CHECKLIST

**WELL CONSTRUCTION PERMIT**

- WELL NAME or LOCATION: Makaha-Clayer
- ISLAND: Oahu
- WELL NUMBER: 3-2813-03
- Tax Map Key: 8-4-1:15

**OWNER/OPERATOR:**
- Firm Name: Richard Clayer
- Contact Person: ________________
- Phone: ________________

**LANDOWNER:**
- Firm Name: ________________
- Contact Person: ________________
- Address: ________________
- Phone: ________________

- Date application received: 4-10-92
- Date acknowledged receipt/request more info: 4-12-92
- Date application accepted: ________________
- Suspense date (90 days): ________________
- Date filing fee deposited: ________________

- Application sent to following:
  - Dept. of Hawn Home Lands: 4/2/92
  - Dept. of Health: 4/14/92
  - Office of Hawn. Affairs: 4/14/92
  - State Hist Pres Div: 4/14/92
  - Dept/Bd of Water Supply: 4/14/92
  - Keolaulea NB #29 (Oahu): 4/14/92
  - Dept.Pub. Wrks (Hawaii): 4/14/92
  - Additional List (Molokai): ________________

- Date agenda due: ________________
- Date submittal due: ________________
- Date submittal sent to applicant: ________________
- Date application approved or disapproved: ________________
- Date applicant notified of decision: ________________

**REMARKS:** Applicant would like permit ASAP since pouring of slab for house to be done AFTER well put in.
SHORELINE LOCATION
OF LOT 927
OF LAND COURT APPLICATION 1052
AT MAKAKA, WAIANAE, OAHU, HAWAII

Tax Map Key: 8-4-01: 15
Owner: Richard Gayer
<table>
<thead>
<tr>
<th>Revision</th>
<th>Date</th>
<th>Brief</th>
<th>By</th>
<th>Approved</th>
</tr>
</thead>
</table>

**TOPOGRAPHIC SURVEY**

FOR MR. RICHARD CAYEY, ET. AL.

**F.B.: 15:44**

**Designed by:**

**Checked by:**

**Drawn by:**

**Project No.:**

890860

**Scale:** 1"=20'

**Date:** JUNE 1989

**Sheet:** 1 of 1

**Signature:**
Dear Sir,

Enclosed is D.R. Drilling report for my salt water well.

Please send the permit to my home address at

If you have any questions please call me at [redacted] or [redacted]

Sincerely,

Richard Craig
owner
William W. Paty  
State of Hawaii  
Department of Land and Natural Resources  
Commission on Water Resource Management  
P.O. Box 621  
Honolulu, Hawaii  96809

Attn:    Ms. Rae M. Loui, Deputy Deputy

Dear Mr. Paty:

We have received the following water permit applications. Thank you for the opportunity to review these applications and to comment on issues that are of concern to the Native Hawaiian community.

<table>
<thead>
<tr>
<th>Island</th>
<th>Well Name</th>
<th>Well No.</th>
<th>Application Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hawai‘i</td>
<td>Hokukano Well</td>
<td>3153-01</td>
<td>Well construction</td>
</tr>
<tr>
<td>O‘ahu</td>
<td>Makaha-Cayer</td>
<td>2813-03</td>
<td>Well and Pump</td>
</tr>
</tbody>
</table>

Our records indicate that these wells are not on ceded land. We have no other comments or concerns at this time.

Sincerely,

Clayton H.W. Hee  
Chair, Board of Trustees
**STATE WELL NO.** 2813-03  
**WELL NAME** Makaha-Cayer Well  
**ISLAND** Oahu

**LOCATION** Makaha, Oahu  
**TAX MAP KEY** 1841 Parc #15

**WELL OWNER** Richard Cayer  
**DRILLING OR PUMP INSTALLATION CONTRACTOR** P.R. Drilling Company, Inc.

**DATE OF WELL COMPLETION** 15 April 1992  
**DATE OF PUMP INSTALLATION** 15 April 1992

**GROUND ELEVATION (ma) 10 ft.**  
Top of Drilling Platform (m) 0 ft.  
Height of drilling platform above ground surface

**Bench mark and method used to determine ground elevation** Sea level ft.

**TOTAL DEPTH OF WELL BELOW GROUND** 25 ft.

**HOLE SIZE:**  
10 inch dia. from 0.0 ft. to 25 ft. below ground

**Casing Installed:**  
4 in. L.D. x 25 ft. well solid section to 10 ft. below ground

**Annulus:**  
Grouted from 0 ft. to 10 ft. below ground  
Gravel packed from 10 ft. to 25 ft. below ground

**PERMANENT PUMP INSTALLATION:**  
Pump type, make, serial No. 504 SS Submersible  
Capacity 25 gpm  
Motor type, H.P., voltage, r.p.m. 772 HP 115 Volt 60 Hz  
Depth of pump intake setting ft. below  
Depth of bottom of well ft. below  
which elevation is  
which elevation is ft.

**PROPOSED USE** Salt Water Well

**INITIAL WATER LEVEL** 10 ft. below ground  
Date and time of measurement 4/15/92 10:00 a.m.

**INITIAL CHLORIDE** ppm  
Date and time of sampling n/a

**PUMPING TESTS:**  
Reference point (R.P.) used:  
which elevation is ft.

**Q. DRILLER'S LOG:**

<table>
<thead>
<tr>
<th>Depth, ft.</th>
<th>Rock Description &amp; Remarks</th>
<th>Water Level, ft.</th>
<th>Depth, ft.</th>
<th>Rock Description &amp; Remarks</th>
<th>Water Level, ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>to 25</td>
<td>Coral</td>
<td>10</td>
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</tbody>
</table>

**REMARKS:**

Submitted by (print) Martin E. La Nell  
**Vice President**  
Date July 20, 1992

**FOR OFFICIAL USE:**  
Latitude 21° 28' 54"  
Longitude 158° 13' 37"  
Well No. 2813-03
WELL CONSTRUCTION
Well No. 2813-03

I have read the 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: Richard Cayer
Printed Name: Richard Cayer
Firm or Title: OWNER

Date: 6-23-92

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

Enclosures
cc: USGS
    Department of Health
    Safe Drinking Water Branch
    Ground Water Protection Program
    Honolulu Board of Water Supply
WELL CONSTRUCTION AND PUMP INSTALLATION PERMIT

for

Makaha-Cayer Well
Well No. 2813-03
Makaha, Oahu

TO: Richard Cayer

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 Makaha-Cayer Well (Well No. 2813-03), for salt water aquarium use, is approved subject to the following conditions:

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

2. The proposed uses 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 the 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.

3. The permit shall be for construction, testing, and installation of a 25 gpm capacity pump in the well, as determined by the pumping test results. The applicant shall submit to the Commission staff 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.
4. The following shall be submitted to the Commission staff within 30 days after completion of the work:
   a. Well Completion Report.
   b. As-built sectional drawing of the well.
   c. Plot plan and map showing the exact location of the well.
   d. Complete pumping test record; including time, pumping rate, drawdown, chloride content, and water quality data.

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.

The applicant is hereby notified that the Makaha Shores Condominium, located at 84-265 Farrington Highway, has an injection well permit to dispose 18,000 gallons per day of secondary treated effluent into nine injection wells. These wells have a surface diameter of eight feet and a total depth of 24 feet. The ground water quality in the area may be impacted by the injection well operation and the applicant should take any necessary precautions.

WILLIAM W. PATY, Chairperson
Commission on Water Resource Management

JUN 18 1992
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: ________________

Printed Name: ________________________________

Firm or Title: ________________________________

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

Enclosures

cc: USGS
    Department of Health
    Safe Drinking Water Branch
    Ground Water Protection Program
    Honolulu Board of Water Supply
June 3, 1992

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 Permits
Stream Alteration Permits

Thank you for the opportunity to comment on the following applications:

- Makaha-Cayer Well (2813-03)
- Grove Farm-Haiku Mauka 1 (5825-01)
- Hokukano Well (3153-01)
- Hawi Well 2 (7349-01)
- Maintenance Ramps, various Oahu streams
- Individual lot access ford (Waimanalo)
- 16-inch water main stream crossings (Windward Oahu)

These projects are not expected to affect Hawaiian home lands; we have no comment at this time.

Warmest aloha,

Hoaliku L. Drake, Chairman
Hawaiian Homes Commission
May 8, 1992

MEMORANDUM

TO: Rae M. Loui, Deputy Director
    Commission on Water Resource Management

FROM: Don Hibbard, Administrator
    State Historic Preservation Division

SUBJECT: Well Construction and Pump Installation Permit Application, Makaha-Cayer Well No. 2813-03
         Makaha, Wai'anae, O'ahu
         TMK: 8-4-1: 15

Thank you for the opportunity to review this permit application. The well location is near the shoreline in an area that might have been used for human burial in ancient times. The 8" diameter hole is unlikely to disturb burials that might be at this parcel because of its small size. Therefore, we will not require that an archaeological inventory survey precede this action. However, if human remains are encountered during routine well construction activities, then all work at the site must stop and the applicant must contact the Historic Preservation Division at 587-0047.

TD: amk
PAY TO THE ORDER OF

Debt of Land & Natural Res. $25.00
Twenty-Five

Dollars

First Hawaiian Bank
86-000 Farrington Highway
Wai`anae, Hawaii 96792

MEMO

Well No. 2813-03  Richard Cayer

Comm. on Water Resources
P.O. Box 621
Hono. Ht.
96809

C/o Rae Loni

4-28-92

709

59-101/1213
Ms. Rae Loui, Deputy Director
Commission on Water Resource Management
Department of Land and Natural Resources
State of Hawaii
P.O. Box 621
Honolulu, Hawaii 96809

Dear Ms. Loui:

SUBJECT: WELL CONSTRUCTION PERMIT APPLICATION
MAKAHA-CAYER WELL
STATE WELL NO. 2813-03
MAKAHA, OAHU

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 description of the proposed work indicates that the proposed well will be used to provide salt water for an aquarium. In this situation, Hawaii Administrative Rules, Title 11, Chapter 20, Potable Water Systems, would not be applicable.

   However, this conflicts with item no. 5 of the application where "Domestic" use is indicated. Given the location and depth of the proposed well, it would appear that well is intended to supply only salt water for non-domestic or nonpotable purposes. In the event that this well is to be used for domestic or potable purposes, the Safe Drinking Water Branch must be notified.

2. If the subject well will be used for domestic purposes, it may be subject to Hawaii Administrative Rules, Title 11, Chapter 20, Potable Water Systems. 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 Chapter 20.

3. 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.
4. The proposed well is situated below the Underground Injection Control (UIC) line. Land areas below the UIC line are generally considered to not contain underground sources of drinking water. However, if this well were to be used for domestic purposes, it would be 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.

5. The map accompanying the application indicates that the proposed well may be located within 200 feet of the Makaha Shores Condominium injection well system. This facility is located at 84-265 Farrington Highway (tax map key: 8-4-01: 05) and has been issued UIC permit number UO 1250. According to our records, the Makaha Shores Condominium is permitted to dispose 18,000 gallons per day of secondary treated effluent into nine injection wells. These wells have a surface diameter of eight (8) feet and a total depth of 24 feet. The well operator should be forewarned that groundwater quality in this area may be impacted by this injection well operation.

If you should have any questions, please contact Stuart Yamada of the Safe Drinking Water Branch at 586-4258.

Sincerely,

THOMAS E. ARIZUMI, P.E., Chief
Environmental Management Division

SY:la

c: Richard Cayer
April 24, 1992

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

Dear Ms. Loui:

SUBJECT: WELL CONSTRUCTION PERMIT APPLICATION
MAKAHA-CAYER WELL
STATE WELL NO. 2813-03
MAKAHA, OAHU

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 description of the proposed work indicates that the proposed well will be used to provide salt water for an aquarium. In this situation, Hawaii Administrative Rules, Title 11, Chapter 20, Potable Water Systems, would not be applicable.

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APR 27 1992
Ms. Rae Loui  
April 24, 1992  
Page 2

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If you should have any questions, please contact Stuart Yamada of the Safe Drinking Water Branch at 586-4258.

Sincerely,

THOMAS B. ARIGUMI, P.E., Chief  
Environmental Management Division

SY:la

c: Richard Cayer

WELLS{2813-03A.OSY}
Well Name: Moloaa - Roger
Use: Domestic
HWP: A. Not listed in Kauai WUDP
   B. Aquifer Sector: Lihue
   C. Aquifer System: Anahola, S.Y. = 36 mgd
   D. Existing Water Withdrawal (system) = 6.96 mgd
   E. 20-year Water Need (system) = 15.71 mgd
      Long-range Water Need (system) = 18.10 mgd
Comments: 1) Response should include condition statement regarding health standards.
          2) Proposed well appears to be located near a stream. Any effects?

Well Name: Makaha -议员 Salt Water
Use: Domestic, for aquarium
HWP: A. Not listed in Oahu WUDP
   B. Aquifer Sector: Waianae
   C. Aquifer System: Makaha, S.Y. = 4 mgd
   D. Existing Water Withdrawal (system) = 2.37 mgd
   E. 2010 Additional Water Need (sector) = 1.9 mgd
Comments: 1) Land use classification for the proposed area is stated as residential.
          O.K.
Mr. Clayton H. W. Hee  
Chairman & Trustee At Large  
Office of Hawaiian Affairs  
711 Kapiolani Blvd., Suite 500  
Honolulu, Hawaii 96813-5249  

Attn: Ms. Linda Delaney, Land & Natural Resources Division  

Dear Mr. Hee:

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>
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<tbody>
<tr>
<td>Oahu</td>
<td>Makaha-Cayer</td>
<td>2813-03</td>
<td>Well and Pump</td>
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</table>

Please review the application(s) pursuant to your area of concern and submit your comments to us, orally or in writing, ten (10) working days from date of this letter.

Should you have any questions, please contact Rae M. Loui, Deputy Director at 587-0214.

Very truly yours,

[Signature]

WILLIAM W. PATY  

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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Should you have any questions, please contact Rae M. Loui, Deputy Director at 587-0214.

Very truly yours,

WILLIAM W. PATY

Enc.
Mr. Richard Cayer

Dear Mr. Cayer:

We have received your application for a permit to construct and install a pump in a salt water well (Well No. 2813-03) at Makaha, Oahu, (TMK 8-4-01:15). We are reviewing the application for completeness. However, our rules require a $25 permit application processing fee. Please make out a check payable the Department of Land and Natural Resources, and send it to the Commission on Water Resource Management, P.O. Box 621, Honolulu, Hawaii 96809.

Should you have questions, please call the Commission staff at 587-0225.

Sincerely,

RAE M. LOUI
Deputy Director

NF:fc
Mr. Thomas Arizumi, Chief
Environmental Management Division
State Department of Health
Five Waterfront Plaza
500 Ala Moana Blvd., Suite 250
Honolulu, Hawaii 96813

Attn: Mr. William Wong

Dear Mr. Arizumi:

Well Construction and Pump Installation Permit Application

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, ten (10) working days from date of this letter.

Should you have any questions, please contact the Commission on Water Resource Management staff at 587-0225.

Sincerely,

RAE M. LOUI
Deputy Director

NF:ky
Enc.
MEMORANDUM

TO: Don Hibbard, Director
   Historic Preservation Program

FROM: Rae M. Loui, Deputy Director

SUBJECT: 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, ten (10) working days from date of this memo.

Should you have any questions, please contact the Commission on Water Resource Management staff at 587-0225.

Enc.
Ms. Marjorie Ziegler  
Sierra Club Legal Defense Fund, Inc.  
212 Merchant Street, Room 202  
Honolulu, Hawaii 96813  

Dear Ms. Ziegler:  

Well Construction and Pump Installation Permit Application(s)  

Transmitted for your information are copies of recent well permit application(s):  

<table>
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Should you have questions, please contact the Commission on Water Resource Management staff at 587-0225.

Sincerely,

RAE M. LOUI  
Deputy Director

NF:ky  
Enc.
Mr. Kazu Hayashida  
Manager and Chief Engineer  
Board of Water Supply  
City and County of Honolulu  
630 South Beretania Street  
Honolulu, Hawaii 96843

Dear Mr. Hayashida:

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, ten (10) working days from date of this letter.

Should you have any questions, please contact the Commission on Water Resource Management staff at 587-0225.

Sincerely,

RAE M. LOUI  
Deputy Director

NF:ky  
Enc.
WELL LOCATION

Island: Oahu
Tax Map Key: 45-2-2
Address: 84-245 FARRINGTON HWY, WAILUA

Well Owner

Name: NONE
Contact Person: RICHARD CAYEY
Address: [redacted]
Phone: [redacted]

Proposed Contractor For:

- Well Drilling
- Pump Installation

Name: P.R. Drilling Co., Inc.
Address: 235 Koko Street, Waialua, HI 96791

Proposed Work

- Drill New Well
- Deepen
- Alter
- Install New Pump
- Seal
- Replace Pump
- Abandon
- Modify Pump

Proposed Use

- Municipal (including hotels, stores, etc.)
- Military
- Domestic (individual, non-commercial water systems)
- Industrial
- Irrigation (specify)
- Other (specify)

Proposed Amount of Withdrawal

- 15 gallons per day

Proposed Pump Information

- Pump Type: Submersible
- Motor: Diesel
- Rated Pump Capacity: 25 gallons per minute

Well Owner (print): RICHARD CAYEY
Signature: [Signature]
Date: 1-7-92

Landowner (print): RICHARD CAYEY
Signature: [Signature]
Date: 1-7-92

State Well No.: 3-28/3-03

Hydrologic Unit: [redacted]
Briefly describe the proposed work:

Drill 8" diameter hole for an exploratory salt water well. Final depth is approximately 26' depending on salt content. Well is for an aquarium, Sch. 40 PVC will be set in the boring and a pump test conducted.

**PROPOSED SECTION OF WELL**

<table>
<thead>
<tr>
<th>Elevation at top of casing (ft., m)</th>
<th>Ground Elev. 9' 5&quot; ft., m</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cement G. out 9' ft.</td>
<td></td>
</tr>
<tr>
<td>Hole Dia. 8&quot; in.</td>
<td></td>
</tr>
<tr>
<td>Total Depth 25' ft.</td>
<td></td>
</tr>
<tr>
<td>Rock Backing 16' ft.</td>
<td></td>
</tr>
</tbody>
</table>

**Solid Casing:**
- Material: SCH. 40 PVC
- Length: 10' ft.
- Diameter: 4" in.
- Wall thickness: 0.308 in.

**Casing:**
- Perforated Screen
- Material: SCH. 40 PVC
- Length: 15' ft.
- Diameter: 4" in.
- Wall thickness: 0.308 in.
- Openings: 6 eq. in./lf.

**Open Hole:**
- Length
- Diameter

*Approximate elevation at time of filing application. Final elevation (m) by a surveyor licensed by the State must be submitted at start of construction.*