0010	ND< 0.0010	13	13
Chlordane (tech)		ND< 0.200	ND< 0.200	ND< 0.200	17	23

NOTES:

HDOH Tier 1 EAL	Hawaii State Department of Health (HDOH) Tier 1 Unrestricted Environmental Action Levels (EALs) at sites where drinking water is not threatened and the site is not located within 150 meters of a surface water body
Unrest.	Unrestricted Action Level
C/I	Commercial/Industrial Action Level
mg/kg	Milligrams per kilogram
EPA	Environmental Protection Agency
NS	No Standard
ND<	Analyte not detected. The value after the '<' is the laboratory Reporting Limit
	[1] While there is no EAL for this analyte, the EAL for g-BHC was used as a proxy value.
	[2] While there is no EAL for this analyte, the EAL for Endosulfan was used as a proxy value.
	[3] While there is no EAL for this analyte, the EAL for Endrin was used as a proxy value.
BOLD	Analyte detected at a concentration greater than the HDOH Tier 1 Unrestricted EAL.
BOLD	Analyte detected at a concentration greater than the HDOH Tier 1 C/I EAL.

FORD CANTY & ASSOCIATES, INC.
ENVIRONMENTAL SCIENTISTS & ENGINEERS

Table 3
Statistical Summary for Replicate Samples
6.315-Acre Property
Kahului, Maui, Hawaii

Project No. 17-1226

Analyte	EPA Method	Sample Identification	Sample Type	Result (mg/kg)	RPD of Primary and Duplicate	RPD of Primary and Triplicate	Mean	Standard Deviation	Relative Standard Deviation	95% Upper Confidence Level (UCL) Calculations				Comment
										Number of Samples	t value	95% UCL	Mean + UCL	
Arsenic	6020A/3050B	DU-1	Primary	2.0	0.0%	18.2%	2.1	0.2	10.8%	3	2.92	0.389	2.52	The data indicates that there is 95% confidence that the true mean for the analyte does not exceed 2.52 mg/kg within the DU
		DU-1 Dup	Duplicate	2.0										
		DU-1 Trip	Triplicate	2.4										

Notes:
RPD Relative Percent Difference
mg/kg milligrams per kilogram

PHOTOGRAPHS

Client:	R.D. Olson Development	**Project No.:**	17-1226
Site Name:	6.315-Acre Property Kahului, Maui, Hawaii	**Date:**	July 17, 2017

Overview of portion of site (DU-4), looking east towards Airport Road. Orange flags were used to mark the boundaries of the DUs and the former seed treatment plant.	PHOTO **1**

Overview of portion of site (DU-3), looking southeast towards Airport Road from the former seed treatment plant area.	PHOTO **2**

Client:	R.D. Olson Development	**Project No.:**	17-1226
Site Name:	6.315-Acre Property Kahului, Maui, Hawaii	**Date:**	July 17, 2017

Overview of site (DU-1 and DU-2), looking southwest from the former seed treatment plant area.	PHOTO **3**

Overview of southeast side of site, looking southwest towards DU-1.	PHOTO **4**

Client:	R.D. Olson Development	**Project No.:**	17-1226
Site Name:	6.315-Acre Property Kahului, Maui, Hawaii	**Date:**	July 17, 2017

Overview of portion of site (DU-1), looking southeast towards Airport Road. DU-1 was more heavily vegetated than the remainder of the site.	PHOTO **5**

Soil was retreived from the ground surface using a broad-headed stainless steel trowel, and collected in a plastic bucket.	PHOTO **6**

APPENDIX A
LABORATORY ANALYTICAL REPORT AND CHAIN-OF-CUSTODY FORM

ADVANCED ANALYTICAL LABORATORY INC

July 21, 2017

Ford Canty & Associates, Inc
928 Nuuanu Ave. Suite 505
Honolulu, HI
96813

Dear Jeff Cruise,

Please find enclosed the analytical report for:

Project Name:	6.315 Acre Property-Kahului
AAL Project #:	S376
Date Received:	07/18/2017
MIS Prep:	Yes

The results, applicable reporting limits, QA/QC data, invoice, and copy of COC are included.

Advanced Analytical Laboratory appreciates the opportunity to provide analytical services for this project. If you have any questions regarding this project, please don't hesitate to contact AAL.

Thank you for your business and continuing support.

Sincerely,

Uwe Baumgartner, Ph.D
Owner

Elisa M. Young
Owner

3210 Koapaka Street, #A, HONOLULU HAWAII 96819
tel (808) 836-2252 fax (808) 836-2250

Advanced Analytical Laboratory
(425)702-8571

AAL Job Number: B70719-1
Client: Advanced Analytical Lab
Project Manager: Uwe Baumgartner
Client Project Name: 6.315 Acre Property-Kahului
Client Project Number: S376
Date received: 07/19/17

Analytical Results

8081A (Pesticides), µg/kg		MTH BLK	LCS	DU-1	DU-1 Dup	DU-1 Trip	DU-2	DU-3
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	07/19/17	07/19/17	07/19/17	07/19/17	07/19/17	07/19/17	07/19/17
Date analyzed	Limits	07/19/17	07/19/17	07/19/17	07/19/17	07/19/17	07/19/17	07/19/17
a-BHC	1.0	nd		nd	nd	nd	nd	nd
g-BHC (Lindane)	1.0	nd	122%	nd	nd	nd	nd	nd
b-BHC	1.0	nd		nd	nd	nd	nd	nd
Heptachlor	1.0	nd	136%	nd	nd	nd	nd	nd
d-BHC	1.0	nd		nd	nd	nd	nd	nd
Aldrin	1.0	nd	126%	nd	nd	nd	nd	nd
Heptachlor epoxide	1.0	nd		nd	nd	nd	nd	nd
Endosulfan I	1.0	nd		nd	nd	nd	nd	nd
4,4'-DDE	1.0	nd		nd	nd	nd	nd	nd
Dieldrin	1.0	nd	115%	nd	nd	nd	nd	nd
Endrin	1.0	nd	117%	nd	nd	nd	nd	nd
4,4'-DDD	1.0	nd		nd	nd	nd	nd	nd
Endosulfan II	1.0	nd		nd	nd	nd	nd	nd
4,4'-DDT	1.0	nd		nd	nd	nd	nd	nd
Endrin Aldehyde	1.0	nd		nd	nd	nd	nd	nd
Methoxychlor	1.0	nd		nd	nd	nd	nd	nd
Endrin ketone	1.0	nd		nd	nd	nd	nd	nd
Endosulfan sulfate	1.0	nd		nd	nd	nd	nd	nd
Chlordane (tech)	200	nd		nd	nd	nd	nd	nd
Surrogate recoveries:								
Tetrachloro-m-xylene		98%	110%	88%	94%	93%	94%	93%
Decachlorobiphenyl		89%	84%	64%	71%	110%	101%	91%

Data Qualifiers and Analytical Comments
nd - not detected at listed reporting limits
na - not analyzed
Results reported on dry-weight basis
Acceptable RPD limit: 50%

AAL Job Number: B70719-1
Client: Advanced Analytical Lab
Project Manager: Uwe Baumgartner
Client Project Name: 6.315 Acre Property-Kahului
Client Project Number: S376
Date received: 07/19/17

Analytical Results

8081A (Pesticides), µg/kg		DU-4	MS	MSD	RPD
Matrix	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	07/19/17	07/19/17	07/19/17	07/19/17
Date analyzed	Limits	07/19/17	07/19/17	07/19/17	07/19/17
a-BHC	1.0	nd			
g-BHC (Lindane)	1.0	nd	128%	108%	17%
b-BHC	1.0	nd			
Heptachlor	1.0	nd	126%	102%	21%
d-BHC	1.0	nd			
Aldrin	1.0	nd	122%	102%	18%
Heptachlor epoxide	1.0	nd			
Endosulfan I	1.0	nd			
4,4'-DDE	1.0	nd			
Dieldrin	1.0	nd	114%	98%	15%
Endrin	1.0	nd	121%	91%	28%
4,4'-DDD	1.0	nd			
Endosulfan II	1.0	nd			
4,4'-DDT	1.0	nd			
Endrin Aldehyde	1.0	nd			
Methoxychlor	1.0	nd			
Endrin ketone	1.0	nd			
Endosulfan sulfate	1.0	nd			
Chlordane (tech)	200	nd			

Surrogate recoveries:				
Tetrachloro-m-xylene	92%	106%	89%	
Decachlorobiphenyl	73%	78%	65%	

Data Qualifiers and Analytical Comments
nd - not detected at listed reporting limits
na - not analyzed
Results reported on dry-weight basis
Acceptable RPD limit: 50%

ACCU LABORATORY

12524 130th Lane NE
Kirkland WA 98034

Tel: (425) 214-5858
(425) 214-5868
Email: lisa@accu-lab.com
website: www.accu-lab.com

Analytical Report

Client	**Advanced Analytical Laboratory**	**Acculab WO#**	**17-AL0719-2**
	544 Ohohia Street #10		
	Honolulu, HI, 96819	Date Sampled	7/17/2017
Project Manager	Uwe Baumgartner/ Elisa Young	Date Received	7/19/2017
Project Name	**6.315 Acre Property-Kahului**	Date Reported	7/21/2017
Client Project#	**17-1226**		
Project#	**S376**		

Metals in Soil by EPA 6020A/EPA3050B

Accu Lab Analytical Batch# AL072017-2

Client sample ID					**DU-1**	**DU-1 Dup**	**DU-1 Trip**	**DU-2**
Lab ID	**MRL**	**Unit**	**MTH BLK**	**LCS**	17-AL0719-2-1	17-AL0719-2-2	17-AL0719-2-3	17-AL0719-2-4
Matrix			Soil	Soil	Soil	Soil	Soil	Soil
Date Digested			7/20/2017	7/20/2017	7/20/2017	7/20/2017	7/20/2017	7/20/2017
Date Analyzed			7/20/2017	7/20/2017	7/20/2017	7/20/2017	7/20/2017	7/20/2017
Arsenic (As)	1.0	mg/Kg	nd	90%	2.0	2.0	2.4	1.2

Acceptable Recovery Limits:

LCS	*80-120%*
MS/MSD	*75-125%*
Acceptable RPD limit:	*20%*

ACCU LABORATORY

12524 130th Lane NE
Kirkland WA 98034

Tel: (425) 214-5858
(425) 214-5868
Email: lisa@accu-lab.com
website: www.accu-lab.com

Analytical Report

Client	**Advanced Analytical Laboratory**	**Acculab WO#**	**17-AL0719-2**
	544 Ohohia Street #10		
	Honolulu, HI, 96819	Date Sampled	7/17/2017
Project Manager	Uwe Baumgartner/ Elisa Young	Date Received	7/19/2017
Project Name	**6.315 Acre Property-Kahului**	Date Reported	7/21/2017
Client Project#	**17-1226**		
Project#	**S376**		

Metals in Soil by EPA 6020A/EPA3050B

Accu Lab Analytical Batch# AL072017-2

Client sample ID			**DU-3**	**DU-4**	**MS S-3**	**MSD S-3**	**RPD S-3**
Lab ID	**MRL**	**Unit**	17-AL0719-2-5	17-AL0719-2-6	17-AL0720-2-3	17-AL0720-2-3	17-AL0720-2-3
Matrix			Soil	Soil	Soil	Soil	Soil
Date Digested			7/20/2017	7/20/2017	7/20/2017	7/20/2017	7/20/2017
Date Analyzed			7/20/2017	7/20/2017	7/20/2017	7/20/2017	7/20/2017
Arsenic (As)	1.0	mg/Kg	1.2	1.5	105%	106%	1%

Acceptable Recovery Limits:

LCS	*80-120%*
MS/MSD	*75-125%*
Acceptable RPD limit:	*20%*

ACCU LABORATORY

12524 130th Lane NE
Kirkland WA 98034

Tel: (425) 214-5858
(425) 214-5868
Email: lisa@accu-lab.com
website: www.accu-lab.com

Analytical Report

Client	Advanced Analytical Laboratory	**Acculab WO#**	**17-AL0719-2**
	544 Ohohia Street #10		
	Honolulu, HI, 96819	Date Sampled	7/17/2017
Project Manager	Uwe Baumgartner/ Elisa Young	Date Received	7/19/2017
Project Name	**6.315 Acre Property-Kahului**	Date Reported	7/21/2017
Client Project#	**17-1226**		
AAL Project#	**S376**		

Data Qualifiers and Comments:

Results reported on dry-weight basis for soil samples. Sample received as dry sample for metals.

MRL- Method Reporting Limit
nd- Indicates the analyte is not detected at the listing reporting limit.
C- Coelution with other compounds.
M- % Recovery of surrogate, MS/MSD is out of the acceptable limit due to matrix effect.
B- Indicates the analyte is detected in the method blank associated with the sample.
J- The analyte is detected at below the reporting limit.
E- The result reported exceeds the calibration range, and is an estimate.
D- Sample required dilution due to matrix. Method Reporting Limits were elevated due to dilutions.
H- Sample was received or analyzed past holding time
Q- Sample was received with head space, improper preserved or above recommended temperature.

ADVANCED ANALYTICAL LABORATORY-CHAIN OF CUSTODY RECORD

Phone: (808) 836 2252 Fax:(808) 836 2250 Address: 3210 Koapaka Street#A Honolulu, HI 96819

TURNAROUND TIME: 24 hour AAL PROJECT#: 5376

CLIENT: Ford Canty & Associates, Inc.
ADDRESS: 928 Nuuanu Avenue, Suite 505
PHONE: 808-782-9929 EMAIL: Jcruise@fordcanty.com
CLIENT PROJECT#: 17-1226

PROJECT NAME: 6.315 Acre Property - Kaholui
COLLECTOR: J. Cruise and M. Costrey
DATE OF COLLECTION: 7/12/17
PROJECT MANAGER: J. Cruise

ANALYSES

Sample Number	Time	Sample type	Container Type	Multi-Incremental Volatile	Multi-Incremental Non Volatile	8015M TPH Fuel Scan	8015M TPH Gasoline	8015M TPH Diesel	8015M TPH Oil	8260B Volatiles	8021B BTEX	8021B MtBE	8100 PAH DOH 4	8270 PAH 17 analytes	8270 Semi Volatiles	8082 PCB	TCLP 8081 OrganoChlorind Pest.	8081 Organochlorine Pesticides	8081 Technical Chlordane	Total Lead	Total Cadmium	Total Arsenic	TCLP RCRA 8 Metals	Total RCRA 8 Metals	Field Notes	Number of containers	Number containers received
DU-1	1245	Soil	Bag	X												X				X						1	1
~~Blank~~ DU-1 Dup	1345	Soil	Bag	X												X				X						1	1
DU-1 Trip	1454	Soil	Bag	X												X				X						1	1
DU-2	1235	Soil	Bag	X												X				X						1	1
DU-3	1355	Soil	Bag	X												X				X						1	1
DU-4	1310	Soil	Bag	X												X				X						1	1

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME
	7/18/17 0935		7/18/17 9:35
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME

SAMPLE RECEIPT

TOTAL NUMBER OF CONTAINERS	6
CHAIN OF CUSTODY SEALS INTACT	Y
RECEIVED IN GOOD CONDITION	Y
TEMPERATURE	2.4°C
PAGE 1 OF 1	

LABORATORY NOTES:

Appendix 8

Botanical and Fauna Survey

BOTANICAL AND FAUNA SURVEYS

WINDWARD HOTEL DEVELOPMENT PROJECT

KAHULUI, MAUI

by

Robert W. Hobdy
Environmental Consultant
Kokomo, Maui
August 2017

Prepared for:
R.D. Olson Development

BOTANICAL AND FAUNA SURVEY
THE WINDWARD HOTEL DEVELOPMENT PROJECT
KAHULUI, MAUI

INTRODUCTION

The Windward Hotel Development project is located on 5.17 acres of undeveloped land in the Maui Business Park Phase II along the west side of the Kahului Airport Access Road, TMK's: (2) 3-8-103: 014 portion, 015, 016, 017, 018 (see Figure 1). This biological study inventories and assesses the flora and fauna resources in the project area in fulfillment of environmental requirements of the planning process.

SITE DESCRIPTION

The project area is nearly level with a sparse growth of grasses and low shrubs. Elevations range between 40 and 50 feet above sea level. Soils are classified as Molokai Silty Clay Loam, 3 – 7 % slopes (Foote et al, 1972). Rainfall averages 20 inches per year with most occurring during the winter months (Armstrong, 1983). Summers are typically hot and dry.

SURVEY OBJECTIVES

This report summarizes the findings of a flora and fauna survey of the Windward Hotel Development project. The objectives of the survey were to:

1. Document what plant and animal species occur on the property or may likely occur in the existing habitat.

2. Document the status and abundance of each species.

3. Determine the presence or likely occurrence of any native flora and fauna, particularly any that are Federally listed as Threatened or Endangered. If such occur, identify what features of the habitat may be essential for these species.

4. Determine if the project area contains any special habitats which if lost or altered might result in a significant negative impact on the flora and fauna in this part of the island.

BOTANICAL SURVEY REPORT

SURVEY METHODS

A walk-through botanical survey method was used following routes to ensure that all parts of the project area were covered. Areas most likely to harbor native or rare plants were more intensively examined. Notes were made on plant species, distribution and abundance as well as terrain and substrate.

DESCRIPTION OF THE VEGETATION

The vegetation in the project area consists mostly of a sparse growth of grasses and low shrubs (see Figures 2 & 3). Most of the plant species are non-native weeds that are typical of disturbed environments or abandoned agricultural lands. A total of 49 plant species were recorded during the survey. Seven species were of common occurrence. They included buffelgrass (*Cenchrus ciliaris*), swollen fingergrass (*Chloris barbata*), Bermuda grass (*Cynodon dactylon*), coat buttons (*Tridax procumbens*), four-spike heliotrope (*Heliotropium procumbens*), creeping indigo (*Indigofera spicata*) and ʻuhaloa (*Waltheria indica*). The remaining 42 species were of uncommon or rare occurrence.

Three species were indigenous, native plants in Hawaii as well as in other Pacific islands. These include ʹuhaloa, kīpūkai (*Heliotropium curassavicum*) and pōpolo (*Solanum americanum*). All three species are widespread and common in Hawaii and none of them are of any particular environmental concern.

DISCUSSION AND RECOMMENDATIONS

The vegetation throughout the project area consists primarily of non-native species with a few common native species scattered about. No Federally listed Threatened or Endangered species (USFWS, 2017) were found on the property nor were any found that are candidates for such status. No special habitats were found on the property either.

Because of the above existing conditions there is little of botanical concern on this property, and the proposed project is not expected to have a significant negative impact on the botanical resources in this part of Maui.

The only recommendation that is offered is that there are a number of native plants that might be incorporated into the landscape design that would lend a distinctive accent to the project. Ideas for appropriate species can be found in the Maui County Planting Plan or can be obtained from nursery growers who specialize in native plants.

PLANT SPECIES LIST

Following is a checklist of all those vascular plant species inventoried during the field studies. Plant families are arranged alphabetically within two groups: Monocots and Dicots. Taxonomy and nomenclature of the plants are in accordance with Wagner et al. (1999).

For each species, the following information is provided:

1. Scientific name with author citation.

2. Common English or Hawaiian name.

3. Bio-geographical status. The following symbols are used:

   endemic = native only to the Hawaiian Islands; not naturally occurring anywhere else in the world.

   indigenous = native to the Hawaiian Islands and also to one or more other geographic area(s).

   Polynesian = those plants brought to the islands by the Polynesians in the course of their migrations.

   non-native = all those plants brought to the islands intentionally or accidentally after western contact.

4. Abundance of each species within the project area:

   abundant = forming a major part of the vegetation within the project area.

   common = widely scattered throughout the area or locally abundant within a portion of it.

   uncommon = scattered sparsely throughout the area or occurring in a few small patches.

   rare = only a few isolated individuals within the project area.

SCIENTIFIC NAME	COMMON NAME	STATUS	ABUNDANCE
MONOCOTS			
POACEAE (Grass Family)			
Cenchrus ciliaris L.	buffelgrass	non-native	common
Cenchrus echinatus L.	common sandbur	non-native	rare
Chloris barbata (L.) Sw.	swollen fingergrass	non-native	common
Cynodon dactylon (L.) Pers.	Bermuda grass	non-native	common
Megathyrsus maximus (Jacq.) Simons & Jacobs	Guinea grass	non-native	rare
Setaria verticillata (L.) P. Beauv.	bristly foxtail	non-native	rare
DICOTS			
AMARANTHACEAE (Amaranth Family)			
Alternanthera pungens Kunth	khaki weed	non-native	uncommon
Amaranthus spinosus L.	spiny amaranth	non-native	rare
Atriplex suberecta Verd.	saltbush	non-native	rare
Chenopodium murale L.	'āheahea	non-native	rare
Kali tragus (L.) Scop.	Russian thistle	non-native	uncommon
APOCYNACEAE (Dogbane Family)			
Asclepias physocarpa (E. Meyen) Schlechter	baloon plant	non-native	rare
ASTERACEAE (Sunflower Family)			
Bidens alba (L.) DC.	romerillo	non-native	rare
Bidens pilosa L.	Spanish needle	non-native	rare
Emilia fosbergii Nicolson	red pualele	non-native	uncommon
Flaveria trinervia (Spreng.) C. Mohr	clustered yellowtops	non-native	rare
Lactuca sativa L.	prickly lettuce	non-native	uncommon
Pluchea carolinensis (Jacq.) G. Don	sourbush	non-native	rare
Tridax procumbens L.	coat buttons	non-native	common
Verbesina encelioides (Cav.) Benth. & Hook.	golden crown-beard	non-native	uncommon
BORAGINACEAE (Borage Family)			
Heliotropium curassavicum L.	kīpūkai	indigenous	rare
Heliotropium procumbens Mill.	four-spike heliotrope	non-native	common
CONVOLVULACEAE (Morning Glory Family)			
Ipomoea obscura (L.) Ker-Gawl.	----------	non-native	uncommon
Ipomoea triloba L.	little bell	non-native	rare
EUPHORBIACEAE (Spurge Family)			
Euphorbia hypericifolia L.	graceful spurge	non-native	uncommon
Ricinus communis L.	Castor bean	non-native	rare
FABACEAE (Pea Family)			
Chamaecrista nictitans(L.) Moench	partridge pea	non-native	rare

SCIENTIFIC NAME	COMMON NAME	STATUS	ABUNDANCE
Crotalaria incana L.	fuzzy rattlepod	non-native	rare
Crotalaria pallida Aiton	smooth rattlepod	non-native	uncommon
Crotalaria retusa L.	rattlepod	non-native	rare
Desmanthus pernambucanus (L.) Thellung	slender mimosa	non-native	uncommon
Indigofera spicata Forssk.	creeping indigo	non-native	common
*Indigofera suffruticosa*Mill.	inikō	non-native	rare
Leucaena leucocephala (Lam.) de Wit	koa haole	non-native	uncommon
Macroptilium atropurpureum (DC.) Urb.	siratro	non-native	uncommon
Macroptilium lathyroides(L.) Urb.	wild bean	non-native	rare
Neonotonia wightii (Wight & Arnott) Lackey	glycine	non-native	uncommon
Prosopis pallida (Humb. & Bonpl. ex Willd.) Kunth	kiawe	non-native	rare
Senna ocidentalis (L.) Link	coffee Senna	non-native	rare
Tephrosia sp.	prostrate tephrosia	non-native	rare
MALVACEAE (Mallow Family)			
Abutilon grandifolium (Willd.) Sweet	hairy abutilon	non-native	rare
Malvastrum coromandelianum (L.) Garcke	false mallow	non-native	rare
Sida rhombifolia L.	arrowleaf sida	non-native	rare
Waltheria indica L.	'uhaloa	indigenous	common
NYCTAGINACEAE (Four-o'clock Family)			
Boerhavia coccinea Mill.	scarlet spiderling	non-native	uncommon
PAPAVERACEAE (Poppy Family)			
Argemone mexicana L.	Mexican poppy	non-native	rare
SOLANACEAE (Nightshade Family)			
Nicotiana glauca R.C. Graham	tree tobacco	non-native	rare
Solanum americanum L.	pōpolo	indigenous	rare
Solanum lycopersicum L.	cherry tomato	non-native	uncommon

FAUNA SURVEY REPORT

SURVEY METHODS

A walk-through fauna survey method was conducted in conjunction with the botanical survey. All parts of the project area were covered. Field observations were made with the aid of binoculars and by listening to vocalizations. Notes were made on species, abundance, activities and location as well as observations of trails, tracks, scat and signs of feeding. In addition, an evening visit was made to the area to record crepuscular activities and vocalizations and to see if there was any evidence of occurrence of the Hawaiian hoary bat (*Lasiurus cinereus semotus*) in the area.

RESULTS

MAMMALS

No mammal species were seen in the project area during two site visits, due no doubt to the dryness of the habitat and sparseness of the vegetation. Taxonomy and nomenclature follow Tomich (1986). Non-native mammal species that one might expect to occasionally show up here include mongoose (*Herpestes auropunctatus*), rats (*Rattus* spp.) mice (*Mus domesitcus*), cats (*Felis catus*) and dogs (*Canis familiaris*).

During the evening survey, a special effort was made to look for any occurrence of the endemic and Endangered ʻōpeʻapeʻa or Hawaiian hoary bat by looking for them visually at twilight and by using a bat detector (Batbox IIID) after dark, set to the frequency of 27,000 Hertz that these bats are known to use when echolocating for nocturnal flying insect prey. None of these bats were detected by either method following prolonged observation.

BIRDS

Just three species of non-native birds were observed during two site visits to the project area. No doubt human activity and lack of suitable habitat contributed to this result. Taxonomy and nomenclature follow American Ornithologists' Union (2017). All three of the bird species were of uncommon occurrence. They included the zebra dove (*Geopelia striata*), common myna (*Acridotheres tristis*) and the gray francolin (*Francolinus pondicerianus*). Several other non-native birds might occasionally utilize this habitat, but only one native migratory species, the Pacific golden-plover (*Pluvialis fulva*) might show up during winter months.

INSECTS

Insect life was poorly represented in this habitat. Just eight non-native insect species were observed, representing four insect Orders. Taxonomy and nomenclature follow Nishida et al (1992). Just one species was found to be common, the long-tailed blue butterfly (*Lampides boeticus*). Two species were uncommon, the honey bee (*Apis mellifera*) and the short-horned grasshopper (*Oedaleus abruptus*). The remaining five species were rare.

No native insect species were found. The endemic and Endangered Blackburn's sphynx moth (*Manduca blackburni*) (USFWS, 2000) was looked for but not found. Two six-foot tall non-native plants of the tree tobacco (*Nicotiana glauca*), which is the primary host plant for this moth, were observed just inside of the eastern project area boundary. These plants were examined but no moths or their eggs or larvae were found. Summer however, is not the time for egg-laying and larval activity, so one cannot say with certainty that these plants are not being utilized by the moth. These Endangered moths have been observed in recent years on tree tobacco plants in the vicinity of the Kahului Airport, so these plants bear watching during the winter moths.

MOLLUSKS

One shell of the non-native giant East African snail (*Achatina fulica*) was found in the project area.

DISCUSSION AND RECOMMENDATIONS

The fauna survey of the Windward Hotel Development project found three birds, eight insects and one mollusk species during two site visits. None of these were native to Hawaii and none of these are of any environmental concern.

While not detected during the survey, the Hawaiian hoary bat has been documented from a wide range of habitats from sea level to high in the mountains, from wet forests, dry areas and even from lava flows. They are highly mobile and can move about seasonally and follow spikes in insect activity. It is possible that they could occasionally visit this project area. Their Endangered status would require certain protective measures to ensure that they would not be harassed or harmed if they show up.

The Blackburn's sphinx moth, though not found during the survey, could also show up in association with the two tree tobacco host plants that were found in the project area. Reviewers of this document may comment on it and give guidelines on how to deal with the Blackburn's sphinx moth as the project moves forward.

No other concerns with fauna species are anticipated. This Windward Hotel Development project is not likely to have a significant negative impact on fauna resources in this part of Maui.

ANIMAL SPECIES LIST

Following is a checklist of the animal species inventoried during the field work. Animal species are arranged in descending abundance within three groups: Birds, Insects and Mollusks. For each species the following information is provided:

1. Common name.
2. Scientific name.
3. Bio-geographical status. The following symbols are used:

   endemic = native only to Hawaii; not naturally occurring anywhere else in the world.

   indigenous = native to the Hawaiian Islands and also to one or more other geographic area(s).

   non-native = all those animals brought to Hawaii intentionally or accidentally after western contact.

   migratory = spending a portion of the year in Hawaii and a portion elsewhere. In Hawaii, the migratory birds are usually in the overwintering/non-breeding phase of their life cycle.

4. Abundance of each species within the project area:

   abundant = many flocks or individuals seen throughout the area at all times of day.

   common = a few flocks or well scattered individuals throughout the area.

   uncommon = only one flock or several individuals seen within the project area.

   rare = only one or two seen within the project area.

SCIENTIFIC NAME	COMMON NAME	STATUS	ABUNDANCE
BIRDS			
COLUMBIDAE (Dove Family)			
Geopelia striata L.	zebra dove	non-native	uncommon
STURNIDAE (Starling Family)			
Acridotheres tristis L.	common myna	non-native	uncommon
PHASIANIDAE (Pheasant Family)			
Francolinus pondicerianus Gmelin	gray francolin	non-native	uncommon
MOLLUSKS			
ACHATINIDAE (Achatinid Snail Family)			
Achatina fulica Ferussac	giant East African snail	non-native	rare

SCIENTIFIC NAME	COMMON NAME	STATUS	ABUNDANCE
INSECTS			
Order DIPTERA - flies			
MUSCIDAE (House Fly Family)			
Musca sorbens Wiedemann	dung fly	non-native	rare
Order HYMENOPTERA - bees, wasps & ants			
APIDAE (Honey Bee Family)			
Apis mellifera L.	honey bee	non-native	uncommon
FORMICIDAE (Ant Family)			
Pheidole megacephala Fabricius	big-headed ant	non-native	rare
VESPIDAE (Vespid Wasp Family)			
Polistes aurifer Saussure	golden paper wasp	non-native	rare
Order LEPIDOPTERA - butterflies & moths			
LYCAENIDAE (Gossamer-winged Butterfly Family)			
Brephidium exilis Boisduval	western pygmy blue	non-native	rare
Lampides boeticus L.	long-tailed blue butterfly	non-native	common
Order ORTHOPTERA - grasshoppers, crickets			
ACRIDIDAE (Grasshopper Family)			
Oedaleus abruptus Thunberg	short-horned grasshopper	non-native	uncommon
Schistocereis nitens Thunberg	graybird grasshopper	non-native	rare

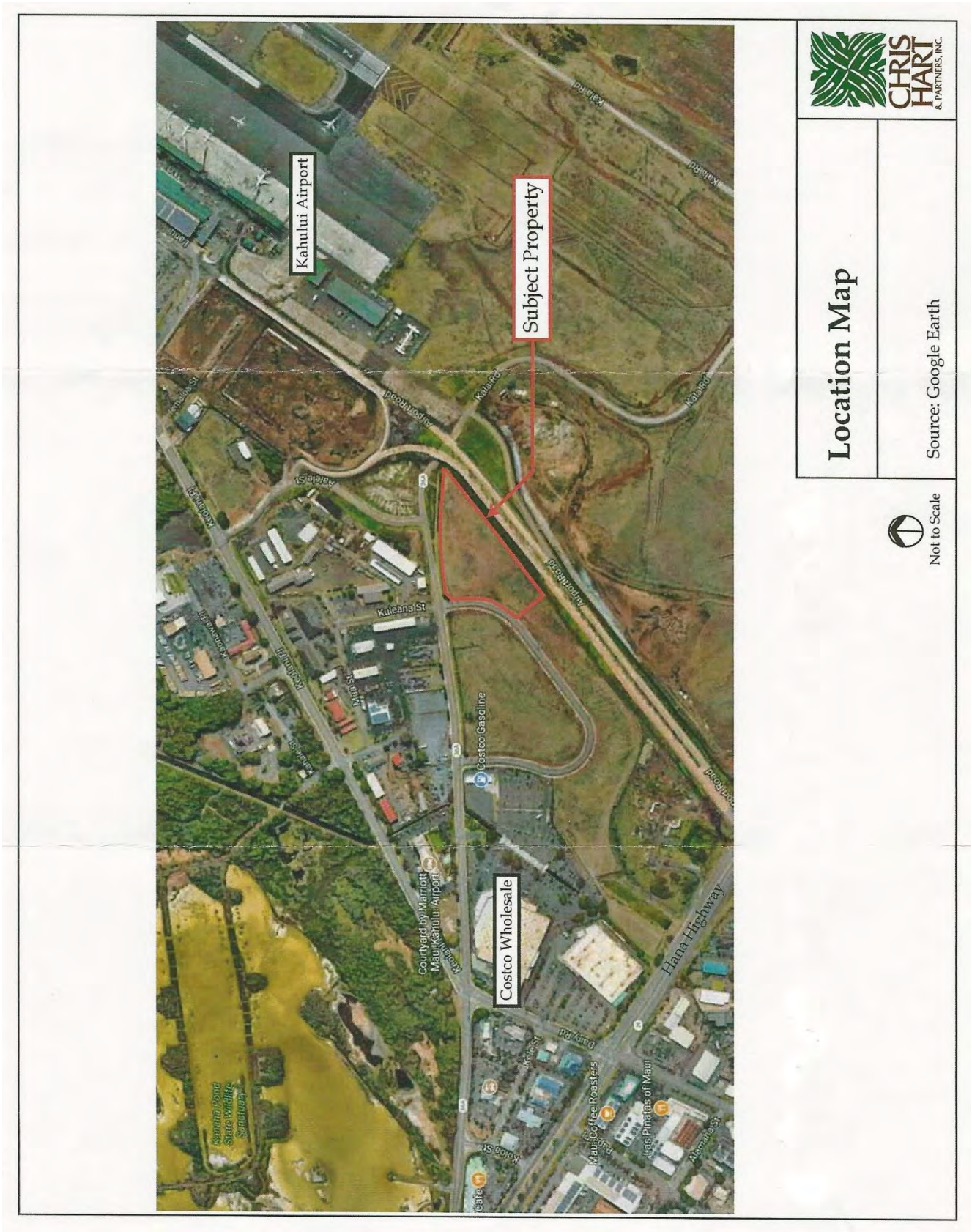


Figure 1. Windward Hotel Development Project

Figure 2. Windward Hotel Development Project.
View to the east toward the Kahului Airport Access Road.

Figure 3. Windward Hotel Development project.
View to the northeast toward Kahului Airport.

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Appendix 9

USFWS Acceptance Letter dated May 21, 2003

ALEXANDER & BALDWIN, INC.

February 5, 2003

Mr. Paul Henson
U.S. Fish and Wildlife Service
Pacific Islands EcoRegion
Attention: Ms. Lorena Wada
300 Ala Moana Boulevard, Room 3-122
Honolulu, Hawaii 96850-0001

Subject: Removal of Tree Tobacco Shrubs at Maui Business Park

Dear Mr. Henson:

As discussed with Ms. Lorena Wada of your staff, Alexander & Baldwin, Inc. (A&B) has identified an estimated three dozen mature tree tobacco shrubs (*Nicotiana glauca*) in and around a rock pile on its land in Kahului, Maui designated as Tax Map Key (TMK) Number (2) 3-8-6:004. The Maui County Wailuku-Kahului Community Plan designation for this area is Light Industrial and A&B plans to develop a portion of this parcel as the next phase of its Maui Business Park project. The rock pile was created by land clearing and grubbing operations during an earlier phase of the project, and has since become populated with tree tobacco, along with castor bean, haole koa, and other weeds. As you know, larvae of the endangered Blackburn's sphinx moth (BSM) are sometimes found on tree tobacco plants. The purpose of this letter is to outline measures which A&B intends to take to ensure that our project will not adversely impact any BSM that may be present on the tree tobacco shrubs. We request that the Service review our plan of action and provide written concurrence that these actions are adequate to avoid "take" of the moth when the tree tobacco plants are removed. It is our hope that this proactive approach will help to address any concerns about endangered species on the property that may arise during the development process.

As outlined to Ms. Wada during our conversation of January 21, 2003, A&B intends to implement the following measures to identify and protect any BSM that may be present on the property:

1. All tree tobacco plants planned to be removed will be examined for the presence of BSM eggs or larvae and/or signs of recent BSM larval feeding. A&B anticipates contracting an experienced biologist with knowledge of the BSM to conduct this initial survey. A&B may request the biologist to provide training to A&B personnel during the initial survey so that subsequent surveys may potentially be conducted in-house.
2. Plants on which BSM larvae or eggs are found will be documented, flagged for temporary preservation, and resurveyed at a later date. Per guidance provided by the Service, BSM caterpillars may be removed from individual plants and moved to other tree tobacco plants in the area (note that under no circumstances will BSM caterpillars be handled; instead, the occupied tree tobacco branch will be broken off

and transported to another nearby tree tobacco plant so that the caterpillar can crawl onto the nearby plant). BSM eggs, if found, will not be moved.
3. Plants which do not exhibit signs of the presence of BSM will either be removed during the survey or flagged for removal after the survey is completed.
4. In order to address the potential presence of pupae in the soil around plants showing signs of recent larval feeding, clear ground in a five-foot radius around such plants will not be disturbed for a 30-day period to allow any pupating moths to emerge and disperse. It should be noted, however, that most such plants are expected to be located within the rock pile, where soil conditions are unlikely to be conducive to the survival of pupae. Such plants located within the rock pile may be removed (cut down) despite showing signs of recent feeding, so long as larvae or eggs are not present.
5. In the event that any tree tobacco plants need to be temporarily preserved based on results of the initial biological survey, A&B will conduct follow-up surveys to monitor the status of BSM on these plants and will remove additional plants as the results of such surveys permit, with the expectation that all mature tree tobacco plants in the area to be developed will eventually be removed through this iterative process. A&B also intends to conduct periodic maintenance at the site to prevent tree tobacco from re-infesting the area.

As noted above, the purpose of implementing these measures it to avoid "take" of the BSM as a result of A&B's activities at the site. Because the tree tobacco plant is ubiquitous on Maui and is not considered to be essential to the conservation of the species (i.e., has not been designated as a "primary constituent element" of moth habitat), it is not A&B's intent to replant or otherwise replace any tree tobacco plants that may have served as BSM host plants prior to being removed from the property.

A&B appreciates the input that your staff has provided in the development of this plan of action, and we look forward to receiving your approval of the plan at your earliest convenience. We are scheduled to apply for government approvals necessary for this project in late March 2003, and would like to resolve issues related to the potential presence of BSM on the property by that time.

Thank you for your assistance in this matter, and please feel free to call me at (808) 877-2959 if you have any questions regarding our plans.

Sincerely,

Sean O'Keefe
Director, Environmental Affairs
Alexander & Baldwin, Inc.

c: R. Stack, A&B Properties

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Pacific Islands Fish and Wildlife Office
300 Ala Moana Boulevard, Room 3-122
Box 50088
Honolulu, Hawaii 96850

In Reply Refer To:
PI-03-52

MAY 2 1 2003

Sean O'Keefe
Alexander & Baldwin, Inc.
P.O. Box 266
Puunene, Hawaii 96784

Dear Mr. O'Keefe:

This responds to your February 5, 2003, letter in which you request the U. S. Fish and Wildlife Service (Service) review the proposed project of the removal of tree tobacco shrubs at Maui Business Park in Kahului, Maui, Hawaii.

Per your conversation with Ms. Lorena Wada of our staff, Alexander & Baldwin, Inc. (A&B) has identified an estimated three dozen mature tree tobacco shrubs (*Nicotiana glauca*) in and around a rock pile on its land in Kahului, Maui designed as Tax Map Key Number (2) 3-8-6-:004. The Maui County Wailuku-Kahului Community Plan designation for this area is Light Industrial and A&B plans to develop a portion of this parcel as the next phase of its Maui Business Park project. The rock pile was created by land clearing and grubbing operations during an earlier phase of the project, and has since become populated with tree tobacco, along with castor bean, haole koa, and other weeds. The larvae of the endangered Blackburn's sphinx moth (BSM) are sometimes found on tree tobacco plants. A&B intends to take measures to ensure that their project will not adversely impact any BSM that may be present on the tree tobacco shrubs.

A&B intends to implement the following measures to identify and protect any BSM that may be present on the property. These measures are listed below.

1. All tree tobacco plants planned to be removed will be examined for the presence of BSM eggs or larvae and/or signs of recent BSM larval feeding. A&B anticipates contracting an experienced biologist with knowledge of the BSM to conduct this initial survey. A&B may request the biologist to provide training to A&B personnel during the initial survey so that subsequent surveys may potentially be conducted in-house.

2. Plants on which BSM larvae or eggs are found will be documented, flagged for temporary preservation, and resurveyed at a later date.

3. Plants which do not exhibit signs of the presence of BSM will either be removed during the survey or flagged for removal after the survey is completed.

4. In order to address the potential presence of pupae in the soil around plants showing signs of recent larval feeding, clear ground in a five-foot radius around such plants will not be disturbed for a 30-day period to allow any pupating moths to emerge and disperse. It should be noted, however, that such plants are expected to be located within the rock pile, where soil conditions are unlikely to be conducive to the survival of pupae. Such plants located within the rock pile may be removed (cut down) despite showing signs of recent feeding, so long as larvae or eggs are not present.

5. In the event that any tree tobacco plants need to be temporarily preserved based on results of the initial biological survey, A&B will conduct follow-up surveys to monitor the status of BSM on these plants and will remove additional plants as the results of such surveys permit, with the expectation that all tree tobacco plants in the area to be developed will eventually be removed through this iterative process. A&B also intends to conduct periodic maintenance at the site to prevent tree tobacco from re-infesting the area.

Based on the information you provided, we agree that implementation of these measures for the proposed project are unlikely to result in violations of section 9 of the Endangered Species Act.

We appreciate your efforts to conserve endangered species. If you have any questions, please contact Lorena Wada, Supervisory Fish and Wildlife Biologist (phone: 808/541-3441; fax: 808/541-347).

Sincerely,

Paul Henson, Ph.D.
Field Supervisor

Appendix 10

Blackburn Sphinx Moth Survey

Robert W. Hobdy
Environmental Consultant
2560-B Pololei Place Ha'ikū, Maui Hawaii 96708

December 17, 2018

Mr. Anthony Wrzosek – R.D. Olson Development
520 Newport Center Drive Suite 600
Newport Beach, CA 92660
cc: Brent Davis / Chris Hart & Partners, Inc.

Reference: Blackburn's Sphinx Moth Survey
Windward Hotel Development
TMK (2) 3-9-002:014 Kahului, Maui

Aloha,

On December 15, 2018 I visited this 5.17 acre Windward Hotel Development Project site in Kahului, Maui to conduct a Blackburn's sphinx moth and tree tobacco survey. This survey, following up on an August, 2017 flora and fauna survey and assessment of this project area, was requested by the U.S. Fish and Wildlife Service to evaluate the current presence or absence of the Endangered Blackburn's sphinx moth and its associated tree tobacco host plant. The 2017 survey found two six foot tall tree tobacco plants growing along the eastern boundary fence with the Airport Access Road corridor. No Endangered Blackburn's sphinx moths, their eggs or their larvae were found on these plants at that time.

This current survey involved a careful inspection of the entire Windward Hotel Development project area. No tree tobacco plants of any size were found growing on the property at this time. Blackburn's sphinx moths have very specialized relationships with certain plants in the tobacco family, and without these special host plants they are unable to reproduce and survive and they are therefore not presently attracted to the area. As of this date there are no concerns regarding the Blackburn's sphinx moth on the Windward Hotel Development project.

Sincerely,
Robert W. Hobdy

Robert W. Hobdy

Robert W. Hobdy
Environmental Consultant
2560 B Pololei Place Ha'ikūMaui, HI 96708
ph 573 8029 hobdyr001@hawaii.rr.com

Date: December 17, 2018
Invoice: WNDWRDHTL

R.D. Olson Development
Attn: Mr. Anthony Wrzosek
520 Newport Center Drive Suite 600
Newport Beach, CA 92660

Re: Blackburn's Sphinx Moth Survey Dec.15, 2018
Windward Hotel Development
TMK (2) 3-9-002:014 Kahului, Maui

Blackburn's Sphinx Moth & Tree Tobacco Survey	$875.00
tax @ .5%	4.38
Total Invoice:	**$ 879.38**

Appendix 11

Nēnē Survey

October 16, 2020

R.D. Olson Development
Attn: Mr. Anthony Wrzosek

Re: Nēnē goose survey
Kanahā Hotel at Kahului Airport (aka Windward Hotel)

On October 16, 2020 I made an inspection of the Kanahā Hotel project site near the Kahului Airport, Kahului, Maui to verify the reported presence of a family of the federally listed Endangered nēnē geese (*Branta sandvicense*) living on this property. If nēnē were not present I was asked to assess the habitat to determine if the presence of nēnē was likely to occur.

A thorough inspection of the property found no nēnē to be present. Furthermore, there was no evidence of any sign of these geese in the form of tracks, droppings or the remains of former nesting sites.

Nēnē are gregarious birds that usually occur in flocks ranging from 2 or 3 birds up to 20 or more. They feed on succulent young grasses and herbaceous plants, berries and seeds. They are upland birds but usually prefer to gather near wetland reservoirs and irrigated landscapes where feed is plentiful. They prefer to nest in such areas as well. Nēnē are powerful fliers that can traverse great distances around Maui in a day and are now widespread in open lands and can show up almost anywhere.

The Kanahā Hotel project area is not a preferred habitat for nēnē. It is situated on land that was cleared and leveled over a decade ago, and has been maintained in a closely mowed condition (see attached images). The soil is well-drained and never floods and doesn't retain surface water. The climate is dry and hot. There is no shade or cover and the vegetation is usually thin and dried.

While the project area looks like a desert, there are wet habitats nearby. Kanahā Pond Wildlife Sanctuary lies 2,000 feet to the west of the project area. Irrigated lawns around the Airport are even closer, and scattered plantation reservoirs are further afield. These habitats all attract nēnē from time to time. At these times nēnē can also be seen flying overhead as they traverse to other suitable habitats. But there are no food, water, or nesting resources in the project area that would attract nēnē to even land here, much less to spend time or take up "residence" here.

Robert W. Hobby

Robert W. Hobby

- I worked for the State Division of Forestry and Wildlife for 38 years studying and managing these resources, and for an additional 18 years to present have worked as an environmental consultant on Maui.

Project Area looking south.

Project Area looking north.

Appendix 12

Air Quality Study

AIR QUALITY STUDY

FOR THE PROPOSED

KANAHA HOTEL PROJECT

KAHULUI, MAUI, HAWAII

Prepared for:

R.D. Olson Development

March 2021

B.D. NEAL & ASSOCIATES

Applied Meteorology • Air Quality • Computer Science

P.O. BOX 1808 • KAILUA-KONA, HAWAII 96745 • TELPHONE (808) 329-1627 • FAX (808) 325-6739
EMAIL: bdneal@bdneal.com

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FIGURES

TABLES

1.0 SUMMARY

R.D. Olson Development is proposing the Kanaha Hotel Project on a 5.17-acre lot near the Kahului Airport on the island of Maui. Construction will start in 2023 and the hotel will be open for business in 2025. The proposed action is to develop a 200-unit hotel with associated infrastructure and landscaping. The proposed hotel building varies from one (1) to four (4) stories in height and will be massed toward the center of the project site with generous setbacks on all sides accommodating the width of a landscape buffer the width of two parking stalls and a parking lot drive isle. Amenities and uses include but are not limited to: swimming pool, dining area and other typical and similar incidental support services and accessory uses for hotel operation. Access to the project will be provided by driveways connected to the existing Lauo Loop. This study examines the potential short- and long-term air quality impacts that could occur as a result of construction and use of the proposed facilities and suggests mitigative measures to reduce any potential air quality impacts where possible and appropriate.

Both federal and state standards have been established to maintain ambient air quality. At the present time, seven parameters are regulated including: particulate matter, sulfur dioxide, hydrogen sulfide, nitrogen dioxide, carbon monoxide, ozone and lead. Hawaii air quality standards are comparable to the national standards except those for nitrogen dioxide and carbon monoxide which are more stringent than the national standards.

Regional and local climate together with the amount and type of human activity generally dictate the air quality of a given

location. The climate of the project area is very much affected by its elevation near sea level and by nearby mountains. The predominant trade winds tend to be channeled through the area by the mountains to the east and west. Temperatures in the project area are generally very consistent and warm with average daily temperatures ranging from about 67°F to 82°F. Rainfall in the project area is minimal with an average of about 16 inches per year.

Except for periodic impacts from volcanic emissions (vog) and possibly occasional localized impacts from traffic congestion and local agricultural sources, the present air quality of the project area is believed to be relatively good. There is very little air quality monitoring data from the Department of Health for the project area, but the limited data that are available suggest that concentrations are generally within state and national air quality standards. The recent cessation of sugarcane cultivation in the project area likely has resulted in improved air quality.

If the proposed project is given the necessary approvals to proceed, there may be some short- and/or long-term impacts on air quality that may occur either directly or indirectly as a consequence of project construction and use. Short-term impacts from fugitive dust could occur during the project construction phases. To a lesser extent, exhaust emissions from stationary and mobile construction equipment, from the minor disruption of traffic, and from workers' vehicles may also affect air quality during the period of construction. State air pollution control regulations require that there be no visible fugitive dust emissions at the property line. Hence, an effective dust control plan must be

implemented to ensure compliance with state regulations. Fugitive dust emissions can be controlled to a large extent by watering of active work areas, using wind screens, keeping adjacent paved roads clean, and by covering of open-bodied trucks. Other dust control measures to consider include limiting the area that is disturbed at any given time and/or mulching or chemically stabilizing inactive areas that have been worked. Paving and landscaping of project areas early in the construction schedule will also reduce dust emissions. Exhaust emissions can be mitigated by moving construction equipment and workers to and from the project site during off-peak traffic hours.

To assess the potential long-term impact of emissions from project-related motor vehicle traffic operating on roadways in the project area after construction is completed, a computerized air quality modeling study was undertaken. The air quality modeling study estimated current worst-case concentrations of carbon monoxide at intersections in the project vicinity and predicted future levels both with and without the proposed project. During worst-case conditions, model results indicated that present 1-hour and 8-hour worst-case carbon monoxide concentrations are well within both the state and the national ambient air quality standards. In the year 2024 without the project, worst-case carbon monoxide concentrations were predicted to decrease (improve) slightly despite an increase in traffic, and concentrations would remain well within standards. This is because emissions from the increase in traffic will be more than offset by the retirement of older, more-polluting vehicles over time. With the project in the year 2024, estimated worst-case carbon monoxide concentrations indicated no measurable impact compared to the without project case. Concentrations would remain well within standards. Due to the

negligible impact the project is expected to have, implementing mitigation measures for long-term traffic-related air quality impacts is probably unnecessary and unwarranted.

2.0 INTRODUCTION

R.D. Olson Development is proposing the Kanaha Hotel Project in Kahului on the island of Maui (see Figure 1 for project location). The project site is located on a 5.17-acre lot within the Maui Business Park in Kahului near the airport. The project site is bounded by Haleakala Highway to the north and Lauo Loop to the west. It is anticipated that the Kanaha Hotel at Kahului Airport project will be constructed in a single phase. The construction will start in 2023 and the hotel will be open for business in 2025. The proposed action is to develop a 200-unit hotel with associated infrastructure and landscaping. The proposed hotel building varies from one (1) to four (4) stories in height and will be massed toward the center of the project site with generous setbacks on all sides accommodating the width of a landscape buffer the width of two parking stalls and a parking lot drive isle. Amenities and uses include but are not limited to: swimming pool, dining area and other typical and similar incidental support services and accessory uses for hotel operation. Access to the project will be provided by driveways connected to the existing Lauo Loop.

The purpose of this study is to describe existing air quality in the project area and to assess the potential short- and long-term direct and indirect air quality impacts that could result from construction and use of the proposed facilities as planned.

Measures to mitigate project impacts are suggested where possible and appropriate.

3.0 AMBIENT AIR QUALITY STANDARDS

Ambient concentrations of air pollution are regulated by both national and state ambient air quality standards (AAQS). National AAQS are specified in Section 40, Part 50 of the Code of Federal Regulations (CFR), while State of Hawaii AAQS are defined in Chapter 11-59 of the Hawaii Administrative Rules. Table 1 summarizes both the national and the state AAQS that are specified in the cited documents. As indicated in the table, national and state AAQS have been established for particulate matter, sulfur dioxide, nitrogen dioxide, carbon monoxide, ozone and lead. The state has also set a standard for hydrogen sulfide. National AAQS are stated in terms of both primary and secondary standards for most of the regulated air pollutants. National primary standards are designed to protect the public health with an "adequate margin of safety". National secondary standards, on the other hand, define levels of air quality necessary to protect the public welfare from "any known or anticipated adverse effects of a pollutant". Secondary public welfare impacts may include such effects as decreased visibility, diminished comfort levels, or other potential injury to the natural or man-made environment, e.g., soiling of materials, damage to vegetation or other economic damage. In contrast to the national AAQS, Hawaii State AAQS are given in terms of a single standard that is designed "to protect public health and welfare and to prevent the significant deterioration of air quality".

Each of the regulated air pollutants has the potential to create or exacerbate some form of adverse health effect or to produce environmental degradation when present in sufficiently high concentration for prolonged periods of time. The AAQS specify a maximum allowable concentration for a given air pollutant for one or more averaging times to prevent harmful effects. Averaging times vary from one hour to one year depending on the pollutant and type of exposure necessary to cause adverse effects. In the case of the short-term (i.e., 1- to 24-hour) AAQS, both national and state standards allow a specified number of exceedances each year.

The Hawaii AAQS are in some cases considerably more stringent than the comparable national AAQS. In particular, the Hawaii 1-hour AAQS for carbon monoxide is four times more stringent than the comparable national limit.

The national AAQS are reviewed periodically, and multiple revisions have occurred over the past 30 years. In general, the national AAQS have become more stringent with the passage of time and as more information and evidence become available concerning the detrimental effects of air pollution. Changes to the Hawaii AAQS over the past several years have tended to follow revisions to the national AAQS, making several of the Hawaii AAQS the same as the national AAQS.

4.0 REGIONAL AND LOCAL CLIMATOLOGY

Regional and local climatology significantly affect the air quality of a given location. Wind, temperature, atmospheric

turbulence, mixing height and rainfall all influence air quality. Although the climate of Hawaii is relatively moderate throughout most of the state, significant differences in these parameters may occur from one location to another. Most differences in regional and local climates within the state are caused by the mountainous topography.

The topography of Maui is dominated by the great volcanic masses of Haleakala (10,023 feet) and the West Maui Mountains (5,788 feet). The island consists entirely of the slopes of these mountains and of a connecting isthmus. Haleakala is still considered to be an active volcano and last erupted about 1790. The project site is located near sea level, close the Kahului Airport and near the northern coast of Maui.

Maui lies well within the belt of northeasterly trade winds generated by the semi-permanent Pacific high-pressure cell to the north and east. Because the project site is located near the northern side of the valley between Haleakala and the West Maui Mountains, the predominant trade wind flow tends to be channeled through the area from north to south by the terrain to the east and west. Local winds such as land/sea breezes and/or upslope/downslope winds also influence the wind pattern for the area when the trade winds are weak or absent. During winter, occasional strong winds from the south or southwest occur in association with the passage of winter storm systems.

Air pollution emissions from motor vehicles, the formation of photochemical smog and smoke plume rise all depend in part on air temperature. Warmer temperatures tend to result in higher

emissions of carbon monoxide from automobiles and higher concentrations of photochemical smog. In Hawaii, the annual and daily variation of temperature depends to a large degree on elevation above sea level, distance inland and exposure to the trade winds. Average temperatures at locations near sea level generally are warmer than those at higher elevations. Areas exposed to the trade winds tend to have the least temperature variation, while inland and leeward areas often have the most. The project site's lower elevation and near-windward location results in relatively even temperatures compared with many other parts of the island. Average daily minimum and maximum temperatures at Kahului Airport are 67°F and 82°F, respectively [1]. Temperatures at the project site can be expected to be similar to this.

Small scale, random motions in the atmosphere (turbulence) cause air pollutants to be dispersed as a function of distance or time from the point of emission. Turbulence is caused by both mechanical and thermal forces in the atmosphere. It is often measured and described in terms of Pasquill-Gifford stability class. Stability class 1 is the most turbulent and class 6 is the least. Thus, air pollution dissipates the best during stability class 1 conditions and the worst when stability class 6 prevails. In the Kahului area, stability classes 5 or 6 typically occur during the nighttime or early morning hours when temperature inversions form due to radiational cooling or to drainage flow from the nearby mountains. Stability classes 1 through 4 occur during the daytime, depending mainly on the amount of cloud cover and incoming solar radiation and the prevailing wind conditions.

Mixing height is defined as the height above the surface through which relatively vigorous vertical mixing occurs. Low mixing heights can result in high ground-level air pollution concentrations because contaminants emitted from or near the surface can become trapped within the mixing layer. In Hawaii, minimum mixing heights tend to be high because of mechanical mixing caused by the trade winds and because of the temperature moderating effect of the surrounding ocean. Low mixing heights may sometimes occur, however, at inland locations and even at times along coastal areas early in the morning following a clear, cool, windless night. Coastal areas also may experience low mixing levels during sea breeze conditions when cooler ocean air rushes in over warmer land. Mixing heights in Hawaii typically are above 3,000 feet (1,000 meters).

Rainfall can have a beneficial effect on the air quality of an area in that it helps to suppress fugitive dust emissions, and it also may "washout" gaseous contaminants that are water soluble. Rainfall in Hawaii is highly variable depending on elevation and on location with respect to the trade wind. The climate of the project area is moderately dry due to the low elevation. Historical records from Kahului show that this area of Maui averages about 16 inches of precipitation per year with the summer months being the driest [1].

5.0 PRESENT AIR QUALITY

Present air quality in the project area is mostly affected by air pollutants from vehicular, industrial, natural and/or agricultural sources. Table 2 presents an air pollutant emission summary for the island of Maui for calendar year 1993. This is the most

recent year for which an island-wide emission inventory is available, and emissions today are probably somewhat different. The emission rates shown in the table pertain to manmade emissions only, i.e., emissions from natural sources are not included. As suggested in the table, most of the manmade particulate and sulfur oxides emissions on Maui originate from point sources, such as power plants and other fuel-burning industries. Nitrogen oxides emissions are roughly equally divided between point sources and area sources (mostly motor vehicle traffic). The majority of carbon monoxide emissions occur from area sources (motor vehicle traffic and agriculture), while hydrocarbons are emitted mainly from point sources. Emissions today from agriculture, primarily particulate and carbon monoxide, are probably lower than those shown in the table with the recent cessation of sugarcane cultivation.

The largest sources of air pollution in the immediate project area are most likely airport operations and automobile traffic using local roadways. Emissions from these sources consist primarily of particulate, hydrocarbons, carbon monoxide and nitrogen oxides. Kahului Power Plant, which is located about 1 mile to the west, emits mostly sulfur dioxide, nitrogen oxides and particulate. Volcanic emissions from distant natural sources on the Big Island also affect the air quality at times during kona wind conditions. By the time the volcanic emissions reach the project area, they consist mostly of fine particulate sulfate.

The State Department of Health operates a network of air quality monitoring stations at various locations around the state, but only very limited data are available for Maui Island. The only

recent air quality data for the island of Maui consists of particulate measurements collected at Kihei, which is about 8 miles to the south, and beginning in 2015 at Kahului. Table 3 summarizes the data from these two monitoring stations. At Kihei, the annual 24-hour 98th percentile PM-2.5 particulate concentrations (which are most relevant to the air quality standards) ranged from 10 to 13 µg/m^3 between 2014 and 2018. Average annual concentrations ranged from 4 to 5 µg/m^3. One value above 35 µg/m^3 (which relates to the national standard) was recorded during this period. Concentrations at Kahului for the period 2014 to 2018 were similar but slightly lower.

Given the limited air pollution sources in the area, it is likely that air pollution concentrations are near natural background levels most of the time, except possibly for locations adjacent to agricultural operations or near traffic-congested intersections. With the cessation of sugarcane cultivation in 2017, it is likely that air quality has improved. Present concentrations of carbon monoxide in the project area are estimated later in this study based on computer modeling of motor vehicle emissions.

6.0 SHORT-TERM IMPACTS OF PROJECT

Short-term direct and indirect impacts on air quality could potentially occur due to project construction. For a project of this nature, there are two potential types of air pollution emissions that could directly result in short-term air quality impacts during project construction: (1) fugitive dust from vehicle movement and soil excavation activities; and (2) exhaust

emissions from on-site construction equipment. Indirectly, there also could be short-term impacts from slow-moving construction equipment traveling to and from the project site, from a temporary increase in local traffic caused by commuting construction workers, and from the disruption of normal traffic flow caused by roadway lane closures.

Fugitive dust emissions may arise from the grading and dirt-moving activities associated with site clearing and preparation work. The emission rate for fugitive dust emissions from construction activities is difficult to estimate accurately. This is because of its elusive nature of emission and because the potential for its generation varies greatly depending upon the type of soil at the construction site, the amount and type of dirt-disturbing activity taking place, the moisture content of exposed soil in work areas, and the wind speed. The EPA [2] has provided a rough estimate for uncontrolled fugitive dust emissions from construction activity of 1.2 tons per acre per month under conditions of "medium" activity, moderate soil silt content (30%), and precipitation/evaporation (P/E) index of 50. Uncontrolled fugitive dust emissions at the project site could be somewhere near that level, depending on the amount of rainfall that occurs. In any case, State of Hawaii Air Pollution Control Regulations [3] prohibit visible emissions of fugitive dust from construction activities at the property line. Thus, an effective dust control plan for the project construction phase is essential.

Adequate fugitive dust control can usually be accomplished by the establishment of a frequent watering program to keep bare-dirt surfaces in construction areas from becoming significant sources of dust. In dust-prone or dust-sensitive areas, other control

measures such as limiting the area that can be disturbed at any given time, applying chemical soil stabilizers, mulching and/or using wind screens may be necessary. Control regulations further stipulate that open-bodied trucks be covered at all times when in motion if they are transporting materials that could become airborne. Haul trucks tracking dirt onto paved streets from unpaved areas is often a significant source of dust in construction areas. Some means to alleviate this problem, such as road cleaning or tire washing, may be appropriate. Paving of parking areas and/or establishment of landscaping as early in the construction schedule as possible can also lower the potential for fugitive dust emissions.

On-site mobile and stationary construction equipment also will emit air pollutants from engine exhausts. The largest of this equipment is usually diesel-powered. Nitrogen oxides emissions from diesel engines can be relatively high compared to gasoline-powered equipment, but the annual standard for nitrogen dioxide is not likely to be violated by short-term construction equipment emissions. Also, the new short-term (1-hour) standard for nitrogen dioxide is based on a three-year average; thus it is unlikely that relatively short-term construction emissions would exceed the standard. Carbon monoxide emissions from diesel engines are low and should be relatively insignificant compared to vehicular emissions on nearby roadways.

Project construction activities could obstruct the normal flow of traffic for short periods of times such that overall vehicular emissions in the project area could temporarily increase. The only means to alleviate this problem will be to attempt to keep roadways open during peak traffic hours and to move heavy

construction equipment and workers to and from construction areas during periods of low traffic volume. Thus, most potential short-term air quality impacts from project construction can be mitigated.

7.0 LONG-TERM IMPACTS OF PROJECT

After construction is completed, use of the proposed facilities may result in increased motor vehicle traffic in the project area, potentially causing long-term impacts on ambient air quality. Motor vehicles with gasoline-powered engines are significant sources of carbon monoxide. They also emit nitrogen oxides and other contaminates.

Federal air pollution control regulations require that new motor vehicles be equipped with emission control devices that reduce emissions significantly compared to a few years ago. In 1990, the President signed into law the Clean Air Act Amendments. This legislation required further emission reductions, which have been phased in since 1994. More recently, additional restrictions were signed into law during the Clinton administration, and these began to take effect during the next decade. The added restrictions on emissions from new motor vehicles will lower average emissions each year as more and more older vehicles leave the state's roadways.

To evaluate the potential long-term ambient air quality impact of motor vehicle traffic using the proposed new roadway facilities, computerized emission and atmospheric dispersion models can be used to estimate ambient carbon monoxide concentrations along

roadways within the project area. Carbon monoxide is selected for modeling because it is both the most stable and the most abundant of the pollutants generated by motor vehicles. Furthermore, carbon monoxide air pollution is generally considered to be a microscale problem that can be addressed locally to some extent, whereas nitrogen oxides air pollution most often is a regional issue that cannot be addressed by a single project.

For this project, three scenarios were selected for the carbon monoxide modeling study: (1) year 2019 with present conditions, (2) year 2024 without the project, and (3) year 2024 with the project. To begin the modeling study of the three scenarios, critical receptor areas in the vicinity of the project were identified for analysis. Generally speaking, roadway intersections are the primary concern because of traffic congestion and because of the increase in vehicular emissions associated with traffic queuing. For this study, four of the key intersections identified in the traffic study [4] were selected for air quality analysis. These included the following intersections:

- Dairy Road/Keolani Place at Haleakala Highway
- Dairy Road at Hana Highway
- Airport Access Road at Hana Highway
- Hookele Street at Hana Highway.

The traffic study indicated that the selected intersections generally had higher traffic volumes and/or more congestion. The traffic study describes the existing and projected future traffic conditions and laneage configurations of the study intersections in detail. In performing the air quality impact analysis, it was

assumed that all recommended traffic mitigation measures would be implemented.

The main objective of the modeling study was to estimate maximum 1-hour average carbon monoxide concentrations for each of the three scenarios studied. To evaluate the significance of the estimated concentrations, a comparison of the predicted values for each scenario can be made. Comparison of the estimated values to the national and state AAQS was also used to provide another measure of significance.

Maximum carbon monoxide concentrations typically coincide with peak traffic periods. The traffic impact assessment report evaluated weekday morning and afternoon peak traffic periods and also Saturday midday traffic. The air quality study was restricted to weekday morning and afternoon peak-traffic periods, but the Saturday midday traffic was not substantially different from the weekday peak traffic periods.

Vehicular carbon monoxide emissions for each year studied were calculated using EPA's Motor Vehicle Emission Simulator (MOVES) computer model [5]. MOVES was configured for a project-level analysis specifically for Hawaii. Assumptions included an urban, unrestricted road type, default fuel supply and fuel formulation, default vehicle age distribution and morning and afternoon ambient temperatures of 70°F and 90°F, respectively. MOVES emission factors were generated both for idling and for moving traffic.

After computing vehicular carbon monoxide emissions through the use of MOVES, these data were then input to an atmospheric dispersion model. EPA air quality modeling guidelines [6] currently recommend that the computer model CAL3QHC [7] be used to assess carbon monoxide concentrations at roadway intersections, or in areas where its use has previously been established, CALINE4 [8] may be used. Until a few years ago, CALINE4 was used extensively in Hawaii to assess air quality impacts at roadway intersections. In December 1997, the California Department of Transportation recommended that the intersection mode of CALINE4 no longer be used because it was thought the model had become outdated. Studies have shown that CALINE4 may tend to over-predict maximum concentrations in some situations. Therefore, CAL3QHC was used for the subject analysis.

CAL3QHC was developed for the U.S. EPA to simulate vehicular movement, vehicle queuing and atmospheric dispersion of vehicular emissions near roadway intersections. It is designed to predict 1-hour average pollutant concentrations near roadway intersections based on input traffic and emission data, roadway/receptor geometry and meteorological conditions.

Input peak-hour traffic data were obtained from the traffic study cited previously. This included vehicle approach volumes, saturation capacity estimates, intersection laneage and signal timings. All emission factors that were input to CAL3QHC for free-flow traffic on roadways were obtained from MOVES based on assumed free-flow vehicle speeds corresponding to the posted or design speed limits.

Model roadways were set up to reflect roadway geometry, physical dimensions and operating characteristics. Concentrations predicted by air quality models generally are not considered valid within the roadway-mixing zone. The roadway-mixing zone is usually taken to include 3 meters on either side of the traveled portion of the roadway and the turbulent area within 10 meters of a cross street. Model receptor sites were thus located at the edges of the mixing zones near all intersections that were studied for all three scenarios. This acknowledges that pedestrian sidewalks already exist or may exist in the future in these locations. All receptor heights were placed at 1.8 meters above ground to simulate levels within the normal human breathing zone.

Input meteorological conditions for this study were defined to provide "worst-case" results. One of the key meteorological inputs is atmospheric stability category. For these analyses, atmospheric stability category 6 was assumed for the morning cases, while atmospheric stability category 4 was assumed for the afternoon cases. These are the most conservative stability categories that are generally used for estimating worst-case pollutant dispersion within suburban areas for these periods. A surface roughness length of 100 cm and a mixing height of 1000 meters were used in all cases. Worst-case wind conditions were defined as a wind speed of 1 meter per second with a wind direction resulting in the highest predicted concentration. Concentration estimates were calculated at wind directions of every 5 degrees.

Existing background concentrations of carbon monoxide in the project vicinity are believed to be at low levels. Thus,

background contributions of carbon monoxide from sources or roadways not directly considered in the analysis were accounted for by adding a background concentration of 0.5 ppm to all predicted concentrations for 2019. Although increased traffic is expected to occur within the project area within the next few years with or without the project, background carbon monoxide concentrations may not change significantly since individual emissions from motor vehicles are forecast to decrease with time. Hence, a background value of 0.5 ppm was assumed to persist for the future scenarios studied.

Predicted Worst-Case 1-Hour Concentrations

Table 4 summarizes the final results of the modeling study in the form of the estimated worst-case 1-hour morning and afternoon ambient carbon monoxide concentrations. These results can be compared directly to the state and the national AAQS. Estimated worst-case carbon monoxide concentrations are presented in the table for three scenarios: year 2019 with existing traffic, year 2024 without the project and year 2024 with the project. The locations of these estimated worst-case 1-hour concentrations all occurred at or very near the indicated intersections.

As indicated in the table, the highest estimated 1-hour concentration within the project vicinity for the present (2019) case was 1.6 ppm. This was projected to occur during the morning peak traffic hour at the intersection of Airport Access Road and Hana Highway. Predicted worst-case 1-hour concentrations at all locations studied for the 2019 scenario were well within both the national AAQS of 35 ppm and the state standard of 9 ppm.

In the year 2024 without the proposed project, the highest worst-case 1-hour carbon monoxide concentration in the project area was predicted to reach 1.3 ppm during the morning and afternoon peak traffic hours at the intersection of Hookele Street and Hana Highway. Compared to the existing case, predicted concentrations for the year 2024 without the project decreased (improved) at all locations, and worst-case concentrations remained well within the state and national standards. This suggests that emissions from higher traffic volumes and increased traffic congestion in the future will be more than offset by the retirement of older, more-polluting vehicles over time.

Predicted 1-hour worst-case concentrations for the 2024 with project scenario remained unchanged at the study intersections. Forecast worst-case concentrations at all locations studied remained well within the state and federal standards.

Predicted Worst-Case 8-Hour Concentrations

Worst-case 8-hour carbon monoxide concentrations were estimated by multiplying the worst-case 1-hour values by a persistence factor of 0.5. This accounts for two factors: (1) traffic volumes averaged over eight hours are lower than peak 1-hour values, and (2) meteorological conditions are more variable (and hence more favorable for dispersion) over an 8-hour period than they are for a single hour. Based on monitoring data, 1-hour to 8-hour persistence factors for most locations generally vary from 0.4 to 0.8 with 0.6 being the most typical. One study based on modeling [9] concluded that 1-hour to 8-hour persistence factors could typically be expected to range from 0.4 to 0.5. EPA guidelines

[10] recommend using a value of 0.7 unless a locally derived persistence factor is available. Recent monitoring data for locations on Oahu reported by the Department of Health [11] suggest that this factor may range between about 0.2 and 0.6 depending on location and traffic variability. Considering the location of the project and the traffic pattern for the area, a 1-hour to 8-hour persistence factor of 0.5 will likely yield reasonable estimates of worst-case 8-hour concentrations.

The resulting estimated worst-case 8-hour concentrations are indicated in Table 5. For the 2019 scenario, the estimated worst-case 8-hour carbon monoxide concentrations for the four locations studied ranged from 0.4 to 0.8 ppm. The estimated worst-case concentrations for the existing case were well within both the state standard of 4.4 ppm and the national limit of 9 ppm.

For the year 2024 without project scenario, predicted worst-case concentrations ranged between 0.4 and 0.6 ppm, generally decreasing (improving) slightly compared to the existing scenario. All predicted concentrations were within the standards.

For the 2024 with project scenario, worst-case concentrations remained unchanged compared to the without project case, indicating no measurable project impact. All predicted 8-hour concentrations for this scenario were well within both the national and the state AAQS.

Conservativeness of Estimates

The results of this study reflect several assumptions that were made concerning both traffic movement and worst-case meteorological conditions. One such assumption concerning worst-case meteorological conditions is that a wind speed of 1 meter per second with a steady direction for 1 hour will occur. A steady wind of 1 meter per second blowing from a single direction for an hour is extremely unlikely and may occur only once a year or less. With wind speeds of 2 meters per second, for example, computed carbon monoxide concentrations would be only about half the values given above. The 8-hour estimates are also conservative in that it is unlikely that anyone would occupy the assumed receptor sites (within 3 m of the roadways) for a period of 8 hours.

8.0 CONCLUSIONS AND RECOMMENDATIONS

Although very little ambient air quality data are available to characterize existing conditions, it is likely that state and federal ambient air quality standards are currently being met in the project area. Occasional air quality degradation may occur due to dust and smoke emissions from nearby sugarcane operations.

Project-related short-term impacts on air quality may occur from the emission of fugitive dust during construction phases. Uncontrolled fugitive dust emissions from construction activities could amount to about 1.2 tons per acre per month, depending on rainfall. To control dust, active work areas and any temporary unpaved work roads should be watered at least twice daily on days without rainfall. Use of wind screens and/or limiting the area

that is disturbed at any given time will also help to contain fugitive dust emissions. Wind erosion of inactive areas of the site that have been disturbed could be controlled by mulching or by the use of chemical soil stabilizers. Dirt-hauling trucks should be covered when traveling on roadways to prevent windage. A routine road cleaning and/or tire washing program will also help to reduce fugitive dust emissions that may occur as a result of trucks tracking dirt onto paved roadways in the project area. Establishment of landscaping early in the construction schedule will also help to control dust.

During construction phases, emissions from engine exhausts (primarily consisting of carbon monoxide and nitrogen oxides) will also occur both from on-site construction equipment and from vehicles used by construction workers and from trucks traveling to and from the project. Increased vehicular emissions due to disruption of traffic by construction equipment and/or commuting construction workers can be alleviated by moving equipment and personnel to the site during off-peak traffic hours.

After the proposed project is completed, any long-term impacts on air quality in the project area due to emissions from project-related motor vehicle traffic should be negligible. Worst-case concentrations of carbon monoxide should remain within both the state and the national ambient air quality standards. Implementing any air quality mitigation measures for long-term traffic-related impacts is probably unnecessary and unwarranted.

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DeLorme Street Atlas USA® 2011

Figure 1 - Project Location

MN (9.6° E)

0 2 4 6 8 10 12 mi

Data Zoom 8-7

Table 1

SUMMARY OF STATE OF HAWAII AND NATIONAL AMBIENT AIR QUALITY STANDARDS

Pollutant	Units	Averaging Time	Maximum Allowable Concentration		
			National Primary	National Secondary	State of Hawaii
Particulate Matter (<10 microns)	µg/m³	Annual	-	-	50
		24 Hours	150[a]	150[a]	150[b]
Particulate Matter (<2.5 microns)	µg/m³	Annual	15[c]	15[c]	-
		24 Hours	35[d]	35[d]	-
Sulfur Dioxide	ppm	Annual	-	-	0.03
		24 Hours	-	-	0.14[b]
		3 Hours	-	0.5[b]	0.5[b]
		1 Hour	0.075[e]	-	-
Nitrogen Dioxide	ppm	Annual	0.053	0.053	0.04
		1 Hour	0.100[f]	-	-
Carbon Monoxide	ppm	8 Hours	9[b]	-	4.4[b]
		1 Hour	35[b]	-	9[b]
Ozone	ppm	8 Hours	0.075[g]	0.075[g]	0.08[g]
Lead	µg/m³	3 Months	0.15[h]	0.15[h]	-
		Quarter	1.5[i]	1.5[i]	1.5[i]
Hydrogen Sulfide	ppm	1 Hour	-	-	0.025[b]

[a] Not to be exceeded more than once per year on average over three years.
[b] Not to be exceeded more than once per year.
[c] Three-year average of the weighted annual arithmetic mean.
[d] 98th percentile value of the 24-hour concentrations averaged over three years.
[e] Three-year average of annual fourth-highest daily 1-hour maximum.
[f] 98th percentile value of the daily 1-hour maximum averaged over three years.
[g] Three-year average of annual fourth-highest daily 8-hour maximum.
[h] Rolling 3-month average.
[i] Quarterly average.

Table 2

AIR POLLUTION EMISSIONS INVENTORY FOR ISLAND OF MAUI, 1993

Air Pollutant	Point Sources (tons/year)	Area Sources (tons/year)	Total (tons/year)
Particulate	63,275	7,030	70,305
Sulfur Oxides	6,419	nil	6,419
Nitrogen Oxides	7,312	8,618	15,930
Carbon Monoxide	4,612	20,050	24,662
Hydrocarbons	1,991	234	2,225

Source: Final Report, “Review, Revise and Update of the Hawaii Emissions Inventory Systems for the State of Hawaii”, prepared for Hawaii Department of Health by J.L. Shoemaker & Associates, Inc., 1996

Table 3

ANNUAL SUMMARIES OF AIR QUALITY MEASUREMENTS FOR MONITORING STATIONS NEAREST KANAHA HOTEL PROJECT

Parameter / Location	2014	2015	2016	2017	2018
Particulate (PM-2.5) / Kahului					
24-Hour Averaging Period:					
No. of Samples	-	346	339	322	295
Highest Concentration (µg/m³)	-	20	18	13	15
98th Percentile Concentration (µg/m³)	-	12	11	10	8
No. of values greater than 35 µg/m³	-	0	0	0	0
Annual Average Concentration (µg/m³)	-	5	3	4	3
Particulate (PM-2.5) / Kihei					
24-Hour Averaging Period:					
No. of Samples	260	306	356	349	339
Highest Concentration (µg/m³)	14	23	47	29	13
98th Percentile Concentration (µg/m³)	10	13	12	11	11
No. of values greater than 35 µg/m³	0	0	1	0	0
Annual Average Concentration (µg/m³)	4	5	4	4	4

Source: State of Hawaii Department of Health, "Annual Summaries, Hawaii Air Quality Data, 2014 - 2018"

Table 4

ESTIMATED WORST-CASE 1-HOUR CARBON MONOXIDE CONCENTRATIONS ALONG ROADWAYS NEAR KANAHA HOTEL PROJECT (parts per million)

Roadway Intersection	Year/Scenario					
	2019/Present		2024/Without Project		2024/With Project	
	AM	PM	AM	PM	AM	PM
Dairy Rd/Keolani Pl at Haleakala Highway	0.8	0.9	0.7	0.8	0.7	0.8
Dairy Road at Hana Highway	1.4	1.3	1.0	1.1	1.0	1.1
Airport Access Rd at Hana Highway	1.6	1.4	1.1	1.1	1.1	1.1
Hookele St at Hana Highway	1.5	1.5	1.3	1.3	1.3	1.3

Hawaii State AAQS: 9
National AAQS: 35

Table 5

ESTIMATED WORST-CASE 8-HOUR CARBON MONOXIDE CONCENTRATIONS ALONG ROADWAYS NEAR KANAHA HOTEL PROJECT (parts per million)

Roadway Intersection	Year/Scenario		
	2019/Present	2024/Without Project	2024/With Project
Dairy Rd/Keolani Pl at Haleakala Highway	0.4	0.4	0.4
Dairy Road at Hana Highway	0.7	0.6	0.6
Airport Access Rd at Hana Highway	0.8	0.6	0.6
Hookele St at Hana Highway	0.8	0.6	0.6

Hawaii State AAQS: 4.4
National AAQS: 9

Appendix 13

Acoustic Study

ACOUSTIC STUDY FOR THE KANAHA HOTEL AT KAHULUI AIRPORT KAHULUI, MAUI, HAWAII

Prepared for:

R.D. OLSON DEVELOPMENT

Prepared by:

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APRIL 2021

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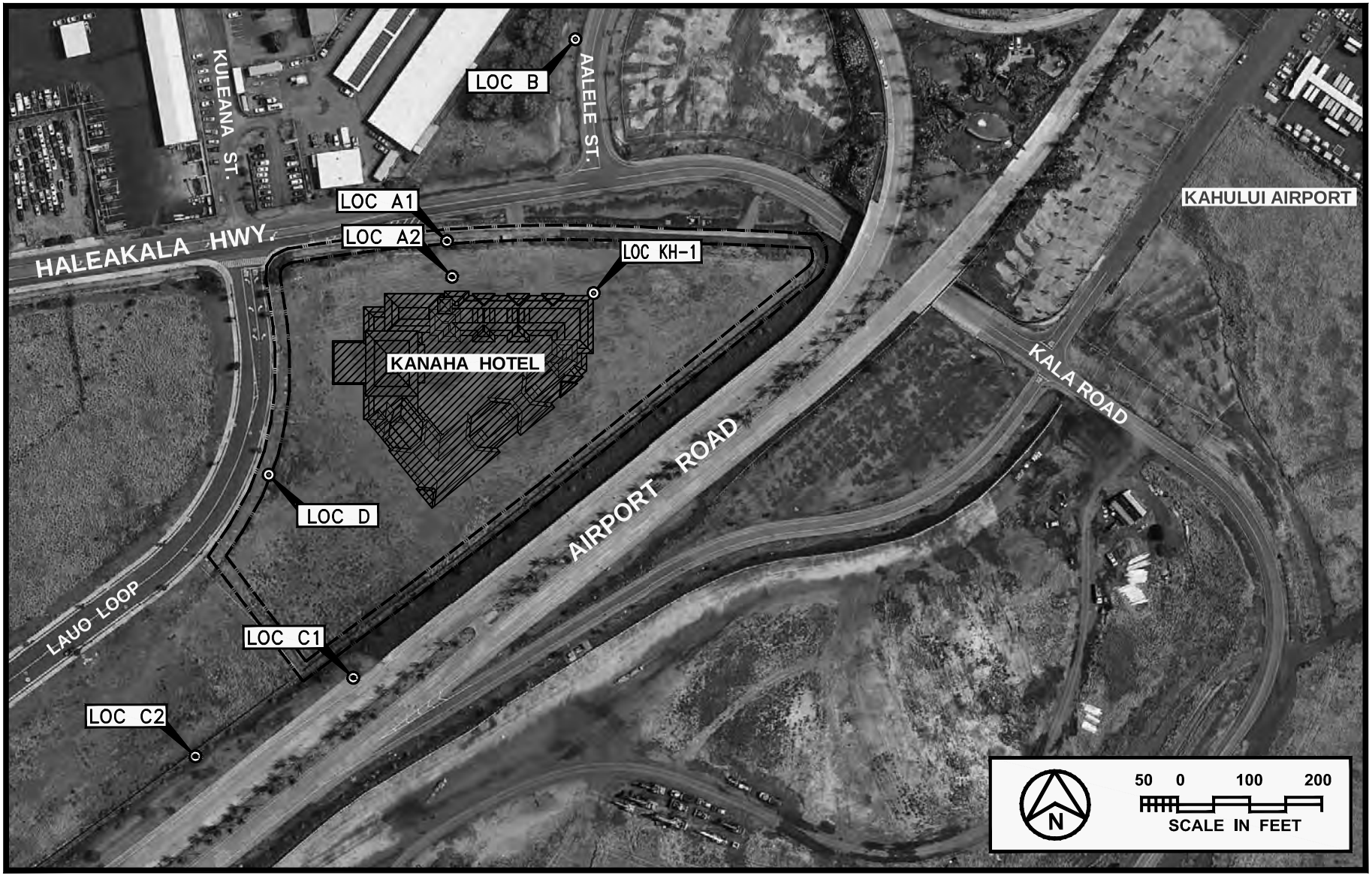
CHAPTER I. SUMMARY

The existing and future traffic noise levels in the vicinity of the proposed Kanaha Hotel At Kahului Airport (Kanaha Hotel) in Kahului, Maui were evaluated for their potential noise impacts on future occupants of the hotel as well as at nearby noise sensitive areas. Figure 1 depicts the location of the project site. The future traffic noise levels along the primary access roadways to the project were calculated for the Year 2025 with and without the project.

Along the Airport Access Road, traffic noise levels are expected to increase by 0.5 DNL (Day-Night Average Sound Level) between CY 2019 and CY 2025 as a result of both project and non-project traffic. Along Haleakala Highway, traffic noise level increases are predicted to range from 1.1 to 1.3 DNL during that same period. Traffic noise increases due to project traffic along those two roadways are predicted to range from 0.1 to 0.5 DNL which are typically less than the noise level increases caused by non-project traffic. Hana Highway should not experience traffic noise level increases resulting from the project. These increases in traffic noise levels associated with project traffic are considered to be small. A larger increase in traffic noise levels of 1.9 DNL is expected to occur along the Lauo Loop as a result of project traffic, primarily due to the relatively low levels of existing traffic on this relatively new roadway which services the Maui Business Park North Project Area. Due to the primarily commercial and airport land uses in the immediate environs of the project site, adverse noise impacts from project traffic are not anticipated.

Based on previously published CY 1993 and 1998 14 CFR Part 150 aircraft noise contours for Kahului Airport, the project site is affected by the 65 DNL to 75 DNL noise contours. These noise contours are probably not accurate and probably overstate the potential aircraft noise impacts since they represent a prior period when much noisier aircraft routinely operated at Kahului Airport and within the State of Hawaii. A better estimate of the current aircraft noise levels on the project site ranges between 60 and 65 DNL. Because the proposed hotel use of the project site is considered to be a noise sensitive use, sound attenuation measures should be incorporated into the design of the exterior envelope of the facility. A recommended minimum exterior-to-interior noise reduction of 30 dBA is believed to be consistent with the current official 14 CFR Part 150 aircraft noise contours for Kahului Airport, and should provide a 10 dBA margin of safety for future increases in aircraft noise levels at the hotel.

Unavoidable, but temporary, noise impacts at neighboring commercial establishments may occur during the construction of the Kanaha Hotel. These noise impacts are not expected to be severe. Because construction activities are predicted to be audible at nearby properties, the quality of the acoustic environment may be degraded during periods of construction. Mitigation measures to reduce construction noise to inaudible levels will not be practical in all cases. For this reason, the use of quiet equipment and construction curfew periods as required under the State



PROJECT LOCATION MAP AND NOISE MEASUREMENT LOCATIONS

FIGURE 1

Department of Health noise regulations will be implemented to minimize construction noise impacts.

CHAPTER II. PURPOSE

The objectives of this study were to describe the existing and future noise environment in the environs of the proposed Kanaha Hotel At Kahului Airport on the island of Maui. Traffic noise level increases and impacts associated with the proposed hotel were to be determined within the project site as well as along the public roadways expected to service the project traffic. A specific objective was to determine the future traffic noise level increases associated with both project and non-project traffic, and the potential noise impacts associated with these increases. Assessments of possible impacts from noise resulting from fixed and rotary wing aircraft operations at nearby Kahului Airport (OGG), and from short term construction noise at the project site were also included in the noise study objectives. Recommendations for minimizing these noise impacts were also to be provided as required.

CHAPTER III. NOISE DESCRIPTORS AND THEIR RELATIONSHIP TO LAND USE COMPATIBILITY

The noise descriptor currently used by federal agencies to assess environmental noise is the Day-Night Average Sound Level (DNL or Ldn). This descriptor incorporates a 24-hour average of instantaneous A-Weighted sound levels as read on a standard Sound Level Meter. The maximum A-Weighted sound level occurring while a noise source such as a heavy truck or aircraft is moving past a listener (i.e., the maximum sound level from a "single event") is referred to as the "Lmax value". The mathematical product (or integral) of the instantaneous sound level times the duration of the event is known as the "Sound Exposure Level", or Lse, which is analogous to the energy of the time-varying sound levels associated with a single event.

The DNL values represent the average noise during a typical day of the year. DNL exposure levels of 55 or less are typical of quiet rural or suburban areas. DNL exposure levels of 55 to 65 are typical of urbanized areas with medium to high levels of activity and street traffic. DNL exposure levels above 65 are representative of densely developed urban areas and areas fronting high volume roadways.

By definition, the minimum averaging period for the DNL descriptor is 24 hours. Additionally, sound levels which occur during the nighttime hours of 10:00 PM to 7:00 AM are increased by 10 decibels (dB) prior to computing the 24-hour average by the DNL descriptor. Because of the averaging used, DNL values in urbanized areas typically range between 50 and 75 DNL. In comparison, the typical range of intermittent noise events may have maximum Sound Level Meter readings between 75 and 105 dBA. A more complete list of noise descriptors is provided in Appendix B to this report. In Appendix B, the Ldn descriptor symbol is used in place of the DNL descriptor symbol.

Table 1, extracted from Reference 1, categorizes the various DNL levels of outdoor noise exposure with severity classifications. Table 2, also extracted from Reference 1, presents the general effects of noise on people in residential use situations. Figure 2, extracted from Reference 2, presents suggested land use compatibility guidelines for residential and nonresidential land uses. Hotels are considered to be 5 DNL less noise sensitive than residences in Figure 2. A general consensus among federal agencies has developed whereby residential housing and hotel developments are considered acceptable in areas where exterior noise does not exceed 65 DNL. This value of 65 DNL is used as a federal regulatory threshold for determining the necessity for special noise abatement measures when applications for federal funding assistance are made.

As a general rule, noise levels of 55 DNL or less occur in rural areas, or in areas which are removed from high volume roadways. In urbanized areas which are shielded from high volume streets, DNL levels generally range from 55 to 65 DNL, and are usually controlled by motor vehicle traffic noise. Residences which front major

TABLE 1

EXTERIOR NOISE EXPOSURE CLASSIFICATION (RESIDENTIAL LAND USE)

NOISE EXPOSURE CLASS	DAY–NIGHT SOUND LEVEL	EQUIVALENT SOUND LEVEL	FEDERAL (1) STANDARD
Minimal Exposure	Not Exceeding 55 DNL	Not Exceeding 55 Leq	Unconditionally Acceptable
Moderate Exposure	Above 55 DNL But Not Above 65 DNL	Above 55 Leq But Not Above 65 Leq	Acceptable(2)
Significant Exposure	Above 65 DNL But Not Above 75 DNL	Above 65 Leq But Not Above 75 Leq	Normally Unacceptable
Severe Exposure	Above 75 DNL	Above 75 Leq	Unacceptable

Notes: (1) Federal Housing Administration, Veterans Administration, Department of Defense, and Department of Transportation.

(2) FHWA uses the Leq instead of the Ldn descriptor. For planning purposes, both are equivalent if: (a) heavy trucks do not exceed 10 percent of total traffic flow in vehicles per 24 hours, and (b) traffic between 10:00 PM and 7:00 AM does not exceed 15 percent of average daily traffic flow in vehicles per 24 hours. The noise mitigation threshold used by FHWA for residences is 67 Leq.

TABLE 2

EFFECTS OF NOISE ON PEOPLE
(Residential Land Uses Only)

EFFECTS[1] / DAY-NIGHT AVERAGE SOUND LEVEL IN DECIBELS	Hearing Loss	Speech Interference		Annoyance[2]	Average Community Reaction[4]	General Community Attitude Towards Area
		Indoor	Outdoor			
	Qualitative Description	%Sentence Intelligibility	Distance in Meters for 95% Sentence Intelligibility	% of Population Highly Annoyed[3]		
75 and above	May Begin to Occur	98%	0.5	37%	Very Severe	Noise is likely to be the most important of all adverse aspects of the community environment.
70	Will Not Likely Occur	99%	0.9	25%	Severe	Noise is one of the most important adverse aspects of the community environment.
65	Will Not Occur	100%	1.5	15%	Significant	Noise is one of the important adverse aspects of the community environment.
60	Will Not Occur	100%	2.0	9%	Moderate to Slight	Noise may be considered an adverse aspect of the community environment.
55 and below	Will Not Occur	100%	3.5	4%		Noise considered no more important than various other environmental factors.

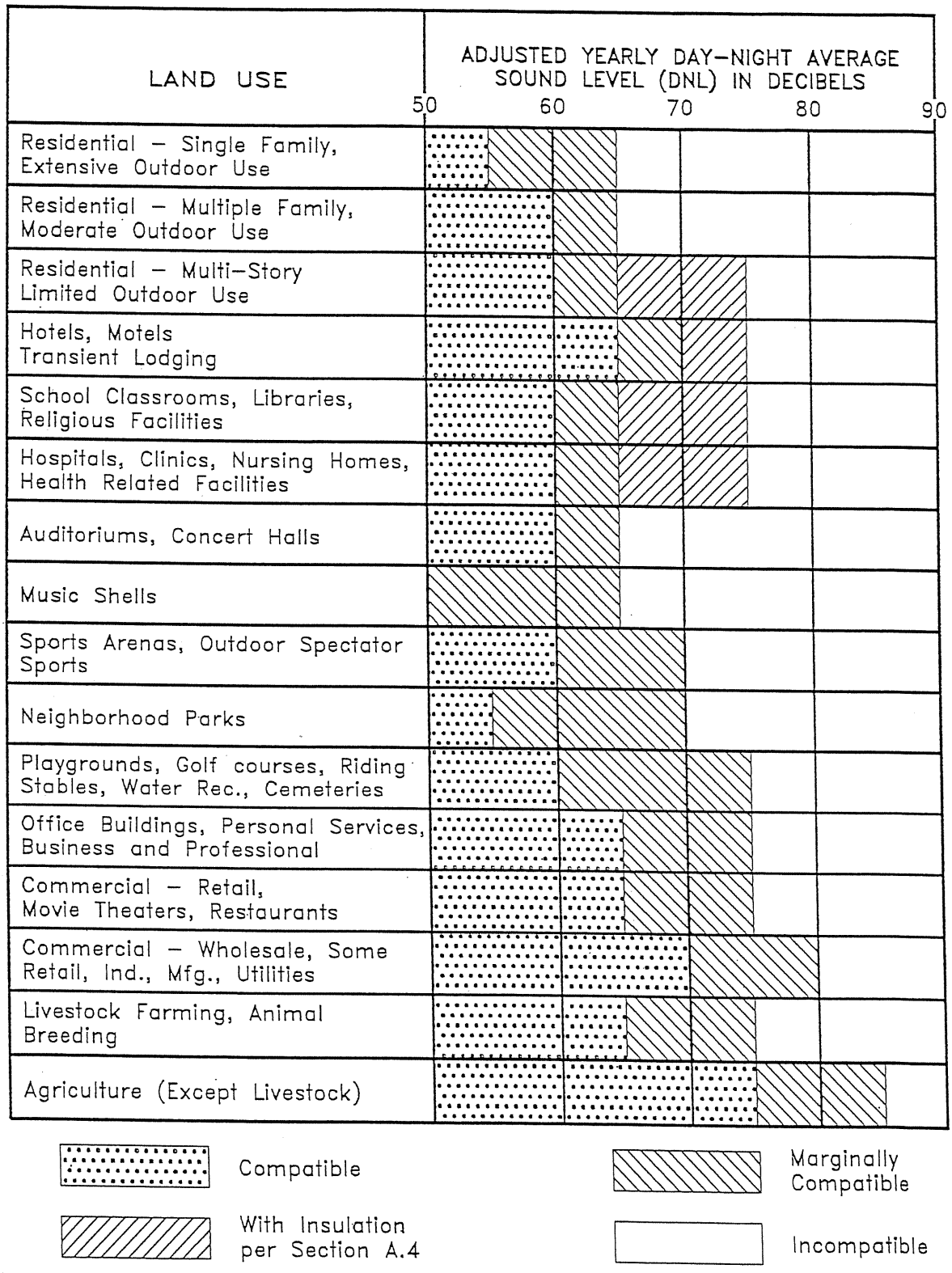
1. "Speech Interference" data are drawn from the following tables in EPA's "Levels Document": Table 3, Fig. D-1, Fig. D-2, Fig. D-3. All other data from National Academy of Science 1977 report "Guidelines for Preparing Environmental Impact Statements on Noise, Report of Working Group 69 on Evaluation of Environmental Impact of Noise."

2. Depends on attitudes and other factors.

3. The percentages of people reporting annoyance to lesser extents are higher in each case. An unknown small percentage of people will report being "highly annoyed" even in the quietest surroundings. One reason is the difficulty all people have in integrating annoyance over a very long time.

4. Attitudes or other non-acoustic factors can modify this. Noise at low levels can still be an important problem, particularly when it intrudes into a quiet environment.

NOTE: Research implicates noise as a factor producing stress-related health effects such as heart disease, high-blood pressure and stroke, ulcers and other digestive disorders. The relationships between noise and these effects, however, have not as yet been quantified.



LAND USE COMPATIBILITY WITH YEARLY AVERAGE DAY–NIGHT AVERAGE SOUND LEVEL (DNL) AT A SITE FOR BUILDINGS AS COMMONLY CONSTRUCTED.
(Source: American National Standards Institute S12.9–1998/Part 5)

FIGURE 2

roadways are generally exposed to levels of 65 DNL, and as high as 75 DNL when the roadway is a high speed freeway. Due to noise shielding effects from intervening structures, interior lots are usually exposed to 3 to 10 DNL lower noise levels than the front lots which are not shielded from the traffic noise.

For the purposes of determining noise acceptability for funding assistance from federal agencies, an exterior noise level of 65 DNL or lower is considered acceptable. These federal agencies include the Federal Aviation Administration (FAA), Department of Defense (DOD); Federal Housing Administration, Housing and Urban Development (FHA/HUD), and Veterans Administration (VA). This standard is applied nationally (see Reference 3), including Hawaii.

Because of Hawaii's open-living conditions, the predominant use of naturally ventilated dwellings, and the relatively low exterior-to-interior sound attenuation afforded by these naturally ventilated dwellings, an exterior noise level of 65 DNL does not eliminate all risks of noise impacts. Because of these factors, a lower level of 55 DNL is considered as the "Unconditionally Acceptable" (or "Near-Zero Risk") level of exterior noise (see Reference 4). For typical, naturally ventilated structures in Hawaii, an exterior noise level of 55 DNL results in an interior level of approximately 45 DNL, which is considered to be the "Unconditionally Acceptable" (or "Near-Zero Risk") level of interior noise. However, after considering the cost and feasibility of applying the lower level of 55 DNL, government agencies such as FHA/HUD and VA have selected 65 DNL as a more appropriate regulatory standard.

For aircraft noise, the Hawaii State Department of Transportation, Airports Division (HDOTA), has recommended that 60 DNL be used as the common level for determining land use compatibility in respect to noise sensitive uses near its airports. Table 3 summarizes the recommendations for compatible land uses at various levels of aircraft noise. The most recent 14 CFR Part 150 noise contours for OGG were completed in 1995 and reflect conditions through 1998 (see Reference 6). Additional airport noise contours for 2010 were developed by the HDOTA for information purposes only during the 2012 time frame. The official 14 CFR Part 150 noise contours for 1993 and 1998 are included in this report. Both contours are believed to be out-of-date because of the elimination and/or replacement of the older and noisier B-737(200) and DC-9(50) passenger aircraft previously used by Aloha and Hawaiian Airlines. More current estimates of the existing aircraft noise levels over the Kanaha Hotel At Kahului Airport project site were made using the unofficial 2010 noise contours and on site aircraft noise measurements.

For commercial, industrial, and other non-noise sensitive land uses, exterior noise levels as high as 75 DNL are generally considered acceptable. Exceptions to this occur when naturally ventilated office and other commercial establishments are exposed to exterior levels which exceed 65 DNL.

TABLE 3

HAWAII STATE DEPARTMENT OF TRANSPORTATION RECOMMENDATIONS FOR LOCAL LAND USE COMPATIBILITY WITH YEARLY DAY–NIGHT AVERAGE SOUND LEVELS (DNL)

TYPE OF LAND USE	**** Yearly Day-Night Average Sound Level ****					
	< 60	60-65	65-70	70-75	75-80	80-85
RESIDENTIAL						
Low density residential, resorts, and hotels (outdoor facil.)	Y(a)	N(b)	N	N	N	N
Low density apartment with moderate outdoor use	Y	N(b)	N	N	N	N
High density apartment with limited outdoor use	Y	N(b)	N(b)	N	N	N
Transient lodgings with limited outdoor use	Y	N(b)	N(b)	N	N	N
PUBLIC USE						
Schools, day-care centers, libraries, and churches	Y	N(c)	N(c)	N(c)	N	N
Hospitals, nursing homes, clinics, and health facilities	Y	Y(d)	Y(d)	Y(d)	N	N
Indoor auditoriums and concert halls	Y(c)	Y(c)	N	N	N	N
Government services and office buildings serving the general public	Y	Y	Y(d)	Y(d)	N	N
Transportation and Parking	Y	Y	Y(d)	Y(d)	Y(d)	Y(d)
COMMERCIAL AND GOVERNMENT USE						
Offices - government, business, and professional	Y	Y	Y(d)	Y(d)	N	N
Wholesale and retail - building materials, hardware and heavy equipment	Y	Y	Y(d)	Y(d)	Y(d)	Y(d)
Airport businesses - car rental, tours, lei stands, ticket offices, etc.	Y	Y	Y(d)	Y(d)	N	N
Retail, restaurants, shopping centers, financial institutions, etc.	Y	Y	Y(d)	Y(d)	N	N
Power plants, sewage treatment plants, and base yards	Y	Y	Y(d)	Y(d)	Y(d)	N
Studios without outdoor sets, broadcasting, production facilities, etc.	Y(c)	Y(c)	N	N	N	N
MANUFACTURING, PRODUCTION, AND STORAGE						
Manufacturing, general	Y	Y	Y(d)	Y(d)	Y(d)	N
Photographic and optical	Y	Y	Y(d)	Y(d)	N	N
Agriculture (except livestock) and forestry	Y	Y(e)	Y(e)	Y(e)	Y(e)	Y(e)
Livestock farming and breeding	Y	Y(e)	Y(e)	N	N	N
Mining and fishing, resource production and extraction	Y	Y	Y	Y	Y	Y
RECREATIONAL						
Outdoor sports arenas and spectator sports	Y	Y(f)	Y(f)	N	N	N
Outdoor music shells, amphitheaters	Y(f)	N	N	N	N	N
Nature exhibits and zoos, neighborhood parks	Y	Y	Y	N	N	N
Amusements, beach parks, active playgrounds, etc.	Y	Y	Y	Y	N	N
Public golf courses, riding stables, cemeteries, gardens, etc.	Y	Y	N	N	N	N
Professional/resort sport facilities, locations of media events, etc.	Y(f)	N	N	N	N	N
Extensive natural wildlife and recreation areas	Y(f)	N	N	N	N	N

Numbers in parentheses refer to notes.

KEY TO TABLE 3:

Y(Yes) = Land Use and related structures compatible without restrictions.
N(No) = Land Use and related structures are not compatible and should be prohibited.

TABLE 3 (CONTINUED)

HAWAII STATE DEPARTMENT OF TRANSPORTATION RECOMMENDATIONS FOR LOCAL LAND USE COMPATIBILITY WITH YEARLY DAY–NIGHT AVERAGE SOUND LEVELS (DNL)

NOTES FOR TABLE 3:

(a) A noise level of 60 DNL does not eliminate all risks of adverse noise impacts from aircraft noise. However, the 60 DNL planning level has been selected by the State Airports Division as an appropriate compromise between the minimal risk level of 55 DNL and the significant risk level of 65 DNL.

(b) Where the community determines that these uses must be allowed, Noise Level Reduction (NLR) measures to achieve interior levels of 45 DNL or less should be incorporated into building codes and be considered in individual approvals. Normal local construction employing natural ventilation can be expected to provide an average NLR of approximately 9 dB. Total closure plus air conditioning may be required to provide additional outdoor to indoor NLR, and will not eliminate outdoor noise problems.

(c) Because the DNL noise descriptor system represents a 24-hour average of individual aircraft noise events, each of which can be unique in respect to amplitude, duration, and tonal content, the NLR requirements should be evaluated for the specific land use, interior acoustical requirements, and properties of the aircraft noise events. NLR requirements should not be based solely upon the exterior DNL exposure level.

(d) Measures to achieve required NLR must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas, or where the normal noise level is low.

(e) Residential buildings require NLR. Residential buildings should not be located where noise is greater than 65 DNL.

(f) Impact of amplitude, duration, frequency, and tonal content of aircraft noise events should be evaluated.

In the State of Hawaii, the State Department of Health (DOH) regulates noise from on-site activities. State DOH noise regulations are expressed in maximum allowable property line noise limits rather than DNL (see Reference 5). The noise limits apply on all islands of the State, including the island of Maui. Although they are not directly comparable to noise criteria expressed in DNL, State DOH noise limits for preservation/residential, apartment/commercial, and agricultural/industrial lands equate to approximately 55, 60, and 76 DNL, respectively.

Because the Kanaha Hotel At Kahului Airport site is located on lands proposed for hotel and commercial uses, DOH noise limits would be applicable along the lot boundary lines or at receptor locations beyond the boundary lines for the noise originating from any stationary machinery on the Kanaha Hotel site. These property line limits are 60 dBA and 50 dBA during the daytime and nighttime periods, respectively. These noise limits cannot be exceeded for more than 2 minutes in any 20-minute time period under the State DOH noise regulations. The State DOH noise regulations do not apply to aircraft or motor vehicles.

CHAPTER IV. GENERAL STUDY METHODOLOGY

Noise Measurements. Existing traffic, aircraft, and background ambient noise levels were measured at seven locations in the project environs to provide a basis for developing the traffic noise contours along the Airport Access Road, Haleakala Highway, Hana Highway, and Lauo Loop, which will service the Kanaha Hotel, and for determining the existing background ambient noise levels in the project area. Traffic noise measurements along Hana Highway west of the Airport Access Road were previously obtained in December 2014. In addition, aircraft noise measurements were also obtained at the northeast corner of the proposed hotel on the project site to estimate the locations of the aircraft noise contours over the project site, and to determine the noise reduction vs. frequency characteristics of the exterior construction materials to be used for the hotel.

The locations of the measurement sites (Locations A1 through D, and REC KH-1) are shown in Figure 1. Traffic noise measurements at measurement Locations A1 through D shown in Figure 1 were performed during a two day period from October 3 to 4, 2017. The traffic noise measurement results, and their comparisons with computer model predictions of existing traffic noise levels are summarized in Table 4. The results of the traffic noise measurements were compared with calculations of existing traffic noise levels to validate the highway traffic noise computer model used. The agreements between measured and predicted traffic noise levels were considered to be good, so the FHWA Traffic Noise Model (TNM Version 2.5, see Reference 7) was used to model both existing and future traffic noise levels. Aircraft noise measurements were obtained at REC KH-1 on August 17, 2017. The single event aircraft noise measurement results are summarized in Table 5, and the average hourly noise levels obtained at REC KH-1 are shown in Table 6. These aircraft noise measurements were used to corroborate the estimates of the aircraft noise levels on the project site and to determine the type of building materials which could be used to meet the exterior-to-interior noise reductions required for the proposed hotel.

Traffic Noise Analysis. Traffic noise calculations for the existing conditions as well as noise predictions for the future conditions with and without the project were performed using the FHWA TNM, Version 2.5. Traffic data entered into the noise prediction model were: hourly traffic volumes, average vehicle speeds, estimates of traffic mix, and loose soil propagation loss factor. The traffic assignments for the project (Reference 8), traffic counts obtained during the noise measurement period, and Hawaii State Department of Transportation counts on Keolani Place (Reference 9) and on Hana Highway (Reference 10) were the primary sources of data inputs to the model. For existing and future traffic, it was assumed that the 24-hour DNL along all roadways were equal to the PM peak hour Leq(h). This assumption was based on computations of both the hourly Leq and the 24-hour DNL of traffic noise along Keolani Place and Hana Highway (see Figures 3 and 4).

Traffic noise calculations for both the existing and future conditions in the project

TABLE 4
TRAFFIC NOISE MEASUREMENT RESULTS

LOCATION	Time of Day (HRS)	Ave. Speed (MPH)	Hourly Traffic Volume AUTO	M.TRUCK	H.TRUCK	Measured Leq (dB)	Predicted Leq (dB)
A1. 50 FT from Centerline of Haleakala Highway (10/3/17)	0700 TO 0800	31	436	12	17	60.6	61.0
A2. 100 FT from Centerline of Haleakala Highway (10/3/17)	0700 TO 0800	31	436	12	17	56.2	55.8
A1. 50 FT from Centerline of Haleakala Highway (10/4/17)	1600 TO 1700	35	668	14	8	62.1	62.7
A2. 100 FT from Centerline of Haleakala Highway (10/4/17)	1600 TO 1700	35	668	14	8	59.6	57.0
B. 100 FT from Centerline of Aalele Street (10/4/17)	1139 TO 1239	35	347	12	12	64.6	64.3
C1. 50 FT from Centerline of Airport Access Road (10/4/17)	0700 TO 0800	45	338	12	25	64.6	64.5

TABLE 4 (CONTINUED)
TRAFFIC NOISE MEASUREMENT RESULTS

LOCATION	Time of Day (HRS)	Ave. Speed (MPH)	Hourly Traffic Volume AUTO	M.TRUCK	H.TRUCK	Measured Leq (dB)	Predicted Leq (dB)
C2. 100 FT from Centerline of Airport Access Road (10/4/17)	0700 TO 0800	45	338	12	25	56.5	57.9
C1. 50 FT from Centerline of Airport Access Road (10/3/17)	1600 TO 1700	45	417	19	23	69.2 *	66.2
C2. 100 FT from Centerline of Airport Access Road (10/3/17)	1600 TO 1700	45	417	19	23	59.6 **	59.0
D. 50 FT from Centerline of Lauo Loop (10/3/17)	1130 TO 1230	35	49	3	2	59.3 ***	53.6

NOTES:

* Residual background ambient noise level was 67.6 dBA. Two noisy vehicles caused average noise level at Location C1 to increase from 68.7 to 69.2 dBA.

** Two noisy vehicles caused average noise level at Location C2 to increase from 59.1 to 59.6 dBA.

*** Residual background ambient noise levels caused total average nosie level at Location D to increase from 58.5 to 59.3 dBA.

TABLE 5
MEASURED AIRCRAFT FLYBY NOISE EVENTS

LOCATION: REC KH-1
DATE: 08/17/17

Time	Lmax	A/C Type	T/O or Land	Remarks
1153	63.7	A-320(200)	Land	
1130	69.2	A-320(200)	Land	
1240	62.3	A321	Land	
1203	64.9	A321	Land	
1051	63.2	A321	Land	
1300	67.6	A-330(200)	Land	
0936	70.2	A-330(200)	Land	
AVE.	65.9	A-300'S	Land	
1309	79.1	A321	T/O	
1446	71.0	A321	T/O	
1149	66.4	A-330(200)	T/O	
1441	71.0	A-330(200)	T/O	
1312	64.2	A-330(200)	T/O	
1353	72.3	A-330(200)	T/O	
1506	69.8	A-330(200)	T/O	
1357	71.2	A-320(200)	T/O	
AVE.	70.6	A-300'S	T/O	

Notes:

a. Lmax = Maximum A-Weighted Sound Level (in dBA)
b. T/O = Departure from Runway 2; Land = Landing on Runway 2

TABLE 5 (CONTINUED)
MEASURED AIRCRAFT FLYBY NOISE EVENTS

LOCATION: REC KH-1
DATE: 08/17/17

Time	Lmax	A/C Type	T/O or Land	Remarks
1210	60.4	B-717(200)	Land	
1337	60.4	B-717(200)	Land	
1244	63.3	B-717(200)	Land	
1103	59.5	B-717(200)	Land	
1147	63.5	B-717(200)	Land	
0906	69.0	B-717(200)	Land	
1628	63.0	B-717(200)	Land	
1648	62.7	B-717(200)	Land	
1556	63.4	B-717(200)	Land	
1335	61.4	B-717(200)	Land	
1155	64.6	B-717(200)	Land	
1022	60.4	B-717(200)	Land	
1520	60.9	B-717(200)	Land	
1234	59.3	B-717(200)	Land	
1408	62.7	B-717(200)	Land	
1004	61.8	B-717(200)	Land	
1533	65.0	B-717(200)	Land	
1324	62.6	B-717(200)	Land	
1429	64.6	B-717(200)	Land	
1657	63.9	B-717(200)	Land	
1016	63.4	B-717(200)	Land	
1027	60.5	B-717(200)	Land	
1307	60.2	B-717(200)	Land	
AVE.	62.5	B-717(200)	Land	

Notes:

a. Lmax = Maximum A-Weighted Sound Level (in dBA)
b. T/O = Departure from Runway 2; Land = Landing on Runway 2

TABLE 5 (CONTINUED)
MEASURED AIRCRAFT FLYBY NOISE EVENTS

LOCATION: REC KH-1
DATE: 08/17/17

Time	Lmax	A/C Type	T/O or Land	Remarks
1247	65.8	B-717(200)	T/O	
1333	64.8	B-717(200)	T/O	
1643	68.3	B-717(200)	T/O	
1621	64.9	B-717(200)	T/O	
1546	65.6	B-717(200)	T/O	
1447	65.8	B-717(200)	T/O	
1339	70.6	B-717(200)	T/O	
1522	62.4	B-717(200)	T/O	
1601	66.5	B-717(200)	T/O	
1425	70.4	B-717(200)	T/O	
1405	67.6	B-717(200)	T/O	
1419	66.5	B-717(200)	T/O	
1120	62.3	B-717(200)	T/O	
1328	64.8	B-717(200)	T/O	
1212	66.5	B-717(200)	T/O	
1301	66.5	B-717(200)	T/O	
1331	67.4	B-717(200)	T/O	
1330	64.8	B-717(200)	T/O	
0939	70.0	B-717(200)	T/O	
1213	64.7	B-717(200)	T/O	
1102	69.7	B-717(200)	T/O	
0943	66.4	B-717(200)	T/O	
1053	62.3	B-717(200)	T/O	
1121	66.2	B-717(200)	T/O	
1122	63.0	B-717(200)	T/O	
AVE.	66.2	B-717(200)	T/O	

Notes:

a. Lmax = Maximum A-Weighted Sound Level (in dBA)
b. T/O = Departure from Runway 2; Land = Landing on Runway 2

TABLE 5 (CONTINUED)
MEASURED AIRCRAFT FLYBY NOISE EVENTS

LOCATION: REC KH-1
DATE: 08/17/17

Time	Lmax	A/C Type	T/O or Land	Remarks
1150	79.2	B-737(800)	FlyBy	
AVE.	79.2	B-737(800)	FlyBy	
1515	64.3	B-737(800)	Land	
1420	68.4	B-737(800)	Land	
1144	62.9	B-737(800)	Land	
1347	61.0	B-737(800)	Land	
1030	65.1	B-737(800)	Land	
1112	67.0	B-737(800)	Land	
1206	61.5	B-737(800)	Land	
0903	65.3	B-737(800)	Land	
0946	65.8	B-737(800)	Land	
AVE.	64.6	B-737(800)	Land	
1226	62.3	P-8	T&Go	
1237	61.8	P-8	T&Go	
1214	61.0	P-8	T&Go	
1220	61.2	P-8	T&Go	
1242	61.7	P-8	T&Go	
AVE.	61.6	P-8	T&Go	
1410	80.8	B-737(800)	T/O	
1308	71.1	B-737(800)	T/O	
1223	70.3	B-737(800)	T/O	
1345	72.6	B-737(800)	T/O	
1501	73.0	B-737(800)	T/O	
1302	72.2	B-737(800)	T/O	
1202	72.0	B-737(800)	T/O	
1154	73.0	B-737(800)	T/O	
1530	71.4	B-737(800)	T/O	
1327	73.8	B-737(800)	T/O	

Notes:

a. Lmax = Maximum A-Weighted Sound Level (in dBA)
b. T/O = Departure from Runway 2; Land = Landing on Runway 2
c. T&Go = Touch and Go Training on Runway 2

TABLE 5 (CONTINUED)
MEASURED AIRCRAFT FLYBY NOISE EVENTS

LOCATION: REC KH-1
DATE: 08/17/17

Time	Lmax	A/C Type	T/O or Land	Remarks
1123	74.3	B-737(800)	T/O	
1159	67.6	B-737(800)	T/O	
1029	74.0	B-737(800)	T/O	
AVE.	72.8	B-737(800)	T/O	
1359	61.9	B-757(200)	Land	
1442	61.0	B-757(200)	Land	
1013	66.3	B-757(200)	Land	
AVE.	63.1	B-757(200)	Land	
1222	65.0	B-757(200)	T/O	
AVE.	65.0	B-757(200)	T/O	
1625	61.4	Caravan	Land	
1521	62.0	Caravan	Land	
1508	62.7	Caravan	Land	
0948	64.7	Caravan	Land	
0950	64.4	Caravan	Land	
1343	65.1	Caravan	Land	
1207	66.9	Caravan	Land	
1547	61.2	Caravan	Land	
1317	59.2	Caravan	Land	
1107	64.8	Caravan	Land	
1641	60.4	Caravan	Land	
1355	61.5	Caravan	Land	
1658	60.6	Caravan	Land	
1145	63.7	Caravan	Land	
1250	63.5	Caravan	Land	
0923	63.5	Caravan	Land	

Notes:

a. Lmax = Maximum A-Weighted Sound Level (in dBA)
b. T/O = Departure from Runway 2; Land = Landing on Runway 2

TABLE 5 (CONTINUED)
MEASURED AIRCRAFT FLYBY NOISE EVENTS

LOCATION: REC KH-1
DATE: 08/17/17

Time	Lmax	A/C Type	T/O or Land	Remarks
1325	64.7	Caravan	Land	
0924	65.1	Caravan	Land	
1358	63.2	Caravan	Land	
AVE.	63.1	Caravan	Land	
1341	63.6	Commuter Jet	Land	
1115	63.5	Commuter Jet	Land	
AVE.	63.6	Commuter Jet	Land	
1543	61.2	Dash-8	Land	
1635	59.2	Dash-8	Land	
1118	64.3	Dash-8	Land	
AVE.	61.6	Dash-8	Land	
1617	62.9	Dash-8	T/O	
AVE.	62.9	Dash-8	T/O	
1042	83.4	Helo		Landing At Helipad
1610	63.7	Helo		Landing At Helipad
0918	63.1	Helo		Landing At Helipad
0927	63.0	Helo		Landing At Helipad
1356	63.3	Helo		Landing At Helipad
1105	66.2	Helo		Landing At Helipad
1536	70.2	Helo		Landing At Helipad
1034	63.3	Helo		Landing At Helipad
1329	86.2	Helo		Landing At Helipad
0932	65.7	Helo		Landing At Helipad

Notes:

a. Lmax = Maximum A-Weighted Sound Level (in dBA)
b. T/O = Departure from Runway 2; Land = Landing on Runway 2
c. Helo = Tour Helicopter

TABLE 5 (CONTINUED)
MEASURED AIRCRAFT FLYBY NOISE EVENTS

LOCATION: REC KH-1
DATE: 08/17/17

Time	Lmax	A/C Type	T/O or Land	Remarks
1534	87.8	Helo		Landing At Helipad
1632	65.6	Helo		Landing At Helipad
1054	76.7	Helo		Landing At Helipad
1451	61.4	Helo		Landing At Helipad
1006	81.6	Helo		Landing At Helipad
1010	61.6	Helo		Landing At Helipad
1005	80.6	Helo		Landing At Helipad
1412	65.4	Helo		Landing At Helipad
1511	59.9	Helo		Landing At Helipad
0952	81.3	Helo		Landing At Helipad
1524	60.5	Helo		Landing At Helipad
0904	77.7	Helo		Landing At Helipad
AVE.	70.4	Helo		Landing At Helipad
1157	68.5	B-767(300)	T/O	
1553	68.0	B-737(200)	Land	
1622	71.2	B-737(200)	T/O	
1504	63.7	B-717(800)	Land	

Notes:

a. Lmax = Maximum A-Weighted Sound Level (in dBA)
b. T/O = Departure from Runway 2; Land = Landing on Runway 2
c. Helo = Tour Helicopter

TABLE 6
HOURLY AIRCRAFT NOISE MEASUREMENTS AT LOCATION REC KH-1

PROJECT: KANAHA HOTEL AT KAHALUI AIRPORT
DATE: AUGUST 17, 2017

Start Time	End Time		Lmax	Leq	Lmin	Remarks
0900	1000		81.3	60.0	50.0	Helicopter Landing, 81.3 dBA
1000	1100		83.4	60.9	51.0	Helicopter Landing, 83.4 dBA
1100	1200		79.2	60.2	50.5	B-737(800) Landing, 79.2 dBA
1200	1300		76.3	57.9	50.4	Loud motor vehicle, 76.3 dBA
1300	1400		86.2	61.5	51.8	Helicopter Landing, 86.2 dBA
1400	1500		82.4	60.6	50.6	Unknown noise event, 82.4 dBA
1500	1600		87.8	61.2	49.8	Helicopter Landing, 87.8 dBA
1600	1700		73.9	57.0	50.4	B-737(800) Takeoff, 73.9 dBA

Notes:

a. Leq = Average A-Weighted Sound Level (in dBA)
b. Lmax = Maximum A-Weighted Sound Level (in dBA)
c. Lmin = Minimum A-Weighted Sound Level (in dBA)

FIGURE 3
HOURLY TRAFFIC NOISE LEVELS VS. TIME OF DAY
STA B74036A00032; KEOLANI PL. BETWN. HALEAKALA HWY. & KAHULUI AIRPORT; 4/29/15

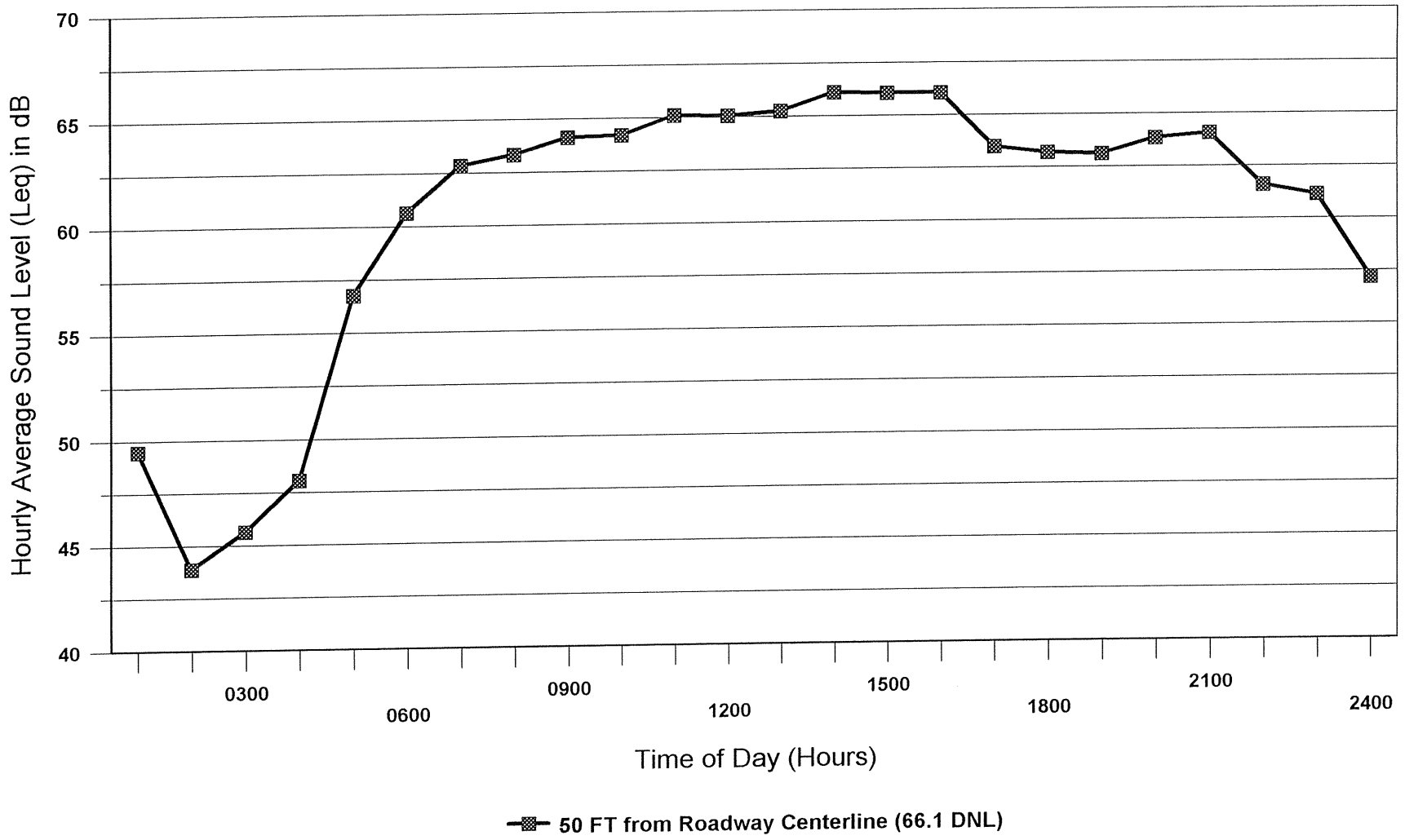
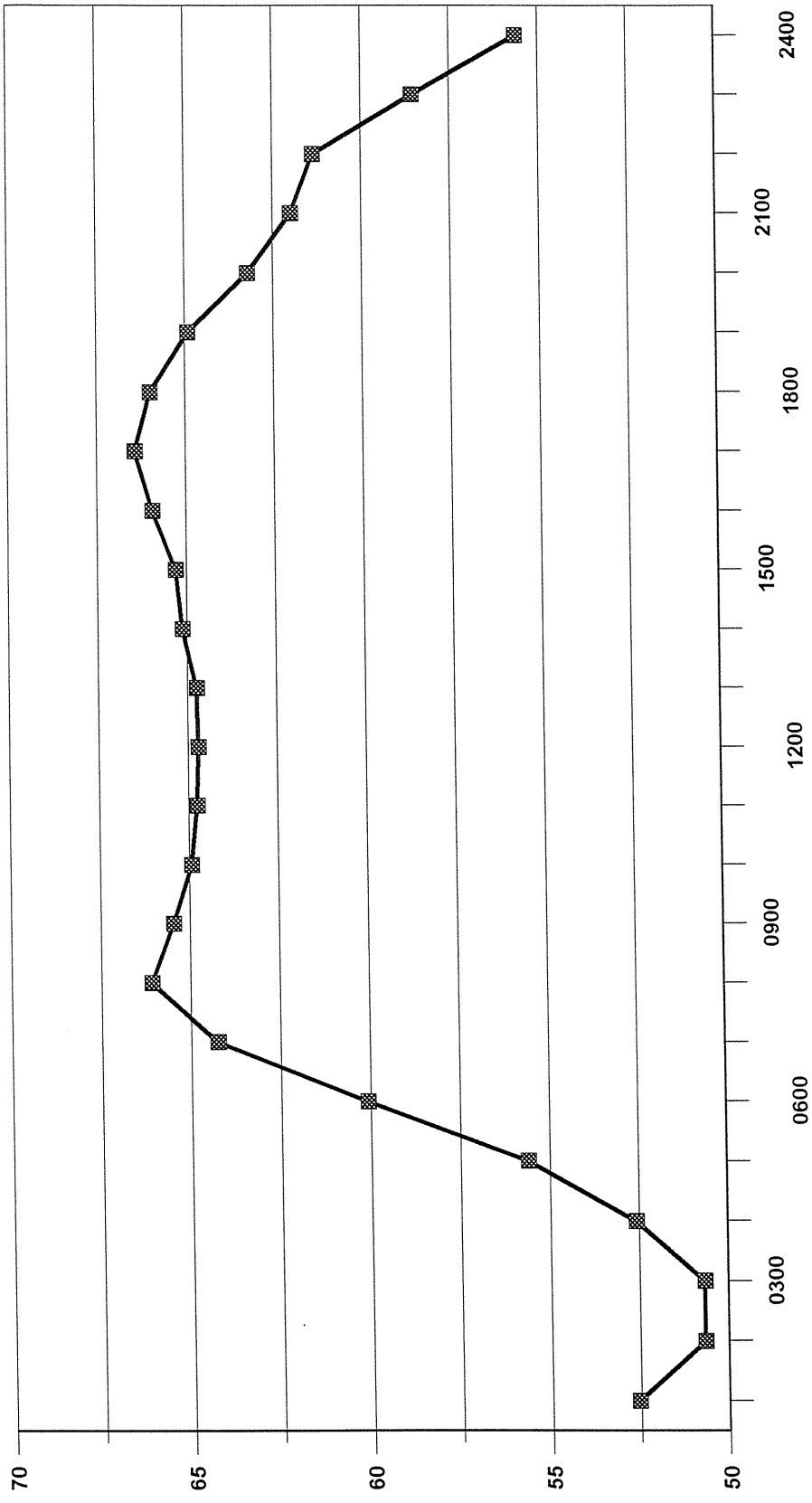


FIGURE 4
HOURLY TRAFFIC NOISE LEVELS VS. TIME OF DAY
STA. 036016, HANA HIGHWAY ROUTE 36, M.P. 1.7, MAUI, 02/13/14

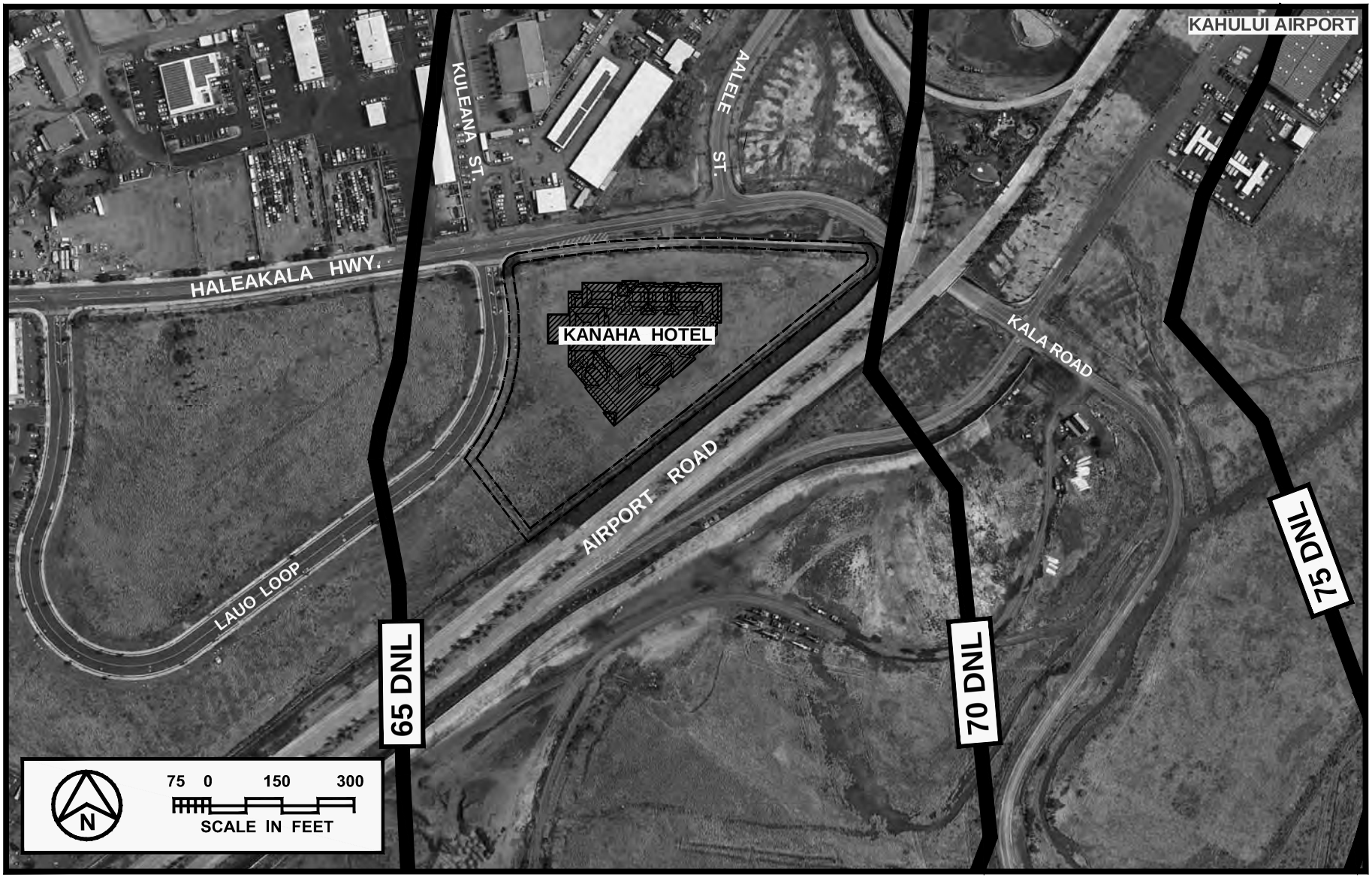


environs were developed for ground and upper floor level receptors without and with the benefit of shielding effects. Future traffic assignments with and without the project were obtained from the project's traffic turning movements (Reference 8). The forecasted increases in traffic noise levels over existing levels were calculated for both scenarios, and noise impact risks evaluated. The relative contributions of non-project and project related traffic to the total noise levels were also calculated, and an evaluation was made of possible traffic noise impacts resulting from the project.

Aircraft Noise Analysis. The potential aircraft noise impacts at the Kanaha Hotel project site from existing and forecasted operations at OGG were evaluated, and sound attenuation treatments to the proposed hotel's exterior envelope were recommended. In addition, aircraft noise measurements on the project site were obtained in August 2017 to validate the reasonableness of the aircraft estimated noise level contours at the project site, and to quantify the expected noise levels from various aircraft flybys at the project site.

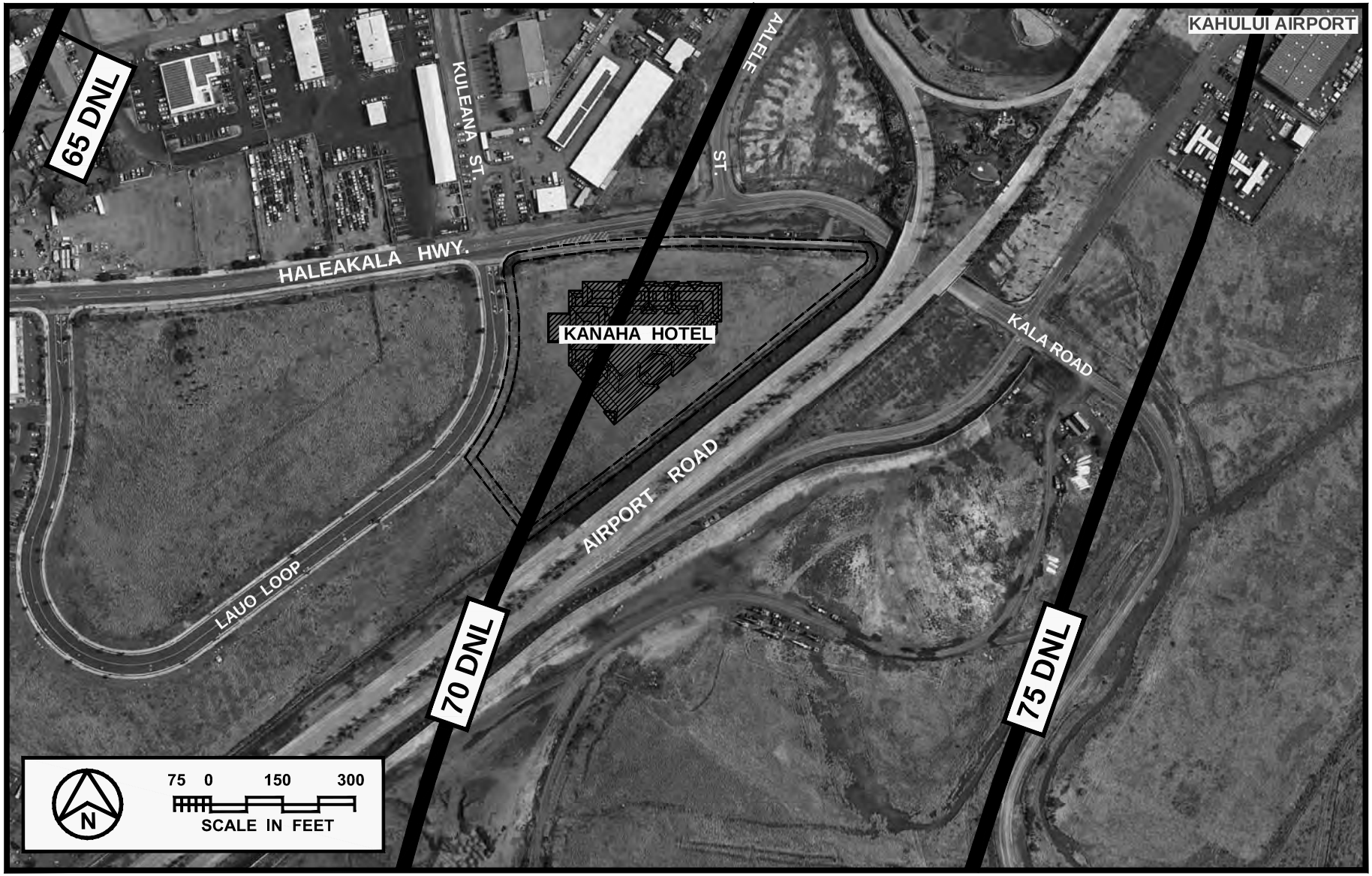
For transient living units, such as hotel rooms, Hawaii State Department of Transportation, Airports Division (HDOTA), has recommended that hotels should not be located in areas exposed to aircraft noise levels greater than 60 DNL (Day-Night Average Sound Level) in prior 14 CFR Part 150 Noise Compatibility Programs for state airports. If the siting of such hotels occur after consideration of all other factors including noise by local authorities, HDOTA has recommended that sound insulation be provided for such facilities so as to not exceed 45 DNL within the interior of such facilities.

The proposed hotel is located near the normal flight tracks of aircraft landing at Kahului Airport during trade wind conditions, and is near the departure end of Runway 2 for aircraft departing from Kahului Airport during trade wind conditions. By the most recent aircraft noise contours developed for Kahului Airport under the 14 CFR Part 150 Noise Compatibility Program for state airports (see Reference 6), the project site is located within the 65 to 75 DNL (Day-Night Average Sound Level) noise contours developed for CY 1993 and 1998 (see Figures 5 and 6). These noise contours are probably out of date for the following reasons: the noisier interisland Stage 2 passenger aircraft [B-737(200) and DC-9(50)] previously used by Aloha and Hawaiian Airlines have been replaced with quieter B-717(200) aircraft used by Hawaiian Airlines; and the CY 1998 noise contours included a 2,500 foot extension of Runway 2/20 to the south, which has not occurred. Recent measurements of aircraft noise at the project site indicate that the project site is probably located between the 55 to 65 DNL noise contours (see Figure 7). Nevertheless, the higher 1993 and 1998 noise contours were used to develop the sound attenuation recommendations for this project, since the 14 CFR Part 150 contours have not been updated, and because the building materials and methods required for achieving the higher sound attenuation are not extraordinary for air conditioned, transient living units. By using the higher aircraft noise contours of CY 1993 and 1998, the minimum exterior-to-interior noise reduction requirement is 25 dBA if the CY 1993 contours are used, and the maximum exterior-to-interior noise reduction



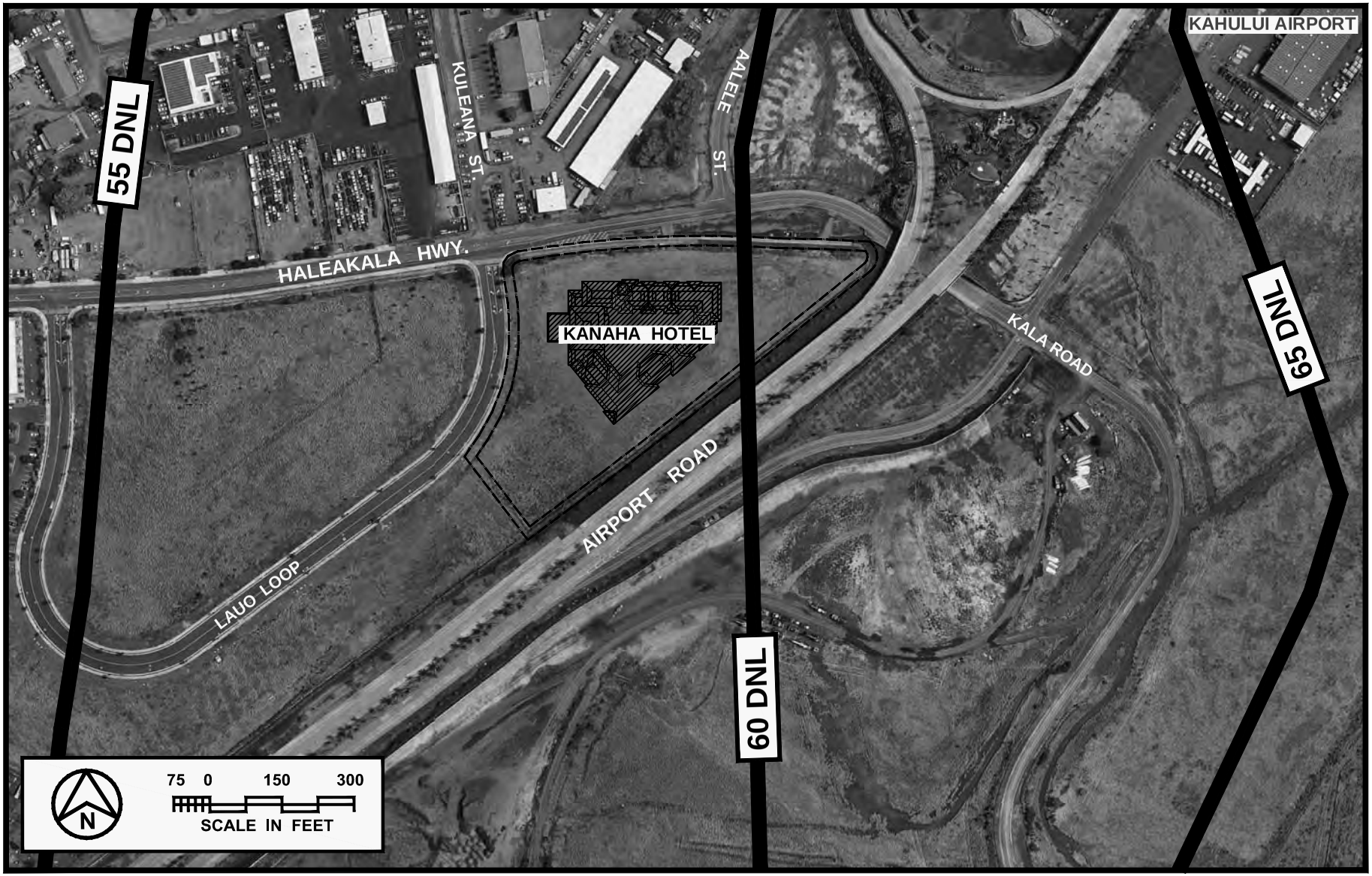
RELATIONSHIP OF KANAHA HOTEL AT KAHULUI AIRPORT TO 14 CFR PART 150 CY 1993 NOISE CONTOURS FOR KAHULUI AIRPORT

FIGURE 5



RELATIONSHIP OF KANAHA HOTEL AT KAHULUI AIRPORT TO 14 CFR PART 150 CY 1998 NOISE CONTOURS FOR KAHULUI AIRPORT

FIGURE 6



RELATIONSHIP OF KANAHA HOTEL AT KAHULUI AIRPORT TO ESTIMATED CY 2010 NOISE CONTOURS FOR KAHULUI AIRPORT

FIGURE 7

requirement rises to 30 dBA if the CY 1998 contours are used. These requirements should not be difficult to achieve with standard construction techniques as long as closure and air conditioning of the hotel are employed.

There are no officially updated forecasted aircraft noise contours for Kahului Airport. However, the sound attenuation treatments recommended for the hotel account for aircraft noise levels as high as 75 DNL, which are substantially higher than the currently estimated levels of 55 to 65 DNL, adverse noise impacts at the project site should be avoidable with the recommended sound attenuation treatments.

Other Noise Analysis. Risks of adverse noise impacts from short term construction noise over the project site were also evaluated. Recommendations for mitigation of construction noise impacts were provided.

CHAPTER V. EXISTING NOISE ENVIRONMENT

Traffic Noise. The existing traffic noise levels at ground level along the perimeter of the proposed Kanaha Hotel building vary from levels of approximately 55 DNL at its southwest corner, to 57 to 58 DNL along its north side. Existing traffic noise levels at ground level along its northeast and east sides are controlled by traffic noise contributions from the Airport Access Road. At the southwest corner of the proposed, traffic noise levels are lowest due to the very low existing traffic volumes along Lauo Loop.

Calculations of existing traffic noise levels (without consideration of noise shielding effects) during the PM peak traffic hour are presented in Table 7 for ground level receptors along the various roadways servicing the project. Existing traffic noise levels at the project site are typically higher during the PM peak traffic hour rather than the AM peak traffic hour. This is due to the larger existing traffic volumes during the PM peak hour (see Appendix C). In Table 7, the hourly Leq (or Equivalent Sound Level) contributions from each roadway section in the project environs were calculated for comparison with forecasted traffic noise levels with and without the project. The existing setback distances from the roadways' centerlines to the 65 and 70 DNL contours are shown in Table 8. The contour line setback distances do not take into account noise shielding effects or the additive contributions of traffic noise from intersecting street sections. Based on the results of Table 8, it was concluded that the existing 65 DNL traffic noise contour is located approximately 91 FT from the centerline of the elevated Airport Access Road in the immediate vicinity of the project site. Hana Highway, which is very distant from the project is significantly (by approximately 5 DNL) noisier than the Airport Access Road, but is located at significantly greater distances to the south and southwest. Haleakala Highway's noise levels are midway between those of the Airport Access Road and Lauo Loop.

Existing traffic noise levels at the perimeter of the Kanaha Hotel were calculated at ground through 4th Floor elevations where shown in Figure 8. These existing noise levels are shown in Table 9, and do not exceed 61 DNL. The results shown in Table 9 include the effects of noise shielding from the elevated section of the Airport Access Road over Haleakala Highway plus the combined traffic noise contributions from Haleakala Highway, Airport Access Road, and Lauo Loop. At the interior locations on the project site, aircraft flyby noise are louder than traffic noise events. A discussion of existing aircraft noise levels on the project site is provided in the following section. Between motor vehicle and aircraft noise events, and during calm winds, background ambient noise levels drop to a range of 50 to 51 dBA. The minimum background ambient noise levels at these interior locations are controlled by distant traffic and wind induced foliage noise.

Aircraft Noise. Aircraft noise sources in the project environs are associated with fixed and rotary wing aircraft operations at Kahului Airport (OGG). In order to quantify

TABLE 7

EXISTING (CY 2019) TRAFFIC VOLUMES AND NOISE LEVELS ALONG VARIOUS ROADWAYS IN PROJECT ENVIRONS (PM PEAK HOUR)

LOCATION	SPEED (MPH)	TOTAL VPH	********* VOLUMES (VPH) ********** AUTOS	M TRUCKS	H TRUCKS	50' Leq	100' Leq	200' Leq
Airport Access Road North of Hana Highway	45	987	899	39	49	70.1	64.2	58.2
Hana Hwy. West of Airport Access Road	55	2,850	2,776	40	34	75.3	69.1	62.6
Haleakala Hwy. E. of Aalele Street	35	701	679	14	8	62.7	57.0	51.3
Haleakala Hwy. Between Aalele and Lauo Loop E.	35	708	686	14	8	62.7	57.1	51.3
Haleakala Hwy. Between Lauo Loop E. and Lauo Loop W.	35	671	650	13	8	62.5	56.9	51.1
Lauo Loop E at Haleakala Highway	35	94	86	5	3	55.5	50.0	44.6

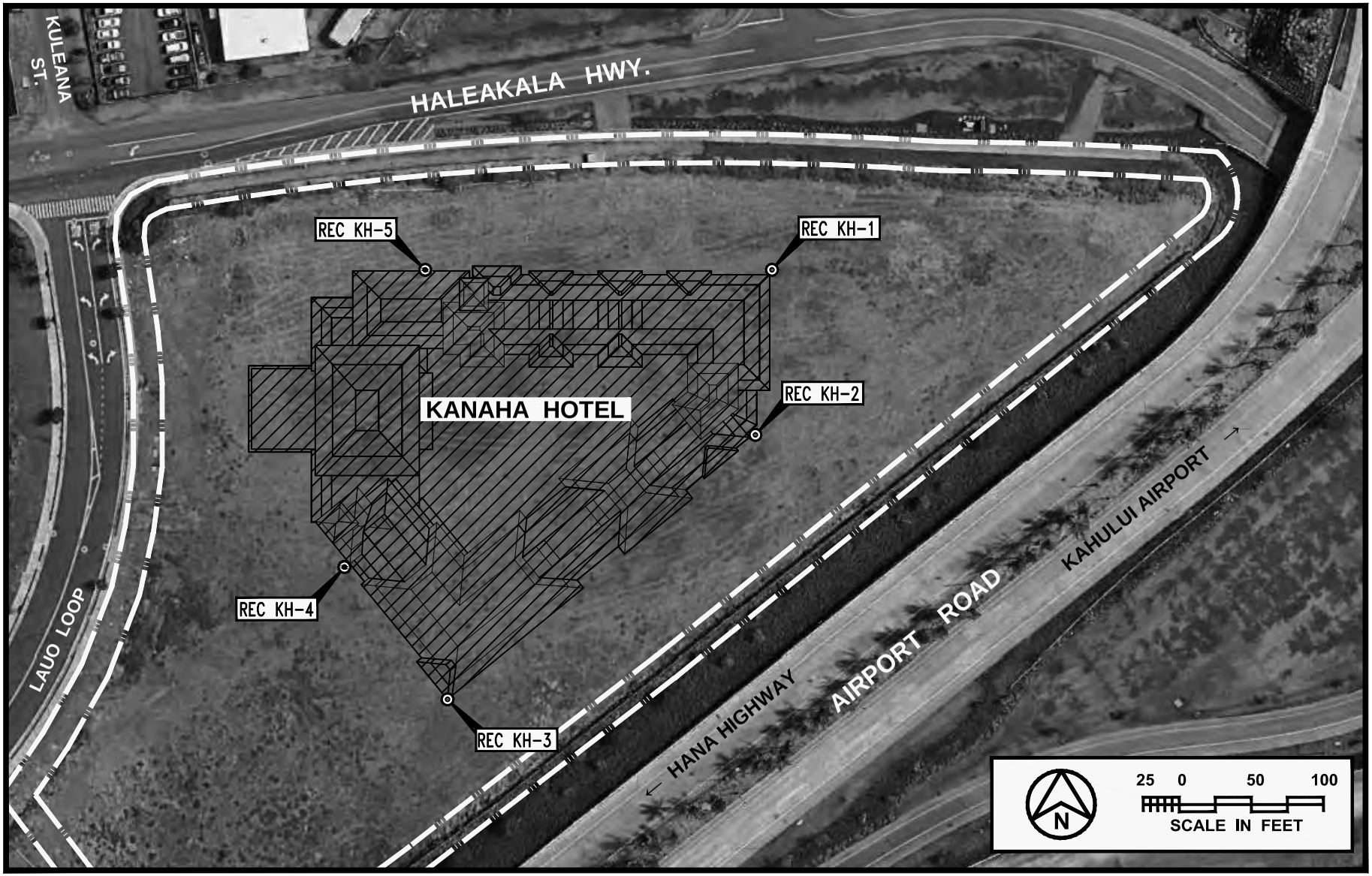
TABLE 8

YEAR 2019 AND 2025 DISTANCES TO 65 AND 70 DNL CONTOURS (BUILD)

STREET SECTION	65 DNL SETBACK (FT) CY 2019	65 DNL SETBACK (FT) CY 2025	70 DNL SETBACK (FT) CY 2019	70 DNL SETBACK (FT) CY 2025
Airport Access Road North of Hana Highway	91	97	51	54
Hana Hwy. West of Airport Access Road	155	162	90	94
Haleakala Hwy. E. of Aalele Street	38	43	21	23
Haleakala Hwy. Between Aalele and Lauo Loop E.	38	44	20	24
Haleakala Hwy. Between Lauo Loop E. and Lauo Loop W.	37	43	20	23
Lauo Loop E at Haleakala Highway	15	23	< 12	12

Notes:

(1) All setback distances are from the roadways' centerlines.
(2) See Tables 7 and 10 for traffic volume, speed, and mix assumptions.
(3) Setback distances are for unobstructed line-of-sight conditions.
(4) "Loose Soil" ground cover conditions assumed along all roadways.



GROUND TO FOURTH FLOOR RECEPTOR LOCATIONS AT PROPOSED KANAHA HOTEL AT KAHULUI AIRPORT

FIGURE 8

TABLE 9

EXISTING AND FUTURE TRAFFIC NOISE LEVELS AT KANAHA RECEPTORS; (DNL)

RECEPTOR LOCATION	EXISTING (CY 2019) DNL	--- FUTURE NO BUILD ---- (CY 2025) / DNL	CHANGE DNL	---- FUTURE BUILD ---- (CY 2025) / DNL	CHANGE DNL
Ground Floor:					
REC KH-1	57.8	58.4	0.6	58.2	0.4
REC KH-2	57.8	58.2	0.4	57.8	0.0
REC KH-3	57.2	57.7	0.5	57.5	0.3
REC KH-4	55.2	55.9	0.7	53.9	-1.3
REC KH-5	58.0	58.7	0.7	58.1	0.1
Seond Floor:					
REC KH-1	58.3	58.9	0.6	58.7	0.4
REC KH-2	58.8	59.3	0.5	59.0	0.2
REC KH-3	58.8	59.3	0.5	59.1	0.3
REC KH-4	55.7	56.4	0.7	54.4	-1.3
REC KH-5	58.2	58.9	0.7	58.3	0.1
Third Floor:					
REC KH-1	58.8	59.4	0.6	59.2	0.4
REC KH-2	59.8	60.3	0.5	60.1	0.3
REC KH-3	60.1	60.5	0.4	60.4	0.3
REC KH-4	56.2	56.8	0.6	54.8	-1.4
REC KH-5	58.3	59.1	0.8	58.5	0.2
Fourth Floor:					
REC KH-1	59.2	59.7	0.5	59.5	0.3
REC KH-2	60.6	61.1	0.5	60.9	0.3
REC KH-3	60.7	61.1	0.4	61.1	0.4
REC KH-4	56.6	57.2	0.6	55.1	-1.5
REC KH-5	58.5	59.2	0.7	58.5	0.0

Notes:

1. First through fourth floor receptors were assumed to be at ground, +13.5'. +24.0', and +34.5' elevation.
2. Future (2025) noise levels calculated using 2025 traffic mix and speeds shown in Table 10.
3. All "Changes" in DNL are relative to Existing DNL values.

the aircraft noise levels at the proposed Kanaha Hotel, aircraft noise measurements were obtained on August 17, 2017 at Location REC KH-1 where shown in Figures 1 and 8. Because the Kanaha Hotel site is located southwest of the south end of main Runway 2/20, the noisier jet aircraft typically fly to and from the airport on a north-south flight track aligned to the main airport runway which is located northeast of the hotel site. Tour helicopters arriving from the west may fly over the project site while landing at the tour helicopter pads which are located to the east of the main Runway 2/20. During typical tradewind conditions, the noisier fixed wing jet aircraft land on the main Runway 2 from the south, and depart seaward toward the north. During kona wind conditions, which occur approximately 12 percent of the time, the noisier jet aircraft departures leave the airport via Runway 20 heading south, and are the loudest aircraft noise events.

The measured hourly noise levels at REC KH-1 on the project site on August 17, 2017 are shown in Table 6. Table 5 summarizes the measured maximum A-Weighted sound levels associated with the various aircraft flyby noise events. The dBA vs. time strip charts of the louder aircraft noise events are shown in Figures 9 through 11. The loudest aircraft noise events at REC KH-1 were overhead tour helicopters landing at their facility northeast of the project site. Their measured noise levels were similar to those expected during commercial and private jet aircraft departures toward the south during kona wind conditions. The noisier military jet aircraft can produce higher noise levels, but they number less than 2 percent of all aircraft noise events. Fixed wing aircraft landings during trade wind conditions were typically less than 70 dBA. Because the typical hourly average (Leq) noise levels at REC KH-1 were approximately 60 dBA, it is considered unlikely that the existing DNL value at REC KH-1 could exceed 65 DNL. Therefore, use of 75 DNL (from the CY 1998 noise contours in Figure 6) for design of the exterior envelope of the hotel should provide a 10 DNL margin in the noise attenuation measures required for the project.

FIGURE 9. DBA VS. TIME RECORD AT LOCATION KH-1, TOUR HELICOPTER FLYBY
(09:03:25 TO 09:04:23 HOURS, AUGUST 17, 2017)

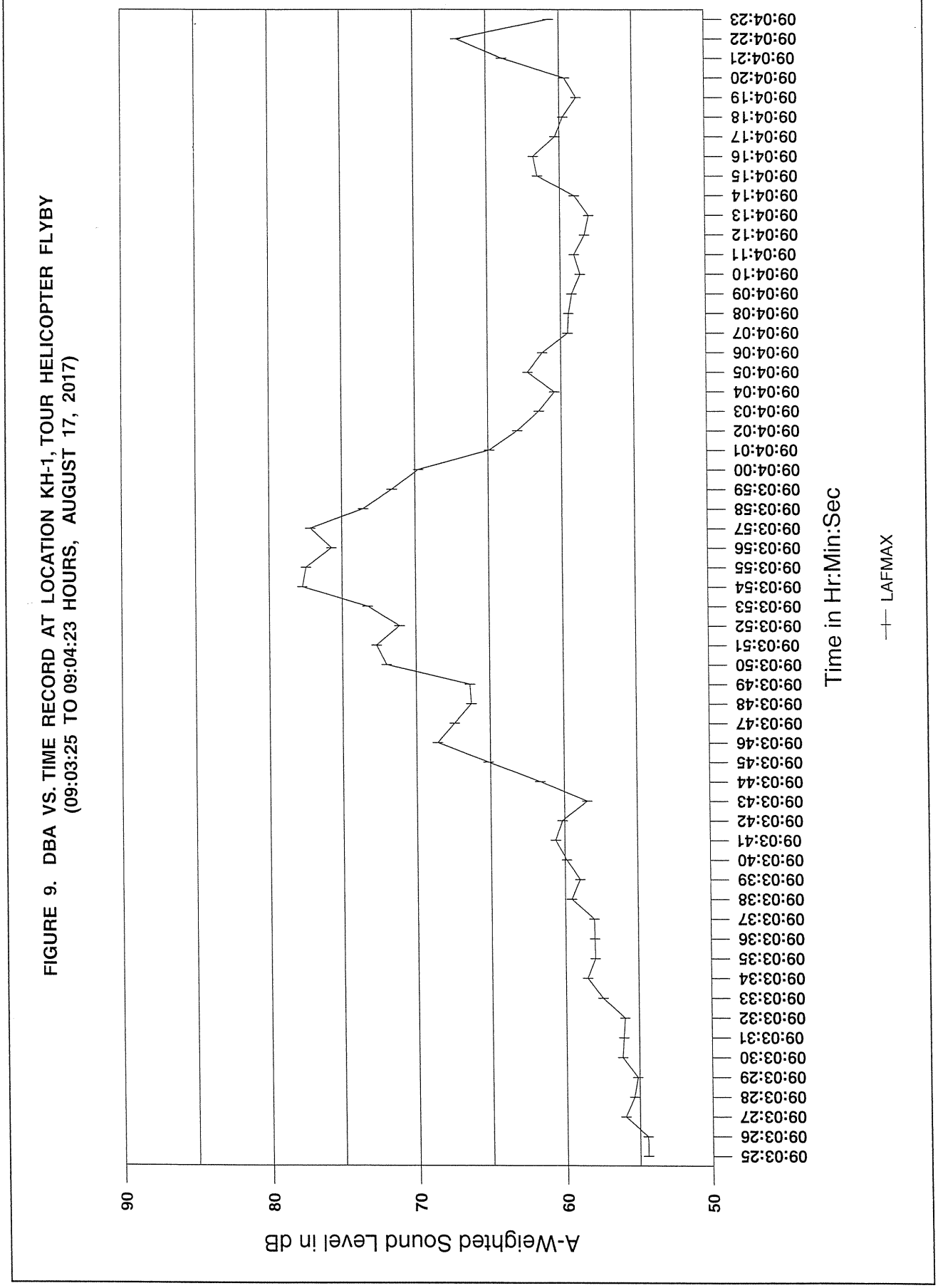


FIGURE 10. DBA VS. TIME RECORD AT LOCATION KH-1, B-737(800) DEPARTURE
(11:21:59 TO 11:22:57 HOURS, AUGUST 17, 2017)

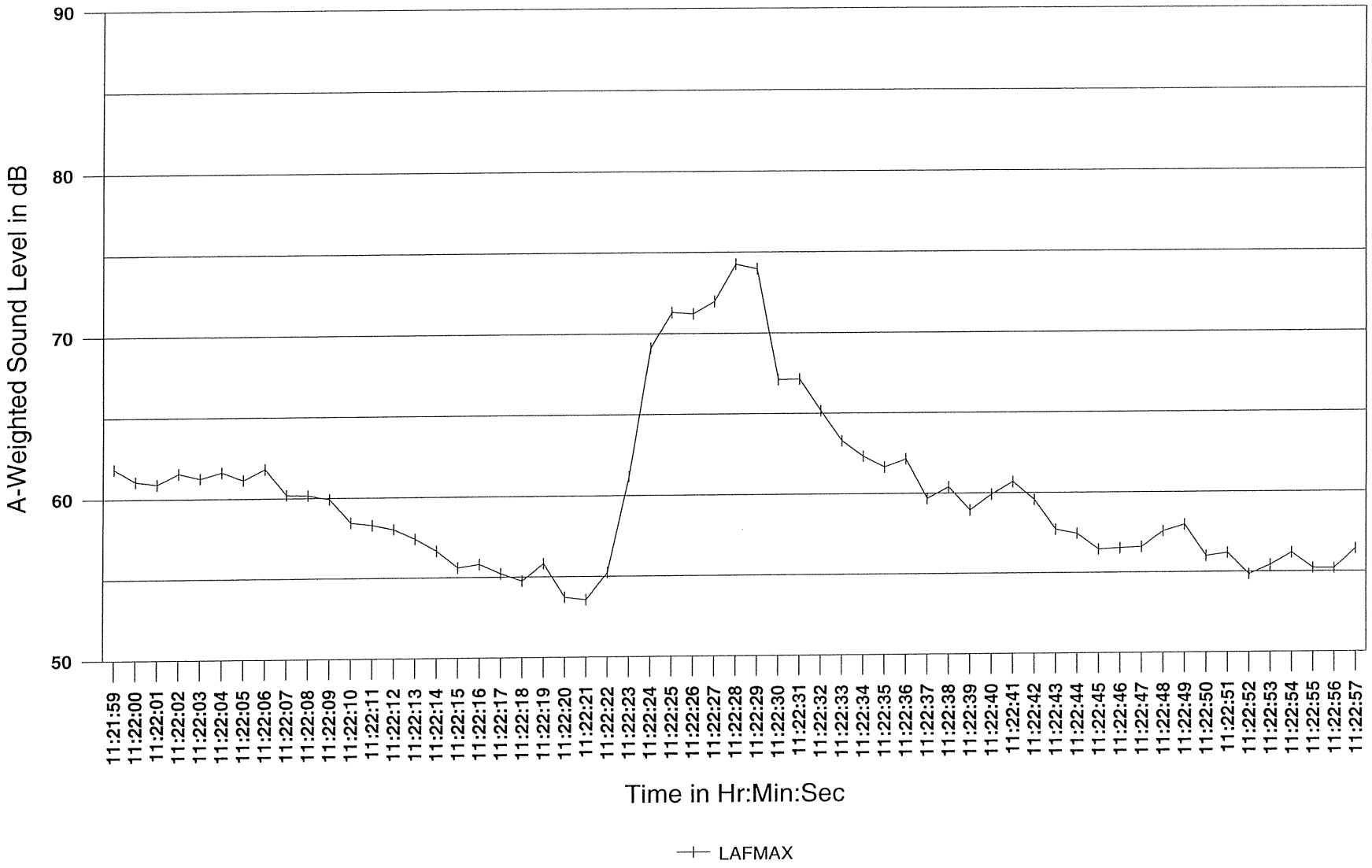
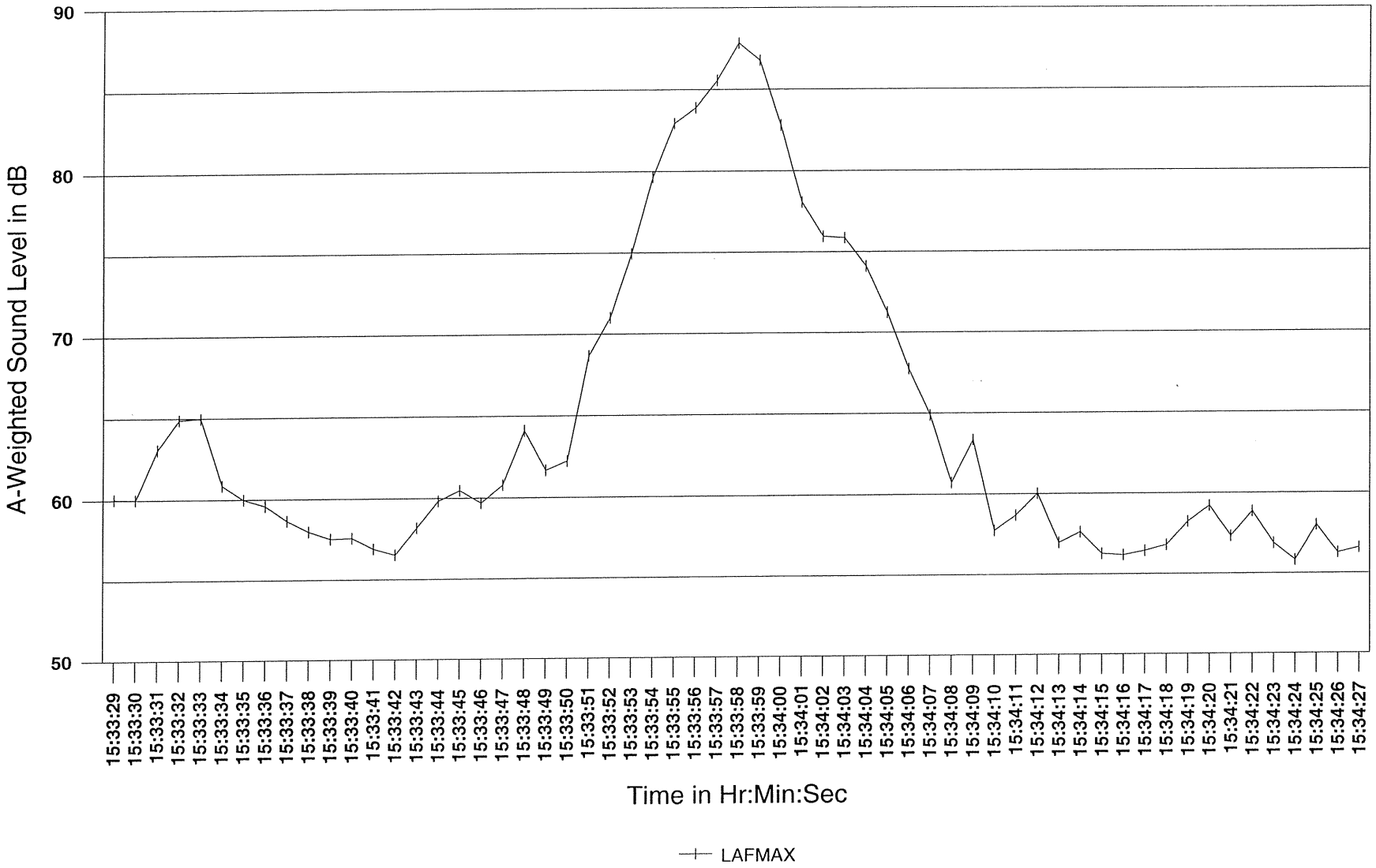


FIGURE 11. DBA VS. TIME RECORD AT LOCATION KH-1, TOUR HELICOPTER FLYBY
(15:33:29 TO 15:34:27 HOURS, AUGUST 17, 2017)



CHAPTER VI. FUTURE NOISE ENVIRONMENT

Traffic Noise. Predictions of future traffic noise levels were made using the traffic volume assignments of Reference 8 for CY 2025 with and without the proposed project. The future assignments of project plus non-project traffic along Airport Access Road, Haleakala Highway, Hana Highway, and Lauo Loop are shown in Table 10 for the PM peak hour of traffic. The future traffic volumes with and without the project are shown in Appendix C.

Table 8 summarizes the predicted increases in the future setback distances to the 65 and 70 DNL traffic noise contour lines along the Airport Access Road, Haleakala Highway, Hana Highway, and Lauo Loop in the project environs and attributable to both project plus non-project traffic in CY 2025. The setback distances in Table 8 do not include the beneficial effects of noise shielding from terrain features and elevated highway sections, or the detrimental effects of additive contributions of noise from intersecting streets. As shown in Table 8, the setback distance to the 65 DNL contour is predicted to be 97 FT from the baseline of the Airport Access Road (for unobstructed line-of-sight conditions to the highway lanes) following project build-out in CY 2025.

Table 11 presents the predicted increases in traffic noise levels associated with non-project and project traffic along Airport Access Road, Haleakala Highway, Hana Highway, and Lauo Loop by CY 2025, and as measured by the DNL descriptor system without consideration of noise shielding effects. As indicated in Table 11, by CY 2025 and following complete project build-out, traffic noise levels on the Airport Access Road in the areas fronting the project are predicted to increase by approximately 0.5 DNL. This increase in traffic noise level is considered to be minimal, and primarily reflects the growth in forecasted non-project traffic in the project environs by CY 2025. As indicated in Table 11, only a 0.1 DNL increase in traffic noise along the Airport Access Road due to project traffic is expected by CY 2025. Overall, the increases in noise levels associated with project traffic are considered to be small and will be difficult to measure along the Airport Access Road, Haleakala Highway, and Hana Highway. A larger increase in project related traffic noise level is predicted to occur along Lauo Loop, but future traffic noise levels are expected to remain less than 65 DNL beyond the Right-of-Way of Lauo Loop. Overall, the proposed location of Kanaha Hotel has adequate setback from the three roadways which adjoin its lot boundaries.

Table 9 summarizes the predicted increases in traffic noise levels at the receptor locations on the perimeter of the proposed Kanaha Hotel shown in Figure 8. The future traffic noise levels at these locations from the first to fourth floor levels with and without the hotel project are shown in Table 9, as well as the anticipated increases in future traffic noise levels with and without the hotel project. Future traffic noise levels tend to increase with higher receptor elevations due to the reduction in noise shielding effects from the west shoulder of the Airport Access Road. Future traffic noise levels with the project are anticipated to be lower than future traffic noise levels without the project due to the noise shielding effects of the proposed Kanaha Hotel building. Overall, future

TABLE 10

FUTURE (CY 2025) TRAFFIC VOLUMES AND NOISE LEVELS ALONG VARIOUS ROADWAYS IN PROJECT ENVIRONS (PM PEAK HOUR, BUILD)

LOCATION	SPEED (MPH)	TOTAL VPH	********* VOLUMES (VPH) ********** AUTOS	M TRUCKS	H TRUCKS	50' Leq	100' Leq	200' Leq
Airport Access Road North of Hana Highway	45	1,105	1,006	44	55	70.6	64.7	58.7
Hana Hwy. West of Airport Access Road	55	3,140	3,058	44	38	75.6	69.5	63.0
Haleakala Hwy. E. of Aalele Street	35	875	846	18	11	63.7	58.1	52.3
Haleakala Hwy. Between Aalele and Lauo Loop E.	35	915	886	18	11	63.9	58.2	52.5
Haleakala Hwy. Between Lauo Loop E. and Lauo Loop W.	35	895	866	18	11	63.8	58.2	52.4
Lauo Loop E at Haleakala Highway	35	205	186	11	8	59.1	53.7	48.4

TABLE 11

CALCULATIONS OF PROJECT AND NON-PROJECT TRAFFIC NOISE CONTRIBUTIONS (CY 2025)

STREET SECTION	NOISE LEVEL INCREASE DUE TO: NON-PROJECT TRAFFIC (DNL)	PROJECT TRAFFIC (DNL)
Airport Access Road North of Hana Highway	0.40	0.10
Hana Hwy. West of Airport Access Road	0.40	0.00
Haleakala Hwy. E. of Aalele Street	0.80	0.30
Haleakala Hwy. Between Aalele and Lauo Loop E.	0.80	0.30
Haleakala Hwy. Between Lauo Loop E. and Lauo Loop W.	0.80	0.50
Lauo Loop E at Haleakala Highway	1.80	1.90

traffic noise levels at the perimeter of the proposed hotel building are not expected to exceed 61.1 DNL, which is well below local or federal noise mitigation thresholds for traffic noise.

Aircraft Noise. The future aircraft noise levels at the Kanaha Hotel project site are not expected to increase to the levels shown in Figure 6, primarily due to the significant quieting of civil and military aircraft. The application of sound attenuation measures to the exterior envelope of the hotel as described in a later section of this report should be more than adequate to comply with local and federal recommendations for noise reductions when noise sensitive properties are located within the 60 to 65 DNL airport noise contours. Because closure and air conditioning of the proposed hotel is planned, it should be possible to provide adequate aircraft noise mitigation measures within the proposed hotel's exterior envelope so as to minimize future aircraft noise impacts.

CHAPTER VII. DISCUSSION OF PROJECT RELATED NOISE IMPACTS AND POSSIBLE NOISE MITIGATION MEASURES

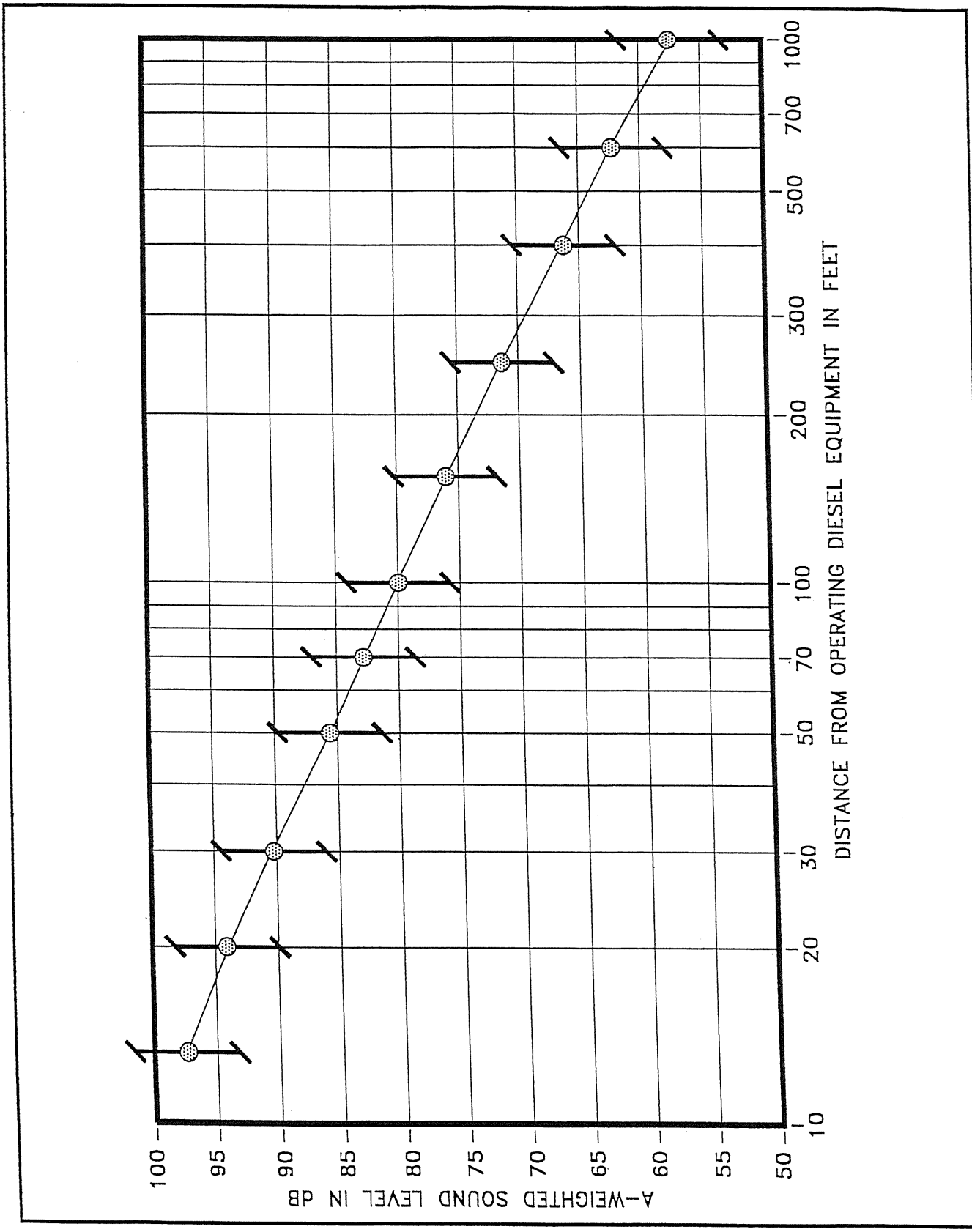
Traffic Noise. The increases in traffic noise levels attributable to the project from the present to CY 2025 are predicted to range from 0.0 to 1.9 DNL along the roadways in the immediate vicinity of the project. Except for traffic volumes associated with project traffic on Lauo Loop, future project traffic on the Airport Access Road, Haleakala Highway, and Hana Highway should not cause traffic noise levels to increase by more than 0.5 DNL. These increases in traffic noise levels which are attributable to the project are considered to be in the insignificant category. These increases of 0.5 DNL or less will be difficult to measure or perceive. Along Lauo Loop, traffic noise increases resulting from the project are predicted to be 1.9 DNL, which are attributable to the very low existing traffic volumes (and noise levels) on that roadway. Even with the projected increases in future traffic noise levels along Lauo Loop, the 65 DNL contour should not extend beyond 23 feet from the centerline of Lauo Loop. Future traffic noise levels at the proposed hotel should not exceed 61 DNL by 2025. For these reasons, traffic noise impacts resulting from project traffic are not expected, and traffic noise mitigation measures should not be required.

Aircraft Noise. Based on the official 14 CFR Part 150 noise contours for 1993 and 1998 (see Figures 5 and 6), aircraft noise mitigation measures should be included in the exterior envelope of the proposed hotel building. An interior noise level of 45 DNL is recommended for noise sensitive occupancies, and for exterior aircraft noise levels of 70 to 75 DNL as shown in Figure 6. A minimum exterior-to-interior noise reduction of 30 dBA is recommended. This amount of noise reduction should provide a safety margin of at least 10 dBA above that which would be recommended for the estimated existing aircraft noise levels of 55 to 65 DNL over the project site. Normally, the use of closure and air conditioning within a building should provide approximately 20 dBA of exterior-to-interior noise reduction.

In order to achieve the minimum 30 dBA noise reduction goal for aircraft noise events, the following acoustical treatments are recommended to the exterior envelope of the Kanaha Hotel building which adjoins the guest suites. The use of 1" laminated, insulating glass (1/4" laminated glass + 1/2" air + 3/16" glass) with STC 39 rating; the use of a concrete roof with minimum 4" thickness (STC 42 rating); and EFS exterior walls with minimum STC 47 rating are the recommended acoustical properties of these major exterior components. The exterior glazed areas should be limited so as to not exceed 25 percent of the exterior wall area, unless the use of glazing with higher STC ratings is possible. If a metal deck roof is used, additional construction elements (drywall furring, resilient clips, plus insulation) will be required due to the lower surface weight of the metal roof panels. Commercial or common areas of the hotel should not require special noise attenuation measures other than those typically available from closure and air conditioning.

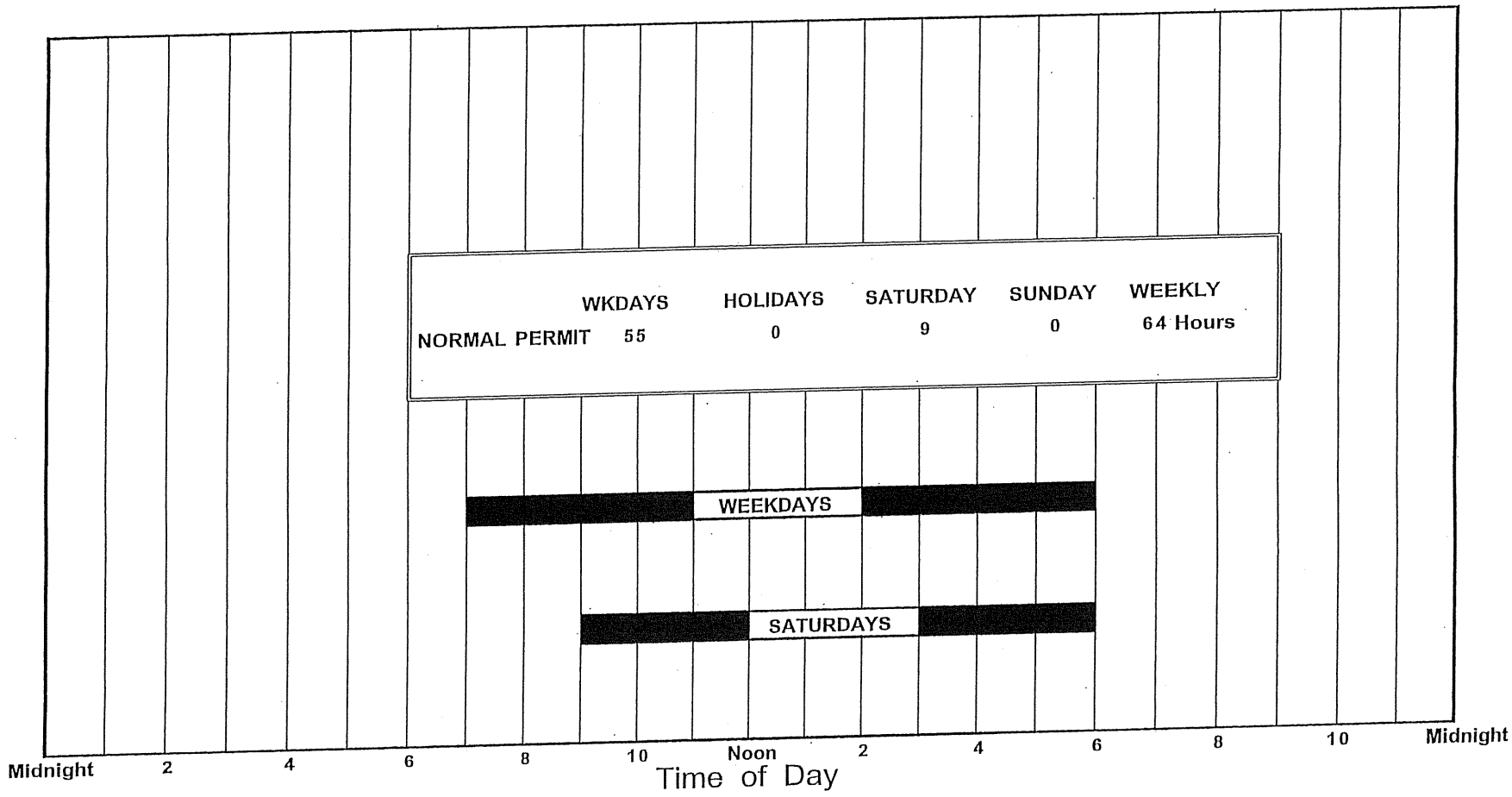
Construction Noise. Audible construction noise will probably be unavoidable during the entire project construction period. It is anticipated that the actual work will be moving from one location on the project site to another during the construction period. Actual length of exposure to construction noise at any receptor location will probably be less than the total construction period for the entire project. Typical levels of noise from construction activity (excluding pile driving activity) are shown in Figure 12. The closest noise sensitive property which may experience noise during construction activities on the project site is the Courtyard by Marriott approximately 1,500 feet to the west. From Figure 11, predicted construction noise levels at the Courtyard are relatively low at 50 to 58 dBA during the noisier site preparation phase of the work. Existing lands located within 150 to 1,000 feet north and northwest of the project construction site are occupied by commercial and light industrial establishments. Lands to the east and south are primarily vacant or in airport use. Risks of adverse construction noise impacts at these locations should be relatively low. Adverse impacts from construction noise are not expected to be in the "public health and welfare" category due to the temporary nature of the work and due to the administrative controls available for its regulation. Instead, these impacts will probably be limited to the temporary degradation of the quality of the acoustic environment in the immediate vicinity of the project site.

Mitigation of construction noise to inaudible levels will not be practical in all cases due to the intensity of construction noise sources (72 to 80+ dBA at 150 FT distance), and due to the exterior nature of the work (grading and earth moving, trenching, concrete pouring, hammering, etc.). The use of properly muffled construction equipment should be required on the job site. The incorporation of State Department of Health construction noise limits and curfew times, which are applicable on the island of Maui (Reference 5), is another noise mitigation measure which will be applied to this project. Figure 13 depicts the normally permitted hours of construction for normal construction noise as well as the curfew periods for construction noise. Noisy construction activities are not allowed on Sundays and holidays under the DOH permit procedures.



ANTICIPATED RANGE OF CONSTRUCTION NOISE LEVELS VS. DISTANCE

FIGURE 12



AVAILABLE WORK HOURS UNDER DOH PERMIT PROCEDURES FOR CONSTRUCTION NOISE

FIGURE 13

APPENDIX A. REFERENCES

(1) "Guidelines for Considering Noise in Land Use Planning and Control;" Federal Interagency Committee on Urban Noise; June 1980.

(2) American National Standard, "Sound Level Descriptors for Determination of Compatible Land Use," ANSI S12.9-1998/ Part 5; Acoustical Society of America.

(3) "Environmental Criteria and Standards, Noise Abatement and Control, 24 CFR, Part 51, Subpart B;" U.S. Department of Housing and Urban Development; July 12, 1979.

(4) "Information on Levels of Environmental Noise Requisite to Protect the Public Health and Welfare with an Adequate Margin of Safety;" U.S. Environmental Protection Agency; EPA 550/9-74- 004; March 1974.

(5) "Title 11, Administrative Rules, Chapter 46, Community Noise Control;" Hawaii State Department of Health; September 23, 1996.

(6) "Kahului Airport - FAR Part 150 Noise Compatibility Program; Volume II Noise Compatibility Program Report;" Hawaii State Department of Transportation, Airports Division; September 1995.

(7) "FHWA Highway Traffic Noise Model User's Guide;" FHWA-PD-96-009, Federal Highway Administration; Washington, D.C.; January 1998 and Version 2.5 Upgrade (April 14, 2004).

(8) Draft Final "Traffic Impact Analysis Report; Kanaha Hotel;" Austin, Tsutsumi & Associates, Inc.; April 1, 2021.

(9) 24-Hour Traffic Counts, Station B74036A00032, Keolani Place Between Haleakala Highway and Kahului Airport Boundary; State Department of Transportation; April 29, 2015.

(10) 24-Hour Traffic Counts, Station 036016, Hana Highway Route 36, M.P. 1.7, Kahului, Maui; State Department of Transportation; February 13, 2014.

APPENDIX B

EXCERPTS FROM EPA'S ACOUSTIC TERMINOLOGY GUIDE

Descriptor Symbol Usage

The recommended symbols for the commonly used acoustic descriptors based on A-weighting are contained in Table I. As most acoustic criteria and standards used by EPA are derived from the A-weighted sound level, almost all descriptor symbol usage guidance is contained in Table I.

Since acoustic nomenclature includes weighting networks other than "A" and measurements other than pressure, an expansion of Table I was developed (Table II). The group adopted the ANSI descriptor-symbol scheme which is structured into three stages. The first stage indicates that the descriptor is a level (i.e., based upon the logarithm of a ratio), the second stage indicates the type of quantity (power, pressure, or sound exposure), and the third stage indicates the weighting network (A, B, C, D, E.....). If no weighting network is specified, "A" weighting is understood. Exceptions are the A-weighted sound level and the A-weighted peak sound level which require that the "A" be specified. For convenience in those situations in which an A-weighted descriptor is being compared to that of another weighting, the alternative column in Table II permits the inclusion of the "A". For example, a report on blast noise might wish to contrast the LCdn with the LAdn.

Although not included in the tables, it is also recommended that "Lpn" and "LepN" be used as symbols for perceived noise levels and effective perceived noise levels, respectively.

It is recommended that in their initial use within a report, such terms be written in full, rather than abbreviated. An example of preferred usage is as follows:

The A-weighted sound level (LA) was measured before and after the installation of acoustical treatment. The measured LA values were 85 and 75 dB respectively.

Descriptor Nomenclature

With regard to energy averaging over time, the term "average" should be discouraged in favor of the term "equivalent". Hence, Leq, is designated the "equivalent sound level". For Ld, Ln, and Ldn, "equivalent" need not be stated since the concept of day, night, or day-night averaging is by definition understood. Therefore, the designations are "day sound level", "night sound level", and "day-night sound level", respectively.

The peak sound level is the logarithmic ratio of peak sound pressure to a reference pressure and not the maximum root mean square pressure. While the latter is the maximum sound pressure level, it is often incorrectly labelled peak. In that sound level meters have "peak" settings, this distinction is most important.

"Background ambient" should be used in lieu of "background", "ambient", "residual", or "indigenous" to describe the level characteristics of the general background noise due to the contribution of many unidentifiable noise sources near and far.

With regard to units, it is recommended that the unit decibel (abbreviated dB) be used without modification. Hence, DBA, PNdB, and EPNdB are not to be used. Examples of this preferred usage are: the Perceived Noise Level (Lpn was found to be 75 dB. Lpn = 75 dB). This decision was based upon the recommendation of the National Bureau of Standards, and the policies of ANSI and the Acoustical Society of America, all of which disallow any modification of bel except for prefixes indicating its multiples or submultiples (e.g., deci).

Noise Impact

In discussing noise impact, it is recommended that "Level Weighted Population" (LWP) replace "Equivalent Noise Impact" (ENI). The term "Relative Change of Impact" (RCI) shall be used for comparing the relative differences in LWP between two alternatives.

Further, when appropriate, "Noise Impact Index" (NII) and "Population Weighed Loss of Hearing" (PHL) shall be used consistent with CHABA Working Group 69 Report Guidelines for Preparing Environmental Impact Statements (1977).

TABLE I

A-WEIGHTED RECOMMENDED DESCRIPTOR LIST

	TERM	SYMBOL
1.	A-Weighted Sound Level	L_A
2.	A-Weighted Sound Power Level	L_{WA}
3.	Maximum A-Weighted Sound Level	L_{max}
4.	Peak A-Weighted Sound Level	L_{Apk}
5.	Level Exceeded x% of the Time	L_x
6.	Equivalent Sound Level	L_{eq}
7.	Equivalent Sound Level over Time (T) (1)	$L_{eq(T)}$
8.	Day Sound Level	L_d
9.	Night Sound Level	L_n
10.	Day-Night Sound Level	L_{dn}
11.	Yearly Day-Night Sound Level	$L_{dn(Y)}$
12.	Sound Exposure Level	L_{SE}

(1) Unless otherwise specified, time is in hours (e.g. the hourly equivalent level is $L_{eq(1)}$). Time may be specified in non-quantitative terms (e.g., could be specified a $L_{eq(WASH)}$ to mean the washing cycle noise for a washing machine).

SOURCE: EPA ACOUSTIC TERMINOLOGY GUIDE, BNA 8-14-78,

TABLE II

RECOMMENDED DESCRIPTOR LIST

TERM	A-WEIGHTING	ALTERNATIVE[1] A-WEIGHTING	OTHER[2] WEIGHTING	UNWEIGHTED
1. Sound (Pressure)[3] Level	L_A	L_{pA}	L_B, L_{pB}	L_p
2. Sound Power Level	L_{WA}		L_{WB}	L_W
3. Max. Sound Level	L_{max}	L_{Amax}	L_{Bmax}	L_{pmax}
4. Peak Sound (Pressure) Level	L_{Apk}		L_{Bpk}	L_{pk}
5. Level Exceeded x% of the Time	L_x	L_{Ax}	L_{Bx}	L_{px}
6. Equivalent Sound Level	L_{eq}	L_{Aeq}	L_{Beq}	L_{peq}
7. Equivalent Sound Level[4] Over Time(T)	$L_{eq(T)}$	$L_{Aeq(T)}$	$L_{Beq(T)}$	$L_{peq(T)}$
8. Day Sound Level	L_d	L_{Ad}	L_{Bd}	L_{pd}
9. Night Sound Level	L_n	L_{An}	L_{Bn}	L_{pn}
10. Day-Night Sound Level	L_{dn}	L_{Adn}	L_{Bdn}	L_{pdn}
11. Yearly Day-Night Sound Level	$L_{dn(Y)}$	$L_{Adn(Y)}$	$L_{Bdn(Y)}$	$L_{pdn(Y)}$
12. Sound Exposure Level	L_S	L_{SA}	L_{SB}	L_{Sp}
13. Energy Average Value Over (Non-Time Domain) Set of Observations	$L_{eq(e)}$	$L_{Aeq(e)}$	$L_{Beq(e)}$	$L_{peq(e)}$
14. Level Exceeded x% of the Total Set of (Non-Time Domain) Observations	$L_{x(e)}$	$L_{Ax(e)}$	$L_{Bx(e)}$	$L_{px(e)}$
15. Average L_x Value	L_x	L_{Ax}	L_{Bx}	L_{px}

(1) "Alternative" symbols may be used to assure clarity or consistency.

(2) Only B-weighting shown. Applies also to C,D,E,.....weighting.

(3) The term "pressure" is used only for the unweighted level.

(4) Unless otherwise specified, time is in hours (e.g., the hourly equivalent level is Leq(1). Time may be specified in non-quantitative terms (e.g., could be specified as Leq(WASH) to mean the washing cycle noise for a washing machine.

APPENDIX C

SUMMARY OF CY 2019 AND FUTURE YEAR (CY 2025) TRAFFIC VOLUMES

ROADWAY LANES	**** CY 2019 *****		CY 2025 (NO BUILD)		CY 2025 (BUILD)	
	AM VPH	PM VPH	AM VPH	PM VPH	AM VPH	PM VPH
Airport Access Road N. of Hana Hwy. (NB)	441	412	478	453	495	465
Airport Access Road N. of Hana Hwy. (SB)	178	575	205	620	220	640
Two-Way	619	987	683	1,073	715	1,105
Hana Hwy. W. of Airport Access Rd. (EB)	829	1,627	925	1,768	935	1,780
Hana Hwy. W. of Airport Access Rd. (WB)	1,687	1,223	1,810	1,348	1,825	1,360
Two-Way	2,516	2,850	2,735	3,116	2,760	3,140
Haleakala Hwy. E. of Aalele St. (EB)	93	408	124	473	140	495
Haleakala Hwy. E. of Aalele St. (WB)	324	293	393	351	425	380
Two-Way	417	701	517	824	565	875
Haleakala Hwy. Between Aalele and Lauo Lp. E. (EB)	136	414	177	496	203	528
Haleakala Hwy. Between Aalele and Lauo Lp. E. (WB)	273	295	344	355	375	388
Two-Way	409	708	521	851	578	915
Haleakala Hwy. Between Lauo Lp. E. and Lauo Lp. W. (EB)	120	363	175	432	220	473
Haleakala Hwy. Between Lauo Lp. E. and Lauo Lp. W. (WB)	268	308	326	385	358	423
Two-Way	388	671	501	816	578	895
Lauo Lp. E at Haleakala Hwy. (NB)	7	32	20	71	70	135
Lauo Lp. E at Haleakala Hwy. (SB)	32	62	32	62	35	70
Two-Way	39	94	52	133	105	205

Appendix 14

Archaeological Assessment

Appendix 14.1

Archaeological Assessment

SCS Project Number 2110 AA-1

AN ARCHAEOLOGICAL ASSESSMENT FOR THE WINDWARD HOTEL PROJECT

KAHULUI, WAILUKU AHUPUA`A
WAILUKU DISTRICT,
ISLAND OF MAUI
HAWAI`I
TMK (2) 3-8-103: 014, 015, 016, 017, 018
(Formerly TMK (2) 3-8-079:013)

Prepared by
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and
Michael F. Dega, Ph.D.
Draft

June 2018

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and

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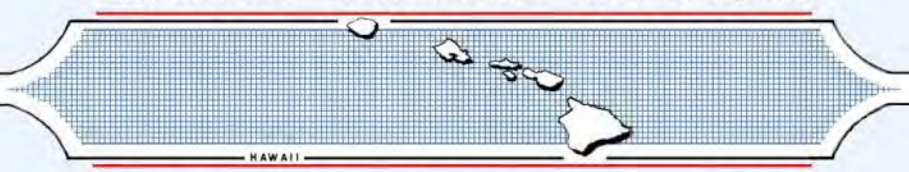
Wailuku, HI 96793

SCIENTIFIC CONSULTANT SERVICES, Inc.



1347 Kapiolani Blvd., Suite 408 Honolulu Hawai`i 96814

ABSTRACT

At the request of Chris Hart & Partners, Inc. and on the behalf of Will Spence, Director (County Maui Planning Department), Scientific Consultant Services, Inc., conducted Archaeological Inventory Survey (AIS) on 6.315 acres of a built environment property for the Windward Hotel project in Kahului, Wailuku Ahupua`a, Wailuku District, Maui Hawai'i [TMK: (2) 3-8-103: 014, 015, 016, 017, 018 (Formerly TMK: (2) 3-8-079:013)]. Survey and representative trenching were completed during this project.

An Archaeological Inventory Survey was performed in order to identify potential historic properties (non-burial and burial), to assess the significance of any identified historic properties, to make a project effect determination, and to propose mitigation measures to address the project effect on historic properties, pursuant to Hawaii Administrative Rules (HAR) § 13-284, as this is a private undertaking, and HAR § 13-276. Please note no federal funding or federal permits are involved with the current undertaking. Eleven (11) stratigraphic trenches (ST-1 through ST-11) mechanically excavated within the project area, were completed during this project.

No traditional or historic sites were identified in surface or subsurface contexts during fieldwork. As no historic properties were identified during the AIS, the following report is being presented as an Archaeological Assessment. Based on the negative findings and that the project area is within an existing built environment, no further archaeological work is recommended for the Windward Hotel Project.

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INTRODUCTION

At the request of Chris Hart & Partners, Inc., and on the behalf of the Will Spence, Director (County Maui Planning Department), Scientific Consultant Services, Inc. conducted Archaeological Inventory Survey (AIS) on 6.315 acres of developed land in Kahului, Wailuku Ahupua`a, Wailuku District, Island of Maui, Hawai'i [TMK (2) 3-8-103: 014, 015, 016, 017, 018 (Formerly TMK (2) 3-8-079:013)](Figures 1 through 3). The AIS was completed in advance of proposed development of the Windward Hotel Project. The project area is owned by Alexander & Baldwin.

An Archaeological Inventory Survey was performed in order to identify potential historic properties (non-burial and burial), to assess the significance of any identified historic properties, to make a project effect determination, and to propose mitigation measures to address the project effect on historic properties, pursuant to Hawaii Administrative Rules (HAR) § 13-284, as this is a private undertaking, and HAR § 13-276. Please note no federal funding or federal permits are involved with the current undertaking. Eleven (11) stratigraphic trenches (ST-1 through ST-11) mechanically excavated within the project area, were completed during this project.

Archaeological Inventory Survey-level work was conducted in order to identify and document historic properties, to gather sufficient information on these properties, to evaluate the significance of any newly identified historic properties, to determine the project effect on these properties, and to make mitigation recommendations to address possible adverse impacts to identified historic properties, pursuant to Hawaii Administrative Rules (HAR) § 13-276.

Pedestrian survey of the project area was completed in December, 2017 with the landowner and SHPD primarily to assess trenching locations, given that the project area is an active, built environment. Subsurface testing was also completed in the form of eleven stratigraphic trenches (ST-1 through ST-11), which provided representative coverage of the project area. No historic properties were identified during the study and thus, this report is presented as an Archaeological Assessment (AA).

SCS Archaeologists Ikaika Kapu, B.A. has conducted fieldwork on December 1 and 2, 2017, under the direct supervision of Michael F. Dega, Ph.D., Principal Investigator. Note that this Archaeological Assessment, per the rules (13-284-5(b)(A) and 13-276-5), provides summary background materials and is not exhaustive, as would be completed for a full AIS.

ENVIRONMENTAL SETTING

Maui is the second largest island among all the Hawaiian Islands, (Handy and Handy 1972:485). The island was formed by shield volcanoes Haleakalā in East and Puʻu Kukui in West Maui. The isthmus between the two cones is primarily composed of alluvial fans made of out-washed silts and gravels that are overlain by coralline sands blown inland from the coast. Lower sand strata have become firmly lithified, forming a soft rock known as eolianite (Stearns 1966: 10). Lithified sand dunes rest on alluvial fans near the shore between Kahului and Waiheʻe, and they extend inland across most of the western edge of the isthmus.

PROJECT AREA

The project area is located approximately 1.5 miles (2.14 kilometers) inland from the northern coastline of the Island of Maui. The project area is situated on the southwest side of the intersection of Hāna Highway and Airport Access Road at an elevation of approximately 80 feet amsl. currently surrounded by vacant lands formerly under commercial sugarcane cultivation.

SOILS

According to Foote *et al*. (1972), the project area is comprised of MuB, Molokai silty clay loam. 3 to 7 percent slope. The well drained alluvial soils of the Ewa Series formed from volcanic rock. These soils occur from 0 to 150 feet AMSL in areas receiving 10 to 30 inches of rainfall annually (ibid: 29). The EaA soils exhibit very slow runoff with a very slight erosion hazard and are typically used for the cultivation of sugarcane and for residential areas (ibid: 30).

As discussed more below, the results of the testing revealed several soil/layer classes. The most predominant was engineered fill (predominantly silt) which occurred in upper levels of the trenches. Silt and natural clay/clay loam were also present, somewhat substantiating the Foote *et al*. (1972) characterization of general project area soils.

CLIMATE

The Kahului area is fairly dry owing in part to the ‘rain shadow’ effect of Haleakala. Temperatures within the project area range from 60 to 98 degrees Fahrenheit during the summer months and from 50 to 93 degrees Fahrenheit during the winter (Armstrong 1983:64). According to Armstrong (1983: 62), annual rainfall in the project area is between the 500 mm (20 in.) and

760 mm (30 in.) isohyets. Giambelluca *et al.* (1986) indicate the project area sits more or less on the 500 mm (20 in.) isohyet

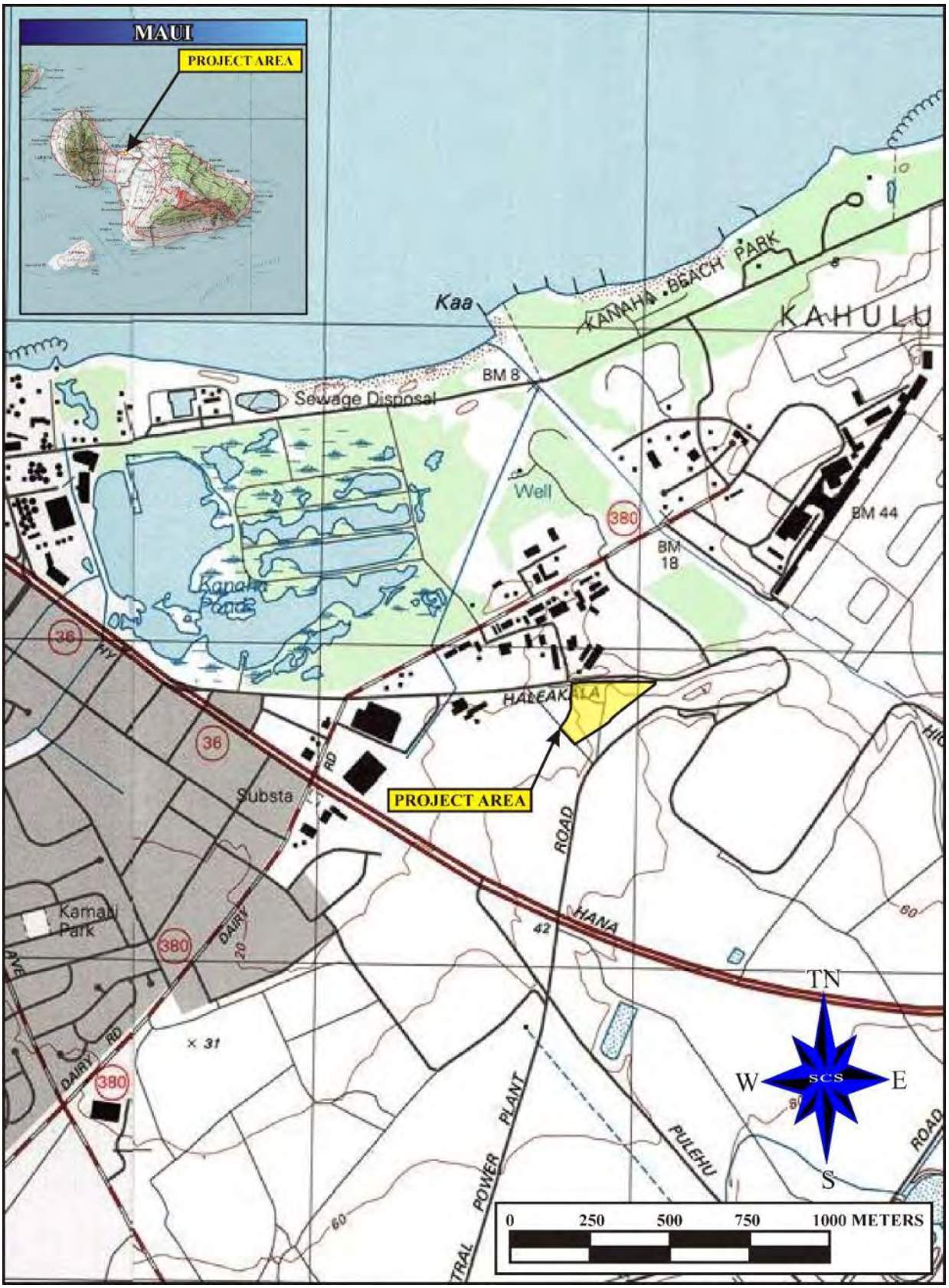

Figure 1: USGS Wailuku Quadrangle Map Showing Project Area.

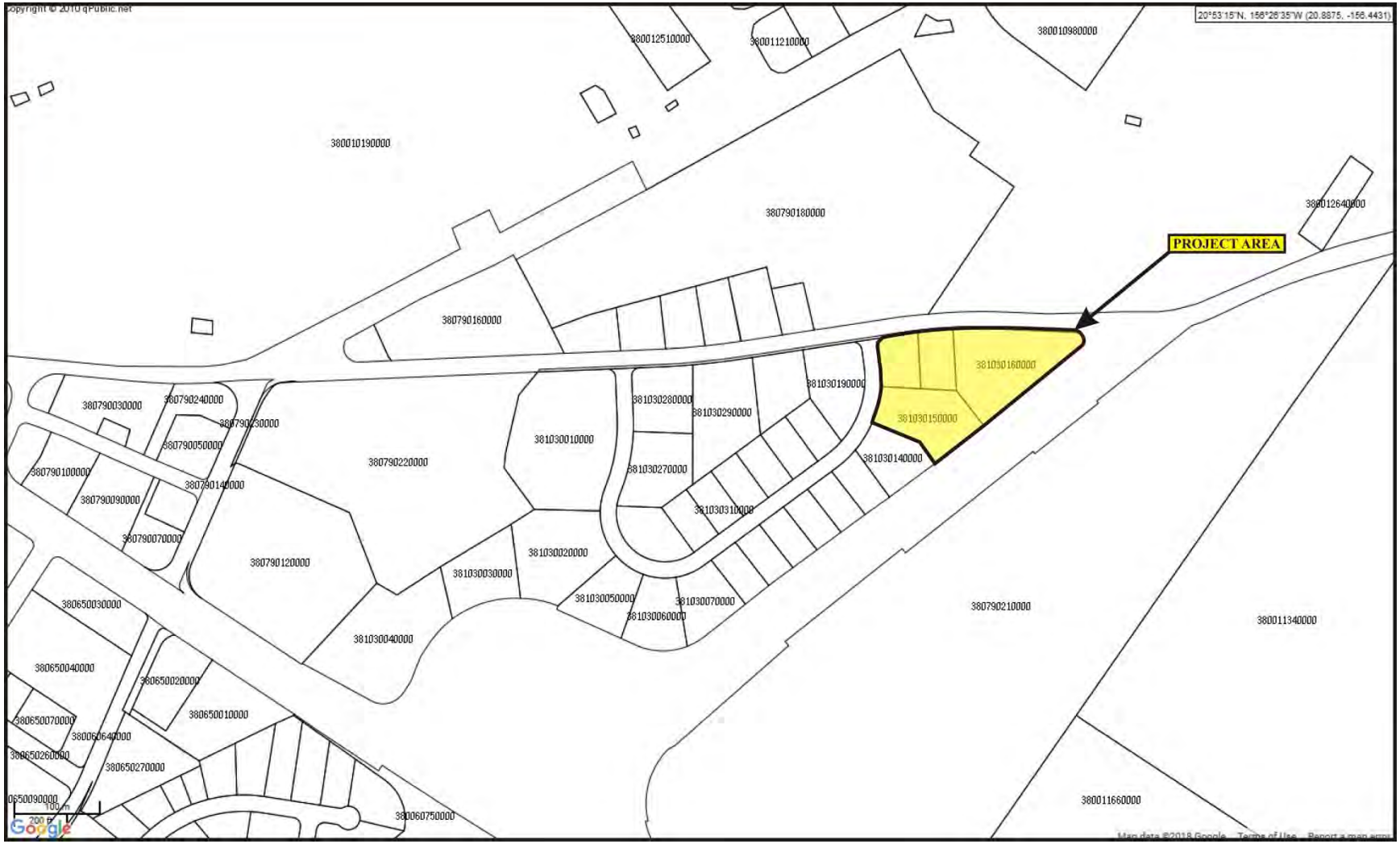

Figure 2: Tax Map Key [TMK: (2) 3-8-103] Showing Project Area.

Figure 3: Photographic Overview Showing Project Area and Environmental Setting.

Figure 4: Windward Hotel Concept Landscape Plan.

TRADITIONAL AND HISTORIC SETTING

Archaeological settlement pattern data indicates that initial colonization and occupation of the Hawaiian Islands first occurred on the windward shoreline areas of the main islands between the A.D. 4th and 11th centuries, with populations eventually settling in drier leeward areas during later periods (Kirch 1985). Although coastal settlement was dominant native Hawaiians began cultivating and living in the upland *kula* zones. Greater population expansion to inland areas began between A.D. 11th and 12th centuries and continued through the 16th century. Large scale or intensive agriculture was implemented in association with habitation, religious, and ceremonial activities. Coastal lands were used primarily for settlement while staple crops (i.e. *kalo*/taro) were cultivated in near-coastal reaches, as well as, in watered regions along the plain and in the uplands.

TRADITIONAL SETTLEMENT PATTERNS

The Hawaiian economy was based on agricultural production and marine exploitation, as well as raising livestock and collecting wild plants and birds. Extended household groups settled in various *ahupuaʻa*. Traditionally, there were primarily two types of agriculture, wetland and dry land, both of which were dependent upon geography and physiography. River valleys provided ideal conditions for wetland *kalo* (*Colocasia esculenta*) agriculture that incorporated pond fields and irrigation canals. Other cultigens, such as *kō* (sugar cane, *Saccharum officinaruma*) and *maiʻa* (banana, *Musa* sp.), were also grown and, where appropriate, such crops as *ʻuala* (sweet potato, *Ipomoea batatas*) were produced. This was the typical agricultural pattern seen during the pre-Contact Period on all the Hawaiian Islands (Kirch and Sahlins 1992, Vol. 1:5, 119; Kirch 1985).

In general, the coastal lands were preferred for chiefly residence. Easily accessible resources such as offshore and onshore fishponds, the sea with its fishing and surfing—known as the sports of kings, and some of the most extensive and fertile wet taro lands were located in the coastal areas (Kirch and Sahlins, 1992 Vol. 1:19). Inland resources necessary for subsistence could easily be brought to the *aliʻi* residences on the coast from nearby inland plantations. The majority of farming was situated in the lower portions of stream valleys where there were broader alluvial flat lands or on bends in the streams where alluvial terraces could be modified to take advantage of the stream flow. Dry land cultivation occurred in colluvial areas at the base of gulch walls or on flat slopes (Kirch 1985; Kirch and Sahlins 1992, Vol. 2:59).

As the initial settlers of the Hawaiian Islands "chose protected bays and beach areas where fresh water was available and there was good inshore and offshore fishing" (Handy and Handy 1972:268). On the Island of Maui, it is quite likely that Kahului was one of the areas that attracted the first occupants. Kahului (literally "the winning") Bay is known for a surf break now known as Kahului Breakwater (Pukui *et al*. 1989:67), but it may have been the site where the *aliʻi* chose to surf, as well.

PAST POLITICAL BOUNDARIES

Traditionally, the island of Maui was divided into twelve districts (Sterling 1998:3). The division of Maui's lands into districts (*moku*) and sub-districts was performed by a *kahuna* (priest, expert) named Kalaihaʻōhia, during the time of the *aliʻi* Kakaʻalaneo (Beckwith 1979:383; Fornander [1919-20, Vol. 6:248] places Kakaʻalaneo at the end of the 15th century or the beginning of the 16th century). Land was considered the property of the king or *aliʻi ʻai moku* (the *aliʻi* who eats the island/district), which he held in trust for the gods. The title of *aliʻi ʻai moku* ensured rights and responsibilities to the land, but did not confer absolute ownership. The king kept the parcels he wanted, his higher chiefs received large parcels from him and, in turn, distributed smaller parcels to lesser chiefs. The *makaʻāinana* (commoners) worked the individual plots of land.

In general, several terms, such as *moku*, *ahupuaʻa*, *ʻili* or *ʻiliʻ āina* were used to delineate various land sections. A district (*moku*) contained smaller land divisions (*ahupuaʻa*) that customarily continued inland from the ocean and upland into the mountains. Extended household groups living within the *ahupuaʻa* were therefore able to harvest from both the land and the sea. Ideally, this situation allowed each *ahupuaʻa* to be self-sufficient by supplying needed resources from different environmental zones (Lyons 1875:111). The *ʻili ʻāina* or *ʻili* were smaller land divisions next to importance to the *ahupuaʻa* and were administered by the chief who controlled the *ahupuaʻa* in which it was located (Lyons 1875:33; Lucas 1995:40). The *moʻoʻāina* were narrow strips of land within an *ʻili*. The land holding of a tenant or *hoa ʻāina* residing in a *ahupuaʻa* was called a *kuleana* (Lucas 1995:61). The project area is located in Wailuku Ahupuaʻa, which has been literally translated as "water [of] destruction" (Pukui *et al*. 1974:225).

PRE-CONTACT PERIOD (PRE-1778)

Contact with the western world occurred on January 18, 1778, with the arrival of Captain James Cook in the Hawaiian Islands during his third voyage into the Pacific Ocean (Daws 1968:1). This section discusses traditional life prior to Cook's arrival.

The Wailuku District was once known as "The Four Streams Area" (*Na Wai Eha*). This area is comprised the four great valleys [Waiheʻe, Waiehu, Wailuku, and Waikapū] which cut far back into the slopes of West Maui and drain the eastward watershed of Puʻu Kukui and the ridges radiating northeastward, eastward, and southeastward from it" (Handy and Handy 1972:497). This area once was renowned for "…its majesty and splendid living, whose native songs gather flowers in the dew and weave wreaths of ohelo berries" (S.W. Nailiili in Sterling 1998:93). The area from Waiheʻe to Wailuku was formally the most extensive continuous area of wet taro cultivation in the Hawaiian Islands. Wailuku, itself, has been described as a "chiefly center" (Sterling 1998:90), although the seat of power was almost certainly concentrated in and around the ʻĪao Valley, on the west side of Wailuku District.

A major inland fishpond was located at the present day spot of Kanahā Pond and Bird Sanctuary, just west of the project area. This was sometimes referred to as two, artificially joined ponds (Kanahā and Mauoni). According to Puea-a-Makakaualii [a.k.a. Mrs. Rosalie Blaisdell, an informant of J.F. G. Stokes (1918) cited in Sterling 1998:87]:

> Kapiiohookalani, king of Oahu and half of Molokai, built the banks of *kuapa* on Kanaha and Mauoni, known as the twin ponds of Kapiioho...he used men from Oahu and Molokai as well as those of Maui...Tradition relates that the laborers stood so closely together that they passed the stones from hand to hand. The line extended from Makawela...to Kanaha.

Prior to the completion of the ponds, Kapiioho was killed in the battle at Kawela , Molokaʻi by Alapainui, of Hawaiʻi Island. The ponds were subsequently completed by Kamehamehanui, a chief of Maui and older brother of Kahekili. Kamehamehanui, then, placed a *kapu* on the bank or *kuapa* or wall which divided the pond into two (Mrs. Rosalie Blaisdell cited in Sterling 1998:87).

WAHI PANA (LEGENDARY PLACES)

According to Kamakau (1870 in Sterling 1998: 2), "...the ancient name of the island of Maui was Ihikapalaumaewa...". The island was renamed "...after a famous child of Wakea and

Papa who became ancestor of the people of Maui (Kamakau (1870 cited in Sterling 1998: 2). The town of Kahului is situated within the Wailuku Ahupua‘a and Wailuku District. The following is a brief summary of the salient aspects of these data. The project area is located in the *ahupua‘a* of Wailuku.

A famous chant from the Rebecca Nuuhiwa Audio collection (in Sterling 1998:62), called The Four Winds, is associated with Wailuku:

> Wailuku’s wind is the Makani-lawe-mailie, the wind that takes it easy. Waiehu’s wind is the Makani-hoo‘eha-ili, the wind that hurts the skin. Waikapu’s wind is the Makani-ko-kololio, the gusty wind. Waihee’s wind is the Makani-kili-‘o‘pu.

According to Fornander (in Sterling 1998”63), “Wailuku is the source of the flying clouds. It is the broad plain where councils are held”.

“Wailuku” translated literally means “water of destruction” (Pukui *et al*. 1974:225) and the Wailuku area was witness to many battles, from the Battles of ‘Īao and Sand Hills to the Battles of Kepaniwai and Kakanilua. The most famous battle was that of Kepaniwai where Kamehameha I, in July 1790, finally wrested control of Maui Island. Kamehameha I and his warriors landed at the Kawela portion of Kahului Bay and proceeded up ‘Īao and other valleys to score a decisive victory. Of additional note is that in the Kauahea area of ‘Īao Valley (southeast of ‘Īao Stream below Pihana Heiau), warriors apparently dwelt and were "trained in war skills and there was a boxing site in the time of Kahekili" (Sterling 1998:89).

As Wailuku District was a center of political power, it was often at war with its rival in Hāna. By the end of the 18th century, Kahekili resided with his entourage in Wailuku and it was on the sand dunes that Kahekili and his warriors engaged those of Kalani‘ōpu‘ū, Chief from Hawai‘i Island.

In his bid to conquer Kahekili and obtain Maui (A.D.1776), Kalani‘opu‘u brought his famous, and fearless, ‘Ālapa warriors who were slaughtered by Kahekili’s men. “The dead lay in heaps strewn like *kukui* branches; corpses lay heaped in death; they were slain like fish enclosed in a net…” (Kamakau 1991:85-89).

George W. Bates recounted his journey from Wailuku to Kahului in 1854:

> Leaving Wai-lu-ku [town], and passing along toward the village Kahului, a distance of three miles, the traveler passes over the old battle-ground named after the village. It is distinctly marked by moving sand-hills, which owe their formation to the action of the northeast trades. Here these winds blow almost with the violence of a sirocco, and clouds of sand are carried across the northern side of the isthmus to a height of several hundred feet. These sand-hills constitute a huge "Golgotha" for thousands of warriors who fell in ancient battles. In places laid bare by the action of the winds, there were human skeletons projecting, as if in the act of struggling for resurrection from their lurid sepulchers. In many portions of the plain who cart-loads were exposed in this way. Judging of the numbers of the dead, the contest of the old Hawaiians must have been exceedingly bloody. . . .[*Sandwich Island Notes*, 309]

G.W. Bates' interpretation of a major battleground site in Kahului may not have been accurate, although there are many oral traditions about battles in this general area.

The 1776 encounter between Kahekili and Kalani'ōpu'ū resulted in a temporary truce which was broken in 1790 by the battle of Kepaniwai, when Kamehameha I consolidated his control over Maui Island. There were so many warriors and canoes invading from Hawai'i Island that it was called the Great Fleet. During Kamehameha's campaign, it was recorded that the bay from Kahului to Hopukoa was filled with war canoes and they extended to Kalae'ili'ili at Waihe'e and below Pu'uhele and Kamakailima:

> . . . Kamehameha and his chiefs went on to the principal encounter at Wailuku. The bay from Kahului to Hopukoa was filled with war canoes. For two days there was constant fighting in which many of the most skillful warriors of Maui took part, but Kamehameha brought up the cannon, Lopaka, with men to haul it and the white men, John Young and Isaac Davis, to handle it; and there was great slaughter. (Kamakau 1991: 148).

From Kahului, Kamehameha marched on to Wailuku Village where Kalanikupule, Kahekili's son, waited with his warriors.

POST-CONTACT PERIOD (POST-1778)

Early records, such as journals kept by explorers, travelers and missionaries, document Hawaiian traditions that survived long enough to be written down, and archaeological investigations have assisted in the understand of past cultural activities.

Traditional land utilization was rapidly and dramatically supplanted by sugar cane cultivation during the 1850s (Dorrance and Morgan 2000). Documentation of 19th century land use in the area is much more pronounced, which also may mean that limited traditional period activities occurred in and near the current project area. Many of the awarded Land Commission

Awards (see Māhele discussion below) in Wailuku Ahupua‘a were under sugar cane cultivation by the mid-nineteenth century. Sites and features built during this period include water irrigation ditches, terraces, freestanding walls, historic houses, and mill structures. Cultivation of sugar cane dominated land use in Wailuku Ahupua‘a from the 1880s through the 1990s (see Tuggle and Welch 1995:24).

In 1837, the village of Kahului consisted of twenty-six *pili*-grass houses living close to the sea and depending on fishing in the coastal waters for the majority of their food (Bartholomew and Bailey 1994). Mullet was still harvested from the twin ponds in the early 1900s and people swam in the spring waters that were continuously refreshed (*ibid*.). Thomas Hogan built the first western building, a warehouse, near the shoreline of Kahului in 1863 (Clark 1980). The dredging of Kahului harbor through the years filled in large sections of the ponds, eventually blocking the outlet to the sea.

As the sugar industry developed, Kahului became a cluster of warehouses, stores, wheelwright and blacksmith shops close to the harbor. A small landing was constructed in 1879 to serve the sugar company (Clark 1980). In the late 1800s, Kahului possessed a new custom house, a saloon, Chinese restaurants, a railroad and a small population of residents. Kahului ‘s main focus was shipping. The 1900 bubonic plague outbreak destroyed much of the town as officials decided to burn down the Chinatown area in an effort to contain the epidemic. The Chinese, Japanese and Hawaiian residents were displaced by this action. To further insure isolation, authorities encircled the entire town with corrugated iron rat-proof fences which ended the spread of the plague (Bartholomew and Bailey 1994). The Kahului Railroad Company built a 1,800 foot long rubble-mound breakwater in 1910 and dredging of the harbor now allowed ships with a 25-foot draft to dock at the new 200-foot wharf (Clark 1980).

THE MĀHELE AND HISTORIC LAND USE

While it is a complex issue, many scholars believe that in order to protect Hawaiian sovereignty from foreign powers, Kauikeaouli (Kamehameha III) was forced to establish laws changing the traditional Hawaiian economy to that of a market economy (Kame‘eleihiwa 1992; Kelly 1983, 1998; Daws 1962; Kuykendall 1938 Vol. I). The Māhele of 1848 divided Hawaiian lands between the king, the chiefs, the government, and began the process of private ownership of lands. The subsequently awarded parcels were called Land Commission Awards (LCAs). Once lands were thus made available and private ownership was instituted, the *maka‘āinana*

(commoners), if they had been made aware of the procedures, were able to claim the plots on which they had been cultivating and living. These claims did not include any previously cultivated but presently fallow land, *ʻokipū* (on Oʻahu), stream fisheries, or many other resources necessary for traditional survival (Kelly 1983; Kameʻeleihiwa 1992; Kirch and Sahlins 1992). If occupation could be established through the testimony of two witnesses, the petitioners were awarded the claimed LCA and issued a Royal Patent after which they could take possession of the property (Chinen 1961).

Literally hundreds of Land Commission Awards are documented for Wailuku Ahupuaʻa (see, *e.g.,* Sterling 1998:86; Burgett and Spear 2003), although, in keeping with the broad settlement pattern outlined above, most of these were located in and around ʻĪao Valley, west of the Wailuku Town and well removed from the project area. The existence of such large numbers of LCAs, however, attests to the large settlements in the lower ʻĪao Valley during the mid-nineteenth century; residents of Kahului were no doubt drawn into this sphere of influence. According to the Waihona ʻAina database (2017), there were over 400 *kuleana* awarded in the district of Wailuku, but none were identified in the project area.

At the time of the Māhele the subject property was considered Crown Lands (c. 1848). However, in 1882, the fee title to many lots/parcels in the Wailuku area were acquired by Claus Spreckles under Land Grant 3343 (from King Kalakaua), including the lands comprising the current project area (Fredericksen and Fredericksen 1988:8-11). Land Grant 3343 consisted of 24,000 acres of land which extended from Wailuku to Pāʻia and towards Maʻalaea. In 1885, Claus Spreckles sold his lands to the Hawaiian Commercial and Sugar Company, a California company owned by the Spreckles, for five dollars. The company was located in San Francisco, California, while the plantation headquarters were located on Maui, in Spreckelsville. In 1898, Hawaiian Commercial and Sugar Company was purchased by James Castle, William Castle, Henry Baldwin, and Samuel Alexander, the latter two founding the Alexander and Baldwin Company (aka A&B). Subsequently, the Hawaiian Commercial and Sugar Company constructed the Puunene Mill, in 1902 to increase sugarcane production, and the Koolau Ditch, in 1904 to transport more water to the mill. Also in the 1920s, a railroad was constructed to haul the cane (see Tuggle and Welch 1995:19). By 1928, the annual crop production had reached 70,000 tons of sugar.

PREVIOUS ARCHAEOLOGY

There are numerous number of Archaeological studies done in the vicinity of the current project (Figure 8), especially within the same parcel of Kahului Airport itself. Below are selected Archaeological projects that are listed chronologically.

In the area north of Runway 5-23 International Archaeological Research Institute, Inc. (IARII) has conducted Archaeological Investigations in 1988. The survey was to relocate the previous sites that was completed by Robert Connolly. The sites were designated as site 50-50-05-1798 for the burial and 50-50-05-1799 for the possible house site. Site 1798 was preserved as-is and was considerate to be valuable to the native Hawaiian community (Welch 1988).

In 1990, an archaeological study was conducted in concert with expansion of the airport (Folk and Hammatt 1991). No surface archaeological sites or buried prehistoric cultural layers were identified during the survey. The lack of cultural evidence was attributed to historic activity originating with the construction of the Kahului Railroad in the late 1800s and culminating with use of the lands for sugarcane cultivation.

Cultural Surveys Hawaii has conducted archaeological subsurface testing for the runway extension at Kahului Airport in 1991. Thirty trenches were excavated, significant cultural materials were found and a burial was exposed and has a State Site number assigned as 50-50-04-2849. Soil and charcoal samples were collected and being analyzed at a lab in Florida. The result rang from, 1230-1765CE (Toenjes et al 1991).

At a new warehouse site in Wailuku [TMK: (2) 3-7-11:6] Archaeological Inventory Survey was conducted by Paul H. Rosendahl, Ph.D., Inc.(PHRI) in 1991. Material cultures was absent during twenty four backhoe trenches in the course of work (Goodfellow 1991).

In 1996 BioSystems Analysis, Inc. has conducted Archaeological Inventory Survey of the Hobron Triangle in Kahului, Wailuku Ahupua`a, Wailuku District, Maui Island, Hawaii [TMK: (2) 3-7-11:03]. From all the sixteen trenches, historic deposit such as milled wood was discovered from trench number seven which could be related to Kahului Railway or related structures. And a late 1900s, no seams green glass bottle was retrieved from trench eleven backfill. No burial encounter within the project area (Eblé and Carlson 1996).

Pacific Legacy Inc. has conducted Archaeological Monitoring in 2003 for Verizon Wireless at 291 Dairy Road, Wailuku Ahupua`a, Wailuku District, Maui Island [TMK: (2) 3-8-65:11]. Two trenches were excavated for electrical utilities and one for shed footing. Both yielded absent of cultural resources (McIntosh and Cleghorn 2003).

In 2003 on the shore line, North of the current project area Xamanek Researches has conducted Archaeological Assessment for Kanaha beach park expansion, Kahului, Wailuku Ahupua`a, Wailuku District, Maui Island [TMK: (2) 3-8-01:119 and 19 por]. Some part of the coastal area contain the historic World War II bunker (Fredericksen 2003)

Scientific Consultant Services, Inc has conducted Monitoring in 2004 on a commercial property near the coastline in Kahului, Maui [TMK: (2) 3-7-12:017] Five trenches were excavated but only led to negative results (Dega and Risedorf 2004).

In 2004 an Archaeological Inventory Survey was conducted by Archaeological Services Hawaii, LLC (ASH) on a 21 acre portion of a 71 acre parcel in Spreckelville, Wailuku Ahupua`a, Wailuku District, Maui Island. Eighteen trenches were excavated. But no significant cultural material found from surface and subsurface (Pantaleo 2004).

SCS has conducted a Monitoring in 2006 at a 5.443 acre property located at Kahului Harbor West of the current project area [TMK: (2) 3-7-008: por 006 and 3-7-008:004].One site and multiple isolated finds from traditional period and historic period were found during the course work. A state site no. 50-50-04-5773 was designated for the single burial identified in the phase II project area (Hunt *et al* 2006).

Archaeological Inventory Survey was conducted by SCS in 2006 for the proposed Runway Safety and Related Improvements at Kahului Airport [TMK: (2) 3-8-001:019]. 11 trenches excavation shown all negative result (Morawski and Dega 2006).

In 2007 ASH has conducted an Archaeological Assessment of Lots 21A – 21G, the E Paepae Ka Puko`a, Wailuku Ahupua`a, Wailuku District, Maui Island.[TMK: (2) 3-8-001: 003 por]. Surface survey's result came out negative. Twenty two trenches total were mechanically excavated yield no material culture (Pantaleo 2007).

In 2012 Scientific Consultant Services (SCS), Inc. conducted Archaeological Monitoring during all excavations associated with the Traffic Operational Improvements, Project Number HWY-M-01-08 along Hana Highway at Wakea Street in Kahului, Wailuku Ahupua`a, Wailuku District, Maui Island, Hawaii [TMK: (2) 3-7-12 and 3-8-66]. No Traditional or Historic-period cultural deposits were encountered during the Archaeological Monitoring along Hana Highway at Wakea Street (Medrano and Dega 2012).

In 2012, Scientific Consultant Services conducted Archaeological Inventory Survey for the proposed consolidated rental car facility and associated improvements at Kahului Airport in Kahului, Wailuku Ahupua`a, Wailuku District, Maui Island, Hawai`i [TMK: (2) 3-8-001:123, 239 and 3-8-079:021] (Bassford and Dega 2012). During the survey two archaeological sites were newly identified (State Sites 50-50-04-7347 and 50-50-04-7348). State Site 50-50-04-7374 consisted of an historic-era concrete flume. State Site Number 50-50-04-7348 consisted of small generator building which was interpreted as associated with the former Naval Air Station.

Scientific Consultant Services has also done an Archaeological Monitoring Plan (AMP) in 2012 in advance of multiple ground disturbing activities associated with improvements to an existing Enterprise Rent A Car facility located at 740 Kaonawai Place, adjacent to the Kahului Airport, Wailuku Ahupua`a, Wailuku District, Island of Maui, Hawai`i [TMK: (2) 3-8-001:101] As the project area is located on a built lot, archaeological features on the ground surface are not anticipated. Thus, an Archaeological Field Inspection was not conducted (Chaffee and Dega 2012a).

In 2012 SCS, Inc. has been tasked by Munekiyo & Hiraga, Inc. with preparing this Archaeological Monitoring Plan (AMP) in advance of improvements and construction to take place during the UPS structure relocation at the Kahului Airport. The project areas occurs within Wailuku Ahupua`a, Wailuku District, Island of Maui, Hawai`i [TMK (2)-3-8-001:239 existing facility and (2) 3-8-001:019 new facility. The project involves relocation of the existing United Parcel Service (UPS) Cargo Facilities from the current location on Hemaloa Street to a location approximately 500 ft.to the southeast (Chaffee and Dega 2012b).

Scientific Consultant Services, Inc. (SCS) conducted an Archaeological Reconnaissance Survey for a newly proposal Federal Aviation Administration (FAA) project off the end of Runway

20 at the Kahului International Airport, Wailuku Ahupua`a, Wailuku District, Island of Maui, Hawai`i [TMK: (2) 3-8-01:019]. The project area is owned by the State of Hawaii and encompasses approximately 2.0 acres (Figures 1 and 2, end of report). The FAA project involves the relocation of the Localizer, which provides runway guidance to aircraft (Perzinski and Dega 2013).

On a 38.19 acre portion of land in Wailuku Ahupua`a, Wailuku District, Maui Island.Xamanek Researches, LLC has conducted Monitoring from October 2011 through January 2013. The area is where the former Central Power Plant is located at. With the excavation and earthmoving activities reveal no evidence of traditional nor historical material cultures (Frey and Fredericksen 2014).

In 2014, SCS conducted inventory-level survey at the northeast end of Runway 020 in within the airport TMK: (2) 3-8-001:019). Full pedestrian survey did not lead to the identification of surface architecture, isolated artifacts, or midden deposits in the project area. This was expected given the location, modern land use, and results of previous archaeological work in the area. The topography of the parcel, as noted above, is undulating, both from natural formation processes (sand dune formation) and cultural formation processes (grading, mechanical piling), the latter occurring in modern times. Given the exposure of silty clays in an obvious dune area, the import of fill onto the project area was noticeable. Modern trash vis temporary camps was noted in the central section of the parcel. Although the surface survey did not reveal sites, it did support the potential for subsurface cultural deposits, as have been documented in the area previously and which were discovered during subsurface mechanical testing. One site, SIHP 50-50-04-8137, was documented as a Pre-Contact cultural deposit (Lyman *et al* 2014).

Scientific Consultant Services, Inc. (SCS) has conducted Monitoring for construction work and improvements to a new UPS structure near the Kahului Airport in 2014. No cultural materials of any time period were identified during Monitoring (Perzinski & Dega 2014).

In the same year SCS has conducted Monitoring for Consolidated Rental Car (ConRAC) Facility and associated improvements at Kahului Airport in Kahului, Wailuku Ahupua`a, Wailuku District, Maui Island, Hawai`i [TMK: (2) 3-8-001:123 and 3-8-079:var.]

Xamanek Researches LLC has conducted Monitoring for Wailuku-Kahului Wastewater Reclamation Division at Facility in Wailuku Ahupua`a, Wailuku District, Maui Island, Hawai`i [TMK: (2) 3-8-001:188 por]in September 2014 through August 2015. Excavation took place at the project area yield no significant finds (Fredericksen 2015).

An archaeological monitoring research was conducted by Scientific Consultant Services from June 19, 2013 to January 15, 2014. Excavations within the project area were completed for the improvements to the Kahului Force Main and the Wailuku Force Main. During archaeological monitoring, multiple historic-era properties belonging to an additional segment of the previously identified State Site 50-50-04-3112 (Fredericksen and Fredericksen 1993 cited in Medrano and Dega 2015) were recorded.

SHPD cites two archaeological sites nearby the current project area (SHPD Letter dated September 21, 2016 as referenced in the Introduction): Site 50-50-05-1177 and Site 50-50-05-1178 both subsurface cultural deposits. One would presume they date to pre-Contact times but no further information is available on them. Site -1178 occurs just to the north of the current project area while Site -1177 was identified c. 500 m to the west of the project area. The letter also cites several ancient gravesites also having been documented in the neighborhood. These could be the ones identified by SCS at the Maui Country Club (see above). No other sites have been identified within a kilometer of the current project area.

In 2017, a cultural impact assessment was completed for Department of Transportation in Kahului, south of the current project area. The project is for a permanent baseyard and materials testing laboratory that will be occupied 3.6 acres of 19.6 acres land.

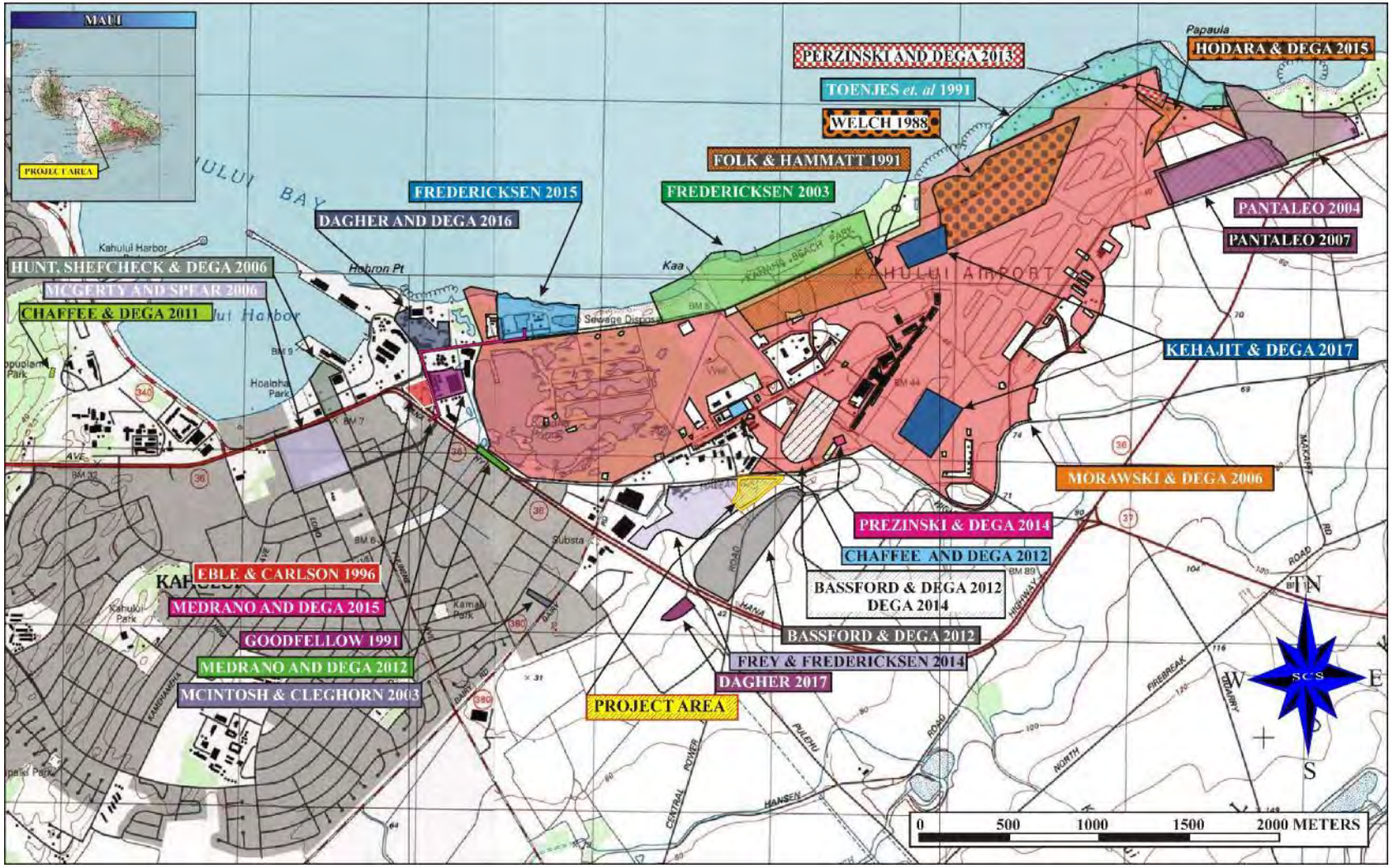

Figure 5: Portion of USGS Map Showing Location of Previous Archaeological Studies Within the Vicinity of the Project Area.

METHODOLOGY

FIELD METHODS

Ikaika Kapu, B.A. conducted fieldwork on December 1 and 2, 2017, under the direct supervision of Michael F. Dega, Ph.D., Principal Investigator. Fieldwork followed intensive surface investigation was primarily completed to asses trenching locations. Survey was completed in December.

Eleven representative locations were selected for subsurface testing within the project area. The selected locations of eleven trenched were chosen in order to provide a solid sample of subsurface matrices occurring throughout the project area. Table 1 summarizes stratigraphic trench dimensions.

All eleven trenches (ST-1 through ST-11) were mechanically excavated using a backhoe. All sediments were documented with photographs, stratigraphic profiles, and Munsell soil descriptions. Standard excavation and recording procedures were used during the project. As no cultural deposits or subsurface features were identified, excavated matrices were not screened.

LABORATORY METHODOLOGY

All field notes, digital photographs, and other materials related to the project have been curated at the SCS laboratory in Honolulu. Representative stratigraphic profiles have been drafted for presentation within this report. True north compass orientation was employed for all maps/illustrations presented herein. All measurements were recorded in metric. All documentation materials gathered during this project are being housed in the SCS laboratory. As no historic properties or artifacts/ecofacts from any time period were identified during this project, the final steps of laboratory work consisted of digitizing photographs, drafting stratigraphic profiles, and reporting.

Table 1: Stratigraphic Trench Dimensions (meters).

Stratigraphic Trench (ST)	Length	Width	Depth
ST-1	2.0 m	1.0 m	1.4 m
ST-2	2.0 m	1.0 m	1.3 m
ST-3	2.0 m	1.0 m	0.60 m
ST-4	-	-	-
ST-5	-	-	-
ST-6	2.0 m	1.0 m	1.5 m
ST-7	2.0 m	1.0 m	0.85 m
ST-8	2.0 m	1.0 m	1.35 m
ST-9	2.0 m	1.0 m	1.0 m
ST-10	2.0 m	1.0 m	0.95 m
ST-11	2.0 m	1.0 m	1.20 m

*ST-4 and ST-5 were terminated.

FIELDWORK RESULTS

Pedestrian survey of the project area and representative testing did not yield evidence for any historic properties in surface or subsurface contexts. Survey revealed the obvious: the surface of the parcel has been modified from development.

Eleven stratigraphic trenches were mechanically excavated during the fieldwork within the project area. Two trenches (ST 4 & 5) had to be terminated due to water pipe was found underneath 15cm. below ground surfaces. There is no traditional or historic-period cultural deposits, artifacts, midden, or skeletal materials were identified during the testing. Excavations ceased at a maximum 1.5 meters below surface (mbs) due to the instability of the sediments and lack of cultural deposits. The following photographs and profiles of each tranches below present the results of the trenching.

STRATIGRAPHIC TRENCH 1 (ST-1)

Stratigraphic Trench 1 (ST-1) (2.0 m long x 1.0 m wide x 1.4 m deep) was located on Universal Transverse Mercator (UTM) 0765811 and 2311812 ST-1 contained a single stratigraphic layer (Figures 6 and 7).

Layer I (0-1.40 mbs) consisted of dark brown (10 YR 3/3) dry, granular, non-plastic, engineered compact fill containing gravel rocks and silt loam. No roots were present in Layer I. The stratum was structureless. The lower boundary was clear and abrupt.

Figure 6: Photograph of Stratigraphic Trench 1 (ST-1). View to South.

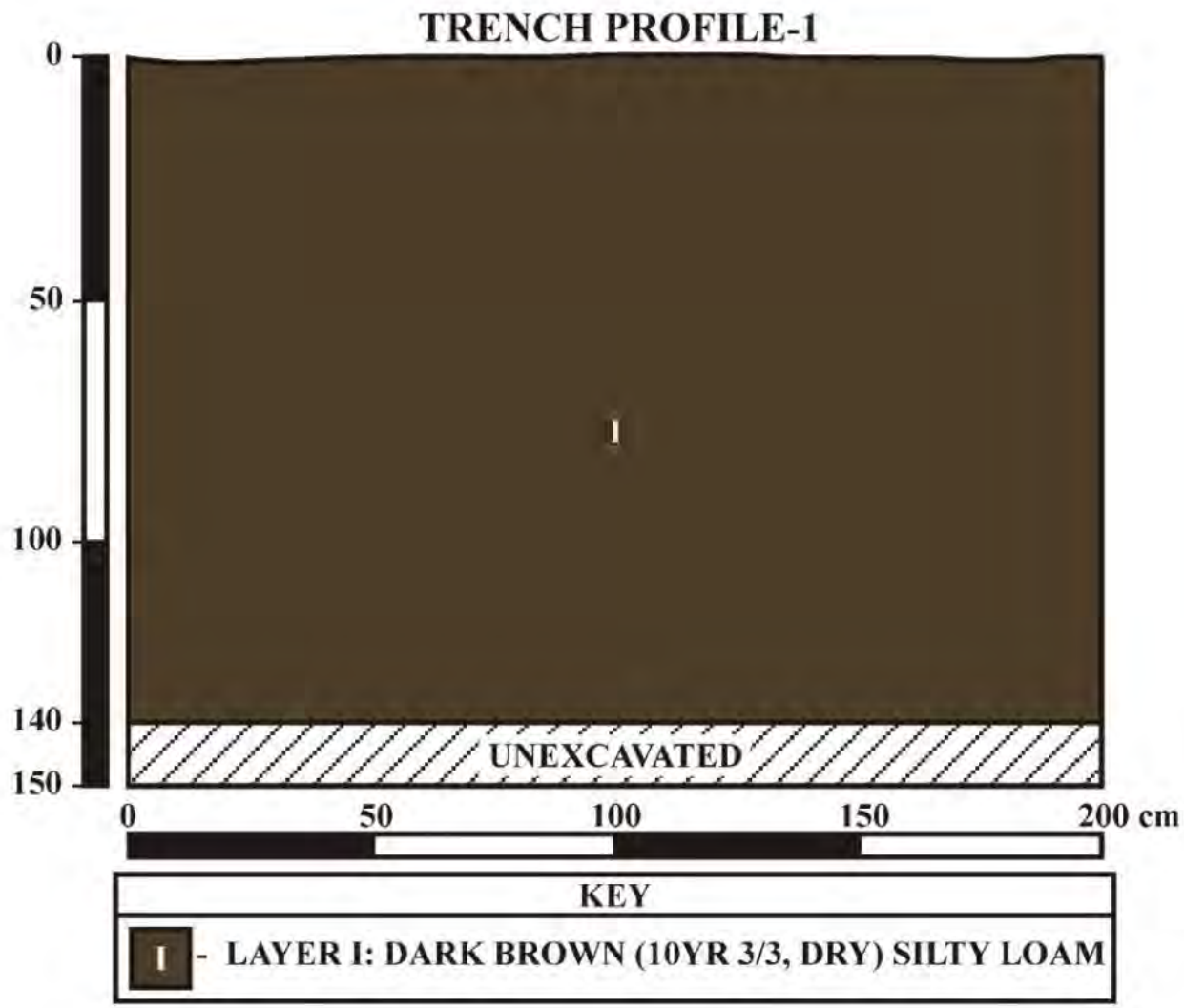

Figure 7: Stratigraphic Trench 1 (ST-1) Profile.

STRATIGRAPHIC TRENCH 2 (ST-2)

Stratigraphic Trench 2 (ST-2) (2.0 m long x 1.0 m wide x 1.4 m deep) was located on a Universal Transverse Mercator (UTM) 0765811 and 2311860 ST-2 contained two stratigraphic layers, (Figures 8 and 9).

Layer I (0-0.50 mbs) consisted of very dark reddish brown (5YR 3/4) dry, granular, non-plastic, containing gravel rocks and silt loam. Few roots were present in Layer I. The stratum was structureless. The lower boundary was clear and wavy.

Layer II (0.50-1.40 mbs) consisted of gray (5YR 6/1) dry, granular, non-plastic, containing gravel rocks and silt loam. No roots were present in Layer II. The stratum was structureless.

Figure 8: Photograph of Stratigraphic Trench 2 (ST-2). View to the East.

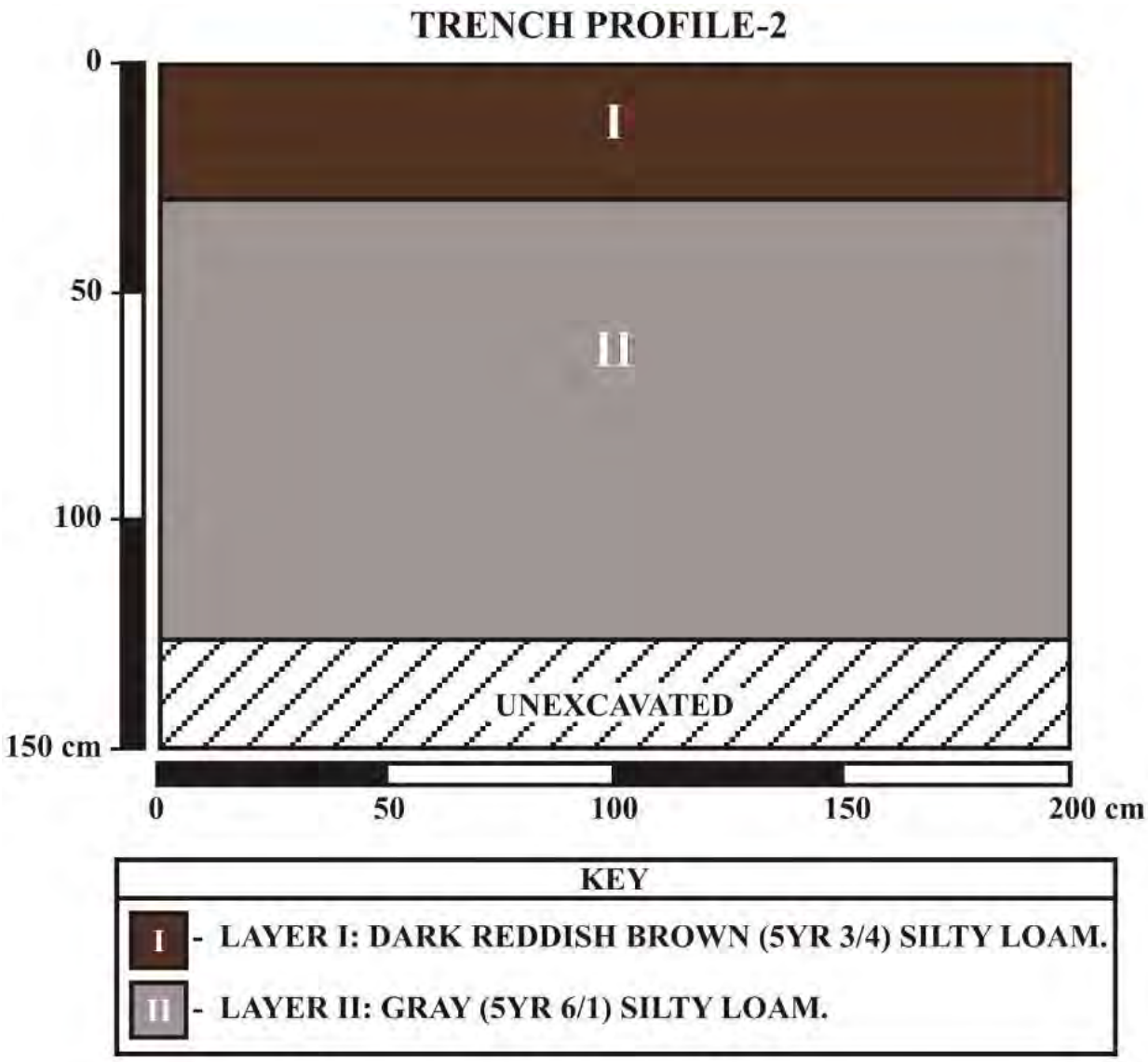

Figure 9: Stratigraphic Trench 2 (ST-2) Profile

STRATIGRAPHIC TRENCH 3 (ST-3)

Stratigraphic Trench 3 (ST-3) (2.0 m long x 1.0 m wide x 0.6 m deep) was located on a Universal Transverse Mercator (UTM) 0765855 and 2311879. ST-3 contained two stratigraphic layers, with the first 0.10 m containing asphalt paving (Figures 10 and 11).

Layer I (0-0.15 mbs) consisted of yellowish red (5YR 4/6) dry, small granular, non-plastic, silty loam. No roots were present in Layer I. The stratum was structureless. The lower boundary was smooth.

Layer II (0.15-0.60 mbs) consisted of gray (5YR 6/1) dry, non-plastic, containing gravel rocks and silt loam. No roots were present in Layer II. The stratum was structureless.

Figure 10: Photograph of Stratigraphic Trench 3 (ST-3). View to the North.

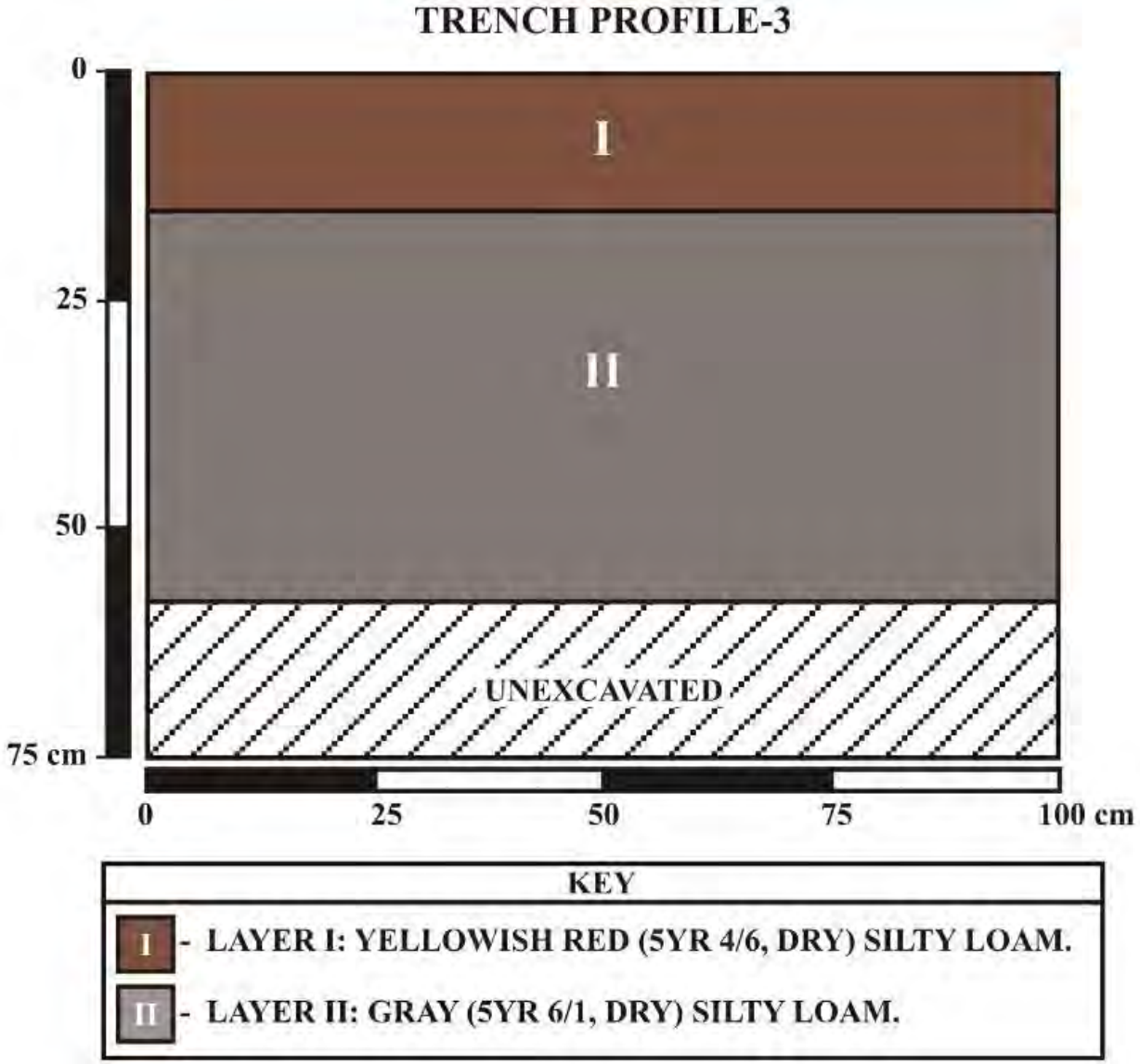

Figure 11: Stratigraphic Trench 3 (ST-3) Profile.

STRATIGRAPHIC TRENCH 6 (ST-6)

Stratigraphic Trench 6 (ST-6) (2.0 m long x 1.0 m wide x 1.5 m deep) was excavated was located on a Universal Transverse Mercator (UTM) 0765943 and 2311840. ST-6 contained one stratigraphic layer (Figures 12 through 13).

Layer I (0-1.50 mbs) consisted of dark brown (5YR 4/4) dry, blocky granular, none plastic. No roots were present throughout Layer I.

Figure 12: Photograph of Stratigraphic Trench 6 (ST-6). View to the Southeast

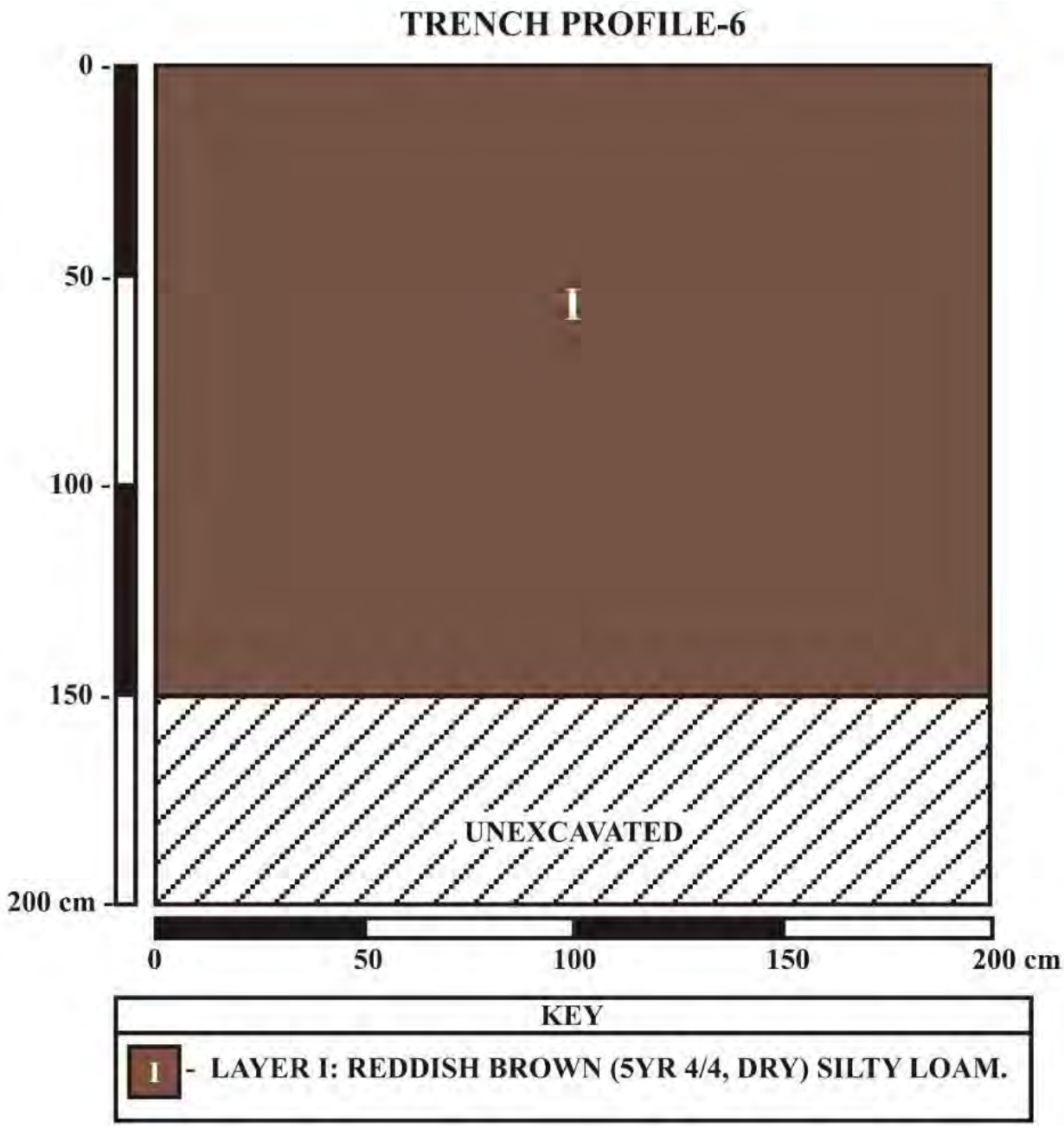

Figure 13: Stratigraphic Trench 6 (ST-6) Profile.

STRATIGRAPHIC TRENCH 7 (ST-7)

Stratigraphic Trench 7 (ST-7) (2.0 m long x 1.0 m wide x 0.85 m deep) was located on a Universal Transverse Mercator (UTM) 0765896 and 2311816. ST-7 contained two stratigraphic layers (Figures 14 through 15).

Layer I (0-0.30 mbs) was reddish brown (5YR 5/4) silty loam, dry, loose consistence, non-plastic, very gravelly, very fine roots, clear lower boundery, with smooth topography.

Layer II (0.30-0.85 mbs) consisted gray (10YR 3/3) silty loam, dry, massive, loose consistence, non-plastic, very rocky, cobbles- boulders, lower boundary is not visible, topography is not visible with bedrock on the bottom.

Figure 14: Photograph of Stratigraphic Trench 7 (ST-7). View to the East.

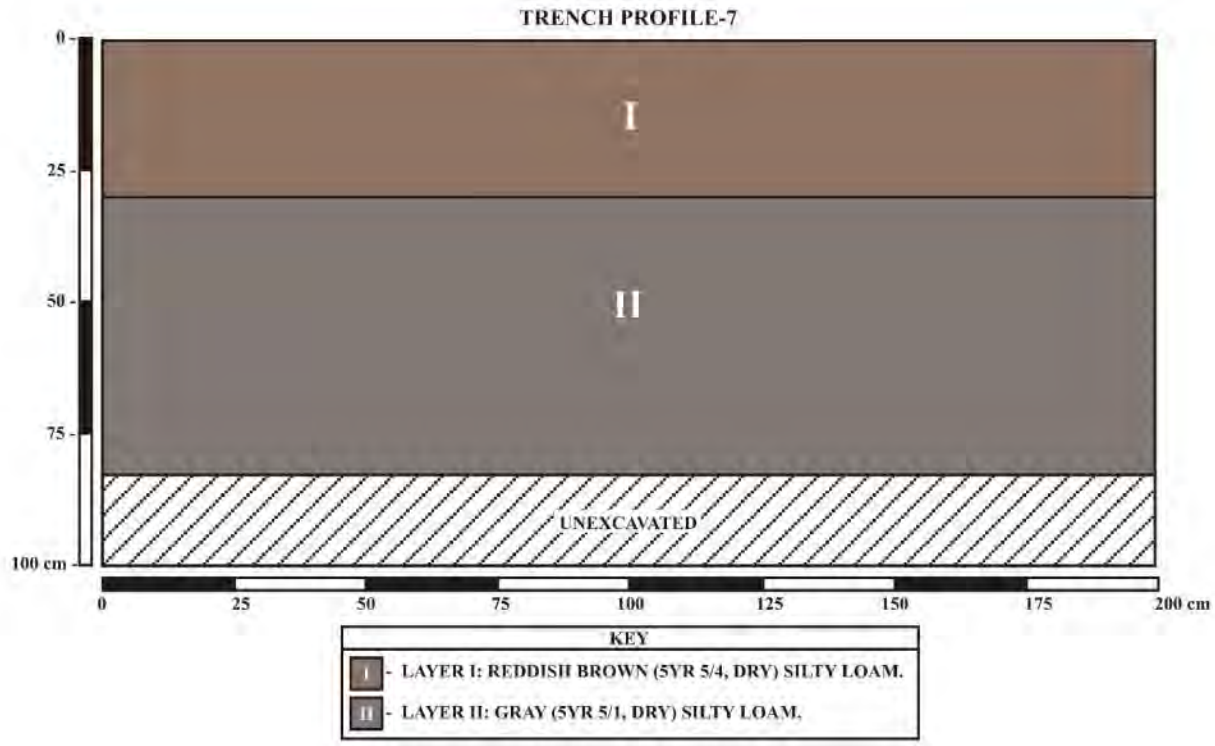

Figure 15: Stratigraphic Trench 7 (ST-7) Profile.

STRATIGRAPHIC TRENCH 8 (ST-8)

Stratigraphic Trench 8 (ST-8) (2.0 m long x 1.0 m wide x 1.3 m deep) was located on a Universal Transverse Mercator (UTM) 0765860 and 2311835. ST-8 contained two stratigraphic layers, (Figures 16 and 17).

Layer I (0-0.25 mbs) consisted of reddish brown (5YR 5/4) silty loam, dry, loose consistence, granular, non-plastic, very fine roots, abrupt lower boundary with wavy topography.

Layer II (0.25-1.30 mbs) consisted of gray (5YR 5/1) silty loam, dry, loose consistence granular, non-plastic, very fine root, lower boundary not visible, absence of topography with bedrock on the bottom.

Figure 16: Photograph of Stratigraphic Trench 8 (ST-8) View to Southwest.

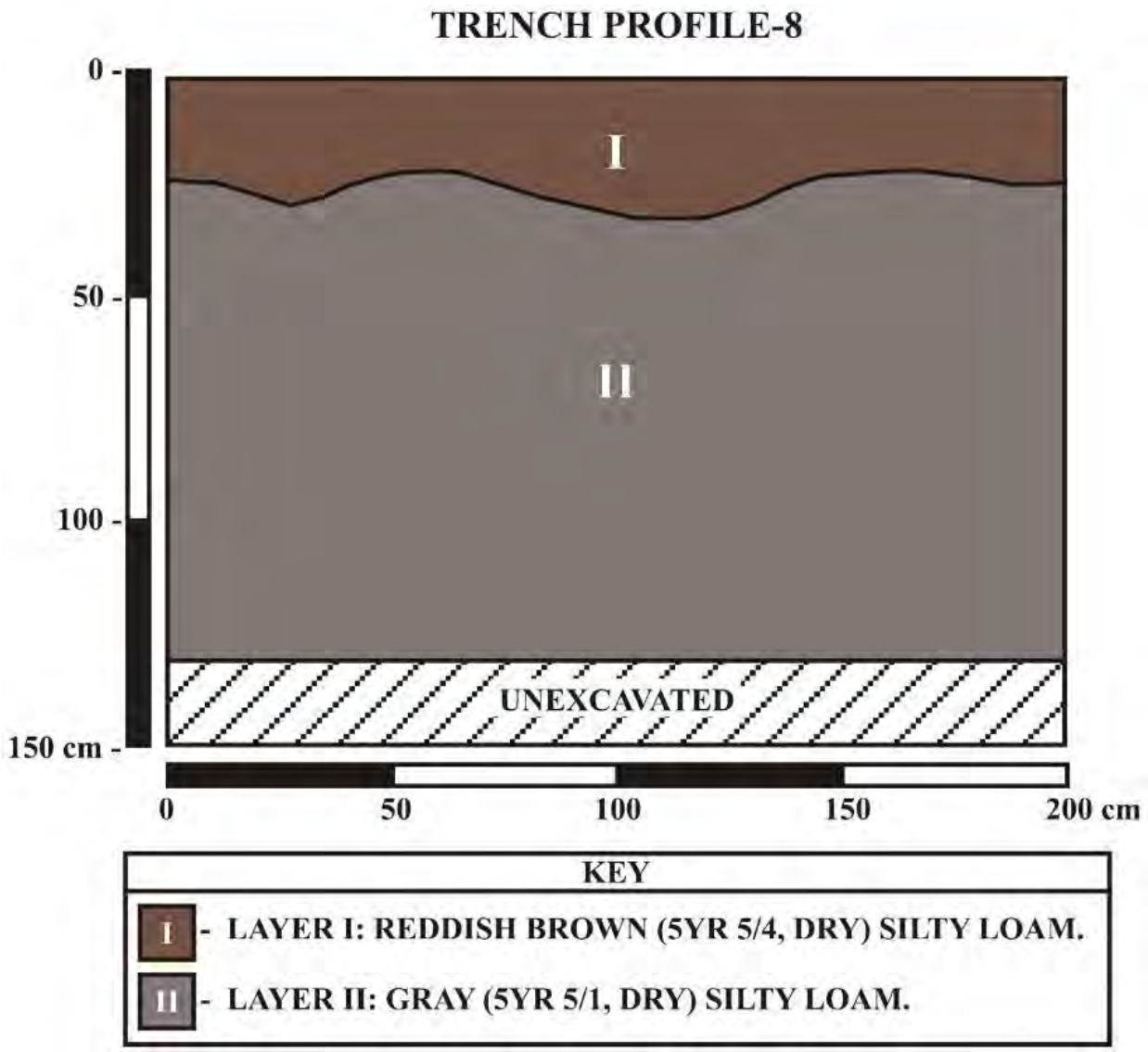

Figure 17: Stratigraphic Trench 8 (ST-8) Profile.

STRATIGRAPHIC TRENCH 9 (ST-9)

Stratigraphic Trench 9 (ST-9) (2.0 m long x 1.0 m wide x 1.0m deep) was located Universal Transverse Mercator (UTM) 0765837 and 2311769. ST-9 contained one stratigraphic layer, (Figures 18 and 19).

Layer I (0-1.0mbs) consisted of yellowish red (5YR 5/8) silty loam moist, loose consistence, structureless, lightly plastic, very fine roots, invisible of lower boundary, topography not visible, with bedrock on the bottom.

Figure 18: Photograph of Stratigraphic Trench 9 (ST-9). View to the South.

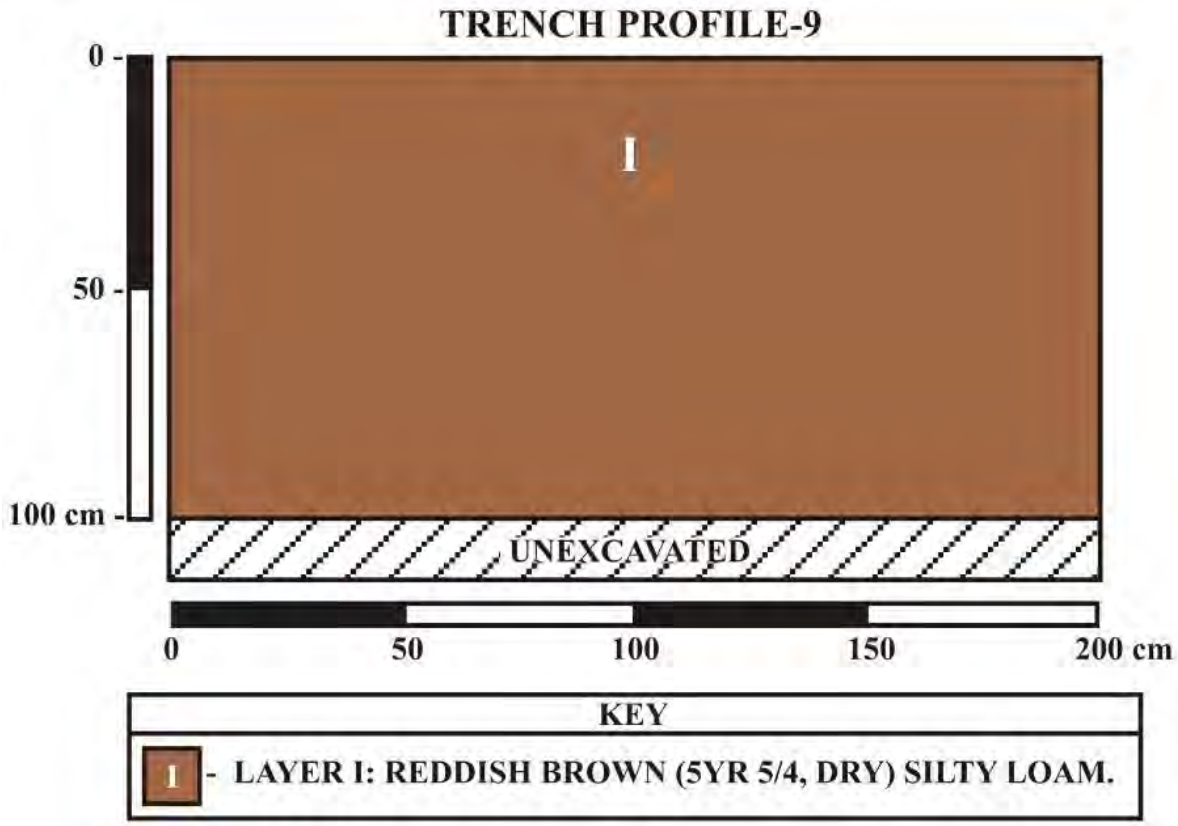

Figure 19: Stratigraphic Trench 9 (ST-9) Profile.

STRATIGRAPHIC TRENCH 10 (ST-10)

Stratigraphic Trench 10 (ST-10) (2.0 m long x 1.0 m wide x 0.95m deep) was located on a Universal Transverse Mercator (UTM) 0765806 and 2311729. ST-10 contained two stratigraphic layers (Figures 20 and 21).

Layer I (0-0.35 mbs) consisted of reddish brown (5YR 4/3) silty loam dry, loose consistence, granular, non-plastic, very fine roots, clear lower boundary with smooth topography.

Layer II (0.35-0.60 mbs) consisted of yellowish red (5YR 5/8) clay loam, moist, sticky consistence, blocky, moderately plastic, invisible lower boundary with absence of topography.

Figure 20: Photograph of Stratigraphic Trench 10 (ST-10). View to the Southeast.

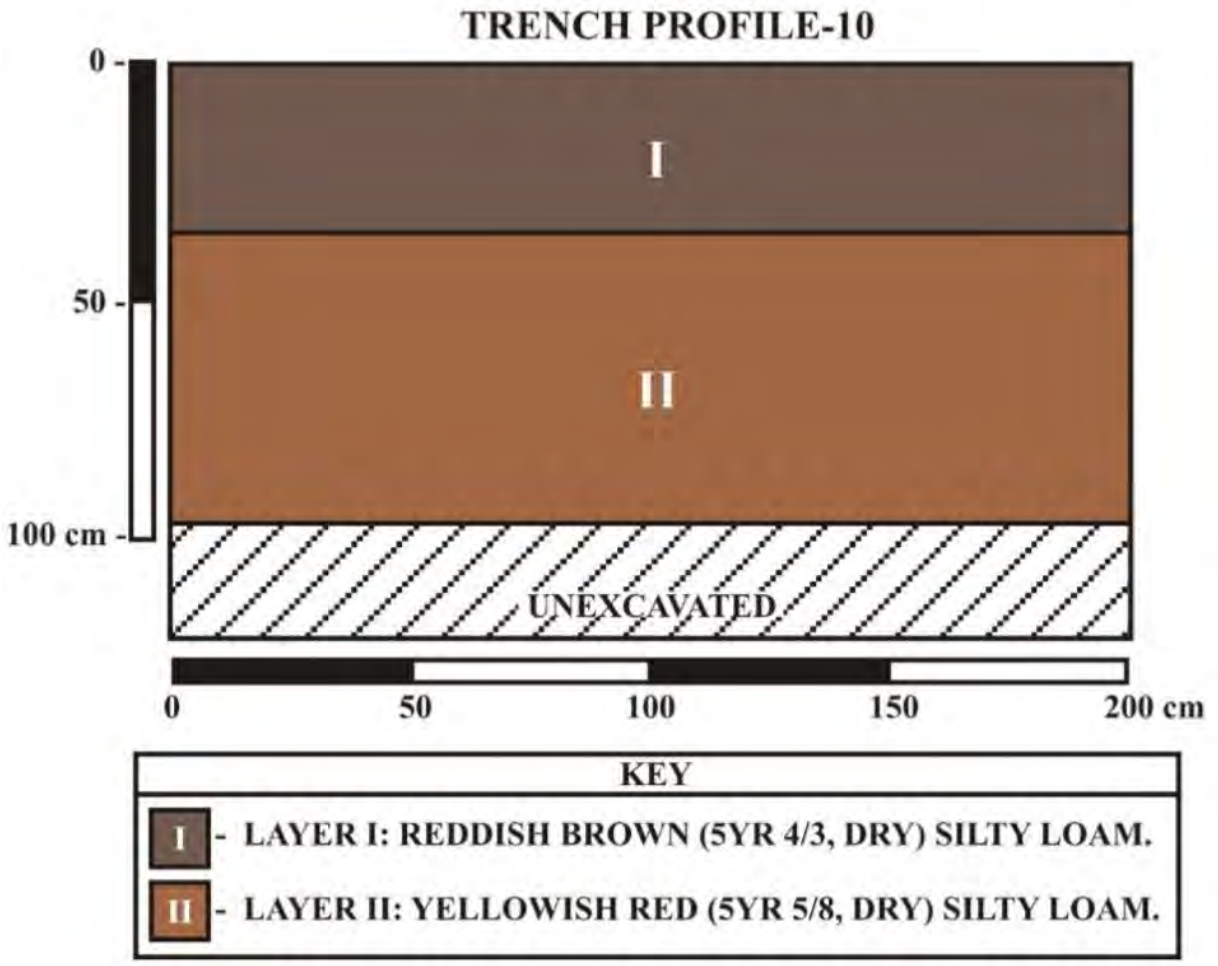

Figure 21: Stratigraphic Trench 10 (ST-10) Profile.

STRATIGRAPHIC TRENCH 11 (ST-11)

Stratigraphic Trench 11 (ST-11) (2.0 m long x 1.0 m wide x 1.25 m) was located Universal Transverse Mercator (UTM) 0765783 and 2311758. ST -11 contained two stratigraphic layers (Figures 22 & 23).

Layer I (0-0.50 mbs) consisted of reddish brown (5YR 4/4) silty loam, dry granular. Loose consistence, non-plastic, very fine, clear lower boundary, smooth topography.

Layer II (0.50-1.20 mbs) consisted of yellowish red (5YR 5/8) clay loam, moist granular. Loose consistence, slightly plastic, lower boundary not visible, topography not visible, bedrock found at the bottom.

Figure 22: Photograph of Stratigraphic Trench 11 (ST-11). View to the Southwest.

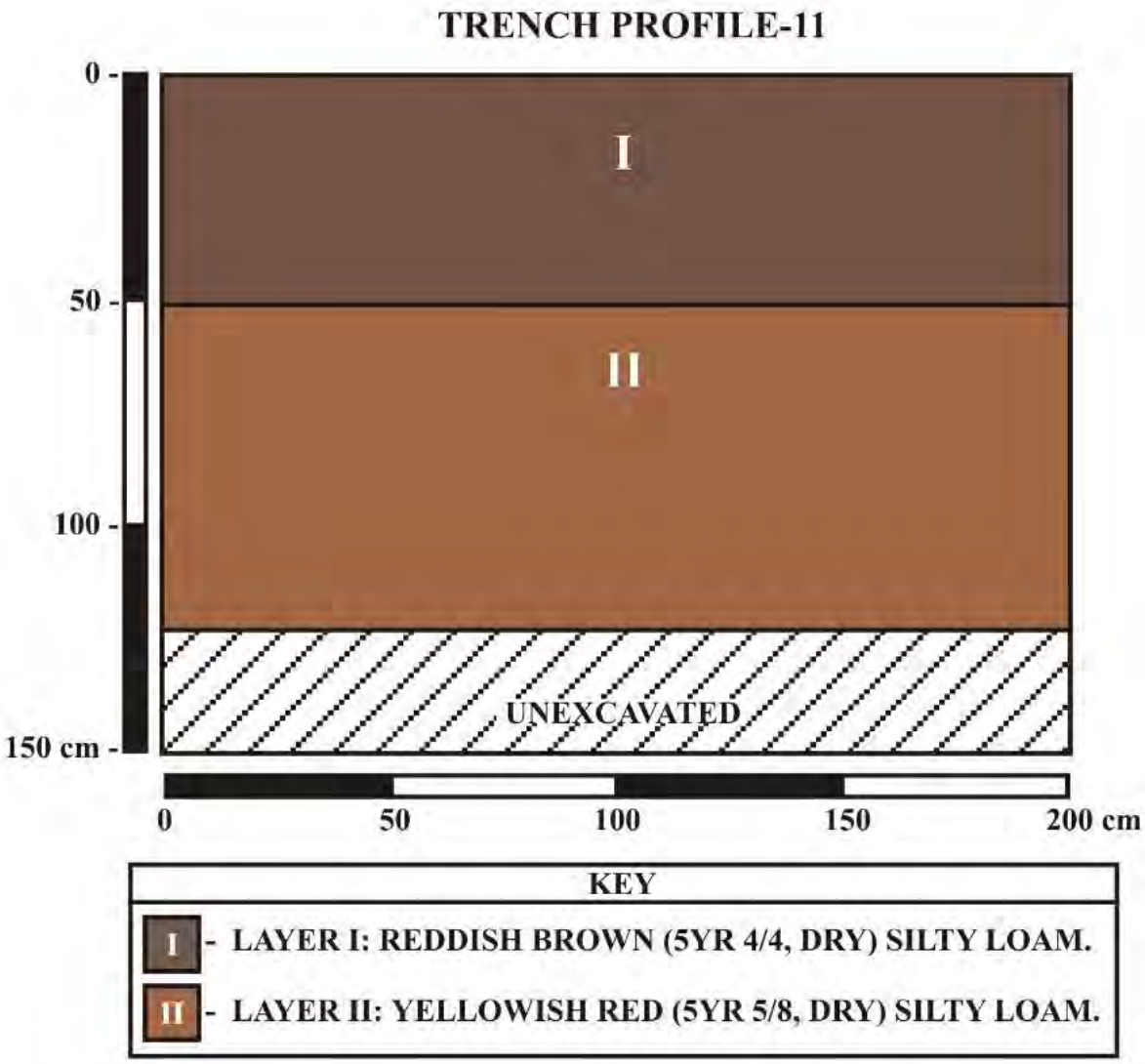

Figure 23: Stratigraphic Trench 11 (ST-11) Profile.

DISCUSSION AND SUMMARY

Archaeological Inventory Survey investigations were conducted on 6.315 acres parcel with a registered address of 870 Haleakala Hwy. Kahului, Wailuku Ahupua`a, Wailuku District, Island of Maui, Hawai'i [TMK (2) 3-8-103: 014, 015, 016, 017, 018 (Formerly TMK (2) 3-8-079:013)]. No historic properties were identified during the AIS-level project. The surface of the parcel had been previously disturbed and altered due to the center's location and development history of the airport road. The absence of cultural materials in subsurface contexts may be somewhat explained by such modern land disturbance and prior development of the land. Subsurface contexts were primarily composed of engineered fill strata, with little natural

sediment (clays) below. While LCAs were present across the project area, no archaeological signatures for such were identified.

RECOMMENDATIONS

Given the negative findings of the current Archaeological Inventory Survey and that the project area consists of an existing built environment, no further archaeological work is recommended for the Windward Hotel Project.

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Appendix 14.2

SHPD Letter dated July 20, 2020

DAVID Y. IGE
GOVERNOR OF
HAWAII

SUZANNE D. CASE
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BOARD OF LAND AND NATURAL RESOURCES
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STATE HISTORIC PRESERVATION DIVISION
KAKUHIHEWA BUILDING
601 KAMOKILA BLVD., STE 555
KAPOLEI, HI 96707

July 20, 2020

IN REPLY REFER TO:
Log No.: 2020.00815
Doc. No.: 2007AM04
Archaeology

Glen Ueno, Administrator
County of Maui
Department of Public Works
Development Services Administration Division
250 South High Street
Wailuku, Maui, Hawai‘i 96793
c/o Tara Furukawa
tara.furukawa@mauicounty.gov

Dear Glen Ueno:

SUBJECT: **Chapter 6E-42 Historic Preservation Review –**
Permit Applications CPA 2018/0001, CIZ 2018/0001, SM1 2018/0001, and EA 2018/0001
Archaeological Assessment for the Windward Hotel Project
Wailuku Ahupua‘a, Pū‘ali Komohana District, Island of Maui
TMK: (2) 3-8-103:014 por., 015, 016, 017, 018 (Formerly TMK: [2] 3-8-079:013)

This letter provides the State Historic Preservation Division’s (SHPD) review of draft report titled, *An Archaeological Assessment for the Windward Hotel Project, Kahului, Wailuku, Ahupua‘a, Wailuku District, Island of Maui, Hawai‘i, TMK (2) 3-8-103: 014, 015, 016, 017, 018 (Formerly TMK (2) 3-8-079:013)* (Kehajit and Dega, March 2020) and associated project permits (CPA 2018/0001, CIZ 2018/0001, SM1 2018/0001, and EA 2018/0001). SHPD previously reviewed the subject archaeological assessment (AA) report, requested revisions, and received the revised version of the report on April 9, 2020.

R.D. Olsen Development (project proponent) proposes the construction of a four-story hotel within a 5.32-acre project area on the subject parcel. SHPD previously reviewed the project and requested an archaeological inventory survey (AIS) be conducted for the project in a letter dated September 25, 2017 (Log No. 2017.01408, Doc. No. 1709MBF19). SHPD previously consulted with the project proponent and their archaeological firm, Scientific Consultant Services, LLC (SCS), regarding the AIS in a meeting at the SHPD Kapolei office on February 18, 2020. During the meeting, SHPD identified several inadequacies in the field work and in the report. SHPD agreed at that time, no additional fieldwork would be conducted as part of the current AIS and, that due to the absence of identified historic properties, the report would be revised only to meet the requirements of an AA report as specified in HAR §13-284-5(b)(5)(A). SHPD requested the report revisions in a letter dated February 27, 2020 (Log No. 2018.01131, Doc. No. 2002AM17).

The revised AA report indicates SCS conducted an archaeological inventory survey (AIS) involving a pedestrian survey using transects spaced 10 to 15 meters apart and excavation of 11 test trenches. No historic properties were identified during the AIS. The report includes a description of the soil stratigraphy within the project area including eleven soil profiles, soil descriptions with Munsell colors and USDA soil terminology, and an aerial photograph depicting the locations of the test trenches within the project area. The locations of the test trenches were recorded using a handheld Garmin GPS Map 60 CSx global positioning system (GPS) unit capable of ±3-meter accuracy. Additionally, the report includes a summary of historical land use in the general area and a brief summary of previous archaeology in the immediate vicinity.

The revisions adequately address the documentation issues and concerns identified during the consultation meeting held on February 18, 2020 and in our letter dated February 27, 2020 (Log No. 2018.01131, Doc. No. 2002AM17). The revised report meets the minimum the requirements of an AA report as specified in HAR §13-276-5. **It is accepted**. Please send two hard copies of the document, clearly marked FINAL, along with a copy of this review letter and a text-searchable PDF version of the report to the Kapolei SHPD office, attention SHPD Library. Additionally, please send a pdf copy of the report to lehua.k.soares@hawaii.gov.

The AA report (Kehajit and Dega, March 2020) recommends no further archaeological work for the Windward Hotel Project. However, as the AIS was conducted without a detailed scope of work guiding the testing strategy, and the pedestrian survey transects were spaced 10 to 15 meters apart, SHPD has insufficient information to determine if the project will adversely affect historic properties, particularly within areas of deep excavation within the construction footprint. Therefore, SHPD requests archaeological monitoring be conducted for identification purposes for all ground disturbing activities during project construction. Additionally, the archaeological monitoring plan will stipulate that a pedestrian survey using transects spaced no greater than 5 meters apart shall be conducted prior to any ground-disturbing activities and the results shall be presented in the archaeological monitoring report.

SHPD looks forward to receiving for review and acceptance an archaeological monitoring plan meeting the requirements of HAR §13-279-4 prior to initiation of the proposed project.

SHPD shall notify the County when the archaeological monitoring plan is accepted, and the permit issuance process may continue.

Please contact Andrew McCallister, Historic Preservation Archaeologist IV, at Andrew.McCallister@hawaii.gov or at (808) 692-8010 for matters regarding archaeological resources or this letter.

Aloha,

Alan Downer

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