CHLORIDE TITRATION RECORD
for ____________________________ Well (No.)

Island Project or Job No. 19

Titrations conducted by

<table>
<thead>
<tr>
<th>Sample No.</th>
<th>Date Taken</th>
<th>Sample (ml)</th>
<th>Burette Rdg Before</th>
<th>AgNO₃ (ml)</th>
<th>AgNO₃ × .2 ml Factor</th>
<th>Chlorides (ppm)</th>
</tr>
</thead>
<tbody>
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### CHLORIDE TITRATION RECORD

for

_____________________________

Well (No.)

Island Project or Job No. 19

Titrations conducted by

<table>
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<tr>
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<th>AgNO₃ Before</th>
<th>AgNO₃ After</th>
<th>- .2 ml Factor</th>
<th>Chlorides (ppm)</th>
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CHLORIDE TITRATION RECORD

for

______________________________
Well (No.)

Island ____________________ Project or Job No. __________

Titrations conducted by

<table>
<thead>
<tr>
<th>Sample No.</th>
<th>Date Taken</th>
<th>Sample (ml)</th>
<th>Burette Rdg</th>
<th>AgNO₃ Before (ml)</th>
<th>AgNO₃ After (ml)</th>
<th>.2 ml Factor</th>
<th>Chlorides (ppm)</th>
</tr>
</thead>
</table>
AS BUILT SECTION

Drilled:
Driller:

Nipple

Ft. MSL - Top of Casing
Ft. MSL - Finish Grade

Ft. MSL

Bottom of Well

NOT TO SCALE

Job No.
AS BUILT SECTION

Drilled:

Driller:

Nipple

Ft. MSL - Top of Casing

Ft. MSL - Finish Grade

Ft. Above MSL

Static Water Level

Casing Guide

NOT TO SCALE

Job No.
ANAULIA WELD 00-00. [RIG]
PUMPING TEST #1
June 2A-2B 1991
P = 500, 6PM
L = 21.7 PPM
T. D. = 466.75
X = WELL 90 P.C. COMBO
C.A.I.: 210 BPM
APPEAR TO BE AWAY
FROM WELL 00-00
CHLORIDE TITRATION RECORD
for

Well  (No.)

Island  Project or Job No.  

Titrations conducted by  

<table>
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<th>Sample No.</th>
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<th>Burette Rdq Before</th>
<th>AgNO₃ (ml)</th>
<th>AgNO₃ Mult.</th>
<th>Chlorides (ppm)</th>
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<td>1</td>
<td>1/20</td>
<td>50</td>
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<td>4.7</td>
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<td>10, 27</td>
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<td>50</td>
<td>7.1</td>
<td>9.6</td>
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<td>10, 24</td>
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<tr>
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<td>50</td>
<td>4.9</td>
<td>7.1</td>
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<td>50</td>
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<td>50</td>
<td>4.9</td>
<td>7.1</td>
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<tr>
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<tr>
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<td>7.1</td>
<td>2.3</td>
<td>10, 23</td>
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</table>
# Island Code 2: Kauai

**Table 1: Kauai Wells Details**

<table>
<thead>
<tr>
<th>WELL NUMBER</th>
<th>LOCATION</th>
<th>MAP</th>
<th>OWNER</th>
<th>DRILLER</th>
<th>COORDINATES</th>
<th>YEAR</th>
<th>PHYSICAL DATA</th>
<th>ELEVATIONS</th>
<th>INITIAL TEST</th>
<th>WATER QUALITY</th>
<th>DRAFT</th>
<th>WATER SUPPLY</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-083-02</td>
<td>KALAELE TUNNEL 10</td>
<td>KALAI DMS 220405</td>
<td>1592230</td>
<td>2018</td>
<td>153</td>
<td>61</td>
<td>616.0</td>
<td>12</td>
<td>20.0</td>
<td>0.94</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>2-091-02</td>
<td>KALAELE TUNNEL 10</td>
<td>KALAI DMS 220405</td>
<td>1592230</td>
<td>2018</td>
<td>153</td>
<td>61</td>
<td>616.0</td>
<td>12</td>
<td>20.0</td>
<td>0.94</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>2-083-04</td>
<td>KAPAA VILLAGE 10</td>
<td>KALAI DMS 220405</td>
<td>1592230</td>
<td>2018</td>
<td>153</td>
<td>61</td>
<td>616.0</td>
<td>12</td>
<td>20.0</td>
<td>0.94</td>
<td>N</td>
<td>Y</td>
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</table>

**Table 2: Summary of Water Quality Parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Unit</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Chloride</td>
<td>mg/L</td>
<td>31</td>
</tr>
<tr>
<td>Nitrate</td>
<td>mg/L</td>
<td>23.5</td>
</tr>
<tr>
<td>Sulfate</td>
<td>mg/L</td>
<td>18.0</td>
</tr>
</tbody>
</table>

**Table 3: Water Supply Capacities**

<table>
<thead>
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<th>Capacity</th>
<th>Unit</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Capacity</td>
<td>MGD</td>
<td>58.78</td>
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</table>

**Table 4: Water Quality at Kauai Wells**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Unit</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chloride</td>
<td>mg/L</td>
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</tr>
<tr>
<td>Nitrate</td>
<td>mg/L</td>
<td>23.5</td>
</tr>
<tr>
<td>Sulfate</td>
<td>mg/L</td>
<td>18.0</td>
</tr>
</tbody>
</table>

**Table 5: Wells by Island Code 2: Kauai**

<table>
<thead>
<tr>
<th>WELL NUMBER</th>
<th>LOCATION</th>
<th>MAP</th>
<th>OWNER</th>
<th>DRILLER</th>
<th>COORDINATES</th>
<th>YEAR</th>
<th>PHYSICAL DATA</th>
<th>ELEVATIONS</th>
<th>INITIAL TEST</th>
<th>WATER QUALITY</th>
<th>DRAFT</th>
<th>WATER SUPPLY</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-083-02</td>
<td>KALAELE TUNNEL 10</td>
<td>KALAI DMS 220405</td>
<td>1592230</td>
<td>2018</td>
<td>153</td>
<td>61</td>
<td>616.0</td>
<td>12</td>
<td>20.0</td>
<td>0.94</td>
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<td>Y</td>
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**Table 6: Groundwater Quality Parameters**

<table>
<thead>
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<th>Parameter</th>
<th>Unit</th>
<th>Value</th>
</tr>
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<tbody>
<tr>
<td>Chloride</td>
<td>mg/L</td>
<td>31</td>
</tr>
<tr>
<td>Nitrate</td>
<td>mg/L</td>
<td>23.5</td>
</tr>
<tr>
<td>Sulfate</td>
<td>mg/L</td>
<td>18.0</td>
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</tbody>
</table>

**Table 7: Water Capacity at Kauai Wells**

<table>
<thead>
<tr>
<th>Capacity</th>
<th>Unit</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Capacity</td>
<td>MGD</td>
<td>58.78</td>
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</table>

**Table 8: Water Quality Data**

<table>
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<tr>
<th>Parameter</th>
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<tbody>
<tr>
<td>Chloride</td>
<td>mg/L</td>
<td>31</td>
</tr>
<tr>
<td>Nitrate</td>
<td>mg/L</td>
<td>23.5</td>
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<tr>
<td>Sulfate</td>
<td>mg/L</td>
<td>18.0</td>
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**Table 9: Water Source by Island Code 2: Kauai**

<table>
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<tr>
<th>WELL NUMBER</th>
<th>LOCATION</th>
<th>MAP</th>
<th>OWNER</th>
<th>DRILLER</th>
<th>COORDINATES</th>
<th>YEAR</th>
<th>PHYSICAL DATA</th>
<th>ELEVATIONS</th>
<th>INITIAL TEST</th>
<th>WATER QUALITY</th>
<th>DRAFT</th>
<th>WATER SUPPLY</th>
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<td>KALAI DMS 220405</td>
<td>1592230</td>
<td>2018</td>
<td>153</td>
<td>61</td>
<td>616.0</td>
<td>12</td>
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**Table 10: Water Supply Capacities**

<table>
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<th>Capacity</th>
<th>Unit</th>
<th>Value</th>
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<tbody>
<tr>
<td>Capacity</td>
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**Table 11: Water Quality at Kauai Wells**

<table>
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<th>Parameter</th>
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<tr>
<td>Chloride</td>
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<tr>
<td>Nitrate</td>
<td>mg/L</td>
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<tr>
<td>Sulfate</td>
<td>mg/L</td>
<td>18.0</td>
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**Table 12: Wells by Island Code 2: Kauai**

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<th>WELL NUMBER</th>
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<th>MAP</th>
<th>OWNER</th>
<th>DRILLER</th>
<th>COORDINATES</th>
<th>YEAR</th>
<th>PHYSICAL DATA</th>
<th>ELEVATIONS</th>
<th>INITIAL TEST</th>
<th>WATER QUALITY</th>
<th>DRAFT</th>
<th>WATER SUPPLY</th>
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</thead>
<tbody>
<tr>
<td>2-083-02</td>
<td>KALAELE TUNNEL 10</td>
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<td>2018</td>
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<td>12</td>
<td>20.0</td>
<td>0.94</td>
<td>N</td>
<td>Y</td>
</tr>
</tbody>
</table>
1. Measure flow (adjust if rate changes) by 20 gpm either way + note down.
2. Read manometer
3. Measure sounding reel
4. Take water samples (time marked on bottles + form already)

In Staymos 07 Kauai Sands
Ph. 822-4951 Rm. #139
MITCHELL

CHECK RADIATOR
## Pumping Test Record

**For**

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<th>Island</th>
<th>Project or Job No.</th>
<th>19</th>
</tr>
</thead>
</table>

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<th>Date &amp; Time</th>
<th>Sample No.</th>
<th>Pumping rate (gpm)</th>
<th>Airline Drawdown (feet)</th>
<th>Chlorides (ppm)</th>
<th>Temp. (°F)</th>
<th>Cond. (mmhos 25°C)</th>
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**Note:** Recovery signature.
## PUMPING TEST RECORD

**Location:** Ana Hola

**Well No.:** 0818-03

**Project or Job No.:** 19

<table>
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<tr>
<th>Date &amp; Time</th>
<th>Sample No.</th>
<th>Pumping rate (gpm)</th>
<th>Airline Drawdown (feet)</th>
<th>Chlorides (ppm)</th>
<th>Temp. (°F)</th>
<th>Cond. (mhmhos 25°C)</th>
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**Note:**
- Chlorides are measured in parts per million (ppm).
- Temperature is recorded in degrees Fahrenheit (°F).
- Conductivity is measured in millimho (mhmhos) at 25°C.
PUMPING TEST RECORD
for

*NAME* 1

Well **0818.03**

*NAME* 2

**KAMALI** Island 1

*NAME* 3

**19** Project or Job No.

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Sheet No. 2 of 4 Sheets
PUMPING TEST RECORD

for

Line: Well 061-01

Island Project or Job No. 19

Description of Well--
1. Elevation: ground surface __ ft., top of casing __ ft.,
   rotary table __ ft., referenced to __ benchmark.
2. Total depth of well __ ft.; or __ ft. elevation, msl
3. __ in. solid casing to __ ft. depth, perforated to __ ft. depth
4. Static water level on __ ft. below ground
   surface, top of casing; or __ ft. elevation msl
   measured __ method

Description of Pump and Pump Setting--
5. ______ type pump with ______ stage bowl assembly
6. Gasoline (diesel, electric, power with ______ horsepower
7. Shaft speed: ______ rpm at ______ gpm flow
8. Depth of pump intake: __ ft. below toe; or __ ft. elev. msl
9. Depth of airline bottom: __ ft. below toe; or __ ft. elev. msl
10. Center of gage: __ ft. elev., msl. Flow measured with ______

Test conducted by ______

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<th>Pumping rate (gpm)</th>
<th>Airline (feet)</th>
<th>Drawdown (feet)</th>
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Sheet No. 1 of Sheets
PUMPING TEST RECORD
for
Well ____________ (name) ____________ (No.)

Island ____________ Project or Job No. ____________ 19

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**Well No.:** 6918.03

**Project or Job No.:** 19

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Sheet No. 2 of 3 Sheets
# Pumping Test Record

**Location:**

- **Name:** Anauola
- **Well No.:**
- **Project or Job No.:** 19

## Details

<table>
<thead>
<tr>
<th>Date &amp; Time</th>
<th>Sample No.</th>
<th>Pumping Rate (gpm)</th>
<th>Airline Drawdown (feet)</th>
<th>Chlorides (ppm)</th>
<th>Temp. (°F)</th>
<th>Cond. (mmhos 25°C)</th>
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*Adjust WHC to 268.0*
PUMPING TEST RECORD

for

[Name: Kauai] Well 0912-03

Project or Job No. 19

Description of Well--
1. Elevation: ground surface ___ ft., top of casing ___ ft., rotary table ___ ft., referenced to ___ ft. benchmark.
2. Total depth of well ___ ft.; or ___ ft. elevation, msl
3. __ in. solid casing to ___ ft. depth, perforated to ___ ft. depth
4. Static water level on 19: ___ ft. below ground surface; or ___ ft. elevation msl measured ___ method

Description of Pump and Pump Setting--
5. ___ type pump with ___ stage bowl assembly
6. Gasoline, diesel, electric, power with ___ horsepower
7. Shaft speed: ___ rpm at ___ gpm flow
8. Depth of pump intake: ___ ft. below ___ ; or ___ ft. elev. msl
9. Depth of airline bottom: ___ ft. below ___ ; or ___ ft. elev. msl
10. Center of gage: ___ ft. elev., msl. Flow measured with ___

<table>
<thead>
<tr>
<th>Date &amp; Time</th>
<th>Sample No.</th>
<th>Pumping rate (gpm)</th>
<th>Airline (feet)</th>
<th>Drawdown (feet)</th>
<th>Chlorides (ppm)</th>
<th>Temp. (°F)</th>
<th>Cond. (mmhos 25°C)</th>
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Test conducted by ___
### CHECKLIST

- **WELL CONSTRUCTION PERMIT**
- **PUMP INSTALLATION PERMIT**

**WELL NAME or LOCATION:** ___________________  **ISLAND:** KAUAI

**WELL NUMBER:** 0818-03  **Tax Map Key:** 4-8-03:23

**OWNER/OPERATOR:** KAUAI COUNTY  **LANDOWNER:** STATE OF HAWAII
- **Firm Name:** DEPARTMENT OF WATER  **Firm Name:** HAWAIIAN HOME LANDS COMMISSION
- **Contact Person:** RAYMOND SATO  **Contact Person:**
- **Address:** P.O. BOX 1708  **Address:**
- **Phone:** 241-5980  **Phone:**

**Date application received:** 27 March 1991

**Date acknowledged receipt/request more info:**

**Date application accepted:**

**Suspense date (90 days):**

**Date filing fee deposited:** NO CHARGE

**Application sent to following:**

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<th>Department/Program</th>
<th>Date sent</th>
<th>Comments received</th>
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<td>Dept/Bd of Water Supply</td>
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<tr>
<td>Historic Preserv. Prog.</td>
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<tr>
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<td>Office of Hawaiian Affairs</td>
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**Date agenda due:**

**Date submittal due:**

**Date submittal sent to applicant:**

**Date application approved or approved:**

**Date applicant notified of decision:**

**REMARKS:**

_________________________________________________________________________
_________________________________________________________________________
APPLICATION FOR

X WELL CONSTRUCTION PERMIT

PUMP INSTALLATION PERMIT

INSTRUCTIONS: Please print or type and send completed application with attachments to the Division of Water and Land Development, P.O. Box 272, Honolulu, Hawaii 96809. Application must be accompanied by a non-refundable filing fee of $25.00 payable to the Department of Land and Natural Resources. (Filing fee waived for government agencies.) If necessary, phone 586-7643, Hydrology/Geology Section for assistance.

1. WELL LOCATION

Job No. 17-KW-C
Anahola Well No. 0818-03
Island Kauai
Tax Map Key 4-8-03:23
Address __________________________

2. WELL OWNER

Firm Name Department of Water Supply
County of Kauai
Contact Person Raymond Sato
Address P.O. Box 1706
Libue, Hawaii 96766
Phone 241-3986

3. PROPOSED CONTRACTOR FOR:

☐ Well Drilling ☐ Pump Installation

Name Paul Frandsen & Associates
Address 1126 12th Ave., Suite 105
Honolulu, Hawaii 96816

4. PROPOSED WORK

☐ Drill New Well  ☐ Deepen  ☐ Redrill  ☐ Modify Pump
☐ Alter  ☐ Seal  ☐ Abandon  ☐
☐ Install New Pump  ☐ Replace Pump
☐ Install New Pump  ☐ Replace Pump  ☐

(Briefly describe the proposed work and fill in the diagram on the back of this form.)

5. PROPOSED USE

☐ Municipal (including hotels, stores, etc.)  ☐ Other (specify) Exploratory
☐ Domestic (individual, noncommercial water systems)  ☐ Industrial
☐ Irrigation (specify) ______________________________

6. PROPOSED AMOUNT OF WITHDRAWAL ___________ gallons per day

7. PROPOSED PUMP INFORMATION

Pump Type: ☐ Vertical Turbine  ☐ Submersible
Motor: ☐ Diesel  ☐ Gas  ☐ Electric: ☐ Centrifugal
Rated Pump Capacity ___________ gallons per minute (gpm)

Well Owner (print) Raymond Sato
Signature __________________________
Date ____________

Landowner (print) State of Hawaii
Signature __________________________
Date __________________________

Field Checked By __________________________  Latitude ____________
Date __________________________  Longitude ____________
Hydrologic Unit __________________________  State Well No. 0818-03
Quadrant Map No. K-9
Briefly describe the proposed work:

Explore for a groundwater source by drilling approximately 467 feet deep.

Geophysical logging will be done. The well will be checked for its chloride content and water level, and pump tested for the determination of its safe yield.

**PROPOSED SECTION OF WELL**

- Elevation at top of casing: 267.5 ft., msl
- Ground Elev.: 265.5 ft., msl
- Cement Grout: 272.5 ft.
- Hole Dia.: 18 in.
- Total Depth: 449.5 ft.
- Rock Packing: 0 ft.
- Solid Casing:
  - Material: Steel
  - Length: 288.5 ft.
  - Diameter: 12 in.
  - Wall thickness: 0.365 in.
- Casing: / Perforated / Screen
  - Material: n/a
  - Length: n/a ft.
  - Diameter: n/a in.
  - Wall thickness: n/a in.
  - Openings: n/a sq. in./L.F.
- Open Hole:
  - Length: 177 ft.
  - Diameter: 11 in.

*Approximate elevation at time of filing application. Final elevation (msl) by a surveyor licensed by the State must be submitted at start of construction.*
Weekly Report No. 26  
State of Hawaii  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
DIVISION OF WATER AND LAND DEVELOPMENT  

WEEKLY CONSTRUCTION REPORT  
Covering Week Ending 8 June, 1991  

JOB NO. 17-KK-C Anahola Well  
CONTRACTOR: Paul Frendsen & Associates  
Anahola, Kauai, Hawaii  

DESCRIPTION OF CONSTRUCTION ACTIVITIES  
1. Complete drilling open hole to depth of 54'6" from ground.  
2. Static Water level 1255.5' from ground.  

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<th>Materials</th>
<th>Equipment (Hours)</th>
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<tbody>
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<td>Item</td>
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Remarks:  

Weather:  

Payroll for Week Ending ___________________ Payroll Amount ___________________  
Total Manhours of Labor Used: ________ No. of Men: ________  

Submitted by:  

[Signature]
ENGINEERING BRANCH
Division of Water Resource Management

FROM: Dickey
DATE: 6-3
FILE IN:

TO: INITIAL: PLEASE: REMARKS:

L. CHANG — See Me
J. Nakamura — Call
G. Miyashiro — Review & Comment
D. Lee — Take Action
G. Morimoto — Investigate & Report
L. Uyehara — Draft Reply
D. Imada — Acknowledge Receipt
E. Yuasa — Type Draft
K. Chung — Type Final cc:
R. Hardy — Xerox copies
A. Christensen — File
J. Menor — Mail
Y. Shibuya —
E. Yonamine —
G. AKITA —
L. Nanbu —
G. MATSUMOTO —
E. SAKODA —
E. LAU —
Y. SHIROMA —
M. TAGOMORI —
S. Kokubun —

FOR YOUR:

Approval
Signature
Information

[Handwritten note:]

Accuracy & detail. The elevation at the well is 265.5. What would put the state water level below sea level? He’ll submit this & Franco to request the vol & ban.
Weekly Report No. 25

State of Hawaii
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF WATER AND LAND DEVELOPMENT

WEEKLY CONSTRUCTION REPORT
Covering Week Ending [June 1991]

JOB NO. 17-KK-C Anahola Well CONTRACTOR: Boy, Friend & Associates
No. 0518-03 Anahola, Kauai, Hawaii

DESCRIPTION OF CONSTRUCTION ACTIVITIES
1. Well depth = 432'
2. Stabilized water level = 270'
3. Drilling in hard area and notable no records any cutting.

<table>
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<tr>
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Remarks:

Weather:

Payroll for Week Ending ___________________ Payroll Amount ___________________
Total Manhours of Labor Used: ____________ No. of Men: ___________________

Submitted by:

[Signature]
Weekly Report No. 27

State of Hawaii
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF WATER AND LAND DEVELOPMENT

WEEKLY CONSTRUCTION REPORT

Covering Week Ending 4 May, 1991

JOB NO. 17-KW-C Anahole Well

CONTRACTOR: Paul Freedsen & Associates

Anahole, Kauai, Hawaii

DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF WATER AND LAND DEVELOPMENT

DESCRIPTION OF CONSTRUCTION ACTIVITIES

1. Open hole x 355' depth
2. Static water level at 255' depth.

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Remarks:

Weather:

Payroll for Week Ending: __________________ Payroll Amount: __________________

Total Manhours of Labor Used: __________ No. of Men: __________

Submitted by: ____________________________
**Weekly Report No. 22**

State of Hawaii  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
DIVISION OF WATER AND LAND DEVELOPMENT

**WEEKLY CONSTRUCTION REPORT**  
Covering Week Ending **20 April 1991**

**JOB NO. 17-KK-CA* Anahole Well**  
CONTRACTOR: Paul Friedle & Associates  
160 Bishop Street  
Suite 1204  
Honolulu, Hawaii 96813

---

**DESCRIPTION OF CONSTRUCTION ACTIVITIES**

1. **Alignment Check** with sheet metal cage has put the alignment within the 6'-140'.

2. **Cement tube of 8' 3/40'.

3. **Water test level** - 222'.

4. **Alignment measurement** N 22'-17  
0 5% 0 5% 0 160' 5% 7% 5% 1%

20 5% 1-1/2' 5% 7% 180 5 9% 5 1%

---

**Materials**  
**Equipment (Hours)**

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<th>Hours Used</th>
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**Remarks:**

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**Weather:**

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**Payroll for Week Ending**  
**Payroll Amount**

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**Total Manhours of Labor Used:**  
**No. of Men:**

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**Submitted by:**

[Signature]


State of Hawaii  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
DIVISION OF WATER AND LAND DEVELOPMENT  

WEEKLY CONSTRUCTION REPORT  
Covering Week Ending 2 Feb, 1991  

JOB NO. 17-KK-C Anahola Well  
CONTRACTOR: Paul Frenson & Associates,  
188 Bishop Street, Suite 1304,  
Honolulu, Hawaii 96813  

Anahola, Kauai, Hawaii  

DESCRIPTION OF CONSTRUCTION ACTIVITIES  

1. Sam Frenson / Install another bit and drill  
   to 225'  
2. Static water level 83 ft. from top of ground.  

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Remarks:  

Weather:  

Payroll for Week Ending  
Payroll Amount  
Total Manhours of Labor Used:  
No. of Men:  

Submitted by:  

[Signature]
**WCR 2 Check for Well No. 0818-03** (survey to regulation memo)

1. **From Charley/Denise/Ryan** (initial)

2. **Pump Tests Check** (special condition of PIP? Yes/No) D. Mills (initial)

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<tr>
<th>Step-Drawdown Test:</th>
<th>Yes</th>
<th>No</th>
<th>If no, describe deficiency</th>
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<tr>
<td>followed WCPI Stds</td>
<td>☐</td>
<td>☐</td>
<td>Testing done by CWRM in 1991</td>
</tr>
<tr>
<td>analysis attached</td>
<td>☐</td>
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<td>C.D. test for 67 hrs @ 500 gpm</td>
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<td>Bauer recommended 350 gpm pump</td>
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<table>
<thead>
<tr>
<th>Potential Well Interference:</th>
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<th>No</th>
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</thead>
<tbody>
<tr>
<td>Potential Stream Impacts:</td>
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<td>☐</td>
</tr>
<tr>
<td>Additional Testing or Data Required:</td>
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<td>☐</td>
</tr>
<tr>
<td>Pump Test Comments Attached:</td>
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<tr>
<td>Proposed Pump Capacity is OK.:</td>
<td>☐</td>
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3. **Pump Installation Check** Mitch Ohye (initial) R. Torres (initial)

<table>
<thead>
<tr>
<th>Yes</th>
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<th>If no, describe deficiency</th>
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<tbody>
<tr>
<td>data complete</td>
<td>☐</td>
<td>followed Special Cond &amp; Elev.</td>
</tr>
<tr>
<td>well database updated</td>
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</tbody>
</table>

4. Charley/Denise/Ryan (initial) take action based on above analysis

**ATTACHMENTS FOR ACCEPTANCE:**
- 1WCR2 ACCEPTANCE LETTER ✔
- 2PUMP INST. COMPLETION CERTIFICATE ✔
- 3METER INSTALL. REPORT (IF NECESSARY) ☐
- 4WUR FORM (if necessary) ☐
- USGS MAP UPDATED ☐
- PARCEL CHECK ☐
- WELL DATABASE INPUT CHECK ☐
- PUMP TEST WORKSHEET ☐
- PUMP As-Built CHECK PRINT ☐

5. Roy (initial) check (Entered WCR 2/PICC accept date into database)

6. Susan Hoagbin (initial) finalize

7. Ken (initial) signature

8. Faith Ching (initial) enter into WUR database

9. Charley/Denise/Ryan File
April 2, 2009

Mr. Bill Eddy
Kauai Department of Water
P.O. Box 1706
Lihue, HI 96766

Dear Mr. Eddy:

Certificate of Pump Installation Completion for
Anahola Well No. 3 Well No. 0818-03 (TMK (4) 4-8-003:023)

We are pleased to inform you that the Pump Installation work permitted for Anahola Well No. 3 (Well No. 0818-03) is complete and acceptable. This certificate of pump installation completion allows you to begin using the well for reasonable and beneficial water use.

To protect Hawaii’s natural ground water resources for the benefit of all, the following requirements apply to the use of your well:

1. If the well is not in use it must be properly capped.

2. If the well is to be abandoned then the landowner must cause a licensed contractor to apply for a well abandonment permit in accordance with HAR § 13-168-12(f) prior to any well sealing or plugging work.

3. In the event that the well operator and/or landowner changes, the Commission shall be notified prior to the change.

4. In the event the benchmark in the concrete base of the well is altered in any way, an updated version of the Well Elevation page of the Well Completion Report Part I shall be submitted to the Commission. If a licensed surveyor had estimated the original benchmark elevation then a licensed surveyor must establish the new benchmark elevation. The Well Elevation portion of the Well Completion Report Part I can be obtained by contacting Commission staff or at www.hawaii.gov/dlnr/cwrm/resources_permits.htm.

5. Your approved pump has a capacity of 350 gpm at a head of 308 feet. In the future, pump replacements of equal or lesser capacity will not require an additional permit from the Commission, but will require the submission of a Well Completion Report Part II by the licensed pump installer. If the pump replacement is greater than the existing pump, you will need to apply for a new pump installation permit.
6. The landowner shall cause the well operator to maintain the installed meter or other appropriate means for measuring and reporting withdrawals and water levels, and appropriate devices or means for measuring chlorides and temperature. These data shall be measured monthly and reported to the Commission on a monthly basis, on forms provided by the Chairperson, in accordance with HAR § 13-168-7. Blank water use report forms may be obtained from our website, at www.hawaii.gov/dlnr/cwrrnlresources_permits.htm.

7. The proposed use shall not adversely affect existing or future legal uses of water in the area, including any surface water or established instream flow standards. The authorization to drill a well and/or install a pump shall not constitute a determination of correlative water rights. The landowner and well operator are notified that the quantity of water taken from the well and/or the pump capacity could be reduced by the Commission in the future.

Because groundwater in Hawaii is a public trust, and adverse effects at one well may affect other water resources, any violation of the above conditions, or any other provision of the Hawaii Administrative Rules, may be subject to fines of up to $5,000/day. The Commission needs your help and asks that you to do your part in utilizing this shared resource. We prefer to work with you in meeting the goal of protecting our ground water resources together.

If you have any questions, please contact Denise Mills of the Commission staff at 587-0251 or toll-free from Kauai at 274-3141, extension 70251.

Sincerely,

KEN C. KAHWARA, P.E.
Deputy Director

DEM:ss

c: Beylik Drilling & Pump Services, Inc.
April 2, 2009

Mr. Fred Camero, Jr.
Beylik Drilling & Pump Services, Inc.
91-259A Olai Street
Kapolei, HI 96707

Dear Mr. Camero, Jr.:

Well Completion Report Part II for Well No. 0818-03

We received your Well Completion Report Part II for the Anahola Well No. 3 (Well No. 0818-03) on March 17, 2009 and acknowledge that it is complete.

This completes your obligations under the pump installation permit. A certificate of pump installation completion will be issued to the well operator/landowner and you will receive a copy for your record. The certificate transfers responsibility of all aspects of well usage and maintenance from you to the well operator/landowner.

If you have any questions, please contact Denise Mills of the Commission staff at 587-0251.

Sincerely,

KEN C. KAWAHARA, P.E.
Deputy Director

DEM:ss

c: Kauai Department of Water
TO  
COMMISSION ON WATER RESOURCE MGMT  
P.O. BOX 621  
HONOLULU, HI  96809

WE ARE SENDING YOU  XX Attached  □ Under separate cover via __________ the following items:

□ Shop drawings  □ Prints  □ Plans  □ Samples  □ Specifications
□ Copy of letter  □ Change order  □  

<table>
<thead>
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<th>DATE</th>
<th>NO.</th>
<th>DESCRIPTION</th>
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<td>WELL COMPLETION REPORT: PART II STATE WELL NO.: 0818-03</td>
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<td></td>
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<td>ANAHOLA WELL # 3</td>
</tr>
</tbody>
</table>

THESE ARE TRANSMITTED as checked below:

□ For approval  □ Approved as submitted  □ Resubmit ______ copies for approval
□ For your use  □ Approved as noted  □ Submit ______ copies for distribution
□ As requested  □ Returned for corrections  □ Return ______ corrected prints
□ For review and comment  □  
□ FOR BIDS DUE __________________________   □ PRINTS RETURNED AFTER LOAN TO US

REMARKS  
__________________________________________________________________  
__________________________________________________________________  
__________________________________________________________________  
__________________________________________________________________

COPY TO  1531F / C FILE

SIGNED:  
FRED G. CAMERO, JR.  
PROJECT MANAGER

If enclosures are not as noted, kindly notify us at once.
State of Hawaii  
COMMISSION ON WATER RESOURCE MANAGEMENT  
Department of Land and Natural Resources  
WELL COMPLETION REPORT - PART II  
Pump Installation

Instructions: Please print in ink or type and send completed report (with attachments, if applicable) to the Commission on Water Resource Management, P.O. Box 621, Honolulu, Hawaii 96809. The Commission may not accept incomplete reports. This form shall be submitted within 60 days of the completion of work. For assistance, please consult the Hawaii Well Construction and Pump Installation Standards or call the Regulation Branch at 587-0225. For updates to this form or additional information, please visit our website at http://www.hawaii.gov/dlnr/cwrrnl

1. State Well No.: 0818-03  
2. Address: Kalalea Road, Hawaii 96703  
4. Date Pump Installed: December 1, 2008  
5. PERMANENT PUMP INFORMATION  
   Pump Type, Make, Serial No.: Vertical Turbine, Flowserve 10 ELM-7 Stage, S/N 0804NSH00857-1  
   Rated Capacity: 350 gpm at head of: 308.4 ft.  
   Motor Type, H.P., Voltage, rpm: US Motors, 50 HP, 460 V, 1780 RPM  
   Pump type (check one):  
      □ Deep Well Turbine  
      □ Submersible  
      □ Centrifugal  
   □ Rotary  
   □ Rotary-Displacement  
   □ Reciprocating  
   □ Impulse  
6. Method of flow measurement:  
   □ Flowmeter w/ totalizer  
   Manufacturer: Rosemount  
   Model no.: 3051  
   Size: 6"  
   □ Other, explain and attach schematic  
7. Fill in the as-built section on the other side of this sheet.  
8. Attach the rating curve for the installed pump.  
9. Attach photograph of well clearly showing the benchmark on the concrete pad, the well head, and the method of flow measurement.  
10. Well Owner Company: DWS, County of Kauai  
    Address: 4398 Pua Loke Street, Lihue, Hawaii 96766  
    Phone: (808) 245-5400  
    Fax: (808) 246-8628  
11. Land Owner Company: DWS, County of Kauai  
    Address: 4398 Pua Loke Street, Lihue, Hawaii 96766  
    Phone: (808) 245-5400  
    Fax: (808) 246-8628  

Pump Installation Contractor (print) Beylik Drilling  
C-57/C-57a/A Lic. No. AC-21896  
Signature [Signature]  
Date 3/17/09
7. AS-BUILT PUMP SECTION  
(Please attach as-built if different from diagram provided below)

Bench mark elevation surveyed to nearest 0.01 ft. = ____ ft. mean sea level

267.00

Elevation of top of chase tube 267.50 ft. mean sea level

Pump intake depth = 285.17 ft.  
(referenced to bench mark)

Chase tube depth = 278.0 ft.  
(referenced to bench mark)

If airline installed, bottom of airline elevation = N/A ft. mean sea level
Design Conditions
350 USGPM | 308.4 Ft.

Certified Performance Test
By: Michael A. Hansen Date: 08-May-08

FLOWSERVE

MODEL 10ELM
Speed 1775
Test and Curve Number 10ELMV06
Pump Test Analysis – Comments

Well ID: 0818-03  
Well Name: Anahola Well No. 3
Analysis date: March 24, 2009  
Test Dates: June 24-27, 1991
Analyzed by: D.E. Mills  
Test Dates: April 6-10, 2008

Step-Drawdown Test – 199, by CWRM

Specific capacity at each step:

<table>
<thead>
<tr>
<th>Time (min)</th>
<th>Average Q (gpm)</th>
<th>s (ft)</th>
<th>SC (gpm/ft-dd)</th>
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</thead>
<tbody>
<tr>
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<td>211</td>
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<td>70</td>
</tr>
<tr>
<td>120</td>
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</tr>
<tr>
<td>1,220</td>
<td>507</td>
<td>16.50</td>
<td>31</td>
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</tbody>
</table>

Deviations from requirements (HWCPIS – 2004) – N/A

Note: Did not analyze data from the 2008 step-drawdown test done by Waimea Water Services, Inc. No obvious differences in the test results.

Constant-Rate Pumping Test – 1991, by CWRM

Test duration = 67 hours, average pumping rate (Q) = 499 gpm  
Maximum drawdown, 14.5 ft

Hydraulic parameter estimates:

- K = 90 ft/day,
- T = 18,000 ft²/day (aquifer thickness, b ≈ 200 feet)

Deviations from requirements (HWCPIS – 2004)

1. Standards weren’t adopted at the time this well was tested.
2. Pump stopped twice during the test, the first time for 8.5 hours and the second for 5 hours; however, didn’t appear to significantly affect the quality of the data.

Comments on test data and observations

1. Pump in Well No. 0818-01, located 70 ft from 0818-03, was running a few hours each day during this test. When that pump shut off, the pumping water levels in Well No. 0818-03 rebounded 1 to 1.75 ft. When pumping in 0818-01 resumed, the pumping level in 0818-03 quickly returned to the earlier drawdown curve. Although this complicates the data analysis, the result doesn’t significantly affect analysis of the drawdown curve and slope for the pumped well. The data are not perfect but are useable.
2. The early-time data collection did not follow the frequency currently required by the HWCPIS for the first 15 minutes. This doesn’t affect the quality of later-time pumping data, which is used for the T and K estimates, believed to be representative of aquifer parameters rather than storage losses from the well bore and near the well bore.
3. The well has a moderate specific capacity, which will be a constraining factor for pump design and operation. The proposed pumping rate of 350 gpm should be a safe capacity for this well, provided the efficiency doesn’t decline.

Note: Glenn Bauer analyzed the 1991 test data and recommended the 350-gpm pump capacity for the well based on his observations and analysis.
4. Chloride levels ranged from 21 to 24 mg/l throughout the test. Temperature data was not recorded.

**Constant-Rate Pumping Test – 2008, by Waimea Water Services, Inc.**

Test duration = 72 hours, average pumping rate (Q) = 380 gpm

Maximum drawdown, 11.65 ft

Hydraulic parameter estimates:

- $K = 89 \text{ ft/day}$
- $T = 18,000 \text{ ft}^2/{\text{day}}$ (aquifer thickness, $b \approx 200 \text{ feet}$)

**Well Interference & Stream Impacts**

1. The 1991 constant-rate test was run at the same time that an adjacent well (Well No. 0818-01, approximately 70 ft away) was running, for several hours each day. See note 1 under Comments on constant-rate test data.
2. The 2008 test was run while pumps in two adjacent wells were running, 818-01 and 0818-02, with the same response as observed in 1991. Report by Waimea Water Services in well file details the operation of the adjacent wells.
3. If the coefficient of storage in the aquifer is assumed to be 0.0005 and the well is pumped continuously for 25 years, drawdown within a 1-mile radius of the well is predicted to be approximately 3.4 feet. Drawdown within a $\frac{1}{2}$-mile radius is predicted to be approximately 4 ft.
4. Use of this well at the permitted pumping rate is not expected to adversely affect other wells or water users in the area.
5. No stream impacts are expected.

**Proposed Pump Capacity OK? :** Yes. Well tested at higher rate than proposed on permit application. (Application approved by CWRM on March 6, 2008.)
**INPUT**

<table>
<thead>
<tr>
<th>Construction:</th>
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<tbody>
<tr>
<td>Casing dia. (d_c)</td>
</tr>
<tr>
<td>Annulus dia. (d_w)</td>
</tr>
<tr>
<td>Screen Length (L)</td>
</tr>
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</table>

**Depths to:**

<p>| |</p>
<table>
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<th></th>
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<tbody>
<tr>
<td>water level (DTW)</td>
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<tr>
<td>Top of Aquifer</td>
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<tr>
<td>Base of Aquifer</td>
</tr>
</tbody>
</table>

**Annular Fill:**

<table>
<thead>
<tr>
<th>Across screen -- Open Hole</th>
</tr>
</thead>
<tbody>
<tr>
<td>Above screen -- Cement</td>
</tr>
<tr>
<td>Aquifer Material -- Permeable Basalt</td>
</tr>
</tbody>
</table>

**FLOW RATE**

499 GPM

---

**COMPUTED**

Aquifer thickness = 200 Feet

Slope = 0.969657 Feet/log10

Input is consistent.

**Remarks:** Cooper-Jacob analysis of single-well aquifer test

Note: The pump in adjacent supply well, Well No. 0818-01, located approx. 70 ft from Well No. 0818-03, ran a few hours each day during the CR test. This explains the three intervals where the pumping levels in 0818-03 rebounded 1-1.5 ft.

Analysis Program: USGS Aquifer Test Analysis Spreadsheets v.1.2, Open File Report 02-197
<table>
<thead>
<tr>
<th>Entry</th>
<th>Date Hr:Min:Sec</th>
<th>Water Level (Feet)</th>
<th>Entry</th>
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<th>Water Level (Feet)</th>
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<td>5.50</td>
<td>53</td>
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<td>55</td>
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Well No. 0818-03 (Anahola Well No. 3), Kauai
(test dates: June 25-28, 1991)

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Constant-rate Pumping Test
Well No. 0818-03 (Anahola Well No. 3), Kauai
(test dates: June 25-28, 1991)
## Step-drawdown Test

**Well No. 0818-03 (Anahola Well No. 3), Kauai**  
(test date: June 24-25, 1991)

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## Step-drawdown Test

**Well No. 0818-03 (Anahola Well No. 3), Kauai**

(test date: June 24-25, 1991)

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Step-drawdown Test  
Well No. 0818-03 (Anahola Well No. 3), Kauai  
(test date: June 24-25, 1991)

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<th>Time (min)</th>
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<th>s (ft)</th>
<th>SC (gpm/ft-dd)</th>
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Step-Drawdown Test  
Well 0818-03 (Anahola 3), Kauai

Time (min)

0  200  400  600  800  1,000  1,200  1,400  1,600  1,800

Drawdown (feet)

Pump stopped @ 1,680 min.
THEIS DRAWDOWN CALCULATION
by Glenn Bauer & Roy Hardy with numerical approximations by Huntoon (1980) last update 1/8/07

FILE NAME = Ke Hoomaka 1120-34
TEST NAME = Long-Term Test
DATE = Dec-06

INPUT PARAMETERS
GREEN VALUES
Transmissivity T = 16,000 ft/day
Storage Coeff. S = 0.001 dimensionless
Time t = 9,125 days
Pumping Rate Q = 67,379.7 ft³/day

CALCULATED VALUES ARE RED
Aquifer thickness b = 200 ft
Hydraulic Conductivity K = 80 ft/day
Pumping rate Q = 350 gpm

Radial distance, r (ft.) from well
Drawdown s (ft)

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<th>Drawdown s</th>
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OBSERVATION WELL
Radial distance r from pumping well 5,280 ft

Time t days years u W(u) Drawdown s (ft)

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2nd check Theoretical drawdown a mile (5,280 ft) from the pumping well when u<0.01

T = 16,000 ft/day
Sp. yield = 0.2
s = 9,125 days
b = 1,366 ft

anything <0.01 is unmeasurable
June 19, 1991

MEMORANDUM FOR THE RECORD

FROM: M. Ohye

SUBJECT: Anahola Well No. 0818-03, Kauai; Water Level Measurement

On June 18, 1991, a water level measurement was conducted at the Anahola Well (Well No. 0818-03) using a steel surveyor's tape and wet line chalk method.

Anahola Well No. 0818-03

1) Gr. El. = No B.M. was established at the well
2) Casing dia. = 12 in., height above Gr. = 2 ft.
3) Solid casing depth = 290 ft.
4) Open hole - 276 ft.
5) Total depth = 466 ft.

Water Level Measurement

Reference point is top of a 12-inch casing which stands 2 feet above ground surface. 260 ft. of tape was lowered into the well and a wet mark was recorded at 3.15 ft. from end of tape; therefore, 260 ft. - 3.15 ft. = 256.85 ft. (depth to top of water) or 10.65 ft., msl based on existing ground elevation indicated in the contract plans and specifications.

Airline and Pump Settings

Instructed driller Miles Fransen to set the bottom of airline at 275 ft. below top of casing and pump intake at 290 ft. The well will be cleaned out by surging and some preliminary drawdown data taken. Long-term pumping test tentatively set for the week of June 24-28, 1991.
MESSAGE

TO
FRANSEN DRILLING
ANAHOLA WELL 0818-03
JOB. 17-KW-C

DATE
JUNE 18, 1991

T.O. = 406'
CSG. DIA. = 12" HT. 2' ABOVE GR.
W.L. MEAS. DTW = 256.45' TOP OF CSG.
CSG. SOL. = 290'

SET BOTTOM OF 1/4" AIRLINE
20' BELOW TOP OF WATER (275' BELOW TOP OF CASING)
PUMP INTAKE AT 290' 1/2 TOP OF CSG.

DRILLER: Mike Frandsen

REPLY

DATE
JUNE 18, 1991

SIGNED
MIKEL K. CH.
PUMPING TEST RECORD

for

ANAHOLA Well 0818-03

KAUAI Island 17-KW-C Project or Job No. 19

Description of Well--
1. Elevation: ground surface _____ ft., top of casing _____ ft.,
   rotary table _____ ft., referenced to ________ benchmark.
2. Total depth of well 4,600 ft.; or _____ ft. elevation, msl
3. 12 in. solid casing to 290 ft. depth, perforated to _____ ft. depth
4. Static water level on 19: 7 ft. below ground
   surface, top of casing; or _____ ft. elevation msl
   measured ________ method

Description of Pump and Pump Setting--
5. Multistage pump with _____ stage bowl assembly
6. Gasoline (diesel) electric, power with _______ horsepower
7. Shaft speed: _____ rpm at _____ gpm flow
8. Depth of pump intake: 287 ft. below TOC; or _____ ft. elev. msl
9. Depth of airline bottom: 271 ft. below TOC; or _____ ft. elev. msl
10. Center of gage: ______ ft. elev., msl. Flow measured with ______
11. Test conducted by ________

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<th>Airline (feet)</th>
<th>Drawdown (feet)</th>
<th>Chlorides (ppm)</th>
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<th>Cond. (mmhos 25°C)</th>
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### PUMPING TEST RECORD

**ANAHOLA**

*Well DB16-03*

**KAAULI Island M-KD-C Project or Job No. 19**

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- **ADJUST TO 500 GPM** -

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| 1415        | 529        | 2.3                 | 16.5          |                |                 |            |                   |
| 1420        | 508        | 3.15                | 15.65         |                |                 |            |                   |
| 1500        | 509        | 3.05                | 15.75         |                |                 |            |                   |
| 1530        | 505        | 3.05                | 15.75         |                |                 |            |                   |
| 1600        |            |                     |               |                |                 |            |                   |
| 1615        | 504        | 3.05                | 15.75         |                |                 |            |                   |
| 1630        | 508        | 3.05                | 15.75         |                |                 |            |                   |
| 1700        | 3          | 500                 | 3.20          | 15.60          | 23              |            |                   |
| 1800        | 511        | 2.7                 | 16.1          | 18              |                 |            |                   |
| 1900        | 4          | 511                 | 2.5           | 16.3           |                 |            |                   |
| 2000        |            | 508                 | 2.7           | 16.1           |                 |            |                   |
| 2100        | 5          | 503                 | 2.85          | 15.95          | 22              |            |                   |
| 2200        |            | 502                 | 2.9           | 15.9           |                 |            |                   |
| 2300        |            | 503                 | 2.8           | 16.0           |                 |            |                   |
| 2400        |            | 500                 | 3.0           | 15.8           |                 |            |                   |

*Some values adjusted for analysis.*
# Pumping Test Record

**Location:** Anahola Well 0814-03  
**Project or Job No.:** 17 - KWL - C

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<th>Chlorides (ppm)</th>
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*Engine erratic - cannot maintain constant pumping rate.  
Stop pumping - Recovery*

**Elapsed Time (Minutes):**

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**Sheet No.:** 3 of 1
# PUMPING TEST RECORD

**For:**

- **Name:** ANAHOLA
- **Well:** 0814-03

**Project or Job No.:** 19

**Island:** KAUAI

## Date & Time | Sample No. | Pumping rate (gpm) | Airline (feet) | Drawdown (feet) | Chlorides (ppm) | Temp. (°F) | Cond. (mmhos 25°C)
--- | --- | --- | --- | --- | --- | --- | ---
**June 25** | 1991 | **RECOVERY - CONT** | | | | | **Well 0814-03**
105 | | 18.5 | .21 | | | | .01
120 | | 18.62 | .18 | | | | .15
135 | | 18.65 | .15 | | | | .12
150 | | 18.68 | .12 | | | | .08
165 | | 18.70 | .10 | | | | .00
180 | | 18.75 | .05 | | | | .06
195 | | 18.78 | .02 | | | | .00
210 | | 18.80 | 0 | | | | .00

**1535**

- **CHANGE FUEL FILTERS ON DIESEL ENGINE AND USE NEW FUEL.**
- **Meter Reading:**

| 1545 | 18.80 | **Meter Reading**

**1600**

- **START PUMPING - ADJUST TO 500 GPM.**

| 1615 | 500 | 4.05 | 14.75 |

**1645**

- **FLOWMETER BROKEN**
- **REPAIR METER**

| 1645 | 499 | 5.50 | 13.3 | **Meter Reading**

**46**

| 1700 | 506 | 5.35 | 13.45 |

**2000**

| 1730 | 498 | 5.35 | 13.45 | 24.0 | 267.81 | 4.31 |

**1800**

| 1830 | 495 | 5.35 | 13.45 | 267.70 | 4.20 |

**1900**

| 1930 | 494 | 5.35 | 13.45 | 268.03 | 4.53 |

**2000**

| 2030 | 495 | 5.35 | 13.45 | 268.09 | 4.59 |

**2200**

| 2230 | 501 | 6.35 | 12.50 | 266.55 | 3.06 |
## PUMPING TEST RECORD

**For ANAHOLA Well 088-03**  
(name)  
Kauai Island  
Project or Job No. 19

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**Location**

- Kauai Island
- 17-KW-2 project or job no. 19

#### Date & Time

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**June 28, 1991**

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<th>Drawdown (feet)</th>
<th>Chlorides (ppm)</th>
<th>Temp. (°F)</th>
<th>Cond.</th>
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# PUMPING TEST RECORD

**For**

**ANAHOLA**  
Well 0818-02  
(name)  
(NO.)

**Kauai Island**  
17-KU-C Project or Job No. 19

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<th>Drawdown (feet)</th>
<th>Chlorides (ppm)</th>
<th>Temp. (°C)</th>
<th>Cond.</th>
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**STOP PUMPING - RECOVERY**

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Sheet No. 7 of 9
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<th>Burette Rdg After (ml)</th>
<th>AgNO₃ (ml) Before</th>
<th>AgNO₃ (ml) After</th>
<th>Mult.</th>
<th>Chlorides (ppm)</th>
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ANAHOLA WELL 0810-02, KAUAI
PUMPING TEST 1
JUNE 24-28, 1991
Q = 500 GPM
C1 = 21 PPM
T.D. = 400 FT

* WELL 90+ FT (GRANITE) CAP. 200 GPM APPROX. 70 FT AWAY FROM WELL 0810-02
**WELL ID: 0818-03**

**INPUT**

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<tr>
<td>Casing dia. (d_c)</td>
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<td>Annulus dia. (d_w)</td>
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<tr>
<td>Base of Aquifer</td>
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<table>
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<th>Annular Fill</th>
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<tbody>
<tr>
<td>across screen -- Open Hole</td>
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<tr>
<td>above screen -- Cement</td>
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<tr>
<td>Aquifer Material -- Permeable Basalt</td>
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**FLOW RATE** 380 GPM

**COMPUTED**

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<th>Aquifer thickness (h)</th>
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<td>Slope (S)</td>
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**Input is consistent.**

| \(K\) -- 89 Feet/Day                   |   |
|\(T\) -- 18,000 Feet²/Day               |   |

**REMARKS:** Cooper-Jacob analysis of single-well aquifer test

*Note:* The pump in adjacent supply well, Well No. 0818-01, located approx. 70 ft from Well No. 0818-03, ran a few hours each day during the CR test. This explains the three intervals where the pumping levels in 0818-03 rebounded 1-1.5 ft.

Analysis Program: USGS Aquifer Test Analysis Spreadsheets v.1.2, Open File Report 02-197
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### Constant-rate Pumping Test

**Well No. 0818-03 (Anahola Well No. 3), Kauai**

(test dates: April 6-10, 2008)

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### Constant-rate Pumping Test

**Well No. 0818-03 (Anahola Well No. 3), Kauai**

(test dates: April 6-10, 2008)

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Constant-rate Pumping Test
Well No. 0818-03 (Anahola Well No. 3), Kauai
(test dates: April 6-10, 2008)
## Constant-rate Pumping Test

**Well No. 0818-03 (Anahola Well No. 3), Kauai**

(test dates: April 6-10, 2008)

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Pump Testing of State Well 818-03

Anahola #3

Kauai Department of Water Supply

Stephen P. Bowles
August, 2008
Introduction

Pump testing of the Anahola #3 well was recommended upon its construction in 1991, due to its unique locality to two other active source wells (Anahola's 1 & 2). This testing was supplemental to state requirements, with the intention of providing the owner practical information about the well's behavior when pumped by itself, and in conjunction with the nearby sources.

Installment of a test pump began the week of April 28th, 2008 (Beylik Drilling). By week's end, a lineshaft test pump and diesel drive was successfully installed. Test pumping was planned for the following Monday, May 5th.

Set-up

Two sounding tubes were installed with the pump column, allowing measurement of the water level within the well casing. In the first tube, a recorder was installed to monitor water level, temperature and conductivity on one-minute intervals for the duration of the testing. The second monitoring tube was used to take direct sounding measurements manually by Beylik. Finally, an airline was also installed with the column to track the water level, but it should be noted that this equipment was accurate only to 0.1 psi (or 0.231 feet). For this reason, the direct measurements are favored in the analysis.

Subsequent to installation, the test pump was found to pump at a maximum rate of 680+ gpm, and could be throttled down to a minimum of 170 gpm. While the test pump was capable of 680 gpm, the maximum test rate used was just below 600 gpm, as this was the highest rate possible to maintain water in the sounding tube and to maintain suction on the airline.

In addition to water level, electrical conductivity and temperature of the pumped water was sampled at a port located on the discharge piping. This port overflowed a leaky bucket, which was used to take handheld meter conductivity measurements.
The test was organized into two stages. First, specific capacity testing of the well began Monday morning, with drawdown monitored at four pumping rates for a minimum of 45 minutes at each rate. For the duration of this stage, the neighboring wells were inactive. After shutting the test pump down that afternoon, a second testing phase began the following day, with a single pump rate selected and run continuously for three days. For the first of these three days, neighboring wells were again inactive. However, for the second and third days, Anahola's 1 & 2 were allowed to resume normal operation, maintaining level in the nearby tank.

Specific Capacity Test Data

The following graph displays recorder and manual data indicating the well's water level for the duration of specific capacity testing, as well as the recovery period. Note the rapid recovery, until the neighboring wells went back into operation, shortly after the step drawdown test was finished. Drawdown data was plotted a second time, showing stability at the four test rates (173, 306, 513 and 582 gpm). The average drawdown showed linear behavior below 500 gpm, at which point the flow became increasingly turbulent. Finally, conductivity of the discharged water, as sampled by a handheld meter, is plotted versus water level over the test period.

![Graph showing specific capacity test data]

Figure 1. Anahola #3 Specific Capacity water level data (5/5/08)
Figure 2. Anahola #3 Specific Capacity drawdown data (5/5/08)

Figure 3. Anahola #3 Specific Capacity average drawdown (5/5/08)
Figure 4. Anahola #3 Specific Capacity conductivity and drawdown data (5/5/08)
Constant Rate Test Data
Anahola #3 was pumped at an average rate of 380 gpm continuously for a period of 72 hours (5/6 – 5/9). The rate was slightly in excess of the target production rate of the well (350 gpm) in order to provide adequate cooling to the pump drive unit.

The following figure shows water level readings for the entirety of the 72-hour test period. Also, figure 6 plots water level versus the conductivity of the discharge water for this period.

![Figure 5. Anahola #3 Constant Rate drawdown data (5/6 – 5/9/08)](image-url)
Anahola #3 Testing

August 1, 2008

Figure 6. Anahola #3 Constant Rate conductivity and drawdown data (5/6 - 5/9/08)

Recommendations

As part of the investigations leading to the expansion of the DHHL water supplies for Anahola, concerns were raised over the interference between pumping wells in the Anahola well field. At that time the following recommendation was made:

"The water level responses recorded in December of 1994 are consistent with data obtained at the time of the construction and testing of Well #3 in June of 1991. A controlled aquifer test proved impossible to conduct as the two producing wells operate on demand and are approaching capacity. A complete shutdown of pumping was considered inappropriate under the present working conditions. A complete test is recommended at some future date when the DHHL well #0919-03 can be operated via interconnection."

(DHHL-Anahola Water Resources Plan, WWS 1997)

The present test was conducted in response to that recommendation. Here again, it was impossible to shut down the well field for a prolonged period due to continuous demand. As can be seen in figure 6 above, nearby wells were periodically turned on and did show interference between wells. The well test, at a continuous pumping rate indicates that while interference does occur, there was no severe aquifer drawdown which might cause a dramatic and critical rise in salinity. The evidence from the test indicates that such a rise might only occur over a long period of time and for that reason it is recommended that both the water level and salinity be monitored on a regular basis to provided early warning if there should be a severe aquifer response to added pumpage.

A pumping rate of 350 gpm is proven as reasonable rate for this well and a permanent pump should be installed. The caveat is the long term trend in water level and quality.
It has been previously assumed that this aquifer, because it has a non-pumping water table standing at about elevation +10 feet msl, was a typical basal lens with fresh water in dynamic equilibrium with underlying salt water. The absence of ocean tidal influence, as evidenced in figure 1, raises a question as to actual occurrence. It is noted that the water quality from well #3 improved during continuous pumping.

The well field is constructed in the Koloa volcanic series and it appears that the aquifer, rather than having a high vertical permeability as in the Waimea series, is actually multi-layered, having contact with salt water near the shore, rather than from below. This will only be evidenced through long term monitoring of water levels and quality.
Appendix A

A complete set of reference graphs and tables
Figure 7. Anahola #3 Constant Rate EC meter and Recorder data (5/6 – 5/9/08)

Figure 8. Anahola #3 Constant Rate conductivity and temperature recorder data (5/6 – 5/9/08)
Figure 9. Anahola #3 Constant Rate temperature and water level recorder data (5/6 – 5/9/08)

Figure 10. Anahola #3 Constant Rate conductivity and water level recorder data (5/6 – 5/9/08)
Figure 11. Anahola #3 Constant Rate recorder and meter temperature data (5/6 - 5/9/08)
### STEP-DRAWDOWN PUMP TEST DATA

**Pumped Well No.:** 0818-03  
**Pumped Well Name:** Anahola #3  
**Target Q:** 350 gpm

**Reference pt. for depth to water:** 270.42 ft. msl  
**Static Water Level @ start of test:** 11.17 ft. msl

**Water level measurements by:**  
- (x) electrical sounder  
- ( ) pressure transducer  
- (x) airline

**START TEST**  
**Date:** 5/5/2008  
**Time of day:** 9:40 AM

**Flow Meter Reading Start:** 6,923,600 gallons

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<td>5/6/08 7:48 AM</td>
<td>7.00</td>
<td>11.20</td>
<td>(1000 GALS)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5/6/08 8:03 AM</td>
<td>259.19</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Data in this Table is (x) Pumped Well Observation Remarks**

### Future Date

**Date: 5/6/2008**
**Time: 8:08 AM**

**Flow Meter Reading Start:** 7,043,720 gallons
CONSTANT-RATE PUMP TEST DATA (CONT'D)

Elapsed Time
(hh:mm:ss)

Date/Time

40:57:00
41:57:00
42:57:00
43:57:00
44:57:00
45:57:00
46:57:00
47:57:00
48:57:00
49:57:00
50:57:00
51:57:00
52:57:00
53:57:00
54:57:00
55:57:00
56:57:00
57:57:00
58:57:00
59:57:00
60:57:00
61:57:00
62:57:00
63:57:00
64:57:00
65:57:00
66:57:00
67:57:00
68:57:00
69:57:00
70:57:00
71:57:00
72:57:00
73:57:00

58 081:00 AM
58 082:00 AM
58 083:00 AM
58 084:00 AM
58 085:00 AM
58 086:00 AM
58 087:00 AM
58 088:00 AM
58 089:00 AM
58 0810:00 AM
58 0811:00 AM
58 0812:00 PM
58 081:00 PM
58 082:00 PM
58 083:00 PM
58 084:00 PM
58 085:00 PM
58 086:00 PM
58 087:00 PM
58 088:00 PM
58 089:00 PM
58 0810:00 PM
58 0811:00 PM
59 0812:00 AM
59 081:00 AM
59 082:00 AM
59 083:00 AM
59 084:00 AM
59 085:00 AM
59 086:00 AM
59 087:00 AM
5/9 088:00 AM
5/9 089:00 AM
59 rut! 10:00 AM

Elapsed Time
(h:mm:ss)

Actual Time t

0:00:00 59 0810:02 AM
0:00:30 59 0810:02 AM
0:00:54 59 0810:02 AM
0:01:30 59 0810:03 AM
0:01:51 59 0810:03 AM
0:02:10 59 0810:04 AM
0:02:45 59 0810:04 AM
0:03:24 59 0810:05 AM
0:03:40 59 0810:05 AM
0:04:10 59 0810:06 AM
0:04:46 59 0810:06 AM
0:05:13 59 0810:07 AM
0:06:05 59 0810:08 AM
0:07:04 59 0810:09 AM
0:08:00 59 0810:10 AM
0:08:58 59 0810:10 AM
0:09:56 59 0810:11 AM
0:14:50 59/0810:16 AM
0:19:51 59 0810:21 AM
0:24:51 59 0810:26 AM
0:29:56 59 0810:31 AM
0:35:53 59 0810:37 AM
0:40:06 59 0810:42 AM
0:45:03 59 0810:47 AM
0:50:10 59 08 10:52 AM
0:55:15 59 08 10:57 AM
1:00:03 59 0811:02 AM
1:15:30 59 0811:17 AM
1:30:41 59 0811:32 AM
1:40:30 5/9/08 11 :42 AM

Depth to
Water (ft)
270.61
270.61
266.40
266.45
266.33
266.32
266.34
266.32
266.32
266.33
270.54
270.65
270.64
270.84
270.82
270.74
270.64
270.62
270.62
270.56
270.58
270.26
266.37
266.32
266.30
266.31
266.30
266.31
266.34
270.60
270.70
270.67
270.80
Lb7.3L

Airline
(psi)
2.30
2.10
4.00
4.10
4.10
4.10
4.10
4.10
4.10
4.10
2.30
2.30
2.30
2.30
2.30
2.30
2.30
2.30
2.30
2.30
2.30
2.30
4.10
4.10
4.10
4.10
4.10
4.10
4.10
2.30
2.30
2.30
2.30
3.70

Drawdown
5 (ft)
11.42
11.42
7.21
7.26
7.14
7.13
7.15
7.13
7.13
7.14
11.35
11.46
11.45
11.65
11.63
11.55
11.45
11.43
11.43
11.37
11.39
11.07
7.18
7.13
7.11
7.12
7.11
7.12
7.15
11.41
11.51
11.48
11.61
8.13

7.93
0.36
0.22
0.76
1.30
1.58
1.59
1.66
1.67
1.46
1.63
1.59
1.33
1.30
1.22
1.21
1.17
1.00
0.91
0.82
0.78
0.73
0.67
0.64
0.63
0.62
0.61
0.56
0.46
0.45

-0.19
-0.19
4.02
3.97
4.09
4.10
4.08
4.10
4.10
4.09
-0.12
-0.23
-0.22
-0.42
-0.40
-0.32
-0.22
-0.20
-0.20
-0.14
-0.16
0.16
4.05
4.10
4.12
4.11
4.12
4.11
4.08
-0.18
-0.28
-0.25
-0.38
3.10

Q

(gpm)
380
380
380
380
380
380
380
380
380
380
380
380
380
380
380
380
380
380
380
380
380
380
380
380
380
380
380
380
380
380
380
380
380
380

EC (uMhos)
190.7
190.8
188.0
188.1
188.3
188.6
188.8
189.2
189.5
189.8
192.1
191.2
191.0
190.8
190.8
190.5
190.4
190.0
190.4
190.1
190.0
189.3
186.9
187.3
187.6
187.8
188.3
188.7
188.9
191.2
191.5
189.9
190.0
187.2

Data in this Table is for:
Pumped Well
Observation Well
Remarks
3.30
PUMP OFF
10.87 END METER - 7 008 731
11.01
10.47
9.93
9.65
9.64
9.57
9.56
9.77
9.60
9.64
9.90
9.93
10.01
10.02
10.06
10.23
10.32
10.41
10.45
10.50
10.56
10.59
10.60
10.61
10.62
10.67
10.77
10.78 I(x) 80% recovery

Depth to Recovery R WL Elev (ft,
Water (ft) (OS, ft)
msl)
267.12
259.55
259.41
259.95
260.49
260.77
260.78
260.85
260.86
260.65
260.82
260.78
260.52
260.49
260.41
260.40
260.36
260.19
260.10
260.01
259.97
259.92
259.86
259.83
259.82
259.81
259.80
259.75
259.65
259.64

WL Elev
(msl)

Temp.
(oF)
74.1
74.1
74.1
74.1
74.1
74.1
74.1
74.3
74.4
74.4
74.4
74.4
74.6
74.4
74.6
74.4
74.3
74.1
74.1
74.1
74.1
74.1
74.1
74.1
74.1
74.1
74.1
74.1
73.9
73.9
74.1
74.3
74.1
74.4

Data in this Table is
(x)
Pumped Well
Observation
( )
Remarks
7007972
7007997
7008020
7008041
7008064
7008087
7008109
7008136
7008158
7008179
7008203
7008225
7008248
7008270
7008293
7008317
7008339
7008363
7008385
7008408
7008431
7008454
7008477
7008489
7008522
7008544
7008571
7008594
7008617
7008638
7008662
7008685
7008707
700873


Sorry, please use this copy. Thank you.

From: Fred Camero  
Sent: Tuesday, March 24, 2009 3:31 PM  
To: Denise.E.Mills@hawaii.gov  
Subject: RE: Well No. 0818-03, Anahola Well No. 3 (Kauai)

Hi Denise,  
This just came in the mail. Hope you find this data useful. This report was submitted to the C&C of Kauai, so you may end up with a copy eventually.

Please let me know if you have any questions. Thank you.

v/r,  
Fred G. Camero, Jr.

Fred--  
You're correct about the WCR Part 1-- we only have the as-built diagrams prepared by Akinaka & Associates. We issued both a well construction and a pump installation permit to Beylik in March 2008, issued to Bill who signed the application. So, I'm looking at the file again.

What's confusing is that it's clear the well was already constructed when that application was made-- the well was constructed in or around 1991, and I see now that there is original pumping test data done by CWRM in 1991! It looks like only the pump permit was needed in 2008. The pump permit application was submitted in 1995, but the Commission deferred action because of an objection from a homesteader in the area. There are some records on this.

With that, it looks like all you need to submit is the WCR Part II for the pump installation. I'll put a memo in the file that explains the history and you should have no other outstanding issues relating to this well.

Call if you want to talk further, I'll be in all day.

Aloha, Denise
Hi Denise,
I got your voicemail that you left yesterday. Sorry I missed your call. I did end up calling Dusin from Kauai Department of Water Supply.

Anyway, I will be submitting WCR part II shortly. However, I will be needing your help with WCR Part I. I believe the only thing that has been submitted so far is the as-built (please confirm).

To my knowledge, Beylik Drilling was not involved in the drilling of the well. However, the General Contractor/Kauai DWS did require us to perform a pump test last year prior to the installation of the permanent pump, with Imiola Lindsey of Waimea Water Services administering the test.

I will call you later today to discuss. Thank you.

v/r,
Fred G. Camero, Jr.

From: Bill Godwin
Sent: Wednesday, March 11, 2009 8:41 AM
To: Fred Camero
Subject: FW: Well No. 0818-03, Anahola Well No. 3 (Kauai)

Hi there,

Do you know if the WCR Part II was completed for the Well No. 0818-03 on Kauai?

Thanks,

Bill

From: Denise.E.Mills@hawaii.gov [mailto:Denise.E.Mills@hawaii.gov]
Sent: Tuesday, March 10, 2009 2:41 PM
To: Bill Godwin
Cc: weddy@kauaiwater.org
Subject: Well No. 0818-03, Anahola Well No. 3 (Kauai)

Hi Bill,

This is a follow-up to our conversation in January about Well No. 0818-03 on Kauai. It appears that the Kauai Department of Water started using this well in December 2008 (based on the December water use report they submitted). But we never received the well completion reports part 1 or part 2 for the well work, and therefore we also haven’t issued certificates of completion for the work.

Please submit the well completion reports for this well as soon as possible so we can finish the record on this well and issue certificates. As you know, the certificates of well construction and pump installation completion will transfer all responsibility for well use and maintenance from Beylik Drilling as the permit holder to the Kauai Department of Water.

Please call me if you have questions. Thank you!

--Denise
cc: Bill Eddy, Kauai Dept of Water

Denise E. Mills
HYDROLOGIST

Hawaii Department of Land and Natural Resources
Commission on Water Resource Management
1151 Punchbowl Street, Room 227
Honolulu, Hawaii 96813
Phone: (808) 587-0251

Denise.E.Mills@hawaii.gov  Final Anahola Pump Test Report1.pdf
Pump Testing of State Well 818-03

Anahola #3

Kauai Department of Water Supply

Stephen P. Bowles
August, 2008
March 16, 2009

Mr. Fred Camero
Beylik Drilling & Pump Services, Inc.
91-259A Olai Street
Kapolei, HI 96707

Dear Mr. Camero:

Notice of Cancellation
Well Construction Permit for Well No. 0818-03

This is notice that we are cancelling the well construction permit that we approved on March 6, 2008, for the County of Kauai, Department of Water’s Anahola Well No. 3 (Well No. 0818-03). Our record shows that well construction was completed and the required pumping tests were performed on the well in 1991, but that a pump was not installed prior to 2008. Further, the application made by the County of Kauai on February 9, 2008, was only for a pump installation permit. It appears that Beylik signed Item 24 (Well Driller) on the application by mistake. We are cancelling this permit only to correct this clerical error. Your pump installation permit remains valid.

If you have any questions, please contact Denise Mills of the Commission staff at 587-0251.

Sincerely,

KEN C. KAWAHARA, P.E.
Deputy Director

DEM:ss

c: County of Kauai, Department of Water
Fred--
You're correct about the WCR Part 1-- we only have the as-built diagrams prepared by Akinaka & Associates. We issued both a well construction and a pump installation permit to Beylik in March 2008, issued to Bill who signed the application. So, I'm looking at the file again.

What's confusing is that it's clear the well was already constructed when that application was made-- the well was constructed in or around 1991, and I see now that there is original pumping test data done by CWRM in 1991! It looks like only the pump permit was needed in 2008. The pump permit application was submitted in 1995, but the Commission deferred action because of an objection from a homesteader in the area. There are some records on this.

With that, it looks like all you need to submit is the WCR Part II for the pump installation. I'll put a memo in the file that explains the history and you should have no other outstanding issues relating to this well.

Call if you want to talk further, I'll be in all day.

Aloha, Denise

"Fred Camero" <camero@beylik.com>
Subject: FW: Well No. 0818-03, Anahola Well No. 3 (Kauai)

Hi there,

Do you know if the WCR Part 2 was completed for the Well No. 0818-03 on Kauai?

Thanks,

Bill

From: Denise.E.Mills@hawaii.gov [mailto:Denise.E.Mills@hawaii.gov]
Sent: Tuesday, March 10, 2009 2:41 PM
To: Bill Godwin
Cc: weddy@kauaiwater.org
Subject: Well No. 0818-03, Anahola Well No. 3 (Kauai)

Hi Bill,

This is a follow-up to our conversation in January about Well No. 0818-03 on Kauai. It appears that the Kauai Department of Water started using this well in December 2008 (based on the December water use report they submitted). But we never received the well completion reports part 1 or part 2 for the well work, and therefore we also haven’t issued certificates of completion for the work.

Please submit the well completion reports for this well as soon as possible so we can finish the record on this well and issue certificates. As you know, the certificates of well construction and pump installation completion will transfer all responsibility for well use and maintenance from Beylik Drilling as the permit holder to the Kauai Department of Water.

Please call me if you have questions. Thank you!

--Denise

cc: Bill Eddy, Kauai Dept of Water

Denise E. Mills  
HYDROLOGIST  
Hawaii Department of Land and Natural Resources  
Commission on Water Resource Management  
1151 Punchbowl Street, Room 227  
Honolulu, Hawaii 96813  
Phone: (808) 587-0251

Denise.E.Mills@hawaii.gov Anahola Well As Built.pdf
Hi Bill,

This is a follow-up to our conversation in January about Well No. 0818-03 on Kauai. It appears that the Kauai Department of Water started using this well in December 2008 (based on the December water use report they submitted). But we never received the well completion reports part 1 or part 2 for the well work, and therefore we also haven't issued certificates of completion for the work.

Please submit the well completion reports for this well as soon as possible so we can finish the record on this well and issue certificates. As you know, the certificates of well construction and pump installation completion will transfer all responsibility for well use and maintenance from Beylik Drilling as the permit holder to the Kauai Department of Water.

Please call me if you have questions. Thank you!

--Denise

cc: Bill Eddy, Kauai Dept of Water

Denise E. Mills
HYDROLOGIST

Hawaii Department of Land and Natural Resources
Commission on Water Resource Management
1151 Punchbowl Street, Room 227
Honolulu, Hawaii 96813
Phone: (808) 587-0251
Denise.E.Mills@hawaii.gov
<table>
<thead>
<tr>
<th>Well No.</th>
<th>Well Name</th>
<th>Applicant</th>
<th>Driller</th>
<th>Pump Inst. Type</th>
<th>Issued</th>
<th>Signed</th>
<th>WCR1</th>
<th>Accept</th>
</tr>
</thead>
<tbody>
<tr>
<td>5648-03</td>
<td>Aina Lea 1</td>
<td>Bridge Aina Lea, LLC</td>
<td>AC-21896</td>
<td>PUMP</td>
<td>2/12/2007</td>
<td>2/14/2008</td>
<td>1/20/2006</td>
<td>1/12/2008</td>
</tr>
<tr>
<td>0545-01</td>
<td>HOVE</td>
<td>Hawaii DWS</td>
<td>AC-21896</td>
<td>BOTH</td>
<td>1/9/2008</td>
<td>1/14/2008</td>
<td>1/9/2008</td>
<td>1/14/2008</td>
</tr>
<tr>
<td>4258-06</td>
<td>Oorna 1</td>
<td>Wai O Kula, LLC</td>
<td>AC-21896</td>
<td>BOTH</td>
<td>1/10/2008</td>
<td>1/16/2008</td>
<td>1/10/2008</td>
<td>1/16/2008</td>
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</tbody>
</table>

**Tuesday, January 27, 2009**

*Well #197 submitted*

*No WEL or cure*

*Pumping test??*
<table>
<thead>
<tr>
<th>State Well No.</th>
<th>Well Name</th>
<th>Period Begin Date</th>
<th>Period End Date</th>
<th>Quantity Pumped (1000 gals)</th>
<th>Method of Measurement</th>
<th>Chloride (mg/l)</th>
<th>Temp. (F)</th>
<th>Non-Pumping Water Level (ft. above msl)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>(future)</td>
<td>Hanamalu Well #5</td>
<td>12/01/09</td>
<td>12/31/09</td>
<td>(future)</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>0124-02</td>
<td>Hanamalu Well #3</td>
<td>12/01/09</td>
<td>12/31/09</td>
<td>407.1</td>
<td>flow meter</td>
<td>23</td>
<td>na</td>
<td></td>
</tr>
<tr>
<td>0124-03</td>
<td>Hanamalu Well #4</td>
<td>12/01/09</td>
<td>12/31/09</td>
<td>538.3</td>
<td>flow meter</td>
<td>22</td>
<td>na</td>
<td></td>
</tr>
<tr>
<td>0023-02</td>
<td>Pukaki Well</td>
<td>12/01/09</td>
<td>12/31/09</td>
<td>860.8</td>
<td>flow meter</td>
<td>26</td>
<td>na</td>
<td></td>
</tr>
<tr>
<td>5824-05</td>
<td>Puhi Well #3</td>
<td>12/01/09</td>
<td>12/31/09</td>
<td>2676.5</td>
<td>flow meter</td>
<td>27</td>
<td>na</td>
<td></td>
</tr>
<tr>
<td>0320-01</td>
<td>Nonou Well #9-1A</td>
<td>12/01/09</td>
<td>12/31/09</td>
<td>(not in service)</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td></td>
</tr>
<tr>
<td>0320-03</td>
<td>Nonou Well #9-1B</td>
<td>12/01/09</td>
<td>12/31/09</td>
<td>1782.4</td>
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<td>60</td>
<td>na</td>
<td></td>
</tr>
<tr>
<td>0321-01</td>
<td>Nonou Well #9-1C</td>
<td>12/01/09</td>
<td>12/31/09</td>
<td>1593.7</td>
<td>flow meter</td>
<td>62</td>
<td>na</td>
<td></td>
</tr>
<tr>
<td>0421-01</td>
<td>Wailua Homesteads Well #1</td>
<td>12/01/09</td>
<td>12/31/09</td>
<td>118.8</td>
<td>flow meter</td>
<td>44</td>
<td>na</td>
<td></td>
</tr>
<tr>
<td>0421-02</td>
<td>Wailua Homesteads Well #2</td>
<td>12/01/09</td>
<td>12/31/09</td>
<td>0.0</td>
<td>flow meter</td>
<td>44</td>
<td>na</td>
<td></td>
</tr>
<tr>
<td>0623-01</td>
<td>Makaleha Tunnel A</td>
<td>12/01/09</td>
<td>12/31/09</td>
<td>(no data)</td>
<td>flow meter</td>
<td>17</td>
<td>na</td>
<td></td>
</tr>
<tr>
<td>0623-02</td>
<td>Makaleha Tunnel B</td>
<td>12/01/09</td>
<td>12/31/09</td>
<td>(no data)</td>
<td>flow meter</td>
<td>na</td>
<td>na</td>
<td></td>
</tr>
<tr>
<td>0623-04</td>
<td>Makaleha Well</td>
<td>12/01/09</td>
<td>12/31/09</td>
<td>438.4</td>
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<td>20</td>
<td>na</td>
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<tr>
<td>0622-02</td>
<td>Kapaa Homesteads Well #2</td>
<td>12/01/09</td>
<td>12/31/09</td>
<td>1886.2</td>
<td>flow meter</td>
<td>19</td>
<td>na</td>
<td></td>
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<tr>
<td>0818-01</td>
<td>Anahola Well #90-A</td>
<td>12/01/09</td>
<td>12/31/09</td>
<td>3592.7</td>
<td>flow meter</td>
<td>23</td>
<td>na</td>
<td></td>
</tr>
<tr>
<td>0818-02</td>
<td>Anahola Well #90-B</td>
<td>12/01/09</td>
<td>12/31/09</td>
<td>85.4</td>
<td>flow meter</td>
<td>21</td>
<td>na</td>
<td></td>
</tr>
<tr>
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<td>Anahola Well #90-C</td>
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<td>12/31/09</td>
<td>39.6</td>
<td>flow meter</td>
<td>16</td>
<td>na</td>
<td></td>
</tr>
<tr>
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<td>Moolepe Tunnel</td>
<td>12/01/09</td>
<td>12/31/09</td>
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<td>16</td>
<td>na</td>
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<td>12/31/09</td>
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<td>Maka Ridge Well</td>
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<td>12/31/09</td>
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<td>Robinson Well</td>
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<td>12/31/09</td>
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<td>Waiminha Well</td>
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<td>12/31/09</td>
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<td>Haena Well</td>
<td>12/01/09</td>
<td>12/31/09</td>
<td>1548.4</td>
<td>flow meter</td>
<td>44</td>
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</tbody>
</table>

* Flow meter, electrical consumption, weir or flume, not metered (estimated).
** Measurement should be taken while pump is NOT running just prior to a pumping cycle; if measurement is taken while pump is running, please indicate so.

Other comments or additional information (e.g., date and method of chloride measurement, how pumpage amounts are estimated, etc.):

Submitted by (print): Wynne M. Ushigome
Signature: Wynne M. Ushigome
Title: Acting Manager and Chief Engineer
Date: 1/8/9

GWUR-MON FORM (06/10/2004)
STATE OF HAWAII - DLNR
COMMISSION ON WATER RES. MGMT.
P.O. BOX 621
HONOLULU, HI 96809

WE ARE SENDING YOU ☑ Attached □ Under separate cover via __________________ the following items:

☐ Shop drawings ☐ Prints ☐ Plans ☐ Samples ☐ Specifications
☐ Copy of letter ☐ Change order ☐

Copies Date No. Description
1 WELL CONSTRUCTION PERMIT
1 WELL INSTALLATION PERMIT

These are transmitted as checked below:

☐ For approval ☐ Approved as submitted ☐ Resubmit ______ copies for approval
☐ For your use ☐ Approved as noted ☐ Submit ______ copies for distribution
☐ As requested ☐ Returned for corrections ☐ Return ______ corrected prints
☐ For review and comment ☐
☐ FOR BIDS DUE _____________________________ ☐ PRINTS RETURNED AFTER LOAN TO US

REMARKS

COPY TO 1531 F/C FILE

Signed: FRED CAMERO, PROJECT MGR.

If enclosures are not as noted, kindly notify us at once.
WELL CONSTRUCTION PERMIT

Anahola C, Well No. 0818-03

Note: This permit shall be prominently displayed at the construction site until the work is completed.

In accordance with Department of Land and Natural Resources, Commission on Water Resource Management's Administrative Rules, Section 13-168, entitled "Water Use, Wells, and Stream Diversion Works", this document permits the construction and testing of Anahola C (Well No. 0818-03) at TMK 4-8-0303:023, Kauai, subject to the Hawaii Well Construction & Pump Installation Standards (HWCPIS - February 2004) which include but are not limited to the following conditions:

1. The Chairperson of the Commission on Water Resource Management (Commission), P.O. Box 621, Honolulu, HI 96809, shall be notified, in writing, at least two (2) weeks before any work authorized by this permit commences and staff shall be allowed to inspect installation activities in accordance with §13-168-15, Hawaii Administrative Rules.

2. This permit shall be prominently displayed, or made available, at the site of construction work until work is completed.

3. The well construction permit shall be for construction and testing of the well only. The permittee shall coordinate with the Chairperson and conduct a pumping test in accordance with the HWCPIS (the latest pump test worksheet can be obtained by contacting Commission staff or at www.hawaii.gov/dlnr/cwrm/forms.htm). The permittee shall submit to the Chairperson the test results as a basis for supporting an application to install a permanent pump. No permanent pump may be installed until a pump installation permit is approved and issued by the Chairperson. No withdrawal of water shall be made for purposes other than testing without a Certificate of Pump Installation Completion. The permitted pump capacity described on the pump installation permit may be reduced in the event that the pump test does not support the capacity.

4. In basal ground water, the depth of the well may not exceed one-fourth (1/4) of the theoretical thickness (41 times initial head) of the basal ground water unless otherwise authorized by the Chairperson.

5. The permittee shall incorporate mitigation measures to prevent construction debris from entering the aquatic environment, to schedule work to avoid periods of high rainfall, and to revegetate any cleared areas as soon as possible.

6. In the event that historically significant remains such as artifacts, burials or concentrations of shells or charcoal are encountered during construction, the permittee shall stop work and immediately contact the Department of Land and Natural Resources’ State Historic Preservation Division. Work may recommence only after written concurrence by the State Historic Preservation Division.

7. The proposed well construction shall not adversely affect existing or future legal uses of water in the area, including any surface water or established instream flow standards. This permit or the authorization to construct the well shall not constitute a determination of correlative water rights.

8. The Well Completion Report Part I shall be submitted to the Chairperson within sixty (60) days after completion of work (please contact staff or visit www.hawaii.gov/dlnr/cwrm/forms.htm for current form).

9. The permittee shall comply with all applicable laws, rules, and ordinances; non-compliance may be grounds for revocation of this permit.

10. The well construction permit application and any related staff submittal approved by the Commission are incorporated into this permit by reference. This permit is also subject to the HWCPIS. If the HWCPIS are not followed and as a consequence water is wasted or contaminated, a lien on the property may result. Any variances from the HWCPIS shall be approved by the Chairperson prior to invoking the variance.

11. The work proposed in the well construction permit application shall be completed within two (2) years from the date of permit approval, unless otherwise specified. The permit may be extended by the Chairperson upon a showing of good cause and good-faith performance. A request to extend the permit shall be submitted to the Chairperson no later than the date the permit expires.

12. If the well is not to be used it must be properly capped. If the well is to be abandoned during the course of the project then the permittee must apply for a well abandonment permit in accordance with §13-168-12(f) prior to any well sealing or plugging work.

13. The permittee, its successors, and assigns shall indemnify, defend, and hold the State of Hawaii harmless from and against any loss, liability, claim, or demand for property damage, personal injury, or death arising out of any act or omission of the applicant, assigns, officers, employees, contractors, and agents under this permit or relating to or connected with the granting of this permit.

14. This permit shall apply to the location shown on the application only. If the well is to be relocated, the permittee shall apply for a new well construction/pump installation permit in accordance with Hawaii Administrative Rules §13-168-12(f).

15. Special conditions in the attached cover transmittal letter are incorporated herein by reference.

Date of Approval: March 6, 2008
Expiration Date: March 6, 2010

I have read the conditions and terms of this permit and understand them. I accept and agree to meet these conditions as a prerequisite and underlying condition of my ability to proceed and understand that I shall not commence work until I have signed, dated, and returned the permit to the Commission. I understand that this permit is not to be transferred to any other entity. I also understand that non-compliance with any permit condition may be grounds for revocation and fines of up to $5,000 per day starting from the permit date of approval.

Driller’s Signature: ___________________________ C-57 License #: 21896 Date: 3-20-08

Printed Name: Bill Godwin Firm or Title: Beylik Drilling and Pump Service, Inc.

Please sign both copies of this permit, return one to the Chairperson, and retain the other for your records.

Attachment
PUMP INSTALLATION PERMIT
Anahola C, Well No. 0818-03

Note: This permit shall be prominently displayed at the site until the work is completed

In accordance with Department of Land and Natural Resources, Commission on Water Resource Management's Administrative Rules, Section 13-168, entitled "Water Use, Wells, and Stream Diversion Works", this document permits the pump installation for Anahola C (Well No. 0818-03) at TMK 4-8-003:023, Kauai, subject to the Hawaii Well Construction & Pump Installation Standards (HWCPIS - February 2004) which include but are not limited to the following conditions:

1. The Chairperson to the Commission on Water Resource Management (Commission), P.O. Box 621, Honolulu, HI 96809, shall be notified, in writing, at least two (2) weeks before any work covered by this permit commences and staff shall be allowed to inspect installation activities in accordance with §13-168-15, Hawaii Administrative Rules.

2. No withdrawal of water shall be made other than for testing until a Certificate of Pump Installation Completion has been issued by the Commission.

3. This permit shall be prominently displayed, or made available, at the site of construction work until work is completed.

4. The pump installation permit shall be for installation of a 350 gpm rated capacity, or less, pump in the well. This permanent capacity may be reduced in the event that the pump test data does not support the capacity.

5. A water-level measurement access shall be permanently installed, in a manner acceptable to the Chairperson, to accurately record water levels.

6. The permittee shall install an approved meter or other appropriate means for measuring and reporting withdrawals and appropriate devices or means for measuring chlorides and temperature at the well head.

7. Well Completion Report Part II shall be submitted to the Chairperson within 60 days after completion of work. This form can be obtained by contacting staff or on the internet at www.hawaii.gov/dlnr/cwrm.

8. The permittee, well operator, and/or well owner shall comply with all applicable laws, rules, and ordinances, and non-compliance may be grounds for revocation of this permit.

9. The pump installation permit application and any related staff submittal approved by the Commission are incorporated into this permit by reference. This permit is also subject to the HWCPIS. If the HWCPIS are not followed and as a consequence water is wasted or contaminated, a lien on the property may result. Any variances from the HWCPIS shall be approved by the Chairperson prior to invoking the variance.

10. The work proposed in the pump installation permit application shall be completed within two (2) years from the date of permit approval, unless otherwise specified. The permit may be extended by the Chairperson upon a showing of good cause and good-faith performance. A request to extend the permit shall be submitted to the Chairperson no later than the date the permit expires.

11. The permittee, its successors, and assigns shall indemnify, defend, and hold the State of Hawaii harmless from any loss, liability, claim, or demand for property damage, personal injury, or death arising out of any act or omission of the applicant, assigns, officers, employees, contractors, and agents under this permit or relating to or connected with the granting of this permit.

12. Special conditions in the attached cover transmittal letter are incorporated herein by reference.

Date of Approval: March 6, 2008
Expiration Date: March 6, 2010

I have read the conditions and terms of this permit and understand them. I accept and agree to meet these conditions as a prerequisite and underlying condition of my ability to proceed and understand that I shall not commence work until I and the pump installer have signed, dated, and returned the permit to the Commission. I understand that this permit is not to be transferred to any other entity. I also understand that non-compliance with any permit condition may be grounds for revocation and fines of up to $5,000 per day starting from the permit date of approval.

Installer's Signature:  
Printed Name: Bill Godwin  
Firm or Title: Beylik Drilling and Pump Service, Inc.

Please sign both copies of this permit, return one to the Chairperson, and retain the other for your records.

Attachments
March 12, 2008

Ref: 0818-03.wcp

Mr. Bill Godwin
Beylik Drilling and Pump Service, Inc.
91-259 Olai Street
Kapolei, HI 96707

Dear Mr. Godwin:

Well Construction Permit
Anahola C (Well No. 0818-03)

Enclosed are two (2) copies of your approved Well Construction Permit for the captioned well(s) that authorize well construction activities but excludes installation work for a permanent pump. As part of the Chairperson's approval, the following special conditions were added and are part of your permit under Permit Condition 13:

Special Conditions

1. Attached for your information are copies of the Department of Health's (DOH) review comments. Please note DOH's requirements related to discharge of effluent from well drilling and testing activities.

2. Attached for your information is a copy of the State Department of Land and Natural Resources Land Division's comments related to water lease requirements.

3. Attached for your information is a copy of the State Department of Land and Natural Resources Historic Preservation Division's comments related to historic sites.

Please refer to the Permit Processes Worksheet (transmitted with your acknowledgement letter) for further information regarding the process of drilling a well and installing a pump.

No withdrawal of water shall be made other than for testing purposes until a certificate of pump installation completion has been issued by the Commission.

Please sign both permit originals and return one for our files. For copies of the aquifer pump test worksheet, please call staff or visit www.state.hi.us/dlnr/cwrm/forms.htm.

IMPORTANT - Drilling work shall not commence until a fully signed permit is returned to the Commission. The permit shall be prominently displayed or made available at the construction site during construction. Be advised that you may be subject to fines of up to $5,000 per day for any violations of your permit conditions starting from the permit approval date.

If you have any questions, please call Charley Ice of the Commission staff at 587-0251 or toll-free at 274-3141 (Kauai), extension 70251.

Sincerely,

LAURA H. THEILEN
Chairperson

Enclosures

Kauai Department of Water (with applicable comments – DOH SDWB, WWB, CWB, Land Division, DHP)
USGS
WELL CONSTRUCTION PERMIT

Anahola C, Well No. 0818-03

Note: This permit shall be prominently displayed at the construction site until the work is completed.

In accordance with Department of Land and Natural Resources, Commission on Water Resource Management’s Administrative Rules, Section 13-168, entitled “Water Use, Wells, and Stream Diversion Works”, this document permits the construction and testing of Anahola C (Well No. 0818-03) at TMK 4-8-003:023, Kauai, subject to the Hawaii Well Construction & Pump Installation Standards (HWCPIS - February 2004) which include but are not limited to the following conditions:

1. The Chairperson of the Commission on Water Resource Management (Commission), P.O. Box 621, Honolulu, HI 96809, shall be notified, in writing, at least two (2) weeks before any work authorized by this permit commences and staff shall be allowed to inspect installation activities in accordance with §13-168-15, Hawaii Administrative Rules.

2. This permit shall be prominently displayed, or made available, at the site of construction work until work is completed.

3. The well construction permit shall be for construction and testing of the well only. The permittee shall coordinate with the Chairperson and conduct a pumping test in accordance with the HWCPIS (the latest pump test worksheet can be obtained by contacting Commission staff or at www.hawaii.gov/dlnr/cwrml/forms.htm). The permittee shall submit to the Chairperson the test results as a basis for supporting an application to install a permanent pump. Any permanent pump may be installed until a pump installation permit is approved and issued by the Chairperson. No withdrawal of water shall be made for purposes other than testing without a Certificate of Pump Installation Completion. The permitted pump capacity described on the pump installation permit may be reduced in the event that the pump test does not support the capacity.

4. In basal ground water, the depth of the well may not exceed one-fourth (1/4) of the theoretical thickness (41 times initial head) of the basal ground water unless otherwise authorized by the Chairperson.

5. The permittee shall incorporate mitigation measures to prevent construction debris from entering the aquatic environment, to schedule work to avoid periods of high rainfall, and to revegetate any cleared areas as soon as possible.

6. In the event that historically significant remains such as artifacts, burials or concentrations of shells or charcoal are encountered during construction, the permittee shall stop work and immediately contact the Department of Land and Natural Resources’ State Historic Preservation Division. Work may recommence only after written concurrence by the State Historic Preservation Division.

7. The proposed well construction shall not adversely affect existing or future legal uses of water in the area, including any surface water or established in-stream flow standards. This permit or the authorization to construct the well shall not constitute a determination of correlative water rights.

8. The Well Completion Report Part I shall be submitted to the Chairperson within sixty (60) days after completion of work (please contact staff or visit www.hawaii.gov/dlnr/cwrml/forms.htm for current form).

9. The permittee shall comply with all applicable laws, rules, and ordinances; non-compliance may be grounds for revocation of this permit.

10. The well construction permit application and any related staff submittal approved by the Commission are incorporated into this permit by reference. This permit is also subject to the HWCPIS. If the HWCPIS are not followed and as a consequence water is wasted or contaminated, a lien on the property may result. Any variances from the HWCPIS shall be approved by the Chairperson prior to invoking the variance.

11. The work proposed in the well construction permit application shall be completed within two (2) years from the date of permit approval, unless otherwise specified. The permit may be extended by the Chairperson upon a showing of good cause and good-faith performance. A request to extend the permit shall be submitted to the Chairperson no later than the date the permit expires.

12. If the well is not to be used it must be properly capped. If the well is to be abandoned during the course of the project then the permittee must apply for a well abandonment permit in accordance with §13-168-12(f) prior to any well sealing or plugging work.

13. The permittee, its successors, and assigns shall indemnify, defend, and hold the State of Hawaii harmless from and against any loss, liability, claim, or demand for property damage, personal injury, or death arising out of any act or omission of the applicant, assigns, officers, employees, contractors, and agents under this permit or relating to or connected with the granting of this permit.

14. This permit shall apply to the location shown on the application only. If the well is to be relocated, the permittee shall apply for a new well construction/pump installation permit in accordance with Hawaii Administrative Rules §13-168-12(f).

15. Special conditions in the attached cover transmittal letter are incorporated herein by reference.

Date of Approval: March 6, 2008
Expiration Date: March 6, 2010

I have read the conditions and terms of this permit and understand them. I accept and agree to meet these conditions as a prerequisite and underlying condition of my ability to proceed and understand that I shall not commence work until I have signed, dated, and returned the permit to the Commission. I understand that this permit is not to be transferred to any other entity. I also understand that non-compliance with any permit condition may be grounds for revocation and fines of up to $5,000 per day starting from the permit date of approval.

Driller’s Signature: ___________________________ C-57 License #: 21896 Date: ___________________________

Printed Name: Bill Godwin Firm or Title: Beylik Drilling and Pump Service, Inc.

Please sign both copies of this permit, return one to the Chairperson, and retain the other for your records.

Attachment
March 12, 2008

Mr. Bill Godwin
Beylik Drilling and Pump Service, Inc.
91-259A Olai Street
Kapolei, HI 96707

Dear Mr. Godwin:

Pump Installation Permit
Anahola C (Well No. 0818-03)

Enclosed are two (2) originals of your approved Pump Installation Permit for the captioned well(s) that authorize permanent pump installation work for your well(s). As part of the Chairperson's approval, the following special conditions were added and are part of your permit under Permit Condition 11:

Special Conditions

1. If the elevation benchmark needs to be altered, the permittee, well operator, and/or well owner shall ensure that the benchmark is transferred (or the well resurveyed) and documentation of the new benchmark shall be submitted to the Commission within sixty (60) days after the pump is installed.

The permittee is responsible for all conditions of the permit. This includes ensuring the submission of a completed Well Completion Report Part II form within sixty (60) days after the pump installation work is completed. Be advised that you may be subject to fines of up to $5,000 per day for any violations of your permit conditions starting from the permit approval date.

Please sign both permit originals and return one for our files.

IMPORTANT - Pump installation shall not commence until a fully signed permit is returned to the Commission.

If you have any questions, please call Charley Ice of the Commission staff at 587-0251 or toll-free at 274-3141 (Kauai), extension 70251.

Sincerely,

[Signature]

Laura H. ThieLEN
Chairperson

Enclosure

c: Kauai Department of Water
USGS
OuMP INSJALLATION PERMIT
Anahola C, Well No. 0818-03

Note: This permit shall be prominently displayed at the site until the work is completed.

In accordance with Department of Land and Natural Resources, Commission on Water Resource Management's Administrative Rules, Section 13-168, entitled "Water Use, Wells, and Stream Diversion Works", this document permits the pump installation for Anahola C (Well No. 0818-03) at TMK 4-8-003:023, Kauai, subject to the Hawaii Well Construction & Pump Installation Standards (HWCPIS - February 2004) which include but are not limited to the following conditions:

1. The Chairperson to the Commission on Water Resource Management (Commission), P.O. Box 621, Honolulu, HI 96809, shall be notified, in writing, at least two (2) weeks before any work covered by this permit commences and staff shall be allowed to inspect installation activities in accordance with §13-168-15, Hawaii Administrative Rules.

2. No withdrawal of water shall be made other than for testing until a Certificate of Pump Installation Completion has been issued by the Commission.

3. This permit shall be prominently displayed, or made available, at the site of construction work until work is completed.

4. The pump installation permit shall be for installation of a 350 gpm rated capacity, or less, pump in the well. This permanent capacity may be reduced in the event that the pump test data does not support the capacity.

5. A water-level measurement access shall be permanently installed, in a manner acceptable to the Chairperson, to accurately record water levels.

6. The permittee shall install an approved meter or other appropriate means for measuring and reporting withdrawals and appropriate devices or means for measuring chlorides and temperature at the well head.

7. Well Completion Report Part II shall be submitted to the Chairperson within 60 days after completion of work. This form can be obtained by contacting staff or on the internet at www.hawaiigov/dlnr/cwrm.

8. The permittee, well operator, and/or well owner shall comply with all applicable laws, rules, and ordinances, and non-compliance may be grounds for revocation of this permit.

9. The pump installation permit application and any related staff submittal approved by the Commission are incorporated into this permit by reference. This permit is also subject to the HWCPIS. If the HWCPIS are not followed and as a consequence water is wasted or contaminated, a lien on the property may result. Any variances from the HWCPIS shall be approved by the Chairperson prior to invoking the variance.

10. The work proposed in the pump installation permit application shall be completed within two (2) years from the date of permit approval, unless otherwise specified. The permit may be extended by the Chairperson upon a showing of good cause and good-faith performance. A request to extend the permit shall be submitted to the Chairperson no later than the date the permit expires.

11. The permittee, its successors, and assigns shall indemnify, defend, and hold the State of Hawaii harmless from and against any loss, liability, claim, or demand for property damage, personal injury, or death arising out of any act or omission of the applicant, assigns, officers, employees, contractors, and agents under this permit or relating to or connected with the granting of this permit.

12. Special conditions in the attached cover transmittal letter are incorporated herein by reference.

Date of Approval: March 6, 2008
Expiration Date: March 6, 2010

I have read the conditions and terms of this permit and understand them. I accept and agree to meet these conditions as a prerequisite and underlying condition of my ability to proceed and understand that I shall not commence work until I and the pump installer have signed, dated, and returned the permit to the Commission. I understand that this permit is not to be transferred to any other entity. I also understand that non-compliance with any permit condition may be grounds for revocation and fines of up to $5,000 per day starting from the permit date of approval.

Installer's Signature: ____________________________ Date: ____________
C-57, C-57a, or A License #: 21896

Printed Name: Bill Godwin Firm or Title: Beylik Drilling and Pump Service, Inc.

Please sign both copies of this permit, return one to the Chairperson, and retain the other for your records.

Attachments
**COMMISSION ON WATER RESOURCE MANAGEMENT**  
**ROUTE SLIP FOR PERMIT ISSUANCE 5/19/05**  

<table>
<thead>
<tr>
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<th>DATE: 6/3 MARCH 08</th>
<th>SUSPENSE DATE:</th>
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<td><strong>TO:</strong></td>
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<td>BAUER, G.</td>
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<td>IMATA, R.</td>
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</tbody>
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**WELL NUMBER** 0818-03  
**Anahola C**

**ATTACHMENTS FOR WELL CONSTRUCTION PERMIT:**
1. COVER LETTER  
2. PERMIT (2x)  
3. SDWB  
4. WWB  
5. CWB  
6. HEER  
7. LD  
8. HP  
9. OCCL  
10. SMA

**ATTACHMENTS FOR PUMP INSTALLATION PERMIT:**
1. COVER LETTER  
2. PERMIT (2x)  
3. SDWB  
4. WWB  
5. CWB  
6. HEER  
7. LD  
8. HP  
9. OCCL  
10. SMA

**TO BE SENT TO APPLICANT**

**FOR OFFICE USE ONLY**

---

**PLEASE:**
1. Review & Comment  
2. Type Draft  
3. Type Final  
4. File  
---

**Xerox ___ copies**
March 22, 2006

Mr. Keith Fujimoto  
County of Kauai  
Department of Water  
P.O. Box 1706  
Lihue, HI 96766  

Dear Mr. Fujimoto:

Letter of Assurance for Well No. 0818-03

We received your Pump Installation Permit application, and have completed the review process. In accordance with the State Water Code, §174C-84(a), a contractor is required to obtain a permit.

Once you have selected a contractor, the contractor shall sign and return to the Commission a copy of the original application, upon which a permit will be issued provided that the following conditions are met:

1. The contractor has no outstanding issues with the Commission.
2. There are no significant changes to the application.
3. There have been no significant changes to applicable laws, rules or regulations since the application date.
4. There have been no significant changes to hydrogeologic conditions since the application date.

Also, attached for your information are copies of comments from reviewing agencies.

If you have any questions, please contact Lenore Y. Nakama of the Commission staff at 587-0218 or toll-free at 974-4000 (Hawaii), 274-3141 (Kauai), 984-2400 (Maui), or 1-800-468-4644 (Lanai & Molokai), extension 70218.

Sincerely,

DEAN A. NAKANO  
Acting Deputy Director

LYN:ss  
Enclosures  
c: Kamuela Cobb-Adams, DHHL
STATE OF HAWAI'I
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
APPLICATION FOR A WELL CONSTRUCTION / PUMP INSTALLATION PERMIT

Instructions: Please print in ink or type and send completed application with attachments to the Commission on Water Resource Management, P.O. Box 621, Honolulu, Hawaii 96806. Application must be accompanied by 10 copies and a non-refundable filing fee of $25.00 payable to the Dept. of Land and Natural Resources. The Commission may not accept incomplete applications. For assistance, call the Regulation Branch at 587-0225. For further information and updates to this application form, visit http://www.hawaii.gov/dlnr/cwrm.

WELL LOCATION INFORMATION

1. STN. (WELL NO. already assigned) 0818-03 2. WELL NAME Anahola Well No.3 3. ISLAND Kauai 4. TNK 4.8.03.23

The following must be attached before this application is accepted as complete:
• Portion of 7.5-Minute Series USGS topographic map (scale 1:24,000) with well location labeled and include the name of the quad map
• Property tax map, showing well location referenced to established property boundaries
• Photograph of the proposed well site
• A schematic diagram showing the well site, access road and proposed well infrastructure

5. WELL OPERATOR'S NAME/COMPANY Keith Fujimoto 6. WELL OPERATOR'S CONTACT Phone 808-245-5449 Fax 808-245-5613 E-mail ksfujimoto@gmail.com

5. WELL OPERATOR'S NAME/COMPANY Keith Fujimoto 6. WELL OPERATOR'S CONTACT Phone 808-245-5449 Fax 808-245-5613 E-mail ksfujimoto@gmail.com

5. WELL OPERATOR'S NAME/COMPANY Keith Fujimoto 6. WELL OPERATOR'S CONTACT Phone 808-245-5449 Fax 808-245-5613 E-mail ksfujimoto@gmail.com

5. WELL OPERATOR'S NAME/COMPANY Keith Fujimoto 6. WELL OPERATOR'S CONTACT Phone 808-245-5449 Fax 808-245-5613 E-mail ksfujimoto@gmail.com

5. WELL OPERATOR'S NAME/COMPANY Keith Fujimoto 6. WELL OPERATOR'S CONTACT Phone 808-245-5449 Fax 808-245-5613 E-mail ksfujimoto@gmail.com

PROPOSED WELL INSTALLATION


11. Proposed Pumping Rate, gpm (gallons per minute) 24,000

12. Proposed Amount of Withdrawal, gpd (gallons per day) 432,000

13. Method of flow measurement D Flowmeter D Open Pipe D Well D Orifice D Other (explain)

14. Proposed Surveyor name and license number (a surveyor is required for all Well Construction Permits and may be required for some Pump Installation Permits)

Dennis M. Esaki No. 4383

15. Municipal (water systems serving greater than 25 individuals or 15 service connections)

16. Domestic Number of units to be served: 

17. Industrial (describe)

18. Irrigation (describe crop and no. of acres)

19. Military (describe)

20. Other (describe)

OTHER LEGAL REQUIREMENTS If required, Items 21. and 22. must be obtained before the Commission can legally issue a permit:

21. Conservation District Use Permit (CDUP) D Required, CDUP # date approved

D Not Required (attach documentation from OCCL)

D I have not checked with OCCL about whether or not a CDUP is required. I understand that checking with OCCL prior to making this application will expedite my review. I further understand that issues raised by this agency may delay or result in denial of the permit issuance, or revocation of the permit after it is issued.

22. Special Management Area Permit (SMA) D Required, SMA # date approved

D Not Required (attach documentation from applicable County agency)

D I have not checked with the County about whether or not an SMA Permit is required. I understand that checking with the County prior to making this application will expedite my review. I further understand that issues raised by this agency may delay or result in denial of the permit issuance, or revocation of the permit after it is issued.

23. Historic Preservation Division (HPD) of the Department of Land and Natural Resources D I have consulted with the HPD regarding potential impacts of well construction activities on historic sites. I have attached applicable documentation from the HPD.

D I have not consulted with the HPD regarding potential impacts of well construction activities on historic sites. I understand that checking with the HPD prior to making this application will expedite my review. I further understand that issues raised by this agency may delay or result in denial of the permit issuance, or revocation of the permit after it is issued.

Additional remarks, explanations, etc. (attach additional sheet if more space is needed)

NOTE: Signing below indicates that the signatories understand and swear that the information provided is accurate and true to the best of their knowledge. In the event that the application is not completed correctly, any permit may be suspended until the item is brought in to compliance, and any work done while the permit is in suspension may result in fines of up to $5000/day.

24. WELL DRILLER (Must be filled out if application is for Well Construction)

D Keith Fujimoto 21986

Licensee business name C-57 License No. 04-57-03-60-00-00

Signature Print Date

Address 2550 Ewa Rd. Kapa'a, HI 96732

Phone Fax E-mail

25. PUMP INSTALLER (Must be filled out if application is for Pump installation)

To Be Determined

Licensee business name C-57/C-57a/A License No. SAME.

Signature Print Date

Address

Phone Fax E-mail
**PROPOSED WELL SECTION** (Please attach schematic if different from diagram provided below)

For non-salt water Basal Wells - bottom elevation of well should not be deeper than 1/4 of aquifer thickness or 2 ft. from water surface or 500 ft. whichever is less.

Solid Casing Material:
- Carbon Steel: compliant with (check one or more): □ ANSI/AWWA C200 □ API Spec 5L □ ASTM A53 □ ASTM A139
- Stainless Steel: (check one): □ ASTM A409 (production wells) □ ASTM A312 (monitor wells)
- ABS Plastic conforming to ASTM F490 and ASTM D1527: (check one) □ Schedule 40 □ Schedule 80
- PVC Plastic conforming to ASTM F490 and (ASTM D1785 or ASTM D2241): (check one): □ Schedule 40 □ Schedule 80 □ Schedule 120
- Thermoset Plastic: (check one) □ Filament Wound Resin Pipe conforming to ASTM D2996 □ Centrifugally Cast Resin Pipe conforming to ASTM D2996 □ Reinforced Plastic Mortar Pressure Pipe conforming to ASTM D3517 □ Glass Fiber Reinforced Resin Pressure Pipe conforming to AWWA C950 □ PTFE Fluorocarbon Tubing conforming to ASTM D3296 □ FEP Fluorocarbon Tubing conforming to ASTM D3296

Open Casing Material:
- Carbon Steel: compliant with (check one or more): □ ANSI/AWWA C200 □ API Spec 5L □ ASTM A53 □ ASTM A139
- Stainless Steel: (check one): □ ASTM A409 (production wells) □ ASTM A312 (monitor wells)
- ABS Plastic conforming to ASTM F490 and ASTM D1527: (check one) □ Schedule 40 □ Schedule 80
- PVC Plastic conforming to ASTM F490 and (ASTM D1785 or ASTM D2241): (check one): □ Schedule 40 □ Schedule 80 □ Schedule 120
- Thermoset Plastic: (check one) □ Filament Wound Resin Pipe conforming to ASTM D2996 □ Centrifugally Cast Resin Pipe conforming to ASTM D2996 □ Reinforced Plastic Mortar Pressure Pipe conforming to ASTM D3517 □ Glass Fiber Reinforced Resin Pressure Pipe conforming to AWWA C950 □ PTFE Fluorocarbon Tubing conforming to ASTM D3296 □ FEP Fluorocarbon Tubing conforming to ASTM D3296

Example: Estimated + 2 ft. Water Level Elev. \[ Bottom Elevation of Well Limit = (\text{Water Elevation} + \frac{\text{Water Level Elev.}}{4}) \]

* The approximate elevation must be referenced to mean sea level (msl) at the time of application filing. Final elevations of well components shall be submitted in the Well Completion/Well Abandonment reports and referenced to a benchmark which has been established by a surveyor licensed by the State.

For non-salt water Basal Wells - bottom elevation of well should not be deeper than 1/4 of aquifer thickness or 2 ft. from water surface or 500 ft. whichever is less.
April 4, 2006

Dean Nakano, Acting Deputy Director
Commission on Water Resource Management
P.O. Box 621
Honolulu, Hawai‘i 96809

Dear Mr. Nakano:

SUBJECT: Chapter 6E-8 Historic Preservation Review [State/DHHL] – Pump Installation Permit Application
Anahola Well No. 3 (Well Nos. 0818-03)
Anahola Ahupua‘a, Kawaihau District, Island of Kaua‘i
TMK: (4) 4-8-003:023

The aforementioned project is for a well for the Shannon Valley Estates development.

We believe that "no historic properties will be affected" by this undertaking because:

- a) intensive cultivation has altered the land
- b) residential development/urbanization has altered the land
- c) previous grubbing/grading has altered the land
- d) an acceptable archaeological assessment or inventory survey found no historic properties
- e) this project has gone through the historic review process, and mitigation has been completed
- f) other: There are already two existing wells and pumps on this parcel. Planned undertaking will be within previously disturbed stratum.

In the event that historic resources, including human skeletal remains, are identified during routine construction activities, all work needs to cease in the immediate vicinity of the find, the find needs to be protected from additional disturbance, and the State Historic Preservation Division, Kauai Section, needs to be contacted immediately at (808) 742-7033.

Aloha,

Melanie Chinem, Administrator
State Historic Preservation Division

NM:dlb
February 17, 2006

TO: Honorable Chiyoue L. Fukino, M.D., Director
Department of Health
Attention: Director’s Office
Harold Yee, Wastewater Branch
William Wong, Safe Drinking Water Branch
Alec Wong, Clean Water Branch

FROM: Peter T. Young, Chairperson
Commission on Water Resource Management

SUBJECT: Pump Installation Permit Application
Anahola Well No. 3 (Well No. 0818-03)

Transmitted for your review and comment is a copy of the captioned Pump Installation permit application.

We would appreciate your comments on the captioned application for any conflicts or inconsistencies with the programs, plans, and objectives specific to your department. Please respond by returning this cover memo form by March 17, 2006. If we do not receive comments or a request for additional review time by this date, we will assume that you have no comments.

Please find the attached maps to locate the proposed well. If you have any questions about this permit application, request additional information, or request additional review time, please contact Lenore Y. Nakama of the Commission staff at 587-0218.

LYN: ss
Attachment(s)

RESPONSE:

This well qualifies as a source which will serve as a source of potable water to a public water system (defined as serving 25 or more people at least 60 days per year or has 15 or more service connections) and must receive Director of Health approval prior to its use to comply with Hawaii Administrative Rules (HAR), Title II, Chapter 20, Rules Relating to Potable Water Systems, §11-20-29.

This well does not qualify as a source serving a public water system (serves less than 25 people or more people at least 60 days per year or 15 service connections) and if the well water is used for drinking, the private owner should test for bacteriological and chemical presence before initiating such use and routinely monitor the water quality thereafter. However, if future planned use from this source increases to meet the public water system definition then Director of Health approval is required prior to implementation.

If the well is used to supply both potable and non-potable purposes in a single system, the user shall eliminate cross-connections and backflow connections by physically separating potable and non-potable systems by an air gap or an approved backflow preventer, and by clearly labeling all non-potable spigots with warning signs to prevent inadvertent consumption of non-potable water. Backflow prevention devices should be routinely inspected and tested.

It does not appear that this well will be used for consumptive purposes and is not subject to Safe Drinking Water Regulations.

For the applicant’s information, a source of possible wastewater contamination is not located near the proposed well site (information attached).

An NPDES permit is required.

Other relevant DOH rules/regulations, information, or recommendations are attached.

In the event that the location of the well changes but is still within the parcel described on this application, our division considers the comments to still be applicable, and we do not need to review the new location.

No comments/objections

Contact Person: Lani Monikami
Phone: 586-4294

Signed: Oshi Monikami
Date: 02-20-06
STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
P.O. BOX 821
HONOLULU, HAWAII 96809

February 17, 2006

TO: Honorable Chiyome L. Fukino, M.D., Director
Department of Health
Attention: Director’s Office
Harold Yee, Wastewater Branch
William Wong, Safe Drinking Water Branch
Alec Wong, Clean Water Branch

FROM: Peter T. Young, Chairperson
Commission on Water Resource Management

SUBJECT: Pump Installation Permit Application
Anahola Well No. 3 (Well No. 0818-03)

Transmitted for your review and comment is a copy of the captioned Pump Installation permit application.

We would appreciate your comments on the captioned application for any conflicts or inconsistencies with the programs, plans, and objectives specific to your department. Please respond by returning this cover memo form by March 17, 2006. If we do not receive comments or a request for additional review time by this date, we will assume that you have no comments.

Please find the attached maps to locate the proposed well. If you have any questions about this permit application, request additional information, or request additional review time, please contact Lenore Y. Nakama of the Commission staff at 587-0218.

LYN:ss
Attachment(s)

RESPONSE:

This well qualifies as a source which will serve as a source of potable water to a public water system (defined as serving 25 or more people at least 60 days per year or has 15 or more service connections) and meet receiving Director of Health approval prior to its use to comply with Hawaii Administrative Rules (HARM), Title 11, Chapters 20, Rules Relating to Public Water Systems, 21-20-29.

This well does not qualify as a source serving a public water system (serves less than 25 people or more people at least 60 days per year or 15 service connections) and if the well water is used for drinking, the private owner should serve for bacteriological and chemical presence before installing such one and routinely monitor the water quality thereafter. However, if future plans are from this source taxonomic to make the public water system definition then Director of Health approval is required prior to implementation.

If the well is used to supply both potable and non-potable purposes in a single system, the user shall eliminate cross-connections and backflow connections by physically separating potable and non-potable systems by an air gap or an approved backflow preventer, and by clearly labeling all non-potable spigots with warning signs to prevent inadvertent contamination of non-potable water. Backflow prevention devices should be routinely inspected and tested.

It does not appear that this well will be used for consumptive purposes and is not subject to Safe Drinking Water Regulations.

For the applicant’s information, a source of possible wastewater contamination is not located near the proposed well site (information attached).

An NRDES permit is required.

Other relevant DOH rules/regulations, information, or recommendations are attached.

In the event that the location of the well changes but is still within the parcel described on this application, our division considers the comments to still be applicable, and we do not need to review the new location.

No comments/objections

Contact Person: Stuart Yamada

Phone: 586-4258

Date: 2/28/06

Signed: 

PAGE: 007 R=96%
February 17, 2006

TO: Honorable Chiyoue L. Fukino, M.D., Director
Department of Health

Attention: Director's Office
Harold Yee, Wastewater Branch
William Wong, Safe Drinking Water Branch
Alec Wong, Clean Water Branch

FROM: Peter T. Young, Chairperson
Commission on Water Resource Management

SUBJECT: Pump Installation Permit Application
Anahola Well No. 3 (Well No. 0818-03)

Transmitted for your review and comment is a copy of the captioned Pump Installation permit application.

We would appreciate your comments on the captioned application for any conflicts or inconsistencies with the programs, plans, and objectives specific to your department. Please respond by returning this cover memo form by March 17, 2006. If we do not receive comments or a request for additional review time by this date, we will assume that you have no comments.

Please find the attached maps to locate the proposed well. If you have any questions about this permit application, request additional information, or request additional review time, please contact Lenore Y. Nakama of the Commission staff at 587-0218.

LYN:ss
Attachment(s)

RESPONSE:

1. This well qualifies as a source which will serve as a source of potable water to a public water system (defined as serving 25 or more people at least 60 days per year or has 35 or more service connections) and must receive Director of Health approval prior to its use to comply with Hawaii Administrative Rules (HAR), Title 11, Chapter 20, Rules Relating to Potable Water Systems, §11-20-29.

2. This well does not qualify as a source serving a public water system (serves less than 25 people or more people at least 60 days per year or 35 service connections) and if the well is used for drinking, the private owner should see for bacteriological and chemical analysis before initiating such use and routinely monitor the water quality thereafter. However, if future plans exist from this source increases to meet the public water system definition then Director of Health approval is required prior to implementation.

3. If the well is used to supply both potable and non-potable purposes in a single system, the user shall eliminate cross-connections and backflow connections by physically separating potable and non-potable systems by an air gap or an approved backflow preventer, and by clearly labeling all non-potable streams with warning signs to prevent inadvertent consumption of non-potable water. Backflow preventer devices should be routinely inspected and tested.

4. It does not appear that this well will be used for consumption purposes and is not subject to Safe Drinking Water Regulations.

5. For the applicant's information, a source of possible wastewater contamination [fly] is not located near the proposed well site (information attached).

6. An NPDES permit is required.

7. Other relevant DOH rules/regulations, information, or recommendations are attached.

8. In the event that the location of the well changes but is still within the parcel described on this application, our division considers the comments to still be applicable, and we do not need to review the new location.

No comments/objections

Contact Person: Alec Wong
Phone: 586-4309
Date: 2/22/06

Signed: Alec Wong
Date: 2/22/06
The Department of Health, Clean Water Branch has the following comments:

For Well-Drilling Activities

Any discharge to State waters of treated process wastewater effluent associated with well drilling activities is regulated by Hawaii Administrative Rules, Title 11, Chapter 55, Appendix I, effective September 22, 1997. Treated process wastewater effluent covered by this general permit includes well drilling slurries, lubricating fluids wastewaters, and well purge wastewaters. This general permit does not cover well pump testing. The applicable Notice of Intent Forms and filing fee shall be submitted at least thirty (30) days before the start of discharge to the Department of Health, Clean Water Branch at 919 Ala Moana Boulevard, Room 301, Honolulu, Hawaii 96814-4920 or P.O. Box 3378, Honolulu, Hawaii 96801-3378. Inquiries may be directed to the Clean Water Branch at (808) 586-4309 or by fax at (808) 586-4352.

2. For Well Pump Testing

The discharger shall take all measures necessary to prevent the discharge of pollutants from entering State waters. Such measures shall include, if necessary, containment of the initial discharge until the discharge is essentially free of pollutants. If the discharge is entering a stream or river bed, best management practices shall be implemented to prevent the discharge from disturbing the clarity of the receiving water. If the discharge is entering a storm drain, the discharger must obtain written permission from the owner of that storm drain prior to discharge. Furthermore, best management practices shall be implemented to prevent the discharge from collecting sediments and other pollutants prior to entering the storm drain.

JS/cr
February 17, 2006

TO: Russell Tsuji, Administrator
Land Division

FROM: Dean Nakano, Acting Deputy Director
Commission on Water Resource Management

SUBJECT: Pump Installation Permit Application
Anahola Well No. 3 (Well No. 0818-03)

Transmitted for your review and comment is a copy of the captioned Pump Installation permit application.

We would appreciate your comments on the captioned application with regard to the programs, plans, and objectives specific to your division. Please respond by returning this cover memo form by March 17, 2006. If we do not receive comments or a request for additional review time by this date, we will assume you have no comments.

Please find the attached maps to locate the proposed well. If you have any questions about this permit application, request additional information, or request additional review time, please contact Lenore Y. Nakama of the Commission staff at 587-0218.

LYN:ss
Attachment(s)

RESPONSE:

[ ] A water lease/permit is required of this applicant and an application for such will be requested by our division.

[XX] A water lease/permit is not required of this applicant. from DLNR.

[ ] A water lease/permit has been obtained by the applicant through lease no.

[ ] Other relevant Land Division rules/regulations, information, or recommendations are attached.

[ ] No objections

[XX] Other comments: The landowner of the well site is the Department of Hawaiian Home Lands. The applicant may be subject to its permitting policy.

Contact Person: Gary Martin Phone: 587-0421

Signed: Gary Martin Date: FEB 22 2006
February 17, 2006

Mr. Keith Fujimoto  
County of Kauai  
Department of Water  
P.O. Box 1706  
Lihue, HI 96766  

Dear Mr. Fujimoto:

Pump Installation Permit Application for Well No. 0818-03

We have received your Pump Installation permit application and filing fee for the Anahola Well No. 3 well (Well No. 0818-03). However, a contractor is required to obtain a permit in accordance with the State Water Code, §174C-84(a). Because you have not identified a contractor, your application will not be accepted as complete until a contractor signs and completes section 25 on the application form. However, we will process your incomplete application for review, and if the review warrants the issuance of a permit, a letter of assurance will be issued in lieu of the permit. The letter of assurance will indicate that a permit will be issued when the contractor signs the application, and the following conditions are met: a) the contractor has no outstanding issues with the Commission; b) there have been no significant changes to the application; c) there have been no significant changes to applicable laws, rules, regulations; d) there have been no significant changes to hydrologic conditions.

For your information, the attached table describes the process, responsible parties, and deadline requirements for drilling or modifying a well and installing, modifying, or replacing a pump.

By this acceptance letter, we are also notifying the well operator/landowner that water may not be pumped for purposes other than testing until the certificate of pump installation completion letter is issued to the well operator and landowner.

If you have any questions about your permit application, please contact Lenore Y. Nakama of the Commission staff at 587-0218 or toll-free at 974-4000 (Hawaii), 274-3141 (Kauai), 984-2400 (Maui), or 1-800-468-4644 (Lanai & Molokai) extension 70218.

Sincerely,

DEAN A. NAKANO  
Acting Deputy Director

LYN:ss  
Attachment  
c: Kamuela Cobb-Adams, Department of Hawaiian Home Lands
February 17, 2006

TO: Honorable Chiyome L. Fukino, M.D., Director
   Department of Health
   Attention: Director's Office
   Harold Yee, Wastewater Branch
   William Wong, Safe Drinking Water Branch
   Alec Wong, Clean Water Branch

FROM: Peter T. Young, Chairperson
      Commission on Water Resource Management

SUBJECT: Pump Installation Permit Application
         Anahola Well No. 3 (Well No. 0818-03)

Transmitted for your review and comment is a copy of the captioned Pump Installation permit application.

We would appreciate your comments on the captioned application for any conflicts or inconsistencies with the programs, plans, and objectives specific to your department. Please respond by returning this cover memo form by March 17, 2006. If we do not receive comments or a request for additional review time by this date, we will assume that you have no comments.

Please find the attached maps to locate the proposed well. If you have any questions about this permit application, request additional information, or request additional review time, please contact Lenore Y. Nakama of the Commission staff at 587-0218.

LYN:ss
Attachment(s)

RESPONSE:

[1] This well qualifies as a source which will serve as a source of potable water to a public water system (defined as serving 25 or more people at least 60 days per year or has 15 or more service connections) and must receive Director of Health approval prior to its use to comply with Hawaii Administrative Rules (HAR), Title II, Chapter 20, Rules Relating to Potable Water Systems, §11-20-29.

[1] This well does not qualify as a source serving a public water system (serves less than 25 people or more people at least 60 days per year or 15 service connections) and if the well water is used for drinking, the private owner should test for bacteriological and chemical presence before initiating such use and routinely monitor the water quality thereafter. However, if future planned use from this source increases to meet the public water system definition then Director of Health approval is required prior to implementation.

[1] If the well is used to supply both potable and non-potable purposes in a single system, the user shall eliminate cross-connections and backflow connections by physically separating potable and non-potable systems by an air gap or an approved backflow preventer, and by clearly labeling all non-potable spigots with warning signs to prevent inadvertent consumption of non-potable water. Backflow prevention devices should be routinely inspected and tested.

[1] It does not appear that this well will be used for consumptive purposes and is not subject to Safe Drinking Water Regulations.

[1] For the applicant's information, a source of possible wastewater contamination [ ] is not located near the proposed well site (information attached).

[1] An NPDES permit is required.

[1] Other relevant DOH rules/regulations, information, or recommendations are attached.

[1] In the event that the location of the well changes but is still within the parcel described on this application, our division considers the comments to still be applicable, and we do not need to review the new location.

[1] No comments/objections

Contact Person: ____________________ Phone: ____________________
Signed: __________________________ Date: __________________________
February 17, 2006

TO: Russell Tsuji, Administrator
   Land Division

FROM: Dean Nakano, Acting Deputy Director
      Commission on Water Resource Management

SUBJECT: Pump Installation Permit Application
         Anahola Well No. 3 (Well No. 0818-03)

Transmitted for your review and comment is a copy of the captioned Pump Installation permit application.

We would appreciate your comments on the captioned application with regard to the programs, plans, and objectives specific to your division. **Please respond by returning this cover memo form by March 17, 2006.** If we do not receive comments or a request for additional review time by this date, we will assume you have no comments.

Please find the attached maps to locate the proposed well. If you have any questions about this permit application, request additional information, or request additional review time, please contact Lenore Y. Nakama of the Commission staff at 587-0218.

LYN:ss
Attachment(s)

RESPONSE:

[ ] A water lease/permit is required of this applicant and an application for such will be requested by our division.

[ ] A water lease/permit is **not** required of this applicant.

[ ] A water lease/permit has been obtained by the applicant through lease no. ____________________.

[ ] Other relevant Land Division rules/regulations, information, or recommendations are attached.

[ ] No objections

[ ] Other comments:

Contact Person: ___________________________ Phone: __________

Signed: ___________________________ Date: __________
February 17, 2006

TO: Melanie Chinen, Administrator
    Historic Preservation

FROM: Dean Nakano, Acting Deputy Director
       Commission on Water Resource Management

SUBJECT: Pump Installation Permit Application
          Anahola Well No. 3 (Well No. 0818-03)

Transmitted for your review and comment is a copy of the captioned Pump Installation permit application.

We would appreciate your comments on the captioned application with regard to the programs, plans, and objectives specific to your division. Please respond by returning this cover memo form by March 17, 2006. If we do not receive comments or a request for additional review time by this date, we will assume you have no comments.

Please find the attached maps to locate the proposed well. If you have any questions about this permit application or request additional review time by this date, please contact Lenore Y. Nakama of the Commission staff at 587-0218. If you require additional information regarding specific information that can be provided by the applicant, please contact the applicant directly at the contact information provided on the application form.

LYN:ss
Attachment(s)

RESPONSE:

[ ] This is a [ ] public (county or state) project [ ] private project and [ ] will [ ] may disturb historic sites.

[ ] We concur that the work described under this permit will not disturb historic sites.

[ ] We do not concur that the work described under this permit will not disturb historic sites. We require the following for our concurrence:

Contact Person: ___________________________  Phone: _____________

Signed: ___________________________  Date: ___________
### PUBLIC RECORD DATA

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This information has been supplied by third parties and has not been independently verified by Hawaii Information Service and is, therefore, not guaranteed.
To: Commission on Water Resource Management  
Department of Land & Natural Resources  
State of Hawaii  
1151 Punchbowl Street  
Honolulu, Hawaii 96809

Attention: Mr. Ryan Imata, Room 227

Subject: WELL CONSTRUCTION/PUMP INSTALLATION PERMIT  
ANAHOLA WELL NO. 3  
STATE WELL NO. 0818-03  
TMK: 4-8-03:23 (FOURTH)

We are sending you herewith:

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For:  
- [ ] Information/Files  
- [ ] Review/Comments  
- [ ] Review/Approval  
- [ ] Approval/Signature  
- [x] ACTION  
- [ ] Revise/Re-Submittal  
- [ ] Reply Requested  
- [ ] USE

Remarks:

We herewith submit the attached application for a Well Pump Installation Permit on behalf of Kauai Dept. of Water and Dept. of Hawaiian Home Lands for processing.

If there are any questions, please call the undersigned.

Very truly yours,

By:

Sheldon T. Yamamoto  
President

cc: Keith Fujimoto, Kauai DOW  
Kamuela Cobb-Adams, DHHL  
STY:cyk  
DLNRCWWR03.DOC
NAME/NUMBER : 96823083
PAGE : 1
START TIME : FEB-29-2008 11:11AM FRI
ELAPSED TIME : 00'16"
MODE : STD ECM
RESULTS : [ O.K.]

STATE O. HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
APPLICATION FOR A WELL CONSTRUCTION /
PUMP INSTALLATION PERMIT

WELL LOCATION INFORMATION

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<th>Description</th>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>Permit no. 0806-03</td>
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<tr>
<td>2.</td>
<td>Anaehoomu Well No. 3</td>
</tr>
<tr>
<td>3.</td>
<td>Kauai</td>
</tr>
</tbody>
</table>

NAME : Dennis M. Esaki
ADDRESS : No. 4383

PROPOSED WELL CONSTRUCTION

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
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<tbody>
<tr>
<td>7.</td>
<td>Proposed Work</td>
</tr>
<tr>
<td>7A.</td>
<td>Construction Type</td>
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<td>7B.</td>
<td>Method of Construction</td>
</tr>
</tbody>
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PROPOSED PUMP INSTALLATION

<table>
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<tr>
<th>Item</th>
<th>Description</th>
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<tr>
<td>11.</td>
<td>Proposed Pumps &amp; Pump Sets</td>
</tr>
</tbody>
</table>

OTHER LEGAL REQUIREMENTS

1. Conservation District Use Permit (CDUP)
   - Required
   - COUP: 8

2. Water Conservation District Use Permit (WCDUP)
   - Required
   - COUP: 8

3. Proposed Well Construction Permit (WCP)
   - Required
   - COUP: 8

4. Proposed Pumps & Pump Sets Permit (PPSP)
   - Required
   - COUP: 8

5. Additional requirements as per WPRM regulations.

NOTE: The applicant is required to submit a completed application form along with all required documents and fees. Upon approval, the applicant shall be notified in writing. For more information, contact the Commission on Water Resource Management at 808-587-0219.

For signature, (Lea)
Barry,

I spoke to Lenore Nakama who is the regulator for Kauai, and Kevin Gooding, our state geologist, and the previous test at 500 gpm appears to be sufficient to allow us to issue a 350 gpm pump permit once a contractor is selected.

Let me know if you have any questions.

Ryan

"Barry K. Muranaka" <bkm@akinaka.com>

Ryan - The County has requested to change the flow rate for the well. We are now going with 350 gpm (vs 300 gpm). Will we need to revise the application?

Please call or email me if you have any questions.

Thanks,
Barry

Confidential and Privileged E-Mail Communication
Barry K. Muranaka, P.E.
Executive Vice-President
Akinaka & Associates, Ltd.
3049 Ualena Street, ste 500
Honolulu, Hawaii 96819-1947
Ph: 808-836-1900 ext 656
Fx: 808-836-8852
March 22, 2006

Mr. Keith Fujimoto  
County of Kauai  
Department of Water  
P.O. Box 1706  
Lihue, HI 96766

Dear Mr. Fujimoto:

Letter of Assurance for Well No. 0818-03

We received your Pump Installation Permit application, and have completed the review process. In accordance with the State Water Code, §174C-84(a), a contractor is required to obtain a permit.

Once you have selected a contractor, the contractor shall sign and return to the Commission a copy of the original application, upon which a permit will be issued provided that the following conditions are met:

1. The contractor has no outstanding issues with the Commission.
2. There are no significant changes to the application.
3. There have been no significant changes to applicable laws, rules or regulations since the application date.
4. There have been no significant changes to hydrogeologic conditions since the application date.

Also, attached for your information are copies of comments from reviewing agencies.

If you have any questions, please contact Lenore Y. Nakama of the Commission staff at 587-0218 or toll-free at 974-4000 (Hawaii), 274-3141 (Kauai), 984-2400 (Maui), or 1-800-468-4644 (Lanai & Molokai), extension 70218.

Sincerely,

DEAN A. NAKANO  
Acting Deputy Director

LYN:ss  
Enclosures  
c: Kamuela Cobb-Adams, DHHL
No new wells have gone in.

Dean, you can tell Bob A. & DWS that they need to apply for a pump permit & that a 300 gpm pump is OK based on the past pump test. I will keep a copy of this email in the folder so I can remember to add that special condition per Roy's suggestion. thanks

Roy Hardy/DLNRIStateHiUS

Since they need a new permit:
1) must reapply
2) new standards apply including 96-hour test at 300 - unless, as it sounds, we give a special condition stating the 67-hour test at 500 gpm grants them a variance from this standard requirement. I'm assuming there are no other wells that went in since the previous test was performed in 92.

Lenore Y Nakama/DLNRIStateHiUS

Thanks Ryan for compiling the file info.

Thanks Kevin for Survey Branch assessment.

Roy, the standards require a 96-hour constant-rate test for public supply wells. They don't have a permit & would need to apply (prior permits expired & canceled). Would we require a new test according to standards or is this "grandfathered" since Glenn's recommendation of 350 gpm was based on the 67-hour test? Note that they are requesting to put in a smaller capacity than was recommended by Glenn.

Kevin L Gooding/DLNRIStateHiUS
They test pumped the well at about 500 gpm for 4020 minutes. Drawdowns were about 13 or 14 feet. In 1992 Glenn recommended 350 gpm pump capacity. The test pump was only 67 hours but this was before the Standards. Also, the test pump data looks stable.

Kauai DWS is asking for a 300 gpm pump. I think that 300 gpm is an acceptable pump capacity.

Ryan R Imata/DLNR/StateHiUS

I would consult with Kevin regarding the pump test, but the chlorides seemed to be pretty stable at 500 gpm.

Kevin might want to revisit the file, but I didn’t see any recommendations in there re: the pump size. In a recent Hawaii DWS case, a higher capacity pump was applied for, and since the capacity was supported by the pump test, we approved the installation.

Dean A Nakano/DLNR/StateHiUS

Ryan/Roy: Kauai DW wants to install a 300 gpm pump in Anahola III. However, the 300 gpm pump is higher than what was recommended by CWRM(?), which was to install a 200 gpm pump. Who made this determination and what was the rationale for the 200 gpm size? Are there any provisions for increasing the pump capacity to 300 gpm? Does the pump test data support a larger capacity pump? Apparently, Kauai DW as part of an agreement with DHHL wants to increase the pump size and install the pump.

Your response and recommendations will be appreciated. Thanks, Dean

----- Forwarded by Dean A Nakano/DLNR/StateHiUS on 12/27/2005 03:07 PM -----
Correction - this well in on Kauai.

I helped Sal at Akinaka on this a few days ago. I took a look in the file. Step drawdown and long term tests were run, looks like the long term test was for 500 gpm w/ 15 ft. of drawdown and 21 ppm chlorides. DHHL applied for 200 gpm and we issued a permit for the same on March 14, 1995. According to the database, a letter dated 7/3/97 indicated that DWS did not intend on installing pump.

Dean A Nakano/DLNR/StateHiUS

To all: Received a call from Bob Akinaka inquiring about an Anahola Well III drilled and tested by the State. The well was to be part of the DHHL Anahola Water System(?). Per Bob, recommendations were made concerning the pump size/capacity that should be installed in the well. Apparently the pump size "recommended" by the State differs from what Kauai County DW wants to install. Akinaka and Associates are assisting Kauai County DW with the development of this well/source.

I would appreciate your assistance in checking our files and providing a short recap of the status of the well and any recommendations therein.

Thanks to all for your assistance. Dean
Quite a bit, but still not the whole file. This should lend a little perspective. If you still have questions, please call.
July 3, 1997

Ms. Rae M. Loui
Commission on Water Resource Management
Dept. of Land & Natural Resources
P. O. Box 621
Honolulu, HI 96809

Dear Ms. Loui:

SUBJECT: After the fact pump installation and well construction permit applications for Haena Well (Well No. 1333-01), Puhi Well 5A (Well No. 5824-08), Puhi Well 5B (Well No. 5824-09), Puhi Well 3 (Well No. 5824-05), Puhi Well 4 (Well No. 5824-06), and Koloa Well “E” (Well No. 5427-03). Withdrawing permits for Wailua Homesteads Well No. 3’ (Well No. 0424-01) and Anahola Well “C” (Well No. 0818-03).

This is to acknowledge that the Department has complied with your directive of June 23, 1997, to “cease and desist all construction work immediately” on Puhi Wells 5A & 5B. The contractor was notified verbally on June 25, 1997, and with a confirming letter on June 27, 1997.

We are also submitting the required information for the following wells:

1. Haena Well (Well No. 1333-01) ✓
   Completed permanent pump installation report with as-built information.

2. Puhi Well 3 (Well No. 5824-05) ✓
   Completed permanent pump installation report with as-built information.

3. Puhi Well 4 (Well No. 5824-06) ✓
   Completed permanent pump installation report with as-built information.

4. Koloa Well “E” (Well No. 5427-03) ✓
   Completed permanent pump installation report with as-built information.
Ms. Rae M. Loui  
July 3, 1997  
RE: Well construction permit applications (various wells)  

page two

5. Puhi Well 5A (Well No. 5824-08)
   a. Completed well construction permit application.
   b. The well driller is completing the well completion report for the work completed to date. This will be submitted soon after it is completed.

6. Puhi Well 5B (Well No. 5824-09)
   a. Completed well construction permit application.
   b. The well driller is completing the well completion report for the work completed to date. This will be submitted soon after it is completed.

In addition to the above, we will not be drilling the Wailua Homesteads Well No. 3 and will not be installing the pump for the Anahola Well "C," and therefore will not be renewing their respective permits. Please consider these (two) permits as withdrawn.

We apologize for the inconvenience this has caused you. Please call Mel Matsumura at 808-245-5410 if there are any questions.

Sincerely,

Ernest Y. W. Lau  
Manager and Chief Engineer

MM:ls  
Enclosures

C:\\lynn\\loui.doc
Mr. Ernest W. Lau
Manager and Chief Engineer
Kauai Department of Water
P.O. Box 1706
Lihue, HI 96766

Dear Mr. Lau:

Well Construction / Pump Installation Permit Application for Hanamaulu 3 (Well No. 0124-02)
Well Construction / Pump Installation Permit Application for Pukaki (Well No. 0023-02)
Well Construction Permit Application for Kilauea Well #3 (Well No. 1125-03)
After-the-Fact Pump Installation Permit Application for Koloa E (Well No. 5427-03)

This is in response to your letters of April 25, 1997, May 2, 1997, and May 20, 1997. We have received the subject permit applications. However, your applications are incomplete. Matters which must be addressed before we accept your applications as complete are as follows:

1. Wailua Homesteads Well No. 3 (Well No. 0424-01)
The Well Construction Permit expired on May 5, 1997 (attached). Please submit the items required under Condition 4 within thirty (30) days of the date of this letter.

2. Anahola Well C (Well No. 0818-03)
The Pump Installation Permit expired on February 15, 1997 (attached). Please submit the as-built drawing of the installed pump required under Condition 7 within thirty (30) days of the date of this letter.

3. Haena Well (Well No. 1333-01)
The Pump Installation Permit expired on April 6, 1995 (attached). Please submit the Well Completion Report Part II and as-built drawing of the installed pump required under Condition 5 within thirty (30) days of the date of this letter.

4. Puhi Monitor (Well No. 5824-08)
Puhi Well No. 5 (Well No. 5824-09)
The Well Construction Permits expired on January 25, 1997 (attached). Our letter of October 18, 1996 requested the Well Completion Report Part I for Well No. 5824-08 (for the work completed to date) and also reminded you of the expiration date and need to request extension or make new application if both wells cannot be completed by the January 25, 1997 completion deadline (attached). Your letter of April 25, 1997 indicates that construction work on both wells is ongoing. However, because the permits have expired, new applications must be made to complete the wells. Any ongoing construction work is being done in violation of your permit and the State Water Code. You must cease & desist all construction work immediately until new well construction permits are approved. We have enclosed the appropriate application forms. Please submit the items required under Condition 4 for the work that has been completed to date for both Well Nos. 5824-08 & 09 within thirty (30) days of the date of this letter.
5. Thank you for updating us on the status of the Well Completion Reports for Puhi 5 (Well No. 5824-05) and Puhi 4 (5824-06). We will look forward to receiving the reports.

In anticipation of your submittal of the above items, we have routed the application to the Department of Health for their review and comment. Upon receipt of the items requested above, we will continue to process the subject applications, provided that no subsequent permit violations have occurred. Be advised that failure to comply with the terms and conditions of your permits may result in fines of up to $1000 per day.

We note that you have not yet identified the well drilling contractor or pump installation contractor who will be performing the work. To expedite the process, we will accept your completed application for processing without the contractor's signature; however, we will require your licensed contractor to sign the permit document prior to beginning any well construction or pump installation work.

If you have any questions, please contact Lenore Nakama of the Commission staff at 587-0218 or toll-free at 274-3141, extension 70218.

Sincerely,

RAE M. LOUI
Deputy Director

Attachments
(Copy of Well Construction Permit for Well No. 0424-01)
(Copy of Pump Installation Permit for Well No. 0818-03)
(Copy of Pump Installation Permit for Well No. 1333-01)
(Copy of Well Construction Permit for Well No. 5824-08)
(Copy of Well Construction Permit for Well No. 5824-09)
(Copy of CWRM Letter of October 18, 1997)
(Application for Permit, 3 Jan 97 WCPIA Form)
PUMP INSTALLATION PERMIT

for

Anahola Well C
(Well No. 0818-03)
Anahola, Kawaihau, Kauai

TO: Kaua‘i Department of Water
County of Kaua‘i
4398 Pua Loke
Lihue, HI 96766

In accordance with the Department of Land and Natural Resources Administrative Rules, Section 13-168, entitled "Water Use, Wells, and Stream Diversion Works", your application to install a pump in Anahola Well C (Well No. 0818-03) is approved subject to the following conditions:

STANDARD PUMP INSTALLATION PERMIT CONDITIONS

1. The Commission on Water Resource Management (Commission), P.O. Box 621, Honolulu, HI 96809, shall be notified, in writing, before any work covered by this permit commences.

2. The pump installation permit shall be for installation of a 200 gpm capacity, or less, pump in the well. A means to accurately measure water levels, acceptable to the Commission, shall be provided.

3. The proposed use shall not adversely affect existing or future legal uses of water in the area, including any surface water or established instream flow standards. This permit or the authorization to pump water from a well shall not constitute a determination of correlative water rights. The permittee is notified and by this provision understands that the quantity of water taken from the well could be reduced by the Commission in the future. This permit is not a commitment that the pump capacity permitted here or even some lesser amount is guaranteed in the future.

4. The applicant shall comply with all applicable laws, rules, and ordinances.

5. An approved flowmeter must be installed to measure withdrawals and a monthly record of withdrawals, water-levels, salinity, and temperature must be kept and reported to the Commission on a monthly basis, which conforms with the Commission’s September 16, 1992 direction on reporting requirements.
6. The pump installation permit may be revoked if work is not started within six (6) months of the date of issuance or if work is suspended or abandoned for six months. The work proposed in the pump installation permit application shall be completed within two years from the date of permit approval, unless otherwise specified. The permit may be extended by the Commission upon a showing of good cause and good-faith performance. A request to extend the permit shall be submitted to the Commission no later than three (3) months prior to the date the permit expires. If the commencement or completion date is not met, the Commission may revoke the permit after giving the permittee notice of the proposed action and an opportunity to be heard.

7. An as-built sectional drawing of the pump installation shall be submitted to the Commission within thirty (30) days after completion of work.

8. The pump installation permit application and staff submittal, approved by the Commission at its February 15, 1995 meeting, are incorporated into the permit by reference.

Special Condition

9. The applicant shall report semi-annually on its efforts to incorporate the foreseeable needs of Hawaiian Home Lands at Anahola, as agreed with the Department of Hawaiian Home Lands.

MICHAEL D. WILSON, Chairperson
Commission on Water Resource Management

Date of Issuance

I have read the conditions and terms of this permit and understand them. I accept and agree to meet these conditions as a prerequisite and underlying condition of my ability to proceed.

Applicant’s Signature: __________________________ Date: 4-6-95

Printed Name: Murl T. Nielsen

Firm or Title: Department of Water, County of Kauai

Please sign and return one copy of this permit to the Commission and retain a copy for your record.

cc: USGS
   Department of Health
   Safe Drinking Water Branch
   Ground Water Protection Program
   Wastewater Branch
   Department of Hawaiian Home Lands
TO: Kaua‘i Department of Water  
County of Kaua‘i  
4398 Pua Loke  
Lihue, HI 96766

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MICHAEL D. WILSON, Chairperson
Commission on Water Resource Management

Date of Issuance

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Applicant’s Signature: ____________________________ Date: ______________

Printed Name: __________________________________________

Firm or Title: ____________________________________________

Please sign and return one copy of this permit to the Commission and retain a copy for your record.

cc: USGS
   Department of Health
      Safe Drinking Water Branch
      Ground Water Protection Program
      Wastewater Branch
   Department of Hawaiian Home Lands
December 23, 1994

The Honorable Keith W. Ahue, Chairperson
Commission on Water Resource Management
Department of Land and Natural Resources
P. O. Box 621
Honolulu, Hawaii 96809

Dear Mr. Ahue:

Subject: Pump Installation Application, Anahola Municipal System, Kauai

In our letter of April 18, 1994 on the subject matter, the Department of Hawaiian Home Lands (DHHL) noted that discussions would be initiated with the County of Kauai regarding the operation and maintenance of the Anahola municipal system. Such discussions are underway.

DHHL requests that the Commission on Water Resource Management proceed with approval of the subject pump installation application.

Should you have any questions, please call me or have your staff call Darrell Yagodich at 586-3848. Mahalo for your continued support of Hawaiian home lands.

With warmest aloha,

Ho`aiiku L. Drake, Chairman
Hawaiian Homes Commission

cc: Commissioner Sheehan
     Mr. Murl Nielson
May 18, 1994

The Honorable Keith W. Ahue, Chairperson
Commission on Water Resource Management
Department of Land and Natural Resources
P. O. Box 621
Honolulu, Hawaii 96809

Dear Mr. Ahue:

Pump Installation Application
Anahola Municipal System, Kaua'i

The Commission on Water Resource Management deferred acting on this application at its meeting on March 15, 1994, to gather information. The Department of Hawaiian Home Lands (DHHL) recommended that approval of this permit be conditioned upon finalizing a new agreement with Kaua'i County Department of Water for this municipal system. Your staff has advised us that this is an inappropriate condition for a ministerial permit. Therefore, DHHL hereby withdraws its signature of approval (as landowner) from the permit application.

Should you have any questions, please call me or have your staff call Charley Ice, Planning Office, at 586-3836. I appreciate your cooperation in this matter.

Warmest aloha,

[Signature]
Hoaliku L. Drake, Chairman
Hawaiian Homes Commission

cc: Mr. Murl Nielson
1639L32
REGULATION BRANCH  
Commission on Water Resource Management

FROM: Ed  DATE: 4/27/94  FILE IN:

TO: INIT:  
E. SAKODA  F. Ching  
R. Hardy  L. Nakama  D. Higa  J. Zhang  

PLEASE:  
See Me  
Call  
Review & Comment  
Take Action  
Investigate & Report  
Draft Reply  
Acknowledge Receipt  
Type Draft  
Type Final  
Xerox ___ copies

REMARKS:  
Pee - re: Anaeho’ol Well  
Pump Inst. Permit. Shall we write to DHHL saying we will  
NOT act on PIP until an updated (license) agreement is  
reached between DHHL & Kauai Dow?

FOR YOUR:  
Approval  
Signature  
Information

Wayne Hiamume -  
production  
400 gpm  
200 gpm  
now 2000 gpm  
can run 6000 at any one time  
Torio to Mr. Kanai County
The Honorable Keith W. Ahue, Chairperson
Commission on Water Resource Management
Department of Land and Natural Resources
P. O. Box 621
Honolulu, Hawaii 96809

Dear Mr. Ahue:

Subject: Pump Installation Application, Anahola Municipal System, Kaua'i

Thank you for the opportunity to comment on a request by Kaua'i County Department of Water to install a pump at the new Well #3 (0818-03), in Anahola, Kaua'i. The Department of Hawaiian Home Lands (DHHL) understands that the Commission on Water Resource Management deferred acting on this application at its meeting on March 15, 1994.

DHHL is attempting to negotiate a new agreement for operation and maintenance of the Anahola municipal system. The construction of a distribution line to serve a private subdivision outside of Anahola has raised other concerns as well. It is timely that the agreement be clarified.

DHHL requests that, as a condition of approval of this pump installation application, negotiations for an updated (license) agreement between DHHL and the County of Kaua'i be completed.

Warmest aloha,

Hoaliku L. Drake, Chairman
Hawaiian Homes Commission

CC: Mr. Murl Nielson
1639L.31
April 28, 1994

Ms. Rae Loui  
Commission on Water Resource Management  
Department of Land and Natural Resources  
P. O. Box 621  
Honolulu, Hawaii  96809

RE:  Application for Pump Installation Permit,  
County of Kauai, Anahola Well No. 3

Dear Ms. Loui:

Thank you for taking the time to discuss with me the condition proposed by the Department of Hawaiian Home Lands for the County of Kauai's Anahola Water System pump installation permit. It is my understanding that the proposed condition will authorize issuance of a permit for an additional well pump (which I further understand is being sought by the County's Department of Water because the two existing pumps are currently operating at capacity), subject, however, to the permit being cancelled if DHHL and the County are unable to amend the 1960 Anahola Water System Agreement.

As I stated, my client, James Torio, and the Anahola Homesteaders Council, do not believe that the permit condition, as proposed, would provide the incentive necessary to compel the agencies to reach closure on updating the 1960 agreement. Instead, we would strongly urge that the pump installation permit not be issued until the 1960 agreement is in fact amended. The issue of the need to amend the agreement was raised by DHHL as far back as late 1992; however, as explained below, there appears to be a considerable amount of foot-dragging by the agencies, and we have no information which would lead us to believe that there has been any progress towards updating the agreement.

On March 16, 1993, DHHL Chairperson Hoaliku Drake wrote to the Chief Engineer of the Department of Water, referencing earlier discussions concerning amendments to the 1960 agreement between DHHL and the County, and formally requesting that the agreement be updated. On July 6, 1993, Alan T. Murakami of our office wrote to the Chief Engineer, urging that the agreement amended to address, among other things, the concerns raised by Mrs. Drake in her letter to the Department of Water. Copies of these letters, along with a copy of the 1960 agreement, are enclosed for your information.
A year after she sent her first letter to the Department of Water, Mrs. Drake again requested in writing on March 1, 1994, that the 1960 agreement be updated, and further that negotiations be commenced without delay between DHHL and the County. On March 17, 1994, I wrote to Mrs. Drake, informing her that, based upon our investigation concerning the implementation of the existing agreement, it appeared that the County had failed to remit to DHHL any proceeds derived from the County’s sale to non-homesteaders of water pumped from the Anahola wells. On behalf of my client, I further demanded that action be taken by DHHL to either collect the water sales revenues owed ($38,433.00), or rescind the 1960 agreement and enter into a new agreement with the County that would more adequately address DHHL’s concerns and the concerns of the Anahola homesteaders. On April 18, 1994, I received a reply from Mrs. Drake, stating that she had received my letter and was assigning Darrell Yagodich of DHHL’s Planning Office to look into the issues raised. Copies of these letters are also enclosed.

Despite the fact that a number of requests have now been made by DHHL to the County, and to DHHL by the Native Hawaiian Legal Corporation, urging that the 1960 agreement be updated, there is nonetheless absolutely no evidence of any progress towards a new agreement. Therefore, we request that the Department of Water’s application for a pump installation permit for Anahola Well No. 3 not be approved until a new agreement is reached.

Please do no hesitate to contact me if you have any questions.

Very truly yours,

ARNOLD L. LUM
Staff Attorney

Enclosures

c: Mr. Murl Neilson, Dept. of Water
Mrs. Hoaliku Drake, DHHL
Honorable Paula Ishii Morikami
Honorable Ezra Kanoho
Mr. James C. Torio
WHEREAS the DEPARTMENT OF HAWAIIAN HOME LANDS, hereinafter referred to as the "Hawaiian Homes," is desirous of formally turning over to the BOARD OF WATER SUPPLY, COUNTY OF KAUAI, hereinafter referred to as the "Board," the water system located in the Anahola Hawaiian Homes Commission Development, more particularly described as follows:

All transmission and distribution water mains, fire hydrants and appurtenances; a 150,000-gal. reinforced concrete reservoir, electrical control and its buildings; 2 deep wells and 2 deep well pumping units, a paved drive-way, a tank site containing 60,000 square feet of land, etc., all of these and others which are more fully described under State of Hawaii Department of Public Works Job No. 5827, Anahola Development Project, Anahola, Kauai, Hawaii, for the Hawaiian Homes Commission. Also, materials under Hawaiian Homes Commission Job No. 5956 consisting of 1 only 100,000-gal. elevated steel water tank, a horizontal pumping unit and controls, pipes and appurtenances which are within the tank site described under D. P. W. Job No. 5827; and

WHEREAS it has been necessary to rehabilitate Anahola Well No. 2, a part of the aforementioned water system:

NOW, THEREFORE, for and in consideration of the formal acceptance of the aforementioned system by the Board, Hawaiian Homes herein agrees to provide to the Board, interest free, the sum of TEN THOUSAND DOLLARS ($10,000.00), the sum necessary in the rehabilitation of said Anahola Well No. 2, the repayment of same to be made in the following manner: The Board shall within thirty (30) days after the close of each annual accounting period pay to Hawaiian Homes any net profit resulting from the operation of the aforementioned system. For the purpose of this agreement, the net profit shall be determined by deducting from the gross revenues of the aforementioned system the amortized cost of replacements of any parts of the aforementioned system, the cost of production, maintenance, repair, servicing and other

EXHIBIT "A"
incidental administrative and operational expenditures directly chargeable to the system. When in any one year the aforementioned system operates with a loss, such loss shall be deductible from revenues of the system from the immediately succeeding years.

When any other systems of the Board are connected to the aforementioned system, the Board shall credit to the account of the Department of Hawaiian Home Lands at the rate of $60.00 per million gallons for any and all water required by the systems so connected at a master meter or master meters to be installed by the Board at its own expense.

The Board will be required to make an annual accounting to the Hawaiian Homes within thirty (30) days after the close of each annual accounting period, the said accounting to be subject to audit by the State Comptroller upon request.

IN WITNESS WHEREOF, the parties hereto have executed these presents as of the __ day of ____________, 1960.

DEPARTMENT OF HAWAIIAN HOME LANDS

By
Chairman

By
Executive Director

STATE OF HAWAII
COUNTY OF KAUAII

On this _____ day of ____________, 1960, before me appeared MANUEL R. AGUIAR, JR., to me personally known, who, being by me duly sworn, did say that he is the Chairman of the BOARD OF WATER SUPPLY, COUNTY OF KAUAII; that the foregoing
Instrument was signed in behalf of said Board by authority of said Board, and the said MANUEL R. AGUIAR, JR., acknowledged said instrument to be the free act and deed of said Board; and that said Board has no corporate seal.

Notary Public, Fifth Judicial Circuit
State of Hawaii
My commission expires:

STATE OF HAWAII
CITY AND COUNTY OF HONOLULU

On this 3rd day of November, 1960, before me personally appeared W. C. KEA and A. K. PIHAIWA, to me personally known, who being by me duly sworn did say that they are the Chairman and the Executive Director of the DEPARTMENT OF HAWAIIAN HOME LANDS, respectively, and who executed the foregoing instrument and acknowledged that they executed the same as their free act and deed.

Notary Public, First Judicial Circuit
STATE OF HAWAII
My commission expires April 30, 1964.
March 16, 1993

Mr. Ray Sato, Manager and Chief Engineer
County of Kauai
Department of Water
4398 Pua Loke Street
Lihue, Hawaii 96766

Dear Mr. Sato:

SUBJECT: Aliomanu Estates Transmission Line

My staff has had a number of meetings with you and Mr. Kaluna to discuss the issues surrounding the construction of the subject pipeline extension and its implications for the future availability of water to serve our homestead developments. As a followup to these discussions, we believe that certain affirmative steps should be taken to resolve these concerns and restore the confidence of our homesteaders in the management and operation of the Anahola water system.

As you know, the well sites serving the Anahola system are located on Hawaiian homelands. Section 221 of the Hawaiian Homes Commission Act of 1920, as amended, gives DHHL a priority right to the use of water from this source to support the homesteading needs of our beneficiaries. Moreover, Act 325, SLH/1991 requires the counties to incorporate adequate reserves within the respective county water use and development plans to support DHHL's current and foreseeable homestead needs.

We believe that compliance with these requirements can best be achieved by imposing strict controls on the management of this valuable resource. In this regard, we recommend the following:

1. That the Operating Agreement between the Department of Water and DHHL be updated to acknowledge DHHL's priority right to the use of the water from this source pursuant to Section 221, HHCA and Act 325, SLH/1991; and
2. That the Operating Agreement also include a provision requiring DHHL approval of additional tie-ins to the Anahola Water system;

3. That a limit of forty (40) 5/8-inch meters or 25,000 gallons per day be placed on the withdrawal of water to serve the Aliomanu Estates Subdivision;

We appreciate your continued commitment to protecting this important resource, and believe that implementing these conditions will help to allay many of the concerns within the Anahola community regarding the pipeline extension and operation of the Anahola water system. Through improved coordination of our planning efforts, we can greatly enhance the management of the system.

We look forward to your early reply. Please direct any questions regarding this matter to Ben Henderson of our Planning Office at 586-3836.

Warmest Aloha,

Hoaliku L. Drake, Chairman
Hawaiian Homes Commission

HLD: bh/2769L
July 6, 1993

VIA MAIL & FACSIMILE - 1-245-5813
Mr. Raymond H. Sato
Manager and Chief Engineer
Department of Water
County of Kaua‘i
P. O. Box 1706
Lihue, Kaua‘i, Hawai‘i  96766-5706

Re: Anahola Water System

Dear Ray:

I am writing on behalf of James Torio and certain other members of the Anahola homestead community, who are alarmed at the failure of the County of Kaua‘i to include protections in pending water hookups to the Anahola Water system that will respect water rights of native Hawaiians. As you know, these homesteaders are seriously concerned about the prospects of more affluent private landowners creating water demands in the area sooner than the Department of Hawaiian Home Lands (DHHL) can deliver water to its beneficiaries. Without planning for the current and foreseeable water needs of beneficiaries, they may be left without this important resource as commitments are made on a "first-come-first-served" basis.

First of all, as I mentioned during our telephone conversation on July 1, 1993, I believe that the existing water agreement between your department and the DHHL may need to be updated, if not cancelled, because of supervening law. Primarily, the mandates of Act 325 (SLH 1991) are not reflected in the terms of that agreement. I learned that you are seeking a clarification of this question from the Corporation Counsel, to assure that you appreciate all the legal implications of changing this arrangement.

Secondly, even if the agreement can be maintained, I urge you to consider the requests of Chairperson Hoaliku Drake to amend that agreement, as outlined in her March 16, 1993 letter to you. Given amendments to the Hawaiian Homes Commission Act and Act 325 (SLH 1991) since that agreement, I believe it is imperative that the parties amend the agreement appropriately to reflect these changes in the law before actions are taken to commit water to private, non-Hawaiian water uses. It could be that these water users could be frustrated by these new requirements while relying on your actions to provide them water. If it is later determined that your actions cannot be legally sustained, your department may be liable for damages suffered by them. Such a result will not be in the interest of any of the parties.

Accordingly, I urge you to clarify the respective rights and liabilities involved before you take further actions to allow Aliomanu Estates and other non-Hawaiian subdivisions to tie in to
the Anahola water system. As part of that process, I urge you to resolve Ms. Drake's requests. Please also review your pending water use and development plan to assure that the current and foreseeable needs of the DHHL are incorporated in that plan. How soon do you expect the corporation counsel to provide you an opinion on these matters?

Thirdly, you indicated your willingness to provide me with your analysis of the impact of committing water to Aliomanu Estates, relative to the overall capacity of the water system. I asked for your worst case scenario, as well as your most likely scenario. You indicated that your experience with farmers on the county water system leads you to believe that relatively minor amounts of water would be utilized by the lot owners at Aliomanu Estates (at 59 cents per 1000 gallons).

Finally, I appreciated your cooperation in offering to send me documentation on the actions the County took to secure funding for water storage facilities in Anahola to comply with the settlement in Aki v. Beamer. Without water storage, fewer homes on homestead lands in Anahola can be built. I offered to help with your CIP request to support infrastructural development at Anahola.

Since you are leaving the County shortly, I ask that you give priority to resolving this issue prior to your departure. Given the posture of the subdivision development, time is of the essence. Thank you very much for your anticipated assistance with this matter.

Sincerely,

[Signature]

ALAN T. MURAKAMI
Attorney-at-law

ATM/pc

cc: Mr. James Torio
Ms. Hoaliku Drake, Chair - Dept. of Hawaiian Home Lands
Mr. Ben Henderson, Dept. of Hawaiian Home Lands
Representative Bertha Kawakami
March 1, 1994

Mr. Murl Nielsen, Manager
Water Department
County of Kaua'i
4398 Pua Loke Street
Lihu'e, Kauai  96766

Dear Mr. Nielsen:

Anahola Water System
Operating Agreement of 1960

It has come to our attention that one of the features in the 1960 Agreement (Exhibit A) by which the Department of Hawaiian Home Lands turned over operation of the Anahola wells and water system to the county -- an annual accounting of new connections, with any credits due from non-homestead service -- is not on file in our department. Our beneficiaries, through their attorney, have requested an accounting of these connections (Exhibit B).

If the County has maintained, or could assemble records to indicate the history of connections, we could answer their questions without delay. We request a response as to your understanding of this accounting, and a timetable for assembling the requested information.

As we have received a request from Arnold Lum, attorney at Native Hawaiian Legal Corporation, on behalf of a client, we will share our findings with them.

Recognizing that personnel changes have intervened since we earlier discussed updating the operations agreement, we wish to get this back on track without delay.

If you have questions, please call Darrell Yagodich in our Planning Office at 586-3836.

Warmest aloha,

Hoaliku L. Drake, Chairman
Hawaiian Homes Commission

HLD:ci/160SL.80
Enclosures
J cc:  Arnold Lum, Esq, Native Hawaiian Legal Corporation
March 17, 1994

Hoaliku L. Drake
Chairperson
Hawaiian Homes Commission
P. O. Box 1879
Honolulu, Hawaii  96805

Re: County Water Sales of Groundwater Under DHHL Lands At Anahola, Kauai

Dear Mrs. Drake:

As you may be aware, the Native Hawaiian Legal Corporation requested and recently received from the County of Kauai, certain documents and records relating to the County's operation of the water works system located on the Hawaiian Home Lands at Anahola, Kauai ("Anahola Water System"). These documents and records were obtained by NHLC pursuant to a request made on behalf of James C. Torio, a DHHL lessee at Anahola.

We have reviewed the above-referenced materials and the operating agreement entered into between the Department of Hawaiian Home Lands and County of Kauai on October 10, 1960 ("1960 Agreement" or "Agreement"), and would like to take this opportunity to report our findings to the Hawaiian Homes Commission.

The water works equipment that comprises the Anahola Water System was transferred by DHHL to the County's Board of Water Supply (now Department of Water) pursuant to the 1960 Agreement, upon the understanding that the County would thereafter pay to DHHL a portion of the revenues derived from the sale of groundwater to non-DHHL customers. However, to our knowledge, the County has failed to remit any proceeds from such water sales, and the amount presently owed to DHHL under the 1960 Agreement is $38,433.00. Because the County has breached the Agreement, we are hereby requesting that the Hawaiian Homes Commission either take action to collect the money owed to DHHL, or rescind the Agreement and enter into a contemporary operating agreement that will provide beneficiaries with a more equitable return from the County's sale of DHHL's groundwater.
I would like to take this opportunity to provide you with a brief overview of the County of Kauai's operation of the Anahola Water System, after it was transferred to the Board of Water Supply. Copies of the documents referred to herein are enclosed for your review.

In consideration for quitclaiming the Anahola Water System to the County of Kauai, the Board of Water Supply agreed as follows:

When any other systems of the Board are connected to the aforementioned system, the Board shall credit to the account of the Department of Hawaiian Home Lands at the rate of $60.00 per million gallons for any and all water required by the systems so connected at a master meter or master meters to be installed by the Board at its own expense.

Although the term "other systems of the Board" was not specifically defined in the 1960 Agreement, correspondence between DHHL and the County reveals that both parties construed this provision to require payment by the County to DHHL, at a rate of $60.00 per million gallons, for groundwater that was sold to customers located outside the boundaries of the Anahola Hawaiian Homesteads. This interpretation is evidenced in a February 20, 1962 letter to the Board of Water Supply from DHHL fiscal officer Archibald P. Akau, which requested payment in the amount of $568.02 for water purchased by the County for the Anahola Hawaiian Village, based upon 9,467,000 gallons of water that was sold to non-DHHL Village customers between October 10, 1960 and December 31, 1961. This construction is also reflected in the County's Anahola Water System annual statements of income and expense for the years 1963 through 1978. Each statement contains a specific reference to "Water Sales to Anahola Hawaiian Village . . . @ $60.00 per million gallons."

Although DHHL and the County were in accord in regard to their understanding that DHHL was to receive $60.00 for every million gallons of water sold to non-DHHL customers, their interpretations of the circumstances under which this obligation would arise were substantially at variance. On October 28, 1963, Abraham T. Matsuura, the Board of Water Supply's fiscal officer, wrote a letter to Hawaiian Homes Commissioner A. K. Piianaia, explaining that although the County in 1962 had sold 7,170,000 gallons of water to the Anahola Hawaiian Village, which should have resulted in a payment to DHHL in the amount of $430.20, such a payment would not be forthcoming. Mr. Matsuura's rationale was that because the cost to the County of operating the Anahola Water System in 1962 exceeded water sales revenues for that
year, the County was not obliged to make revenue payments to DHHL. Not
withstanding the fact that the 1960 Agreement did not state that the County of Kauai
would make such payments to DHHL only in the event that it realized a net profit, the
County nonetheless maintained that the 1960 Agreement relieved it from any such
obligation, so long as the Board’s operations resulted in a net loss.

On November 1, 1963, Chairman Piianaia wrote a follow-up letter to the
Board of Water Supply, requesting a detailed breakdown of the expenditures claimed
by the Board, since the inception of the Agreement. The Board’s response, on
November 13, 1963, was accompanied by copies of statements of income and
expenses indicating a net loss throughout the reporting period. Mr. Piianaia on
August 20, 1964, wrote a second letter, requesting that the Board disclose the method
used to compute the amortization cost of the Anahola Water System. In response,
Chief Engineer Walter L. Briant, Jr. furnished DHHL with a schedule of the system’s
annual amortized costs, as reflected in the County’s 1963 statement of income and
expenses.

Thereafter, the County furnished to DHHL, on a periodic non-annual
basis, statements of income and expenses through the year 1988, all of which showed
a net loss. See, County letters dated December 3, 1975; March 31, 1976; February
27, 1978; February 9, 1979; September 29, 1983; February 19, 1986 and October 30,
1989. There were no other records in the County’s files, after the County’s October
30, 1989 report, in regard to income and expense information for the Anahola Water
System.

NHLC was, however, able to obtain from the County copies of the water
sales records for the Anahola Water System, from April 23, 1985 through October 20,
1993. From these records, I was able to calculate the amount of water sold by the
County to non-DHHL customers. Except for the year 1988-89 and a portion of 1989-
90, sufficient information is available in the records to ascertain the actual amount
of water sold. I was also able to estimate the amount of water sold from January 1,

Based upon the County’s annual statements of income and expense
from October 10, 1960 through December 31, 1988, and the County’s water sales
records through October 20, 1993, the total amount of water sold by the County to
non-DHHL customers was 640,543,000 gallons. The data are summarized in Figure
1, attached hereto. There is no information in the County’s records, and no
documents have been produced by DHHL pursuant to NHLC’s Uniform Information
Practices Act requests of January 12 and January 23, 1994, which indicate that any
payments have been made to DHHL by the County. At a rate of $60.00 per million
gallons, the County thus owes DHHL the sum of $38,433.00.
We anticipate, however, that the County will claim it was not required to make any revenue payments to DHHL, because the 1960 Agreement excused such payments so long as the County’s operation of the Anahola Water System did not result in a net profit. Although the issues raised in regard to such a defense are largely beyond the scope of this letter, I would like to briefly apprise you of the results of our investigation into the County’s accounting practices, by which means the County was able to claim a 28-year loss, from 1960 through 1988.

When the Anahola Water System was transferred by DHHL to the County, the pump in Anahola Well No. 2 was in need of refurbishment. Pursuant to the 1960 Agreement, DHHL loaned to the County the sum of $10,000.00, which was applied to purchase a new pump and pay for its installation. The County was to repay the loan by tendering to DHHL, on an annual basis, the net profit derived by the County through the operation of the Anahola Water System, until the $10,000.00 loan was paid. Net profit was supposed to be calculated by deducting from gross revenues “the amortized cost of replacements of any parts” of the system, along with “the cost of production, maintenance, repair, servicing and other incidental administrative and operational expenditures directly chargeable to the system.” If in any year the system operated at a loss, the County could carry forward that loss to the following year or years.

It is important to note that the 1960 Agreement expressly provides that the net profit shall be determined based upon “the amortized cost of replacements of any parts” of the Anahola Water System. However, the County deducted from its gross water sales revenues not the amortized cost of the replacement parts -- for instance, the cost of the new pump -- but rather the amortized price of the original water works equipment that had been purchased and installed by the State of Hawaii in 1956, pursuant to DPW Job No. 5827, and in 1959 pursuant to DHHL Job No. 5956. Applying this accounting methodology, the County assigned a price of $216,810.00 to the original water works equipment, and then proceeded to charge against annual water sales revenues an amortized deduction based upon the value of the entire system.

In the course of our investigation, I consulted with a Certified Public Accountant, in regard to the County’s above-described accounting practices. Our consultant, who reviewed the 1960 Agreement and the records furnished by the

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1. The documents cited in regard to our investigation into the County’s accounting practices are not enclosed with this letter.
Hoaliku L. Drake  
March 17, 1994  
Page 5

County, concludes that the County should not have included in the basis for its deduction the original water works equipment purchased in 1956 and 1959, because the County did not incur any direct costs when it acquired the equipment. Moreover, the County’s treatment of the State-purchased equipment violated Generally Accepted Accounting Practices, which would have required the County to claim the original water works equipment as income. Because the 1960 Agreement did not allow the County to offset against water sales revenues the equipment acquired from the State, the only amortized deduction allowable under the Agreement would have been the cost of the new pump for Anahola Well No. 2, which was $5,830.00, along with any other replacement parts.2

Assuming that the useful life of a well pump is ten years, and therefore that the County could have depreciated the cost of the new pump on a ten-year straight-line basis, i.e., at $538.00 per year, the County would have had to report a net profit from the very inception of the Agreement. Although the County’s statements of income and expenses not include data on gross revenues from water sales to non-DHHL customers, I divided the gross revenues derived from sales to DHHL customers (which were reported annually) by the number of million gallons sold to DHHL customers, to arrive at a unit water sales price per million gallons. This unit price varied from a figure of $365.85 per million gallons for the County’s 1960-1961 reporting period, to $423.96 for the year 1964. The unit price was then multiplied by the number of million gallons of water sold to non-DHHL customers, and the DHHL and non-DHHL gross revenue figures added together.

In order to calculate net profit, I deducted from gross sales revenues the County’s expenses for (1) power and (2) maintenance of equipment and grounds, and also the above-calculated amortized deduction and revenue share ($60.00 per million gallons) owed to DHHL.3 Based upon my layman’s calculations, it appears that DHHL should have realized a net profit in an amount sufficient to pay back to DHHL

2 The County did not claim as part of its amortized deduction the cost of any other replacement parts.

3 Because the County did not report non-DHHL sales data for the year 1962, I took the unit water sales price for the County’s 1960-61 reporting period and multiplied this figure by the consumption reported for non-DHHL customers (which I extrapolated based on data from 1960-61 water sales), to estimate 1962 gross revenue from non-DHHL sales, and DHHL’s revenue share.
by 1964 the $10,000.00 loan. Applying this methodology, there is also no net loss for any year, and the County is therefore obligated beginning on October 10, 1960, to pay to DHHL, at the $60.00 per million gallon rate, revenues from the sale of water to non-DHHL customers.

Accordingly, NHLC hereby makes demand that the Commission take immediate action to collect from the County of Kauai the water sales revenues owed to the Hawaiian Home Lands trust. As a trustee of the Hawaiian Home Lands trust, Ahuna v. Department of Hawaiian Home Lands, 64 Haw. 327 (1982), the Commission is under a duty to take reasonable steps to enforce trust claims. See, Restatement of Trusts 2d § 177 (1959 ed.). In furtherance of this responsibility, fiduciaries such as the Commission must proceed with reasonable diligence to collect as much money as possible from obligors. See, Raasch v. Meier, 524 N.E. 2d 1206 (III. 1988). As Professor Bogert comments:

As part of the process of assuming control of the trust property, the trustee has the duty of collecting choses in action which are part of the trust estate. If he finds notes, bonds, mortgages, checks, drafts, judgments, or other contract or tort claims among the trust assets, he should proceed with reasonable diligence to collect as much money as possible from the obligors. For failure to collect with reasonable skill and certainty, the trustee will be held liable.


Moreover, the Commission may not disclaim its trust obligations merely because it is a state agency:

Every court that has considered the issue has concluded that [state land trusts] are real, enforceable trusts that impose upon the state the same fiduciary duties applicable to private trustees.


In the alternative -- and we suggest that this may be the more prudent course of action -- the Commission could rescind the 1960 Agreement, Bishop Trust Co., Ltd. v. Kamokila Development Corp., 57 Haw. 330 (1976) (non-defaulting party may rescind contract where there is material nonperformance by other party), and
enter into a more contemporary operating agreement with the County. In this regard, we note that Art. XII, Section 1 of the Hawaii Constitution provides that 30 percent of all revenues from water licenses must be transferred to the Native Hawaiian Rehabilitation Fund, for uses authorized by Section 213 of the Hawaiian Homes Commission Act. A 30 percent rate of return, based upon net revenues from water sales by the County to non-DHHL customers, would be more in keeping with the spirit and the intent of this 1978 Constitutional Convention amendment.

Rescinding the 1960 Agreement would also provide the Commission with an opportunity to reserve water in an amount sufficient to meet the future homesteading needs of its beneficiaries and, pursuant to Section 221 of the HHCA, free beneficiaries from the burden of having to pay the County for delivery of water.

Since our client is obviously not in a position to directly negotiate a new operating agreement for the Anahola Water System, we look to you, in your capacity as Chair, and to your fellow Commissioners, to take immediate action to protect and preserve the trust corpus that the Commission is charged with administering. If we do not receive, within 60 days, substantial assurance that progress is being made towards the development of a new operating agreement, we will proceed to seek recovery on behalf of our client, as a third-party beneficiary, under the terms and conditions of the 1960 Agreement.

As previously noted, we are enclosing with this letter copies of certain correspondence between DHHL and the County, along with the County's annual income and expense reports and water sales records for the Anahola Water System. Please feel free to contact me if you have questions or if you would like to review the records relating to the County's accounting practices.

Very truly yours,

Arnold L. Lum
Staff Attorney

Enclosures

cc: James Torio
ALL/co
f:/torio/lrs/agency/drake16.mar
FIGURE 1

Water sold to non-DHHL customers (gallons):

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<thead>
<tr>
<th>Period</th>
<th>Gallons</th>
</tr>
</thead>
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<tr>
<td>Oct. 10, 1960 - Dec. 31, 1961</td>
<td>9,467,000</td>
</tr>
<tr>
<td>Jan. 1, 1962 - Dec. 31, 1962</td>
<td>7,170,000</td>
</tr>
<tr>
<td>Jan. 1, 1963 - Dec. 31, 1963</td>
<td>7,500,000</td>
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<tr>
<td>Jan. 1, 1964 - Dec. 31, 1964</td>
<td>8,294,000</td>
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<tr>
<td>Jan. 1, 1965 - Dec. 31, 1965</td>
<td>7,917,000</td>
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<tr>
<td>Jan. 1, 1966 - Dec. 31, 1966</td>
<td>8,051,000</td>
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<tr>
<td>Jan. 1, 1967 - Dec. 31, 1967</td>
<td>7,219,000</td>
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<tr>
<td>Jan. 1, 1968 - Dec. 31, 1968</td>
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<td>Jan. 1, 1969 - Dec. 31, 1969</td>
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<td>Jan. 1, 1970 - Dec. 31, 1970</td>
<td>12,410,000</td>
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<td>Jan. 1, 1971 - Dec. 31, 1971</td>
<td>13,970,000</td>
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<tr>
<td>Jan. 1, 1972 - Dec. 31, 1972</td>
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<td>Jan. 1, 1973 - Dec. 31, 1973</td>
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<td>Jan. 1, 1976 - Dec. 31, 1976</td>
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<td>Jan. 1, 1980 - Dec. 31, 1980</td>
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<td>Jan. 1, 1987 - Dec. 31, 1987</td>
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<td>Jan. 1, 1988 - Dec. 31, 1988</td>
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<tr>
<td>Jan. 1, 1989 - April 23, 1989</td>
<td>11,259,000 *</td>
</tr>
<tr>
<td>April 24, 1989 - April 23, 1990</td>
<td>30,618,000 **</td>
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<td>April 24, 1990 - April 23, 1991</td>
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<td>35,477,000</td>
</tr>
<tr>
<td>April 24, 1993 - Oct. 20, 1993</td>
<td>20,461,000</td>
</tr>
</tbody>
</table>

Total non-DHHL water sales, October 10, 1960 to October 20, 1993: 640,543,000 gallons

@ $60.00/ million gallons $ 38,433.00

* No breakdown as to allocation of water sales between DHHL and non-DHHL customers provided; prorated estimate based on percentage of F.Y. '91 sales to non-DHHL customers, rounded to nearest 1,000 gallons.

** No breakdown as to allocation of water sales between DHHL and non-DHHL customers provided; estimate based on percentage of F.Y. '91 sales to non-DHHL customers, rounded to nearest 1,000 gallons.
April 18, 1994

Arnold L. Lum, Esq.
Native Hawaiian Legal Corporation
1164 Bishop Street Suite 1205
Honolulu, Hawaii 96813

Dear Mr. Lum:

Subject: Anahola Municipal Water System Agreement

Thank you for your letter of March 17, 1994, transmitting records relating to the county operation of the water system serving the Anahola community. The department is examining the information and will keep you informed of our progress.

If you have any questions, please contact Darrell Yagodich, Planning Office, at 586-3836.

Warmest aloha,

[Signature]

Hualiku L. Drake, Chairman
Hawaiian Homes Commission

cc: Mr. George Kaeo
Deputy Attorney General

HLD:ci
1686L.80
ed

FYI & file
I guess we wait to hear if they decide to invite us.

Rae
Chap 4

With our tailoring paper flushed,
This part is related to the 1960 Agreement betw-
After many years, Wad & the republican system.
We're the attached scope of engines, which will

and many describe your perception in September,
Commun with understanding of where the partners stand.
We wanted to reach a
for clarity that, many invite you to attend a
and meeting with the County Dept. of Water, and
We're about ready to schedule a preliminary
and look a following meeting with our Dep. Ag.
the Allocation situation. We are to anxious County,
We had an inter-department meeting to discuss

Page

Hawaii Water Survey - P:18

Department of Hawaiian Home Lands

Planning Office
The CONSULTANT shall provide planning, engineering, and surveying services necessary to develop the ANAHOLA WATER RESOURCE & IMPROVEMENTS PLAN, Anahola, Kauai, and shall specifically render the following services in the manner directed by the Department and in compliance with all the applicable provisions of the contract:

1. Conduct preliminary investigations and research regarding ordinances, statutes, encumbrances, restrictions, etc., which may hinder or delay the development of the project.

2. Prepare DHHL Anahola Water Resource Plan composed of the following items:
   a. Hydrologic budget of lands tributary to Anahola and vicinity.
   b. Geologic cross sections and a three dimensional picture showing the hydrogeologic relationship of the Anahola wells to the Farm Lot well(s).
   c. Data review of the existing wells.
   d. Description and analysis of the Napali aquifer (Ag Lots) and the Koloa aquifer (House Lots). Aquifer performance test of the House Lots well field and Ag Lots well.
   e. Rationale for future wells.

3. Prepare designs and plans for Anahola Agricultural Well #2 located at existing Anahola Farm Lots Subdivision Well and Tank site consisting of:
   b. Well design and site plan with appropriate specifications.
   c. Processing of well application with the State Commission on Water Resource Management.

4. Soil investigation and report for 500,000 gallon concrete water tank foundation criteria and road pavement design.
5. Design and prepare construction plans and contract documents for a 500,000 gallon concrete tank to be located at the County's Anahola 228' tank site. Coordinate and obtain approval of the design and plans from the County Department of Water. Submit to the DEPARTMENT for its review and concurrence prior to moving on to the subsequent stage:
   a. Preliminary construction plans (50% complete)
   b. Prefinal construction plans (90% complete)

6. Update Anahola-Kamalomalo Water Master Plan based on revised development plans, testimonies at DHHL hearings, and concern expressed at public meetings.

7. Design and prepare construction plans and contract documents for water distribution lines as follows:
   a. DHHL Water System - replace or augment 6-inch pipeline along Hokualele Road.
   b. County Water System:
      1) replace 8-inch pipeline on Kalalea Road mauka of Kuhio Highway
      2) replace 8-inch pipeline on Kinohi Street
      3) replace 6-inch pipeline on Makaio Road
      4) replace 8-inch pipeline on Kukuihale Road (Makaio Road to Unit 6 site)

8. Prepare and process an environmental assessment and a notice of determination (negative declaration).

9. Topographic field survey for well site, tanksite & water distribution lines; plot and prepare.

10. Process designs and plans for governmental agency approval.

11. Prepare cost estimates based on the approved construction plans.

12. Research and coordinate the proposed improvements with the designs and plans for the adjacent Anahola Residence Lots Subdivisions. Present the project at meetings, if necessary.

13. Provide forty (40) sets of construction plans, specifications and proposal, and proposal (separate) for bidding and construction for each project.
SCOPE OF SERVICES
PAGE 3

Design of the improvements shall be done in accordance with the Standard Specifications and Details for Public Works Construction and for the Kauai County’s Department of Water.

Items not in contract:

1. Bidding and construction related activities and services
2. Easement maps and documents
March 23, 1994

Mr. Murl Nielsen
Manager and Chief Engineer
Department of Water
County of Kaua'i
4398 Pualoke Street
Lihu'e, Kauai, Hawaii 96766

Dear Mr. Nielsen:

Subject: Anahola Water System

Thank you for inviting my staff to meet with you and your staff to discuss issues related to updating our license to the County for operation and maintenance of the Anahola Water System. Enclosed is a summary of the background and issues involved.

Mr. Darrell Yagodich (586-3836) in our Planning Office will contact you shortly to make the arrangements.

Warmest Aloha,

Hoaliku L. Drake, Chairman
Hawaiian Homes Commission

HLD:DY:ci
Enclosure
1686.78
ANAHOLA WATER SYSTEM
Brief History and Summary of Issues

The battery of wells on Hawaiian home lands on the Kapaa side plain above Anahola Stream (0818-01 & 02, now 03) was initiated in early 1956 to serve the proposed first residential homestead subdivision in Anahola. Moneys appropriated to the Hawaiian Home Commission were encumbered to develop all aspects of the subdivision, including water, electrical, and telephone service. Work was completed in late 1957, and discussion ensued regarding disposition of the infrastructure for operations and maintenance. The electric and telephone utilities manage their services under license agreements, and the Planning Office was instructed to explore the feasibility of either retaining management of the water system for exclusive use of the homesteaders or turning it over to the county. The Hawaiian Homes Commission minutes report Executive Director Abe Piianaia's direction: "If it were decided that the water system should be turned over to Kaua'i County, then it should be turned over with the understanding that the Commission reserves the right to future supply, distribution, and use."

It was not until after Statehood, in 1960, that the agreement to "turn the system over" was finalized, with very few details identified. During construction of an elevated steel storage tank, a steel member fell and damaged Well #2, and the agreement included provision for an interest-free loan and repayment plan, which we believe has been satisfied. The agreement itself needs to be reviewed to incorporate appropriate terms and conditions to reflect current Hawaiian Homes Commission responsibilities and statutory requirements. The existing arrangement has been mutually beneficial. Kauai County handles operations and maintenance and the community as a whole benefits from upgraded groundwater source to replace its former system.

Approval of the Aliomanu Estates subdivision, with a pipeline constructed to link it with the Anahola municipal system, has raised issues that require clarification of our respective fiduciary responsibilities. The Department is open to the course the County has taken, as a step toward the fulfillment of our own future plans to link the Waimea (Napali) Volcanic Series groundwater source with our residential expansion on the Kapaa side of Anahola Stream. It is clear, however, that the consumption potential at Aliomanu Estates and on neighboring lands could strain our capability for groundwater development to serve homesteads in the future. Our priorities are for additional storage at the Anahola municipal system, and for backup service capacity at the farm lot subdivision.

1686L.79
The sustainable yield of the "Anahola System" reported in the Kaua'i Water Use and Development Plan is calculated over a span about 50 square miles between the Moloaa drainage into Moloaa Bay and the Wailua drainage. This approximately encompasses the Kawaihau District, about four times the size of the Anahola-Kamalomalo area of Hawaiian home lands. The sustainable yield of the larger "Anahola (Aquifer) System" (Kawaihau District) is estimated at about 36 Mgd, while the yield for the Anahola-Kamalomalo area has not been estimated.

Most of Kawaihau (and Anahola) are underlain by Koloa Volcanic Series rock, relatively viscous and only moderately permeable; safe well capacities are also therefore moderate at about 200 gpm. Some inland portions of Kealia, and the Kalalea Mountains of Anahola, are underlain by Waimea Volcanic Series lavas, relatively porous and permeable; installed pump capacity at the Anahola Farmlots tapping the Waimea Series is 700 gpm.

The municipal system on the south bluff of Anahola Stream (overlying Koloa lavas) has recently added a third well, with the intent that two of the three could be operated almost simultaneously for greater yield; this may be the limit on safe capacity at this site. DHHL is unaware of the current service capacity for consumer demand; we are aware that storage capacity rather than pump capacity has been a limiting factor for some time.

Homestead demand for the future, beginning with Anahola Unit 4, consists of 823 new households (both Residential and Agriculture). Using a planning figure of 500 gallons per day per household (gd/hhld), the potable requirement comes to about 411,000 (0.41 M) gd. Existing 200 gpm pumps, operating @ 16 hours per day, would yield 192,000 (0.19 M) gd. There is therefore a foreseeable shortfall in the existing municipal capacity.

The existing Anahola Farm Lot subdivision on the Kilauea side currently has 44 lots and 215 acres (gross), with another 160 acres available for future use. Using 50% efficiency in agricultural acreage irrigation and an average 4000 gd/acre, the irrigation requirement for the initial awarded acreage comes to about 430,000 (0.43 M) gd; full build-out would require 750,000 (0.75 M) gd. The existing 700 gpm pump, operating @ 16 hours per day, would yield 672,000 (0.67 M) gd. There is therefore also a foreseeable shortfall in the existing farmlot system capacity.

On the Kealia side, agricultural expansion has been estimated to employ 1413 acres of irrigable land, requiring 2,826,000 (2.83 M) gd, which is expected to come from the former Lihu'e Plantation irrigation system.
March 1, 1994

Mr. Murl Nielsen, Manager
Water Department
County of Kaua'i
4398 Pua Loke Street
Lihu'e, Kauai 96766

Dear Mr. Nielsen:

Anahola Water System
Operating Agreement of 1960

It has come to our attention that one of the features in the 1960 Agreement (Exhibit A) by which the Department of Hawaiian Home Lands turned over operation of the Anahola wells and water system to the county -- an annual accounting of new connections, with any credits due from non- homestead service -- is not on file in our department. Our beneficiaries, through their attorney, have requested an accounting of these connections (Exhibit B).

If the County has maintained, or could assemble records to indicate the history of connections, we could answer their questions without delay. We request a response as to your understanding of this accounting, and a timetable for assembling the requested information.

As we have received a request from Arnold Lum, attorney at Native Hawaiian Legal Corporation, on behalf of a client, we will share our findings with them.

Recognizing that personnel changes have intervened since we earlier discussed updating the operations agreement, we wish to get this back on track without delay.

If you have questions, please call Darrell Yagodich in our Planning Office at 586-3836.

Warmest aloha,

Hoolikau L. Drake, Chairman
Hawaiian Homes Commission

Enclosures

cc: Arnold Lum, Esq, Native Hawaiian Legal Corporation

HLD:ci/1603L.80

bcc: Kauai District Office Commissioner Sheehan
       Subj. Anahola Water Syst
       IMD, LDD
March 17, 1994

Hoaliku L. Drake
Chairperson
Hawaiian Homes Commission
P. O. Box 1879
Honolulu, Hawaii 96805

Re: County Water Sales of Groundwater Under DHHL Lands At Anahola, Kauai

Dear Mrs. Drake:

As you may be aware, the Native Hawaiian Legal Corporation requested and recently received from the County of Kauai, certain documents and records relating to the County's operation of the water works system located on the Hawaiian Home Lands at Anahola, Kauai ("Anahola Water System"). These documents and records were obtained by NHLC pursuant to a request made on behalf of James C. Torio, a DHHL lessee at Anahola.

We have reviewed the above-referenced materials and the operating agreement entered into between the Department of Hawaiian Home Lands and County of Kauai on October 10, 1960 ("1960 Agreement" or "Agreement"), and would like to take this opportunity to report our findings to the Hawaiian Homes Commission.

The water works equipment that comprises the Anahola Water System was transferred by DHHL to the County's Board of Water Supply (now Department of Water) pursuant to the 1960 Agreement, upon the understanding that the County would thereafter pay to DHHL a portion of the revenues derived from the sale of groundwater to non-DHHL customers. However, to our knowledge, the County has failed to remit any proceeds from such water sales, and the amount presently owed to DHHL under the 1960 Agreement is $38,433.00. Because the County has breached the Agreement, we are hereby requesting that the Hawaiian Homes Commission either take action to collect the money owed to DHHL, or rescind the Agreement and enter into a contemporary operating agreement that will provide beneficiaries with a more equitable return from the County's sale of DHHL's groundwater.
I would like to take this opportunity to provide you with a brief overview of the County of Kauai's operation of the Anahola Water System, after it was transferred to the Board of Water Supply. Copies of the documents referred to herein are enclosed for your review.

In consideration for quitclaiming the Anahola Water System to the County of Kauai, the Board of Water Supply agreed as follows:

When any other systems of the Board are connected to the aforementioned system, the Board shall credit to the account of the Department of Hawaiian Home Lands at the rate of $60.00 per million gallons for any and all water required by the systems so connected at a master meter or master meters to be installed by the Board at its own expense.

Although the term "other systems of the Board" was not specifically defined in the 1960 Agreement, correspondence between DHHL and the County reveals that both parties construed this provision to require payment by the County to DHHL, at a rate of $60.00 per million gallons, for groundwater that was sold to customers located outside the boundaries of the Anahola Hawaiian Homesteads. This interpretation is evidenced in a February 20, 1962 letter to the Board of Water Supply from DHHL fiscal officer Archibald P. Akau, which requested payment in the amount of $568.02 for water purchased by the County for the Anahola Hawaiian Village, based upon 9,467,000 gallons of water that was sold to non-DHHL Village customers between October 10, 1960 and December 31, 1961. This construction is also reflected in the County's Anahola Water System annual statements of income and expense for the years 1963 through 1978. Each statement contains a specific reference to "Water Sales to Anahola Hawaiian Village . . . @ $60.00 per million gallons."

Although DHHL and the County were in accord in regard to their understanding that DHHL was to receive $60.00 for every million gallons of water sold to non-DHHL customers, their interpretations of the circumstances under which this obligation would arise were substantially at variance. On October 28, 1963, Abraham T. Matsuura, the Board of Water Supply's fiscal officer, wrote a letter to Hawaiian Homes Commissioner A. K. Piianaia, explaining that although the County in 1962 had sold 7,170,000 gallons of water to the Anahola Hawaiian Village, which should have resulted in a payment to DHHL in the amount of $430.20, such a payment would not be forthcoming. Mr. Matsuura's rationale was that because the cost to the County of operating the Anahola Water System in 1962 exceeded water sales revenues for that
year, the County was not obliged to make revenue payments to DHHL. Not
withstanding the fact that the 1960 Agreement did not state that the County of Kauai
would make such payments to DHHL only in the event that it realized a net profit, the
County nonetheless maintained that the 1960 Agreement relieved it from any such
obligation, so long as the Board's operations resulted in a net loss.

On November 1, 1963, Chairman Piianaia wrote a follow-up letter to the
Board of Water Supply, requesting a detailed breakdown of the expenditures claimed
by the Board, since the inception of the Agreement. The Board's response, on
November 13, 1963, was accompanied by copies of statements of income and
expenses indicating a net loss throughout the reporting period. Mr. Piianaia on
August 20, 1994, wrote a second letter, requesting that the Board disclose the method
used to compute the amortization cost of the Anahola Water System. In response,
Chief Engineer Walter L. Briant, Jr. furnished DHHL with a schedule of the system's
annual amortized costs, as reflected in the County's 1963 statement of income and
expenses.

Thereafter, the County furnished to DHHL, on a periodic non-annual
basis, statements of income and expenses through the year 1988, all of which showed
a net loss. See, County letters dated December 3, 1975; March 31, 1976; February
27, 1978; February 9, 1979; September 29, 1983; February 19, 1986 and October 30,
1989. There were no other records in the County's files, after the County's October
30, 1989 report, in regard to income and expense information for the Anahola Water
System.

NHLC was, however, able to obtain from the County copies of the water
sales records for the Anahola Water System, from April 23, 1985 through October 20,
1993. From these records, I was able to calculate the amount of water sold by the
County to non-DHHL customers. Except for the year 1988-89 and a portion of 1989-90,
sufficient information is available in the records to ascertain the actual amount of
water sold. I was also able to estimate the amount of water sold from January 1,

Based upon the County's annual statements of income and expense
from October 10, 1960 through December 31, 1988, and the County's water sales
records through October 20, 1993, the total amount of water sold by the County to
non-DHHL customers was 640,543,000 gallons. The data are summarized in Figure
1, attached hereto. There is no information in the County's records, and no
documents have been produced by DHHL pursuant to NHLC's Uniform Information
Practices Act requests of January 12 and January 23, 1994, which indicate that any
payments have been made to DHHL by the County. At a rate of $60.00 per million
gallons, the County thus owes DHHL the sum of $38,433.00.
We anticipate, however, that the County will claim it was not required to make any revenue payments to DHHL, because the 1960 Agreement excused such payments so long as the County’s operation of the Anahola Water System did not result in a net profit. Although the issues raised in regard to such a defense are largely beyond the scope of this letter, I would like to briefly apprise you of the results of our investigation into the County’s accounting practices, by which means the County was able to claim a 28-year loss, from 1960 through 1988.

When the Anahola Water System was transferred by DHHL to the County, the pump in Anahola Well No. 2 was in need of refurbishment. Pursuant to the 1960 Agreement, DHHL loaned to the County the sum of $10,000.00, which was applied to purchase a new pump and pay for its installation. The County was to repay the loan by tendering to DHHL, on an annual basis, the net profit derived by the County through the operation of the Anahola Water System, until the $10,000.00 loan was paid. Net profit was supposed to be calculated by deducting from gross revenues "the amortized cost of replacements of any parts" of the system, along with "the cost of production, maintenance, repair, servicing and other incidental administrative and operational expenditures directly chargeable to the system." If in any year the system operated at a loss, the County could carry forward that loss to the following year or years.

It is important to note that the 1960 Agreement expressly provides that the net profit shall be determined based upon "the amortized cost of replacements of any parts" of the Anahola Water System. However, the County deducted from its gross water sales revenues not the amortized cost of the replacement parts -- for instance, the cost of the new pump -- but rather the amortized price of the original water works equipment that had been purchased and installed by the State of Hawaii in 1956, pursuant to DPW Job No. 5827, and in 1959 pursuant to DHHL Job No. 5956.¹ Applying this accounting methodology, the County assigned a price of $216,810.00 to the original water works equipment, and then proceeded to charge against annual water sales revenues an amortized deduction based upon the value of the entire system.

In the course of our investigation, I consulted with a Certified Public Accountant, in regard to the County’s above-described accounting practices. Our consultant, who reviewed the 1960 Agreement and the records furnished by the

¹ The documents cited in regard to our investigation into the County’s accounting practices are not enclosed with this letter.
The County concludes that the County should not have included in the basis for its deduction the original water works equipment purchased in 1956 and 1959, because the County did not incur any direct costs when it acquired the equipment. Moreover, the County's treatment of the State-purchased equipment violated Generally Accepted Accounting Practices, which would have required the County to claim the original water works equipment as income. Because the 1960 Agreement did not allow the County to offset against water sales revenues the equipment acquired from the State, the only amortized deduction allowable under the Agreement would have been the cost of the new pump for Anahola Well No. 2, which was $5,830.00, along with any other replacement parts.  

Assuming that the useful life of a well pump is ten years, and therefore that the County could have depreciated the cost of the new pump on a ten-year straight-line basis, i.e., at $538.00 per year, the County would have had to report a net profit from the very inception of the Agreement. Although the County's statements of income and expenses do not include data on gross revenues from water sales to non-DHHL customers, I divided the gross revenues derived from sales to DHHL customers (which were reported annually) by the number of million gallons sold to DHHL customers, to arrive at a unit water sales price per million gallons. This unit price varied from a figure of $365.85 per million gallons for the County's 1960-1961 reporting period, to $423.96 for the year 1964. The unit price was then multiplied by the number of million gallons of water sold to non-DHHL customers, and the DHHL and non-DHHL gross revenue figures added together.

In order to calculate net profit, I deducted from gross sales revenues the County's expenses for (1) power and (2) maintenance of equipment and grounds, and also the above-calculated amortized deduction and revenue share ($60.00 per million gallons) owed to DHHL. Based upon my layman's calculations, it appears that DHHL should have realized a net profit in an amount sufficient to pay back to DHHL

---

2 The County did not claim as part of its amortized deduction the cost of any other replacement parts.

3 Because the County did not report non-DHHL sales data for the year 1962, I took the unit water sales price for the County's 1960-61 reporting period and multiplied this figure by the consumption reported for non-DHHL customers (which I extrapolated based on data from 1960-61 water sales), to estimate 1962 gross revenue from non-DHHL sales, and DHHL's revenue share.
by 1964 the $10,000.00 loan. Applying this methodology, there is also no net loss for any year, and the County is therefore obligated beginning on October 10, 1960, to pay to DHHL, at the $60.00 per million gallon rate, revenues from the sale of water to non-DHHL customers.

Accordingly, NHLC hereby makes demand that the Commission take immediate action to collect from the County of Kauai the water sales revenues owed to the Hawaiian Home Lands trust. As a trustee of the Hawaiian Home Lands trust, Ahuna v. Department of Hawaiian Home Lands, 64 Haw. 327 (1982), the Commission is under a duty to take reasonable steps to enforce trust claims. See Restatement of Trusts 2d § 177 (1959 ed.). In furtherance of this responsibility, fiduciaries such as the Commission must proceed with reasonable diligence to collect as much money as possible from obligors. See, Raasch v. Meier, 524 N.E. 2d 1206 (Ill. 1988). As Professor Bogert comments:

As part of the process of assuming control of the trust property, the trustee has the duty of collecting choses in action which are part of the trust estate. If he finds notes, bonds, mortgages, checks, drafts, judgments, or other contract or tort claims among the trust assets, he should proceed with reasonable diligence to collect as much money as possible from the obligors. For failure to collect with reasonable skill and certainty, the trustee will be held liable.


Moreover, the Commission may not disclaim its trust obligations merely because it is a state agency:

Every court that has considered the issue has concluded that [state land trusts] are real, enforceable trusts that impose upon the state the same fiduciary duties applicable to private trustees.


In the alternative -- and we suggest that this may be the more prudent course of action -- the Commission could rescind the 1960 Agreement, Bishop Trust Co., Ltd. v. Kamokila Development Corp., 57 Haw. 330 (1976) (non-defaulting party may rescind contract where there is material nonperformance by other party), and
enter into a more contemporary operating agreement with the County. In this regard, we note that Art. XII, Section 1 of the Hawaii Constitution provides that 30 percent of all revenues from water licenses must be transferred to the Native Hawaiian Rehabilitation Fund, for uses authorized by Section 213 of the Hawaiian Homes Commission Act. A 30 percent rate of return, based upon net revenues from water sales by the County to non-DHHL customers, would be more in keeping with the spirit and the intent of this 1978 Constitutional Convention amendment.

Rescinding the 1960 Agreement would also provide the Commission with an opportunity to reserve water in an amount sufficient to meet the future homesteading needs of its beneficiaries and, pursuant to Section 221 of the HHCA, free beneficiaries from the burden of having to pay the County for delivery of water.

Since our client is obviously not in a position to directly negotiate a new operating agreement for the Anahola Water System, we look to you, in your capacity as Chair, and to your fellow Commissioners, to take immediate action to protect and preserve the trust corpus that the Commission is charged with administering. If we do not receive, within 60 days, substantial assurance that progress is being made towards the development of a new operating agreement, we will proceed to seek recovery on behalf of our client, as a third-party beneficiary, under the terms and conditions of the 1960 Agreement.

As previously noted, we are enclosing with this letter copies of certain correspondence between DHHL and the County, along with the County’s annual income and expense reports and water sales records for the Anahola Water System. Please feel free to contact me if you have questions or if you would like to review the records relating to the County’s accounting practices.

Very truly yours,

Arnold L. Lum
Staff Attorney
FIGURE 1

Water sold to non-DHHL customers (gallons):

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<th>Period</th>
<th>Gallons</th>
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<tr>
<td>Oct. 10, 1960 - Dec. 31, 1961</td>
<td>9,467,000</td>
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<tr>
<td>Jan. 1, 1962 - Dec. 31, 1962</td>
<td>7,170,000</td>
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<tr>
<td>Jan. 1, 1963 - Dec. 31, 1963</td>
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<td>Jan. 1, 1964 - Dec. 31, 1964</td>
<td>8,294,000</td>
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<td>Jan. 1, 1965 - Dec. 31, 1965</td>
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<td>Jan. 1, 1966 - Dec. 31, 1966</td>
<td>8,051,000</td>
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<td>Jan. 1, 1967 - Dec. 31, 1967</td>
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<td>Jan. 1, 1969 - Dec. 31, 1969</td>
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<td>Jan. 1, 1970 - Dec. 31, 1970</td>
<td>12,410,000</td>
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<td>Jan. 1, 1971 - Dec. 31, 1971</td>
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<td>Jan. 1, 1972 - Dec. 31, 1972</td>
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<td>Jan. 1, 1973 - Dec. 31, 1973</td>
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<td>Jan. 1, 1988 - Dec. 31, 1988</td>
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<td>Jan. 1, 1989 - April 23, 1989</td>
<td>11,259,000*</td>
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<td>April 24, 1989 - April 23, 1990</td>
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<td>April 24, 1992 - April 23, 1993</td>
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<td>April 24, 1993 - Oct. 20, 1994</td>
<td>20,461,000</td>
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Total non-DHHL water sales, October 10, 1960 to October 20, 1993
640,543,000 gallons

@ $60,000/million gallons
$ 38,433.00

* No breakdown as to allocation of water sales between DHHL and non-DHHL customers provided; prorated estimate based on percentage of F.Y. '91 sales to non-DHHL customers, rounded to nearest 1,000 gallons.

** No breakdown as to allocation of water sales between DHHL and non-DHHL customers provided; estimate based on percentage of F.Y. '91 sales to non-DHHL customers, rounded to nearest 1,000 gallons.
Demand of Department of Hawaiian Home Lands

Balekauwila and Punchbowl Sts., Honolulu

August 17, 1962

on the TREASURER of THE COUNTY OF KAUAʻI, STATE OF HAWAII, for the sum of

............... Five Hundred Sixty Eight and 02/100 ................. DOLLARS

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<tr>
<th>Fund</th>
<th>WATER UTILITY</th>
<th>Appropriation</th>
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</thead>
</table>

<table>
<thead>
<tr>
<th>Date</th>
<th>Items and Quantity</th>
<th>Amount</th>
<th>Tt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water purchased for Hawaiian Village, Anahola, Kauaʻi from the Anahola Hawaiian Homes System as per schedule attached</td>
<td>568.02</td>
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<td></td>
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</table>

Oct. 10, 1960 to December 31, 1961

9,467,000 gals @ $ 60.00 per M

I hereby certify that the foregoing demand is for services which have been faithfully performed and/or for materials and supplies released in accordance with law, received in good order and are correct in every respect and have not been previously paid.

I hereby certify that the above claim of $568.02 is just and correct in every respect, and that payment therefor has not been received.

[Signature]
Executive Director

2 payments (17 Aug 62, 1 Oct 62) totaling $10,000
Demand of **STATE OF HAWAII, Department of Hawaiian Homes Land**

P O BOX 1879, Honolulu, HI 96805

on the **DEPARTMENT OF WATER of the COUNTY OF KAUAI, STATE OF HAWAII** for the sum of **Nine Thousand four hundred thirty-one and 98/100 **DOLLARS

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<th>DATE</th>
<th>ITEMS and QUANTITY</th>
<th>RATE</th>
<th>AMOUNT</th>
<th>TOTAL</th>
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<tr>
<td>Payment in Full of the outstanding balance of the non-interest bearing note in the amount of $9,431.98.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Repayment to be made from the net profits of the Anahola Hawaiian Homes Commission Development Water System</td>
<td></td>
<td></td>
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<td>9,431.98</td>
</tr>
</tbody>
</table>

(see attached Statements)

**Fund Water Utility Appropriation 1066/221.4**

I hereby certify that the above claim of $9,431.98 is just and correct in every respect, and that payment therefore has not been received.

Claimant
Mr. Murl Nielsen  
Kauai Department of Water  
P O. Box 1706  
Lihue, HI 96766

Dear Mr. Nielsen:

Anahola Well C (Well No. 0818-03)  
Deferral of Pump Installation Permit

The Commission on Water Resource Management (Commission), at its meeting on March 16, 1994, deferred action on your application for a pump installation permit for Anahola Well C. At the meeting, questions were raised by a homesteader, Mr. James Torio, regarding water-related agreements between the Kauai Department of Water (DOW) and the Department of Hawaiian Home Lands (DHHL), the landowner.

Ms. Rae M. Loui, Deputy Director, will be contacting you and DHHL to arrange a meeting with the hope that the matter can be discussed and worked out between the DOW and the DHHL, to the satisfaction of all concerned.

Please call Ms. Loui at 587-0214 if you have any questions.

Very truly yours,

[Signature]

KEITH W. AHUE

Department of Hawaiian Home Lands
December 16, 1993

Mr. Keith W. Ahue, Director  
Comm. on Water Resource Management  
DEPARTMENT OF LAND & NATURAL RESOURCES  
P. O. Box 373  
Honolulu, HI 96809  

Attention: Ms. Rae Loui, Deputy Director

Re: Application for Well Pump Installation Permit, Anahola Well No. 3, State Well No. 0818-01, TMK: 4th Division, 4-8-03:23, Anahola, Kauai, Hawaii

We herewith submit the original and two (2) copies of the above subject permit application for your review and approval.

We understand that the filing fee is waived for government agencies.

The pump size and setting for the above well was set per letter from Division of Water & Land Development (DLNR) dated October 28, 1993.

If there are any questions, please call me at 245-6986 or Mr. Robert Y. Akinaka of Akinaka & Associates in Honolulu at 536-7721.

Jeremiah M. Kaluna  
Acting Manager and Chief Engineer

cc: Mr. Robert Y. Akinaka, Akinaka & Associates, Ltd.-w/o enc.

Enclosures
APPLICATION FOR PERMIT

1. APPLICANT: (may be a, b, or c, but all must be filled in)
   (a) WELL OWNER
      Department of Water, County of Kauai
      Contact Person: Jeremiah M. Kaluna
      Address: 439 Pua Loke, Lihue, Kauai, Hawaii
   (b) LANDOWNER
      Dept. of Hawaiian Home Lands, SOH
      Contact Person: Banyard Sano
      Address: P.O. Box 1870
      Honi, HI 96805
   (c) CONTRACTOR
      Firm/Name: To Be Determined After Bid
      Address

2. WELL LOCATION/NAMES:
   Anahola Well 3
   Island: Kauai
   Tax Map Key: 4-8-03:23
   Location/Name: Kalalea Road, Anahola, Kauai, Hawaii
   Address
   (Attach a USGS map, scale 1:2,000, and a property tax map showing well location referenced to established property boundaries)

3. (a) PROPOSED WORK:
   - Drill New Well
   - Alter Location
   - Modify Existing Well
   - Redrill
   - Install New Pump
   - Replace Pump
   - Modify Pump
   - * Be sure to complete and submit well abandonment report upon completion of work.

   (b) WELL TYPE:
   - Drilled
   - Radial
   - Driven
   - * Is this well a part of a battery of wells? Yes/No
   (Briefly describe and fill in diagram on the back of this form)

4. PROPOSED PUMP INFORMATION:
   Rated Pump Capacity: 200 gallons per minute
   Pump Type:
   - Deep Well Turbine
   - Submersible
   - Centrifugal
   - Rotary
   - Rotary-Displacement
   - Reciprocating
   - Impulse
   Motor:
   - Diesel
   - Gas
   - Electric, rated horsepower of

5. PROPOSED USE:
   - Municipal (including hotels, stores, etc.)
   - Domestic (individual, noncommercial water user)
   - Irrigation (crop)
   - State Land Use District: Urban/Agriculture
   - County Zoning (describe)
   - Agriculture
   - Military
   - Industrial
   - Other (explain)
   (If more space is needed, continue below under remarks, explanations)

6. (a) PROPOSED AMOUNT OF WITHDRAWAL:
   288,000 gallons per day
   (b) METHOD OF FLOW MEASUREMENT:
   - Flow-meter
   - Open-pipe
   - Orifice Plate
   - We

7. PENDING ACTIONS:
   - CDUA
   - SMA
   - EIS
   - EA
   - NONE
   - Other (specify)

8. REMARKS, EXPLANATIONS:

   *(If more space is needed, continue on back)
9. PROPOSED WELL SECTION

SEE "EXHIBIT A"

---

Elevation at top of casing
________________________ ft., mal.

Ground Elevation: __________________ ft., mal

Cement Grout: __________________ ft.

Solid Casing:

- Material ____________________________
- Length _____________________________ ft.
- Diameter _____________________________ in.
- Wall thickness ________________________ in.

Rock Packing: __________________ ft.

Open Hole:

- Length _____________________________ ft.
- Diameter _____________________________ in.

Hole Diameter: __________________ in.

Total Depth: __________________ ft.

Casing: ☐ Perforated  ☐ Screen

- Material ____________________________
- Length _____________________________ ft.
- Diameter _____________________________ in.
- Wall thickness ________________________ in.
- Openings __________________ sq. in./L.F.

---

*Approximate elevation at time of filing application. Ground elevation above mean sea level (mal) by a surveyor licensed by the State must be submitted at 1 of construction. Final elevations of well components shall be submitted in the well completion/well abandonment reports.
EXISTING 0.15 MG REINFORCED CONCRETE RESERVOIR SPILLWAY EL. = 288.0
FIN. FLR. EL. = 269.5

3/4" x 1" CORP STOP

EXISTING WASHOUT LINE

EXIST. OVER.

1" CORP

1/8" X 1" STOP VALVE

EXISTING 6' HIGH CHAIN LINK FENCE

VAHOULA WELL 3

VAHOOLA WATER SYSTEM

ANAHOLA, KAULI, HAWAII

TAX MAP KEY: 04-8-03:23

SITE PLAN

EXHIBIT "A"

SCALE: 1" = 20'

AKINAKA & ASSOCIATES, LTD.
CONSULTING ENGINEERS

DEPT. OF WATER, COUNTY OF KAULI
JOB NO. 87-3
PUMP, CONTROLS, PUMPHOUSE & PIPELINE
FOR ANAHOLA WELL NO. 3
ANAHOLA WATER SYSTEM
ANAHOLA, KAULI, HAWAII

TAX MAP KEY: 4-8-03-23

SHEET 1 OF 2 SHEETS
SECTION

EXISTING 12" I.D. CASING

WATER LEVEL
EL. = (+) 11.0

BOTTOM OF AIR LINE
EL. = (-) 10.5

BOTTOM OF PUMP
EL. = (-) 20.5

STAINLESS STEEL SCREEN
16" DIA. HOLE

BOTTOM OF CASING
EL. = (-) 23.4

BOTTOM OF OPEN HOLE
EL. = (-) 199.4

FOR WELL PUMP PAD DETAILS SEE SHEET 6
FOR REINFORCEMENT

SEE SHEET 6

4" SPOOL, 4'-0" LONG, F.E.

4" 90' BEND, F.E.

4" SPOOL, F.E. x P.E., 2'-0" LONG

BIRD SCREEN

PRE-LUBRICATION ASSEMBLY. SEE DETAIL

SCALE: 1/2" = 1'-0"

WELL PUMP PIPING DETAILS

EXHIBIT "A"
APPLICATION FOR PERMIT

1. APPLICANT: (may be a, b, or c, but all must be filled in)
   (a) WELL OWNER  
   Firm/Name: ____________________________  
   Department of Water, County of Kauai  
   Contact Person: _________________________  
   Jeremiah M. Kaluna  
   Address: _______________________________  
   4398 Pua Loke  
   Lihue, Kauai, Hawaii  
   Phone: _________________________________  
   Fax: _________________________________  
   (b) LANDOWNER  
   Firm/Name: ____________________________  
   Dept. of Hawaiian Home Lands, SOH  
   Contact Person: _________________________  
   Bayard Sohn  
   Address: _______________________________  
   P.O. Box 1870  
   Hon, HI 967805  
   (c) CONTRACTOR  
   Firm/Name: ____________________________  
   To Be Determined After Big  
   Address: _______________________________  

2. WELL LOCATION/NAMES:  
   (State Well No. 0818-03)  
   Island: Kauai  
   Address: Kalalea Road, Anahola, Kauai, Hawaii  
   Tax Map Key: 4-8-03:23  
   (Attach a USGS map, scale 1" = 2000', and a property tax map showing well location referenced to established property boundaries.)

3. (a) PROPOSED WORK:  
   □ Drill New Well  
   □ Modify Existing Well  
   □ Redrill  
   □ Deepen  
   □ Install New Pump  
   □ Replace Pump  
   □ Modify Pump  
   * Be sure to complete and submit well abandonment report upon completion of work.

   (b) WELL TYPE:  
   □ Dug  
   □ Bored  
   □ Driven  
   □ Dug  
   □ Drilled  
   □ Radial  
   □ Other: ____________________________  
   (Briefly describe and fill in diagram on the back of this form.)

4. PROPOSED PUMP INFORMATION:  
   Rated Pump Capacity: ________ gallons per minute
   Pump Type:  
   □ Deep Well Turbine  
   □ Submersible  
   □ Centrifugal  
   □ Rotary  
   □ Rotary-Displacement  
   □ Rotary-Gear  
   □ Propeller  
   □ Reciprocating  
   □ Impulse  
   □ Motor: ____________________________  
   □ Diesel  
   □ Gas  
   □ Electric, rated horsepower of ________

5. PROPOSED USE:  
   □ Municipal (including hotels, stores, etc.)  
   □ Domestic (individual, noncommercial water use)  
   □ Irrigation (crop)  
   □ Other (explain)  
   □ State Land Use District: ____________________________  
   □ Urban  
   □ Agriculture  
   □ Rural  
   □ Conservation  
   □ County Zoning (describe): ____________________________  
   □ (If more space is needed, continue below under remarks, explanations.)

6. (a) PROPOSED AMOUNT OF WITHDRAWAL:  
   ________ gallons per day
   (b) METHOD OF FLOW MEASUREMENT:  
   □ Flow-meter  
   □ Open-pipe  
   □ Orifice Plate  
   □ Well

7. PENDING ACTIONS:  
   □ COUA  
   □ SMA  
   □ IS  
   □ EA  
   □ NONE  
   □ Other (explain)  
   ____________________________  
   ____________________________  
   ____________________________  
   ____________________________  
   ____________________________  

8. REMARKS, EXPLANATIONS:  
   ____________________________  
   ____________________________  
   ____________________________  
   ____________________________  
   ____________________________  

(Note: Signing below indicates that the applicant understands that, if the permit is granted by the Commission on Water Resource Management, the proposed work must be completed within two (2) years of the approval date. In addition, the contractor shall submit to the Commission a well completion report, well abandonment report, or both, within 30 days of completion date of the permitted work. The applicant also understands that monthly water use data shall be submitted to the Commission. The applicant further understands that the proposed permit shall not constitute a determination of corrective water rights and shall not guarantee the pump capacity or future use up to the permitted pump capacity.

Department of Water  
County of Kauai

Signature _________________________  
Date ____________________________

Department of Hawaiian Homelands

Signature _________________________  
Date ____________________________

For Official Use Only:
Date Received ____________________________  
Date Accepted ____________________________  
Field Checked By ____________________________  
Case ____________________________  
Longtude ____________________________  
Latitude ____________________________  
Aquifer System Name ____________________________  
State Well No ____________________________  
Page 5 of 92
9. PROPOSED WELL SECTION

SEE "EXHIBIT A"

Elevation at top of casing
_____ ft., mal.

Ground Elevation: _____ ft., mal.

Cement Grout: _____ ft.

Solid Casing:
Material
Length _____ ft.
Diameter _____ in.
Wall thickness _____ in.

Rock Packing: _____ ft.

Hole Diameter: _____ in.

Total Depth: _____ ft.

Casing: ☐ Perforated ☐ Screen
Material
Length _____ ft.
Diameter _____ in.
Wall thickness _____ in.
Openings _____ sq. in./L.F.

Open Hole:
Length _____ ft.
Diameter _____ in.

Approximate elevation at time of filing application. Ground elevation above mean sea level (mal) by a surveyor licensed by the State must be submitted at the time of construction. Final elevations of well components shall be submitted in the well completion/well abandonment reports.
MATERIAL LIST

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<td>6&quot; DRESSER CAST-IRON FLANGED ADAPTER, STYLE 127, WITH ANSI 125 PSI FLANGE(AL-CLAD FACTORY COATED)</td>
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<td>6&quot; D.I. SPOOL, F.E. x P.E., 3&quot;-7&quot; W/ TAPS</td>
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<td>4</td>
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<td>V-4 FLOTECT FLOW SWITCH, 125V, VANE NO. 280 WITH SADDLE</td>
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<td>5</td>
<td>2</td>
<td>1&quot; AIR RELIEF VALVE ASSEMBLY, SEE DETAIL</td>
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<td>6&quot;x6&quot;x4&quot; D.I. TEE, F.E.</td>
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<td>6&quot; CLA-VAL 810-02, WITH DUAL SPEED CONTROL, ANSI 125, F.E.</td>
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<td>6&quot; SPOOL, F.E., 3'-0&quot; LONG W/ TAP</td>
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<td>BIF MODEL 251-18 ELECTRONIC FLOW TRANSMITTER (0 TO 150&quot; AP) ASSEMBLY</td>
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<td>6&quot; BIF CAST IRON UVT MODEL 0181, F.E.</td>
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<td>6&quot; GATE VALVE, F.E.</td>
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<td>6&quot; 90° BEND, F.E.</td>
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<td>6&quot; SPOOL, F.E. x P.E., CUT TO FIT W/ TAP</td>
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<td>6&quot; 90° BEND, M.J.</td>
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<td>4&quot; GATE VALVE, F.E.</td>
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<td>4&quot; CLA-VAL 61-02 PUMP CONTROL VALVE, ANSI 125, F.E.</td>
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<tr>
<td>22</td>
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<td>BIRD SCREEN</td>
</tr>
<tr>
<td>23</td>
<td>1</td>
<td>PUMP LUBRICATION ASSEMBLY, SEE DETAIL</td>
</tr>
</tbody>
</table>

SCALE: 1/2" = 1'-0"

REVISION DATE: DESCRIPTION: MADE BY: APPROVED

AKINAKA & ASSOCIATES, LTD.
CONSULTING ENGINEERS
DEPT. OF WATER, COUNTY OF KAUAI
JOB NO. 87-3
PUMP, CONTROLS, PUMP HOUSE & PIPELINE
FOR ANAHOLA WELL NO. 3
ANAHOLA WATER SYSTEM
ANAHOLA, KAUAI, HAWAII
TAX MAP KEY: 4-8-03:23

WELL PUMP PIPING DETAILS

EXHIBIT "A"

SHEET 2 OF 2 SHEETS
STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF WATER AND LAND DEVELOPMENT

ANAHOLA WELL 0818-03

AS BUILT SECTION

Drilled: June 1991
Driller: Paul Fransen Drilling Co.

NOT TO SCALE

STEEL TAPE MEASUREMENT
Depth to water on June 18, 1991
= 257.85 ft. below top of casing.
Top of casing is 2 ft. above ground.
Mr. Raymond H. Sato
Manager and Chief Engineer
Department of Water
County of Kauai
P. O. Box 1706
Lihue, Hawaii 96766-5706

Dear Mr. Sato:

Pump Size and Setting for Anahola Well No. 3 (0818-03)

We recommend that a 350 gpm pump be installed in the subject well since the sustained pump test was run at 500 gpm. However, long-term effects to the aquifer, because of the total drawdown induced by all of the wells may eventually lead to increased chlorides. Pumping rate can then be lowered accordingly.

Since our records do not indicate that a benchmark has been established for this well, we recommend that the pump intake be set 285 feet below the top of the casing.

If you have any questions, please contact Glenn Bauer at 587-0263.

Sincerely,

MANABU TAGOMORI
Manager-Chief Engineer

GB:ln
December 4, 1992

Mr. Manabu Tagomori  
Manager and Chief Engineer  
DLNR - DOWALD  
P. O. Box 373  
Honolulu, HI  96809

Re: Pump Size and Setting for Anahola Well No. 3 (Well No. 0818-03)

The Department of Water will be letting out a consultant contract to prepare the plans and specifications to develop the Anahola Well No. 3 (Well No. 0818-03) that was drilled by Paul Frandsen & Associates.

In view of the above, please forward a copy of the pump test data for our files and your recommendation for pump size and setting.

Raymond H. Sato  
Manager and Chief Engineer  

WH: rm
TO:  INITIAL:  PLEASE:  REMARKS:

G. AKITA
L. Nanbu
E. Sakoda
G. Matsumoto
E. Lau
L. Chang
Y. Shiroma

See Me
Take Action By
Route to Your Branch
Review & Comment
Draft Reply
Acknowledge Receipt
Xerox copies
File
Mail

FOR YOUR:

Approval
Signature
Information

PUMP TEST SHEET, AS-BUILT, CHEM ANALYSIS.
Rearrangement, alignment, sent to RECS.

Dave S / 92
Mr. Kazuo G. Akita
Manager-Chief Engineer
Division of Water Resource Management
State of Hawaii
P.O. Box 373
Honolulu, Hawaii 96809

Dear Mr. Akita:

Enclosed are the results of our analysis of water samples collected on June 28, 1991, from the Anahola Well, 2-0818-03, Island of Kauai. This information is provisional and is subject to revision.

The data will be stored in our National Water Information System, a distributed water information data base in which data can be accessed over a network of minicomputers at U.S. Geological Survey offices throughout the United States.

Please contact us if you have any questions.

Sincerely,

William Meyer
District Chief

Enclosure
**United States Department of the Interior, U.S. Geological Survey**  
Water Resources Division, National Laboratory, Arvada, Colorado

**SITE ID:** 220825150185301  
**LAB ID NO.:** 2110194  
**PROJECT:** 471500200

**STATION NAME:** 2-0818-03, ANAHOLA WELL, ANAHOLA, KAUAI  
**STATE:** 15

**BEGIN DATE:** 06-28-1991 AT 1000  
**END DATE:** AT 0000  
**COUNTY:** 007

**MEDIUM:** 6  
**REMARKS TO LAB:** COLL BY DOWRM;MAILED 07-24-91  
**SCHEDULES USED:** 197024 NO. 1024

**CODE** | **PARAMETER NAME** | **UNITS** | **VALUE** | **M** | **A** | **T** | **G**
--- | --- | --- | --- | --- | --- | --- | ---
COMPUTED | 00900 | HARDNESS TOTAL | (MS/L AS CAO3) | 55 |
NEW--> | 00915 | CALCIUM DISSOLVED | (MS/L AS CA) | 7.9 | H | D | 2
NEW--> | 00925 | MAGNESIUM DISSOLVED | (MS/L AS Mg) | 8.6 | H | C | 2
NEW--> | 00930 | SODIUM DISSOLVED | (MS/L AS NA) | 26 | H | C | 2
COMPUTED | 00931 | SODIUM ADSORPTION R. | (RATIO) | 2 |
COMPUTED | 00932 | SODIUM, PERCENT | PERCENT | 50 |
NEW--> | 00935 | POTASSIUM DISSOLVED | (MS/L AS K) | 1.5 | H | B | 2
NEW--> | 00940 | CHLORIDE DISSOLVED | (MS/L AS CL) | 19 | H | J | 2
NEW--> | 00945 | SULFATE DISSOLVED | (MS/L AS SO4) | 12 | H | G | 2
NEW--> | 00950 | FLUORIDE DISSOLVED | (MS/L AS F) | 0.10 | H | E | 2
NEW--> | 00955 | SILICA DISSOLVED | (MS/L AS SIO2) | 29 | H | C | 2
NEW--> | 01002 | ARSENIC TOTAL | (UG/L AS AS) | 1 | < | H | B | 1
NEW--> | 01007 | BARIUM TOTAL | (UG/L AS BA) | 100 | < | H | A | 1
NEW--> | 01012 | BERYLLIUM TOTAL | (UG/L AS BE) | 10 | < | H | A | 2
NEW--> | 01027 | CADMIUM TOTAL | (UG/L AS CD) | 1 | < | H | F | 1
NEW--> | 01034 | CHROMIUM TOTAL | (UG/L AS CR) | 7 | H | D | 1
NEW--> | 01037 | COBALT TOTAL | (UG/L AS CO) | 1 | < | H | F | 1
NEW--> | 01042 | COPPER TOTAL | (UG/L AS CU) | 2 | H | F | 1
NEW--> | 01046 | IRON DISSOLVED | (UG/L AS Fe) | 3 | < | H | D | 1
NEW--> | 01051 | LEAD TOTAL | (UG/L AS Pb) | 3 | H | F | 1
NEW--> | 01055 | MANGANESE TOTAL | (UG/L AS Mn) | 10 | < | H | A | 2
NEW--> | 01056 | MANGANESE DISSOLVED | (UG/L AS Mn) | 1 | < | H | C | 1
NEW--> | 01062 | MOLYBDENUM TOTAL | (UG/L AS Mo) | 1 | < | H | A | 1
NEW--> | 01067 | NICKEL TOTAL | (UG/L AS N1) | 6 | H | F | 1
NEW--> | 01077 | SILVER TOTAL | (UG/L AS Ag) | 1 | < | H | F | 1
NEW--> | 01092 | ZINC TOTAL | (UG/L AS Zn) | 10 | < | H | A | 1
NEW--> | 01105 | ALUMINUM TOTAL | (UG/L AS Al) | 10 | < | H | C | 1
NEW--> | 01132 | LITHIUM TOTAL | (UG/L AS Li) | 10 | < | H | A | 1
NEW--> | 01147 | SELENIUM TOTAL | (UG/L AS Se) | 1 | < | H | A | 1
COMPUTED | 70301 | DISSOLVED SOLIDS SUM | MG/L | 147 |
NEW--> | 71900 | MERCURY, TOT.REC. | UG/L AS HG | 0.10 | < | H | B | 2
NEW--> | 80085 | SPECIFIC CONDUCTANCE | MICROSIEMENS/CM | 229 | H | A | 3
NEW--> | 90410 | ALKALINITY | MG/L AS CACO3 | 72 | H | A | 2

**** NO RECORD COULD BE LOCATED IN THE QWFILE FOR THIS TRANSACTION
-- ALL DATA HAVE BEEN REJECTED - NO SITEFILE ENTRY FOR USGS 220825150185301

**CATIONS**

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<th>(MEQ/L)</th>
<th>(MG/L)</th>
<th>(MEQ/L)</th>
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<td>0.708</td>
<td>SULFATE, DISS. M5/L</td>
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<td>SODIUM, DISS. M5/L</td>
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<td>1.132</td>
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**ANIONS**

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<th>(MG/L)</th>
<th>(MEQ/L)</th>
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<td>SULFATE DISS. M5/L</td>
<td>0.250</td>
</tr>
<tr>
<td>FLUORIDE DISS. M5/L</td>
<td>0.006</td>
</tr>
<tr>
<td>ALKALINITY, FET, LAB</td>
<td>1.430</td>
</tr>
</tbody>
</table>

**TOTAL**

2.272

**PERCENT DIFFERENCE** = 0.93
WELL CONSTRUCTION/PUMP INSTALLATION PERMIT

for

Anahola Well C
Well No. 0818-03
Anahola, Kauai

TO: County of Kauai
Department of Water
P.O. Box 1706
Lihue, HI 96766

In accordance with the Department of Land and Natural Resources Administrative Rules, Section 13-168, entitled "Water Use, Wells, and Stream Diversion Works", your application to construct, test, and install a pump in Anahola Well C (Well No. 0818-03 as a backup well, is approved subject to the following conditions:

1. The proposed well construction and pump installation shall not adversely affect existing or future legal uses of water in the area, including any surface water or established instream flow standards. This permit or the authorization to construct and pump water from a well shall not constitute a determination of correlative water rights. The permittee is notified and by this provision understands that the quantity of water taken from the well could be reduced by the Commission in the future. This permit is not a commitment that the pump capacity permitted here or even some lesser amount is guaranteed in the future.

2. The permit shall be for construction, testing, and installation of a 200 gallons per minute capacity pump in the well, as determined by the pumping test results. The applicant shall submit to DWRM the test results and proposed permanent pump information, based on the test, for approval by the Chairperson. No permanent pump may be installed and no water used from the well without the Chairperson's approval.

3. The applicant shall provide and maintain an approved meter or other appropriate device or means for measuring and reporting total water usage on a monthly basis.
4. The following shall be submitted to DWRM within 30 days after completion of the work:

   a. Well Completion Report.
   
   b. As-built sectional drawing of the well.

5. The applicant shall comply with all applicable laws, rules, and ordinances.

6. This permit may be revoked if work is not started within six months of the date of issuance or if work is suspended or abandoned for six months. The work proposed in the permit application shall be completed within 24 months from the date of permit issuance.

AUG 8 1991
Date of Issuance

cc: USGS
    Department of Health
    Safe Drinking Water Branch
    Ground Water Protection Program
TO Department of Land & Natural Resources
P.O. Box 373
Honolulu, HI 96809

GENTLEMEN:

WE ARE SEND the following it:

1. Pump test data & report
2. Chemical analysis
3. AE Report

COPIES

THESE ARE TRANSMITTED as checked below:

☐ For approval
☐ Approved as submitted
☐ For your use
☐ Approved as noted
☐ As requested
☐ Returned for corrections
☐ For review and comment

REMARKS

COPY TO ____________________________
SIGNED: Keith Fujimoto

If enclosures are not as noted, kindly notify us at once.
Environmental Services Division

DEPARTMENT OF WATER SUPPLY
P.O. Box 1706
Lihue, Hawaii 96766

Date Sampled/Time: 062591/0907-20
Sampled By: Moreno
Sample Location: Anahola Well 3

Analysis Date: 070591

<table>
<thead>
<tr>
<th>UNREGULATED COMPOUNDS</th>
<th>RESULT ug/L</th>
<th>DETECTION LIMIT ug/L</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chloromethane</td>
<td>ND</td>
<td>1.0</td>
</tr>
<tr>
<td>Bromomethane</td>
<td>ND</td>
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</tr>
<tr>
<td>Chloroethane</td>
<td>ND</td>
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<tr>
<td>Methylene Chloride</td>
<td>ND</td>
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</tr>
<tr>
<td>trans-1,2-Dichloroethene</td>
<td>ND</td>
<td>0.6</td>
</tr>
<tr>
<td>1,1-Dichloroethane</td>
<td>ND</td>
<td>1.0</td>
</tr>
<tr>
<td>2,2-Dichloropropane</td>
<td>ND</td>
<td>2.0</td>
</tr>
<tr>
<td>cis-1,2-Dichloroethene</td>
<td>ND</td>
<td>1.0</td>
</tr>
<tr>
<td>Chloroform</td>
<td>ND</td>
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</tr>
<tr>
<td>1,1-Dichloropropene</td>
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<td>1.0</td>
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<tr>
<td>1,2-Dichloropropene</td>
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</tr>
<tr>
<td>Bromodichloromethane</td>
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</tr>
<tr>
<td>Dibromomethane</td>
<td>ND</td>
<td>1.0</td>
</tr>
<tr>
<td>trans-1,3-Dichloropropene</td>
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<td>1.0</td>
</tr>
<tr>
<td>Toluene</td>
<td>ND</td>
<td>1.0</td>
</tr>
<tr>
<td>cis-Dichloropropene</td>
<td>ND</td>
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<td>ND</td>
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</tr>
<tr>
<td>Tetrachloroethene</td>
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<td>0.3</td>
</tr>
<tr>
<td>1,3-Dichloropropene</td>
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<tr>
<td>Dibromochloromethane</td>
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<tr>
<td>Chlorobenzene</td>
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<td>1.0</td>
</tr>
<tr>
<td>Ethyl benzene</td>
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<td>1.0</td>
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<tr>
<td>o-Xylene</td>
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<td>1.0</td>
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<tr>
<td>Styrene</td>
<td>ND</td>
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<tr>
<td>Bromoform</td>
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<tr>
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<td>ND</td>
<td>1.0</td>
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<tr>
<td>Bromobenzene</td>
<td>ND</td>
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<tr>
<td>2-Chlorotoluene</td>
<td>ND</td>
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<tr>
<td>4-Chlorotoluene</td>
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<td>1,3-Dichlorobenzene</td>
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<td>1.0</td>
</tr>
<tr>
<td>1,2-Dichlorobenzene</td>
<td>ND</td>
<td>1.0</td>
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</table>

ND = NOT DETECTED
DEPARTMENT OF WATER SUPPLY
P.O. Box 1706
Lihue, Hawaii 96766

JOB NO: 4417
Date: 07/15/91

Date Sampled/Time: 062591/0907-20
Sampled By: Morenzo
Sample Location: Anahola Well 3

Date Received: 062691
Time Received: 0700

Analysis Date: 7/05/91

<table>
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<tr>
<th>REGULATED COMPOUNDS</th>
<th>RESULT</th>
<th>DETECTION LIMIT</th>
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</thead>
<tbody>
<tr>
<td>Vinyl Chloride</td>
<td>ND</td>
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<tr>
<td>1,1-Dichloroethylene</td>
<td>ND</td>
<td>1.0</td>
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<tr>
<td>1,1,1-Trichloroethane</td>
<td>ND</td>
<td>1.0</td>
</tr>
<tr>
<td>Carbon Tetrachloride</td>
<td>ND</td>
<td>0.5</td>
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<tr>
<td>Benzene</td>
<td>ND</td>
<td>1.0</td>
</tr>
<tr>
<td>1,2-Dichloroethane</td>
<td>ND</td>
<td>1.0</td>
</tr>
<tr>
<td>Trichloroethylene</td>
<td>ND</td>
<td>0.5</td>
</tr>
<tr>
<td>p-Dichlorobenzene</td>
<td>ND</td>
<td>1.0</td>
</tr>
</tbody>
</table>

Analysis Date: 07/05/91

<table>
<thead>
<tr>
<th>UNREGULATED COMPOUNDS-(list 3)</th>
<th>RESULT</th>
<th>DETECTION LIMIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bromochloromethane</td>
<td>ND</td>
<td>1.0</td>
</tr>
<tr>
<td>1,2,4-Trichlorobenzene</td>
<td>ND</td>
<td>1.0</td>
</tr>
<tr>
<td>Hexachlorobutadiene</td>
<td>ND</td>
<td>1.0</td>
</tr>
<tr>
<td>Naphthalene</td>
<td>ND</td>
<td>1.0</td>
</tr>
<tr>
<td>1,2,3-Trichlorobenzene</td>
<td>ND</td>
<td>1.0</td>
</tr>
</tbody>
</table>

Analysis Date: 07/05/91

<table>
<thead>
<tr>
<th>REGULATED COMPOUND</th>
<th>RESULT</th>
<th>DETECTION LIMIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene Dibromide</td>
<td>ND</td>
<td>1.0</td>
</tr>
<tr>
<td>1,2-Dibromo-3-Chloropropane</td>
<td>ND</td>
<td>1.0</td>
</tr>
</tbody>
</table>

ND = NOT DETECTED
LABORATORY ANALYSIS REPORT

DEPARTMENT OF WATER SUPPLY
P.O. Box 1706
Lihue, Hawaii 96766

Date Sampled/Time: 062591/0907-20
Sampled By: Morenzo
Sample Location: Anahola Well 3

Analysis Date: 07/05/91

<table>
<thead>
<tr>
<th>PESTICIDES / HERBICIDES</th>
<th>RESULT ug/L</th>
<th>DETECTION LIMIT ug/L</th>
<th>MCL ug/L</th>
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<tbody>
<tr>
<td>Endrin</td>
<td>ND</td>
<td>0.20</td>
<td>0.2</td>
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<tr>
<td>Lindane</td>
<td>ND</td>
<td>0.02</td>
<td>4.0</td>
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<tr>
<td>Methoxychlor</td>
<td>ND</td>
<td>0.17</td>
<td>100</td>
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<tr>
<td>Toxaphene</td>
<td>ND</td>
<td>0.17</td>
<td>5.0</td>
</tr>
<tr>
<td>2,4-D</td>
<td>ND</td>
<td>5.0</td>
<td>100</td>
</tr>
<tr>
<td>2,4,5-TP (Silvex)</td>
<td>ND</td>
<td>5.0</td>
<td>10</td>
</tr>
</tbody>
</table>

Analysis Date: 07/05/91

<table>
<thead>
<tr>
<th>TRIHALOMETHANES</th>
<th>RESULT ug/L</th>
<th>DETECTION LIMIT ug/L</th>
<th>MCL ug/L</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL</td>
<td>ND</td>
<td>5.0</td>
<td>100</td>
</tr>
<tr>
<td>Chloroform</td>
<td>ND</td>
<td>0.6</td>
<td></td>
</tr>
<tr>
<td>Bromoform</td>
<td>ND</td>
<td>2.0</td>
<td></td>
</tr>
<tr>
<td>Chlorodibromomethane</td>
<td>ND</td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td>Dichlorobromomethane</td>
<td>ND</td>
<td>1.0</td>
<td></td>
</tr>
</tbody>
</table>

ND = NOT DETECTED
DEPARTMENT OF WATER SUPPLY  
P.O. Box 1706  
Lihue, Hawaii 96766

Date Sampled/Time: 062591/0907-20  
Sampled By: Morenzo  
Sample Location: Anahola Well 3

Analysis Date: 07/08/91

<table>
<thead>
<tr>
<th>INORGANIC CONSTITUENTS</th>
<th>RESULT mg/L</th>
<th>DETECTION LIMIT mg/L</th>
<th>MCL mg/L</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arsenic</td>
<td>ND</td>
<td>0.01</td>
<td>0.05</td>
</tr>
<tr>
<td>Selenium</td>
<td>ND</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td>Mercury</td>
<td>ND</td>
<td>0.0002</td>
<td>0.002</td>
</tr>
<tr>
<td>Cadmium</td>
<td>ND</td>
<td>0.01</td>
<td>0.010</td>
</tr>
<tr>
<td>Lead</td>
<td>ND</td>
<td>0.01</td>
<td>0.05</td>
</tr>
<tr>
<td>Chromium</td>
<td>ND</td>
<td>0.01</td>
<td>0.05</td>
</tr>
<tr>
<td>Barium</td>
<td>ND</td>
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<tr>
<td>Silver</td>
<td>ND</td>
<td>0.01</td>
<td>0.05</td>
</tr>
<tr>
<td>Lithium</td>
<td>ND</td>
<td>0.10</td>
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<tr>
<td>Boron</td>
<td>ND</td>
<td>0.03</td>
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</tr>
<tr>
<td>Silica</td>
<td>12.0</td>
<td>0.10</td>
<td></td>
</tr>
<tr>
<td>Sodium</td>
<td>31.0</td>
<td>0.10</td>
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</tr>
<tr>
<td>Vanadium</td>
<td>0.02</td>
<td>0.01</td>
<td></td>
</tr>
<tr>
<td>Nickel</td>
<td>ND</td>
<td>0.01</td>
<td></td>
</tr>
<tr>
<td>Nitrate (as N)</td>
<td>ND</td>
<td>0.1</td>
<td>10</td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.2</td>
<td>0.1</td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
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</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>193</td>
<td>5.0</td>
<td>500</td>
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**ADDITIONAL CONSTITUENTS OF INTEREST:**

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<thead>
<tr>
<th>Constituent</th>
<th>Result</th>
<th>MCL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium</td>
<td>6.4</td>
<td>0.10</td>
</tr>
<tr>
<td>Magnesium</td>
<td>7.1</td>
<td>0.10</td>
</tr>
<tr>
<td>Potassium</td>
<td>2.2</td>
<td>0.10</td>
</tr>
</tbody>
</table>

ND = NOT DETECTED
Mr. William Meyer  
District Chief  
U.S. Geological Survey  
Water Resources Division  
677 Ala Moana Blvd., Suite 415  
Honolulu, Hawaii 96813

Attention: Mr. John Yee

Dear Mr. Meyer:

**Water Sample, Anahola Well 0818-03, Kauai**

Transmitted under separate cover to Mr. John Yee of your office is a one-gallon water sample take on June 28, 1991 from the Anahola Well (Well No. 0818-03).

We would appreciate your running the usual chemical analyses and forwarding us a copy of the results as soon as they become available.

Sincerely,

KAZUO G. AKITA  
Manager-Chief Engineer

MO:ko
ANAHOLA WELL 0818-03. KAUAI

Installation of 8" pump column
Diesel engine, right angle drive

Discharge pipe
Well 0818-02 (background), well 0818-01 (foreground)

Well 0818-01 & Electrical sounding reel
MEMORANDUM FOR THE RECORD

FROM: M. Ohye

SUBJECT: Anahola Well 0818-03, Kauai "Pump Test"

A pumping test was conducted on the subject well from June 24-28, 1991. The well was pumped at a rate of 500 gallons per minute with a drawdown of 15 ft., chloride content 21 ppm, and a constant temperature of 24.0°C.

The pumping test began at 10:00 a.m. on June 24, 1991, but the test was terminated at 12:00 pm on June 25, 1991 after 26 hours because of erratic engine performance. Corrections were made and test resumed at 4:00 p.m. and the pump ran for 67 continuous hours until end of test on June 28, 1991 at 11:00 a.m.
Anahola Well 0818-03, Kauai
Pumping Test Summary

June 24, 1991
Started pumping (step test) at 10:00 am.
Pumping rates at 200, 400, gpm.
Monitor Well 0818-01 located at 70° mauka with electric sounding reel.
Well No. 0818-02 pumped at 200 gpm.

June 25, 1991
Diesel engine running rough and pumping rate erratic. The driller suspected bad fuel and filters. Stopped pumping at 12:00 p.m. and took recovery data while the contractor changed the fuel filters and got new diesel fuel. Started pumping at 4:00 p.m.

June 26-27, 1991
Everything O.K. Continued to monitor Well No. 0818-01.

June 28, 1991
Stopped pumping at 11:00 a.m. after 67 continuous hours and started taking recovery data. Returned sounding reel to Kauai DWS and obtained pump chart for Well No. 0818-02.
GENTLEMEN:

WE ARE SENDING YOU X Attached □ Under separate cover via the following items:

☐ Shop drawings ☐ Prints ☐ Plans ☐ Samples ☐ Specifications
☐ Copy of letter ☐ Change order ☐ Tracings ☐

COPIES | DESCRIPTION
--- | ---
1 | Graph - Water level for Anaholz Well 90-B during 6/27 - 7/3/91

THESE ARE TRANSMITTED as checked below:

☐ For approval ☐ Approved as submitted
☑ For your use ☐ Approved as noted
☐ As requested ☐ Returned for corrections
☐ For review and comment ☐

REMARKS
__________________________________________
__________________________________________
__________________________________________
__________________________________________

COPY TO ___________________ SIGNED: Keith Fujimoto, Engineer

If enclosures are not as noted, kindly notify us at once.
PUMPING TEST RECORD
for

KUAAI Island 17-KW-L Project or Job No. 19

Description of Well--
1. Elevation: ground surface _______ ft., top of casing _______ ft.,
   rotary table _______ ft., referenced to _______ benchmark.
2. Total depth of well _______ ft.; or _______ ft. elevation, msl
3. _______ in. solid casing to _______ ft. depth, perforated to _______ ft. depth
4. Static water level on _______ ft. below ground
   surface, top of casing; or _______ ft. elevation msl
   measured _______ method

Description of Pump and Pump Setting--
5. _______ type pump with _______ stage bowl assembly
6. _______ electric, power with _______ horsepower
7. Shaft speed: _______ rpm at _______ gpm flow
8. Depth of pump intake: _______ ft. below TOC; or _______ ft. elev. msl
9. Depth of airline bottom: _______ ft. below TOC; or _______ ft. elev. msl
10. Center of gage: _______ ft. elev., msl. Flow measured with _______
11. Test conducted by _______ M. OHIGE

<table>
<thead>
<tr>
<th>Date &amp; Time</th>
<th>Sample No.</th>
<th>Pumping rate (gpm)</th>
<th>Airline Drawdown (feet)</th>
<th>Chlorides (ppm)</th>
<th>Temp. (°F)</th>
<th>Cond. (mmhos 25°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>JUNE</td>
<td>24</td>
<td>1991</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
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<tr>
<td>0900</td>
<td>0</td>
<td>18.80</td>
<td></td>
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</tr>
<tr>
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<td>18.80</td>
<td></td>
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<tr>
<td>1000</td>
<td>18.80</td>
<td></td>
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- START PUMPING. ADJUST TO 200 GPM -

|                |            |                   |                        |                 |            |                   |
| 1005          | 209        | 16.10             | 2.7                    |                 |            |                   |
| 1015          | 15.20      | 3.10              |                        |                 |            |                   |
| 1045          | 217        | 15.70             | 3.1                    |                 | 264.9      | 1.4               |
| 1045          | 215        | 19.70             | 3.1                    |                 | 265.0      | 1.5               |
| 1100          | 215        | 15.50             | 3.2                    | 27               | 24.0       | 265.0 1.5         |
| 1115          | 209        | 15.70             | 3.1                    |                 | 264.9      | 1.4               |
| 1145          | 209        | 15.70             | 3.1                    |                 | 265.0      | 1.5               |
| 1200          | 210        | 15.80             | 3.0                    |                 | 265.0      | 1.5               |

- ADJUST TO 400 GPM -

Sheet No. 1 of 7 Sheets
<table>
<thead>
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<th>Date &amp; Time</th>
<th>Sample No.</th>
<th>Pumping Rate (gpm)</th>
<th>Airline (feet)</th>
<th>Drawdown (feet)</th>
<th>Chlorides (ppm)</th>
<th>Temp. (°F)</th>
<th>Cond. (mmhos 25°C)</th>
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</thead>
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</tr>
<tr>
<td>12/05</td>
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<td>393</td>
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<td>10.3</td>
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<tr>
<td>12/15</td>
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<td>396</td>
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<td>10.4</td>
<td></td>
<td></td>
<td>266.9</td>
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<tr>
<td>12/20</td>
<td></td>
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PUMPING TEST RECORD
for

ANAHOLA
Well 0818-03

KAUMAN Island 17-KW-L Project or Job No. 19

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for
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(name)
WELL 0818-03
(No.)

KAUAI Island 17-KW-C Project or Job No. 19

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Sheet No. 6 of 7 Sheets
**PUMPING TEST RECORD**

for

**ANAHOLA**

Well 0816.02

(name) (No.)

Kauai Island 1-KU-C Project or Job No. 19

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**STOP PUMPING - RECOVERY**

**ELAPSED TIME**

40160 9800

AVER. D = 491 GPM

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Sheet No. 7 of 7 Sheets
### CHLORIDE TITRATION RECORD

**Location:** Anakola, Well OEL 18-03

**Island:** Kauai

**Project or Job No.:** 17-KU-C, Project or Job No. 19

**Titrations conducted by:**

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CHLORIDE TITRATION RECORD

KAINUI Island 17-KW-2 Project or Job No. 19
Titrations conducted by M. Okaye

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<th>Sample No.</th>
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<th>Burette Rdg After</th>
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<th>AgNO₃ + .2 ml Factor</th>
<th>Chlorides (ppm)</th>
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</table>
June 19, 1991

MEMORANDUM FOR THE RECORD

FROM: M. Ohye

SUBJECT: Anahola Well No. 0818-03, Kauai; Water Level Measurement

On June 18, 1991, a water level measurement was conducted at the Anahola Well (Well No. 0818-03) using a steel surveyor’s tape and wet line chalk method.

Anahola Well No. 0818-03

1) Gr. El. = No B.M. was established at the well
2) Casing dia. = 12 in., height above Gr. = 2 ft.
3) Solid casing depth = 290 ft.
4) Open hole - 276 ft.
5) Total depth = 466 ft.

Water Level Measurement

Reference point is top of a 12-inch casing which stands 2 feet above ground surface. 260 ft. of tape was lowered into the well and a wet mark was recorded at 3.15 ft. from end of tape; therefore, 260 ft. - 3.15 ft. = 256.85 ft. (depth to top of water) or 10.65 ft., msl based on existing ground elevation indicated in the contract plans and specifications.

Airline and Pump Settings

Instructed driller Miles Fransen to set the bottom of airline at 275 ft. below top of casing and pump intake at 290 ft. The well will be cleaned out by surging and some preliminary drawdown data taken. Long-term pumping test tentatively set for the week of June 24-28, 1991.
MESSAGE

TO
FRANKEN D R I L L I N G
ANAHOLA W E L L 0818-03
JOB. 17-KW-C

DATE
JUNE 18, 1991

T.D. = 466'

CSG. DIA. = 12"  HT. 2' ABOVE GR.

W. L. MEAS. DTW = 256.85' TOP OF CSG.

CSG. SOL. = 290'

SET BOTTOM OF 1/4" AIRLINE
20' BELOW TOP OF WATER (275' BELOW Top OF CASING)
PUMP INTAKE AT 290' TOP OF CSG.

SIGNED

Driller: M i l e s F r a n d s e n

Honolulu, Hawaii 96809

State of Hawaii
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF WATER AND LAND DEVELOPMENT
P. O. Box 373
Honolulu, Hawaii 96809

REPLY

DATE
JUNE 18, 1991

T.D. = 466'

CSG. DIA. = 12"  HT. 2' ABOVE GR.

W. L. MEAS. DTW = 256.85' TOP OF CSG.

CSG. SOL. = 290'

SET BOTTOM OF 1/4" AIRLINE
20' BELOW TOP OF WATER (275' BELOW TOP OF CASING)
PUMP INTAKE AT 290' TOP OF CSG.

SIGNED

Mitchell K. Ch.

Driller: M i l e s F r a n d s e n
May 10, 1991

The Honorable William W. Paty, Chairperson
Commission on Water Resource Management
Department of Land and Natural Resources
State of Hawaii
P.O. Box 621
Honolulu, Hawaii 96809

Dear Mr. Paty:

SUBJECT: WELL CONSTRUCTION PERMIT APPLICATION
ANAHOLA WELL C
STATE WELL NO. 0818-03
ANAHOLA, KAUIA

Thank you for the opportunity to review and comment on the subject document. We have examined the application and have the following comments to offer:

1. The application indicates that the subject well will be for exploratory purposes. If the well is to serve 25 or more individuals at least 60 days per year or will have a minimum of 15 service connections, the applicant will be required to comply with the Department’s Administrative Rules, Title 11, Chapter 20, “Potable Water Systems.”

2. Section 11-20-29 of Chapter 20 requires that a new source of potable water serving a public water system be approved by the Director of Health prior to its use. Such an approval is based primarily upon the submission of a satisfactory engineering report which addresses the requirements set in Section 11-20-29.

3. The proposed well is situated above the Underground Injection Control (UIC) line. Land areas above the UIC line are considered to contain underground sources of drinking water. Thus, it is essential that the well be designed and constructed to prevent the possibility of groundwater contamination. For example, the well should have a concrete well pad and full grouting to prevent seepage or floodwaters from migrating down the well shaft.
The Honorable William W. Paty  
Page 2  
May 10, 1991

If you should have any questions, please contact the Safe Drinking Water Branch at 543-8258.

Sincerely,

THOMAS E. ARIZUMI, P.E., Chief  
Environmental Management Division

cc: Raymond Sato  
Manager and Chief Engineer  
Department of Water  
P.O. Box 1706  
Lihue, Kauai, HI 96766
May 6, 1991

Mr. Manabu Tagomori, Deputy Director
DLNR-Comm. on Water Resource Management
P. O. Box 621
Honolulu, HI 96809

Re: Well Construction and Pump Installation Permit
Application: Anahola C (0818-03), Department of Water, County of Kauai, TMK: 4-8-03:23

We strongly endorse the proposed well and pump permit application.

Raymond H. Sato
Manager and Chief Engineer

GF:rm
The Honorable William W. Paty, Chairperson
Commission on Water Resource Management
Department of Land and Natural Resources
P. O. Box 621
Honolulu, Hawaii 96809

Dear Mr. Paty:

Well Construction and Pump Installation Applications
Stream Alteration Permit

Thank you for the opportunity to comment on the following permit applications:

- Kohanaiki 1 & 2 (4458-01, 02) Well and Pump
- Puako 4-6 (5748-01, 5648-04, 5549-02) Well and Pump
- HCEOC-Milolii (1154-01) Well and Pump
- DHHL-Kawaihae (6448-02) Exploratory Well
- Fern Grotto 2 (0221-02) Well
- Anahola C (0818-03) Well and Pump
- Moloka'i Golf 1 & 2 (0901-02, 1001-02) Well and Pump
- Naiwa-Ciba/Geigy Irrigation (0705-05) Pump
- and Kihei Gulch No. 2 Stream Alteration Permit

Our comments are directed to two projects with positive impact on Hawaiian home lands -- Kawaihae and Anahola wells; and the Moloka'i Golf resubmittal, for which we prepared comments at an earlier time.

The Kawaihae Well is being drilled and tested for the Department of Hawaiian Home Lands by the Division of Water Resource Management; it will directly benefit new native Hawaiian lessees at Kawaihae, a major anticipated growth area and development priority. We anticipate potable results from the well testing, and request your approval of this project.

The Anahola Well will supplement the system on Hawaiian home lands in Anahola operated by Kaua'i County, which serves
Hawaiian homesteaders and other members of this old community. The system is currently at capacity. Anahola is the Department's primary development area on the island of Kaua'i. We request your approval of this project.

The Moloka'i Golf resubmittal appears to be the same as the previous request, and we are attaching our prior comments, which are still relevant. That letter requests the project be denied.

The other captioned projects do not affect Hawaiian home lands, and we do not have comments at this time.

Warmest aloha,

Hoa'ailua L. Drake, Chairman
Hawaiian Homes Commission

HLD:DCY:CI
William W. Paty, Chairperson
Commission on Water Resource Management
P.O. Box 621
Honolulu, Hawaii 96809

Dear Mr. Paty,

Moloka'i Golf Inc.
Request for Extension of Well Construction Permits
Moloka'i Golf Wells 1 & 2, Kualapuu, Moloka'i

The Department of Hawaiian Home Lands appreciates the opportunity to comment on the request to extend well construction permits to serve a golf course in Kualapuu.

These wells draw from the Kualapuu Aquifer, which underlies Hawaiian home lands and is a major source of water for homestead development. By our estimates, Moloka'i Ranch's reasonable share of this aquifer, based upon its proportion of overlying land, is perhaps 1.25 Mgd. Moloka'i Ranch has already sold its interest in an existing well tapping this aquifer, one yielding a little over 1 Mgd. The Department of Hawaiian Home Lands respectfully submits that the proposed golf course wells exceed the amount that might be withdrawn from this aquifer to serve Moloka'i Ranch lands.

We understand that developers expect to find brackish water in these wells. We appreciate that this approach aims to protect potable sources. Any approval to use brackish water should be based on an adequate understanding of the aquifer such that potable sources are not endangered. Should only potable water be found, it should only be used by overlying land owners for reasonable potable uses, in proportion to their rights to the aquifer.

We still have concerns about the appropriateness of golf course development in this location, first because its use of fertilizers, pesticides, and brackish irrigation water may pose a threat to groundwater, and second because the Moloka'i Community Plan confines resort activities to the West End of Moloka'i.
Finally, we wish to express concern over very short notice to prepare comments. The agenda for the Commission on Water Resource Management appears barely a week before the scheduled meeting. This does not allow much preparation time, either to prepare comments or to schedule attendance, as necessary. While most other agenda items have been processed well in advance, this one appeared without prior notice. We are anticipating other issues that are critical to the Hawaiian home lands programs, and would like to have adequate time to make an appropriate response.

A decision on designation of all or parts of Moloka'i as a Water Management Area is one issue in which we have great interest. Even without this designation, the Commission's authority to issue a permit in its trustee capacity is a regulatory function, and the clear potential of the subject request to create a legal conflict as well as a water quality threat should be sufficient to act accordingly.

In light of considerable activity since the initial request, the Commission is within its authority to review the current request from a larger perspective. We do not believe it meets the reasonable and beneficial standard to be applied as the Commission's trust responsibility, and we ask you to deny this request.

Thank you again for this opportunity to present our position.

Warmest aloha,

Hoaliku L. Drake, Chairman
Hawaiian Homes Commission
May 1, 1991

The Honorable William W. Paty, Chairperson
Commission on Water Resource Management
Department of Land and Natural Resources
P. O. Box 621
Honolulu, Hawaii 96809

Dear Mr. Paty:

Well Construction and Pump Installation Applications
Stream Alteration Permit

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Warmest aloha,

Hoa'ali'i L. Drake, Chairman
Hawaiian Homes Commission

HLD:DCY:CI
MEMORANDUM

TO:        Manabu Tagomori, Deputy Director
           Commission on Water Resource Management

FROM:      Don Hibbard, Administrator
           State Historic Preservation Division

SUBJECT:   Historic Preservation Review -- Well Construction and
           Pump Installation Permit Application (County of Kauai
           Department of Water Supply) (Anahola C Well No. 0818-03)
           Anahola, Kawaihau, Kauai
           TMK: 4-8-03: 23

No historic sites are known to be present in the area planned for
the pump. This area has been previously under intensive
cultivation, so it is highly unlikely that significant historic
sites are still exist. Therefore, we believe that the proposed
well drilling and pump installation will have "no effect" on
significant historic sites.

If you have any questions please call Nancy McMahon at 587-006.
Weekly Report No. 23

State of Hawaii
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF WATER AND LAND DEVELOPMENT

WEEKLY CONSTRUCTION REPORT
Covering Week Ending 20 April, 1991

JOB NO. 17-KW-C Anahole Well CONTRACTOR: Paul Frendson & Associates
No. 088-0-3
Anahol, Kauai, Hawaii

Weekly Report No. 23

DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF WATER AND LAND DEVELOPMENT

WEEKLY CONSTRUCTION REPORT
Covering Week Ending 20 April, 1991

JOB NO. 17-KW-C Anahole Well CONTRACTOR: Paul Frendson & Associates
No. 088-0-3
Anahole, Kauai, Hawaii

DESCRIPTION OF CONSTRUCTION ACTIVITIES

1. Contractor checked alignment and poured concrete plug.
2. Removed temporary casing.
3. Pour gravel in sections until completed.
4. Drill open hole to 335'.
5. Alignment test below. Mast 47' from top of casing
   1' cable, 40' dummy, 1' casing. Notes at N. Xl of casing

Materials

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<th>Type</th>
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<td>.44'</td>
<td>235'</td>
<td>4' (15.8&quot;)</td>
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<td>4' (1.2&quot;)</td>
<td>41</td>
<td>.42' (1&quot;)</td>
<td>4 (24)</td>
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<td>9' (3.0&quot;)</td>
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<td>.36</td>
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<td>(19.8&quot;)</td>
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<tr>
<td>14' (7.0&quot;)</td>
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<td>.30</td>
<td>4 (24)</td>
<td></td>
</tr>
<tr>
<td>188' (12&quot;)</td>
<td>26</td>
<td>.50</td>
<td>4 (24)</td>
<td></td>
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Remarks: As shown on the above table @ 188' mark out of plumb should be 11.3", at 235', 14.1", at 290', 17.4".

Weather:

Payroll for Week Ending: ______________ Payroll Amount: ______________

Total Manhours of Labor Used: ______________ No. of Men: ______________

Submitted by:
### PLUMBNESS and ALIGNMENT

#### Well Name: ANARKOL

#### Well No.: 7-04-6-05

#### Total Depth: 9979 ft.

#### Casing Dia.: 12 in.

#### Sol. Cas.: 940 ft.

#### Perf. Cas.: None

#### Date: April 50, 1991

#### Dummy: AO

#### Cage

#### Suspension Pt: AT above TOC.

#### Personnel: T. Nichols

#### Weather

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<th>DIRECTION</th>
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<td>N-25.3</td>
<td>N-19.8 E 6”</td>
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**NOT TO SCALE**
Mr. Raymond H. Sato  
Manager & Chief Engineer  
Department Of Water  
County Of Kauai  
P.O. Box 1706  
Lihue, Hawaii 96766-5706

Dear Mr. Sato:

Well Construction and Pump Installation Permit Application(s)

Transmitted for your review and comment is a copy of the following permit application(s):

<table>
<thead>
<tr>
<th>Island</th>
<th>Well Name</th>
<th>Well No.</th>
<th>Application Type</th>
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<td>Fern Grotto 2</td>
<td>0221-02</td>
<td>Well and Pump</td>
</tr>
<tr>
<td>Kauai</td>
<td>Anahola C</td>
<td>0818-03</td>
<td>Well and Pump</td>
</tr>
</tbody>
</table>

Please review the application(s) pursuant to your area of concern and submit your comments to us, orally or in writing, by ten (10) working days from date of letter.

Should you have any questions, please contact our Regulation Branch at 548-7541.

Sincerely,

[Signature]

MANABU TAGOMORI  
Deputy Director

NF:bm  
Enc.
Honorable Hoaliku L. Drake  
Director  
Department of Hawaiian Home Lands  
State of Hawaii  
P.O. Box 1879  
Honolulu, Hawaii 96805

Dear Mrs. Drake:

Well Construction and Pump Installation Permit Application(s)

Transmitted for your review and comment is a copy of the following permit application(s):

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<td>Well and Pump</td>
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Honorable Hoaliku L. Drake
Page 2

Should you have any questions, please contact Manabu Tagomori, Deputy Director at 548-7533.

Very truly yours,

Enc.

WILLIAM W. PATY
Mr. Thomas K. Kaulukukui, Sr.
Chairman & Trustee-At-Large
Office of Hawaiian Affairs
1600 Kapiolani Blvd., Suite 1500
Honolulu, Hawaii 96814

Attn: Ms. Linda Delaney, Land & Natural Resources Division

Dear Mr. Kaulukukui:

**Well Construction and Pump Installation Permit Application(s)**

Transmitted for your review and comment is a copy of the following permit application(s):

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Please review the application(s) pursuant to your area of concern and submit your comments to us, orally or in writing, by ten (10) working days from date of letter.
Mr. Thomas K. Kaulukukui, Sr.
Page 2

Should you have any questions, please contact Manabu Tagomori, Deputy Director at 548-7533.

Very truly yours,

[Signature]

WILLIAM W. PATY

Enc.
Honorable John C. Lewin, M.D.
Director
Department of Health
State of Hawaii
1250 Punchbowl Street
Honolulu, Hawaii 96813

Attn: Mr. William Wong, Drinking Water Branch

Dear Dr. Lewin:

Well Construction and Pump Installation Permit Application(s)

Transmitted for your review and comment is a copy of the following permit application(s):

<table>
<thead>
<tr>
<th>Island</th>
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<tr>
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</tr>
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Should you have any questions, please contact Manabu Tagomori, Deputy Director at 548-7533.

Very truly yours,

[Signature]

WILLIAM W. PATY

Enc.
MEMORANDUM

TO: Don Hibbard, Director
Historic Preservation Program

FROM: Manabu Tagomori, Deputy Director
Commission on Water Resource Management

SUBJECT: Well Construction and Pump Installation Permit Application(s)

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Please review the application(s) pursuant to your area of concern and submit your comments to us, orally or in writing, by ten (10) working days from date of letter.

Should you have any questions, please contact our Regulation Branch at 548-7541.
Mr. Raymond Sato  
Manager and Chief Engineer  
Department of Water  
County of Kauai  
P.O. Box 1706  
Lihue, Hawaii  96766

Dear Mr. Sato:

We have received your application and filing fee for a permit to construct and install a pump in a well (Well No. 0818-03) at Anahola, Kauai, (TMK 4-8-03:23). We are reviewing the application for completeness.

Should you have questions, please call the Regulation Branch of the Division of Water Resource Management at 548-7541.

Sincerely,

[Signature]

MANABU TAGOMORI  
Deputy Director

NF:bm