PUMP INSTALLATION PERMIT
Onomea #1 Well, Well No. 4805-01

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 Onomea Well (Well No. 4805-01) at Onomea, Hawaii, TMK 2-7-10: 03, subject to the Hawaii Well Construction & Pump Installation Standards (1/23/97) 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. The pump installation permit shall be for installation of a [pump capacity] gpm capacity, or less, pump in the well.

3. The permittee, well operator, and/or well owner shall provide and maintain an approved 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 (attached).

4. 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, well operator, and/or well owner are 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.

5. The permittee, well operator, and/or well owner shall complete and submit as-built drawings and Part II - (Permanent) Pump Installation Report of the Well Completion Report (attached) to the Chairperson within sixty (60) days after completion of work.

6. 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.

7. The pump installation permit application is incorporated into this permit by reference and is subject to the Hawaii Well Construction & Pump Installation Standards (1/23/97). If the HWCPIS are not followed and as a consequence water is wasted or contaminated, a lien on the property may result.

8. The permit may be revoked if work is not started within six (6) months after the date of approval or if work is suspended or abandoned for six (6) months, unless otherwise specified. 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 three (3) months prior to the date the permit expires. If the commencement date is not met, the Commission may revoke the permit after giving the permittee, well operator, and/or well owner notice of the proposed action and an opportunity to be heard.

9. If the well is not to be used it must be properly capped. If the well is to be abandoned then the permittee, well operator, and/or well owner must apply for a well abandonment permit in accordance with §13-168-12(f) prior to any well sealing or plugging work.

10. 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.

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

Date of Approval: June 8, 1999
Expiration Date: June 8, 2001

TIMOTHY E. JOHNS, Chairperson
Commission on Water Resource Management

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 do not hold a valid permit until I and the pump installer have signed, dated, and returned the permit to the Commission. I also understand that non-compliance with any permit condition may be grounds for revocation and fines of up to $1000 per day starting from the permit date of approval.

Permittee's Signature: ___________________________ Date: ____________
Printed Name: ___________________________ Firm or Title: ________________

Installer's Signature: ___________________________ Date: ____________
Printed Name: ___________________________ Firm or Title: ________________

C-57, C-57a, or A License #: ________________

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

Attachments:

USGS
Department of Health/ Safe Drinking Water & Wastewater Branch
Hawaii Department of Water Supply
<table>
<thead>
<tr>
<th>TO:</th>
<th>INIT.</th>
<th>TO:</th>
<th>INIT.</th>
<th>FOR:</th>
<th>PLEASE:</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAUER, G.</td>
<td></td>
<td>CHING, F.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>FUJII, N.</td>
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<td>HARDY, R.</td>
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<td>HIGA, D.</td>
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<td>HIRANO, E.</td>
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<td>ICE, C.</td>
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<td>IMATA, R.</td>
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<td>JINNAI, R.</td>
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<td>KUNIMURA, I.</td>
<td></td>
<td>NAKAMA, L.</td>
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<td>Approval</td>
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<td>NAKANO, D.</td>
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<td>Signature</td>
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<td>Information</td>
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<tr>
<td>OHYE, M.</td>
<td></td>
<td>SAKODA, E.</td>
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<td>SUBIA, S.</td>
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<td>SWANSON, S.</td>
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<td>UWAINIE, J.</td>
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<td>YODA, K.</td>
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</tbody>
</table>

DATE: 3/4/98
SUSPENSE DATE: 3-10-98

PLEASE:
- See Me
- Review & Comment
- Take Action
- Type Draft
- Type Final
- File
- Xerox copies
**WELL CONSTRUCTION PERMIT**

Onomea Well, Well No. 4805-01

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 Onomea Well (Well No. 4805-01) at Onomea, Hawaii, TMK 2-7-10: 03, subject to the Hawaii Well Construction & Pump Installation Standards (1/23/97) 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.

2. The well construction permit shall be for construction and testing of the well only. A minimum one-inch diameter monitor tube shall be permanently installed, in a manner acceptable to the Chairperson, to accurately record water levels. The permittee shall coordinate with the Chairperson and conduct a pumping test in accordance with the Standards (a pump testing worksheet is attached). The permittee shall submit to the Chairperson the test results as a basis for supporting an application to install a permanent pump and withdraw water for use. No permanent pump may be installed until a pump installation permit is approved and issued by the Chairperson.

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

4. 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.

5. In the event that subsurface cultural remains such as artifacts, burials or concentrations of shells or charcoal are encountered during construction, the permittee shall stop work and contact the Department's Historic Preservation Division (587-0045) immediately.

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

7. The following shall be submitted to the Chairperson within sixty (60) days after completion of work:
   b. Elevation (referenced to mean sea level, msl) survey by a Hawaii-licensed surveyor.
   c. As-built sectional drawing of the well.
   d. Plot plan and map showing the exact location of the well.
   e. Complete pumping test records, including time, pumping rate, drawdown, chloride content, and other data.

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

9. The well construction permit application is incorporated into this permit by reference and is subject to the Hawaii Well Construction & Pump Installation Standards (1/23/97).

10. The permit may be revoked if work is not started within six (6) months after the date of approval or if work is suspended or abandoned for six (6) months, unless otherwise specified. 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 three (3) months prior to the date the permit expires. If the commencement 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.

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

Date of Approval: February 18, 1998
Expiration Date: February 18, 2000

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. I also understand that non-compliance with any permit condition may be grounds for revocation and fines of up to $1000 per day.

Permittee's Signature: Date: Feb. 27, 1998

Printed Name: Firm or Title: KTA & CO.

Driller's Signature: License #: C-16545 Date: 3/5/98

Printed Name: Firm or Title: PERMITTEE NAME

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

Attachment c: USGS
Department of Health/ Safe Drinking Water, Wastewater, and Clean Water Branches
Hawaii Department of Water Supply
# WELL COMPLETION REPORT

### Part I. Well Construction & Part II. Permanent Pump Installation

Instructions: Please print or type and submit completed report within 60 days after well completion to the Commission on Water Resource Management, P.O. Box 621, Honolulu, Hawaii 96809. An as-built drawing of the well and chemical analysis should also be submitted. For assistance call the Commission Regulation Branch at 587-0225, or 1-800-468-4644 Extension 70225.

<table>
<thead>
<tr>
<th>1. State Well No.: 4805-01</th>
<th>Well Name: Onomea Well</th>
<th>Island: Hawaii</th>
</tr>
</thead>
</table>

## PART I. WELL CONSTRUCTION REPORT

<table>
<thead>
<tr>
<th>3. Drilling Company:</th>
<th>Wai'eli Drilling &amp; Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. Name of driller who performed work:</td>
<td>Tom Helfrich</td>
</tr>
<tr>
<td>5. Type of rig/construction:</td>
<td>Rotary</td>
</tr>
<tr>
<td>6. Date(s) Well Construction and pump tests (if any) completed:</td>
<td>4/17/98</td>
</tr>
<tr>
<td>7. GROUND ELEVATION (referenced to mean sea level, msl):</td>
<td>319.5 ft.</td>
</tr>
<tr>
<td>Well Bench Mark (description/location):</td>
<td>Top of cement pad</td>
</tr>
<tr>
<td>8. DRILLER'S LOG: Please attach geologic log (if available or if required by permit)</td>
<td></td>
</tr>
<tr>
<td>Depths (ft.) Rock Description, Water Level, Dates, etc.</td>
<td>Depths (ft.) Rock Description, Water Level, Dates, etc.</td>
</tr>
<tr>
<td>0 to 185</td>
<td>Hard</td>
</tr>
<tr>
<td>185 to 270</td>
<td>Hard/soft mixed</td>
</tr>
<tr>
<td>270 to 350</td>
<td>hard with soft layers</td>
</tr>
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<td>(If more space is needed, continue on back)</td>
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</tbody>
</table>

| 9. Total depth of well below ground: | 350 ft. |
| 10. Hole size: | 12½ inch dia. from 0 ft. to 335 ft. below ground |
| | 4½ inch dia. from 335 ft. to 350 ft. below ground |
| | 6 inch dia. from 350 ft. to 350 ft. below ground |
| 11. Casing installed: | 6 in. I.D. x 280 in. wall solid section to 335 ft. below ground |
| | none in. I.D. x ___ in. wall perforated section to ___ ft. below ground |
| Casing Material/Slot Size: | |
| 12. Annulus: | Grouted from 0 ft. below ground to 335 ft. below ground |
| | Gravel packed from ___ ft. below ground to ___ ft. below ground |
| 13. Initial water level: | 299.1 ft. below ground Date and time of measurement: 4/16/98 12 noon |
| 14. Initial chloride: | 15 ppm Date and time of sampling: 4/16/98 12 noon |
| 15. Initial temperature: | 62.6° F Date and time of measurement: 4/16/98 12 noon |
| 16. PUMPING TESTS: Reference Point (R.P.) used: | not required, which elevation is ___ ft. |
| (1) Step-Drawdown Test Date | |
| Start water level | ft. below R.P. |
| End water level | ft. below R.P. |
| (2) Long-term Aquifer Test Date | |
| Start water level | ft. below R.P. |
| End water level | ft. below R.P. |

| 17. Pump Test Procedures data & graphs (12/17/97 SDPTD & CRPTD Forms) attached? | Yes _ No |
| 18. As-built Test Procedures data & graphs attached? | Yes _ No |
| 19. Other remarks/comments: (On back of this form) | |

---

**Well Drilling Contractor (print):** WAI'ELI DRILLING & DEV-57 Lic. No. 16543

**Signature:** [Signature] Date: May 11, 1998

**Surveyor (print):** MUIR, SHIN & ASSOC., LTD. Lic. No. 1847

**Signature:** [Signature] Date: May 20, 1998

**Applicant (print):** Howard Roberts

**Signature:** [Signature] Date: June 7, 1999
PART II. (PERMANENT) PUMP INSTALLATION REPORT

20. Pump Installation Company: WAI'ELI DRILLING & DEVELOPMENT
21. Name of person performing work: TOM HELFRICH
22. Date Pump Installation Completed: 4/20/98

23. PUMP INSTALLATION:
   - Pump Type, Make, Serial No.: Grundfos 16S30-24
   - Capacity: 16 gpm
   - Motor type, H.P., Voltage, rpm: Franklin 3 hp 230 volts
   - Depth of Pump Intake Setting: 326 ft. below bench mark, which elevation is 319.5 ft.
   - Depth to bottom of airline: 324.25 ft. below bench mark, which elevation is 319.5 ft.
   - Pumping Head: 319.5 ft. Type of flow meter: 1" Hersey which measures in gpm

24. As-built drawings attached? X Yes _ No

25. Other remarks/comments: (See below)

<table>
<thead>
<tr>
<th>Pump Installation Company (print)</th>
<th>WAI'ELI DRILLING</th>
<th>C-57 Lic. No.</th>
<th>C 16543</th>
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</thead>
<tbody>
<tr>
<td>Signature</td>
<td></td>
<td></td>
<td>May 11, 1998</td>
</tr>
<tr>
<td>Applicant (print)</td>
<td></td>
<td></td>
<td>June 7, 1999</td>
</tr>
</tbody>
</table>

8. (cont’d) DRILLER’S LOG (cont’d):

<table>
<thead>
<tr>
<th>Water Level Dates (ft.)</th>
<th>Depth (ft.)</th>
<th>Rock Description, Remarks,</th>
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</thead>
<tbody>
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19 & 25. Remarks: WELL NO. 4809-01 ONOMEA

<table>
<thead>
<tr>
<th>Water Level Dates (ft.)</th>
<th>Depth (ft.)</th>
<th>Rock Description, Remarks,</th>
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</tbody>
</table>

LAT. 19° 48' 54"

LONG. 195° 09' 55"
<table>
<thead>
<tr>
<th>Well No.</th>
<th>Well Name</th>
<th>Aquifer Code</th>
<th>Owner/User</th>
<th>Year Drilled</th>
<th>Total Depth ft.</th>
<th>Bottom Solid Casing</th>
<th>Bottom Perf Casing</th>
<th>Bottom of Hole</th>
<th>Static Head</th>
<th>C- Temp</th>
<th>Specific Capacity</th>
<th>T</th>
<th>Pump Test Result</th>
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<tr>
<td>4905-01</td>
<td>ONOMEA-DOTY</td>
<td>80204</td>
<td>DOTY J</td>
<td>1990</td>
<td>256</td>
<td>-26</td>
<td>-52</td>
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<td>.144</td>
<td>.028</td>
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<td>4905-02</td>
<td>LUTKENHOUSE</td>
<td>LUTKENHOUSE</td>
<td>D</td>
<td>1993</td>
<td>152</td>
<td>35</td>
<td>-10</td>
<td>26.2</td>
<td>19.4</td>
<td>.7</td>
<td>.028</td>
<td></td>
<td>DOM</td>
</tr>
</tbody>
</table>
MISSION ON WATER RESOURCE MANAGEMENT

FROM: RYAN
DATE: 2/18/98

TO: BAUER, G.
CHING, F.
FUJII, N.
HARDY, R.
HIGA, D.
HIRANO, E.
ICE, C.
IMATA, R.
JINNAI, R.
KUNIMURA, I.

TO: LOUI, R.
NAKAMA, L.
NAOYAMA, D.
SAKADA, E.
SUBIA, S.
SWANSON, S.
UWAINA, J.
YODA, K.

FOR: Approval Signature Information

PLEASE:
See Me
Review & Comment
Take Action
Type Draft
Type Final
File
Xerox copies

WELL CONSTRUCTION

PUMP INSTALLATION PERMIT FOR:

ATTACHMENTS FOR WELL CONSTRUCTION PERMIT:
1 COVER LETTER
2 PERMIT (2x)
3 DOH COMMENTS
4 WCR FORM

ATTACHMENTS FOR PUMP INSTALLATION PERMIT:
1 COVER LETTER
2 PERMIT (2x)
3 DOH COMMENTS
4 WCR FORM
5 WUR FORM

TO BE SENT TO APPLICANT
FOR OFFICE USE ONLY

PLEASE:
See Me
Review & Comment
Take Action
Type Draft
Type Final
File
Xerox copies

Onsen well
Mr. Howard Rogers  
Kaikodo America, Inc.  
164 64th Street  
New York, NY  10021 

Dear Mr. Rogers:  

Well Construction Permit  
Onomea Well (Well No. 4805-01)  

Enclosed are two (2) copies of your approved Well Construction Permit for the captioned well(s) which authorizes well construction activities but excludes installation work for your permanent pump. As part of the Chairperson's approval, the following special conditions were added and are part of your permit under Permit Condition 12: 

**Special Conditions**  
1. No special conditions 

This permit **does not** authorize work for your permanent pump installation. Approval and issuance of your pump installation permit is contingent upon completed application and information provided to and accepted by Commission staff as required in the Well Construction & Pump Installation Standards (1/23/97) and any special conditions performed under this permit. Please note that special conditions may simply highlight application deviations from the Standards. 

The well owner is responsible for all conditions of the permit. This includes ensuring that the well construction contractor, or other party who constructs the well(s), submits a completed Part I of the Well Completion Report form (enclosed) within sixty (60) days after the well construction work is completed. Be advised that you may be subject to fines of up to $1000 per day for any violations of your permit conditions. 

To validate your permit, please sign and have the contractor sign both permit originals and return one for our files. Also, copies of the aquifer pump test worksheet and the well completion report form are enclosed for your use. Please provide all the information in this packet to your well drilling contractor. 

Also attached for your information is a copy of the Department of Health's review comments. 

If you have any questions, please call Mr. Ryan Imata of the Commission staff at (808) 587-0255. 

Aloha, 

Enclosures  
c: Waimea Water Services
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 Onomea Well (Well No. 4805-01) at Onomea, Hawaii, TMK 2-7-10: 03, subject to the Hawaii Well Construction & Pump Installation Standards (1/23/97) which include but are not limited to the following conditions:

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

Date of Approval: February 18, 1998
Expiration Date: February 18, 2000

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Permittee's Signature: ___________________________ Date: ______________

Printed Name: _______________________________ Firm or Title: _______________________________

Driller's Signature: ___________________________ License #: ______________ Date: ______________

Printed Name: _______________________________ Firm or Title: _______________________________

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

Attachment
C: USGS
Department of Health/ Safe Drinking Water, Wastewater, and Clean Water Branches
Hawaii Department of Water Supply
TO: Honorable Lawrence Miike, Director
Department of Health
Attention: Dennis Tulang, Wastewater Branch
William Wong, Safe Drinking Water Branch

FROM: Michael D. Wilson, Chairperson
Commission on Water Resource Management

SUBJECT: Well Construction/Pump Installation Permit Application
Onomea #1 Well (Well No. 4805-01)

Transmitted for your review and comment is a copy of the captioned well 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 February 28, 1998.

Please find a map, attached, to locate the proposed well. If you have any questions about this permit application, request additional information, or request additional review time, please contact Mr. Ryan Imata of the Commission staff at 587-0255.

RESPONSE:

[ ] This well qualifies as a source which will serve as a source of potable water to a public water system (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 11, Chapter 20, Rules Relating to Potable Water Systems. §11-20-20.

[ ] 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).

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

[ ] No comments/objections

Contact Person: William Wong
Phone: 586-4258
Signed: William Wong
Date: Feb 11, 1998
TO: Honorable Lawrence Miike, Director  
Department of Health  
Attention: Dennis Tulang, Wastewater Branch  
William Wong, Safe Drinking Water Branch

FROM: Michael D. Wilson, Chairperson  
Commission on Water Resource Management

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[] No comments/objections

Contact Person: Lori Kajiwara  
Phone: 586-4294

Signed: [Signature]  
Date: 2-10-98
Mr. Howard Rogers  
Kaikodo America, Inc.  
164 64th Street  
New York, NY 10021

Dear Mr. Rogers:

Well Construction / Pump Installation Permit Application for Well No. 4805-01

We acknowledge receipt, on January 27, 1998, of your completed well construction / pump installation permit application for the Onomea #1 Well (Well No. 4805-01). You can expect your application to be processed within ninety (90) days from this date.

For your information, the process of constructing a well is normally regulated and permitted in two (2) steps. First, a well construction permit is issued for drilling and testing purposes only. Based upon information provided by you through a Well Completion Report Part 1 (Well Construction), a pump installation permit (upon completed application) may then be issued to authorize pump work. If a pump is installed then a Well Completion Report Part 2 (Pump Installation) is required.

If you have any questions about your permit application, please contact Mr. Ryan Imata of the Commission staff at 587-0255.

Sincerely,

EDWIN T. SAKODA
Acting Deputy Director

RI:ss
TO: Honorable Lawrence Miike, Director
   Department of Health
   Attention: Dennis Tulang, Wastewater Branch
            William Wong, Safe Drinking Water Branch

FROM: Michael D. Wilson, Chairperson
       Commission on Water Resource Management

SUBJECT: Well Construction/Pump Installation Permit Application
          Onomea #1 Well (Well No. 4805-01)

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RI: ss
   Attachment(s)

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

[ ] No comments/objections

Contact Person: ___________________________ Phone: ________________

Signed: ___________________________ Date: __________________
**Waimea Water Services**

P.O. BOX 326  KAMUELA, HAWAII  96743
(808) 885-5941  FAX: (808) 885-7851

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<table>
<thead>
<tr>
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<th>SRC OBJ</th>
<th>COST CTR</th>
<th>PROJECT PH ACT</th>
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<th>NAME/DESCRIPTION (WANG INPUT)</th>
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**REMARKS:**

LINE (1) Well No. 4805-01 (WCPA/PTPA)
LINE (2)
LINE (3)
LINE (4)

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**Waimea Water Services**

P.O. BOX 326  KAMUELA, HAWAII  96743
(808) 885-5941  FAX: (808) 885-7851

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**Check**

**DATE:** 2/5/98

**DOCUM. NO.:**

**UAC OR ATTACHED WORKSHEET**

**DATE:** 2/5/98

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**Bank of Hawaii**

KAMUELA BRANCH  KAMUELA, HAWAII  96743

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**Bank of Hawaii**

KAMUELA BRANCH  KAMUELA, HAWAII  96743
SECTION 1: WELL LOCATION INFORMATION

<table>
<thead>
<tr>
<th>Island</th>
<th>HAWAII</th>
<th>Proposed Use</th>
<th>Domestic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aquifer System</td>
<td>E. MAUNA KEA</td>
<td>Proposed Withdrawal</td>
<td>6000</td>
</tr>
<tr>
<td>Aquifer Sector</td>
<td>ONOMEA</td>
<td>System Sustainable Yield</td>
<td>147</td>
</tr>
</tbody>
</table>

SECTION 2: WELL SECTION DATA  
(enter data in grey cells only)

<table>
<thead>
<tr>
<th>Elevation at top of casing</th>
<th>Solid Casing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ground Elevation</td>
<td>Material</td>
</tr>
<tr>
<td>Cement GROUT</td>
<td>Designation</td>
</tr>
<tr>
<td>Rock Packing</td>
<td>Length</td>
</tr>
<tr>
<td>Hole Diameter</td>
<td>Diameter</td>
</tr>
<tr>
<td>Total Depth</td>
<td>Wall Thickness</td>
</tr>
</tbody>
</table>

| Estimated Head             | Casing       |
| Calculated Aquifer Thickness | Material     |
| County Water Supply (Y/N ?) | Designation  |

SECTION 3: CHECKLIST  
(values to check are shaded)

Well Depth

<table>
<thead>
<tr>
<th>Theoretical Thickness of Aquifer</th>
<th>410 ft.</th>
<th>(refer to HWCPIS Section 2.2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4 Aquifer Thickness</td>
<td>102.5 ft.</td>
<td></td>
</tr>
</tbody>
</table>

Depth of Well below Sea Level

| Depth of Well below Sea Level | 20 ft. | okay |

Well Casing

<table>
<thead>
<tr>
<th>Minimum Wall Thickness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material</td>
</tr>
<tr>
<td>County or Non-County</td>
</tr>
<tr>
<td>Minimum Thickness per standards</td>
</tr>
</tbody>
</table>

| Wall Thickness Provided | 0.250 in. | #N/A |

| Minimum Length of Solid Casing | 288 ft. | (refer to HWCPIS Section 2.4 d) |
| 90% of ground to top of aquifer |        | okay |

| Length of solid casing Provided | 340 ft. | okay |
| Casing Material                | ASTM A-242 | #N/A |

Annular Space

<table>
<thead>
<tr>
<th>Depth of Grouting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calculated Depth of Grouting</td>
</tr>
</tbody>
</table>

| Depth of Grouting provided | 340 ft. | okay |
| Thickness of Annular Space | 3 in. | okay |
January 23, 1998

Mr. Mike Wilson, Chairperson
Commission on Water Resource Management
Dept of Land and Natural Resources
Division of Water Resources Management
State of Hawaii
P.O. Box 621
Honolulu, HI 96809

ATTENTION: Rae M. Loui
Deputy Director

SUBJECT: Request for Well Construction and Pump Permit
ONOMEA WELL #1
TMK: 2-7-10:3

Dear Mr. Wilson,

Waimea Water Services, Inc., on behalf of the well owner and land owner, Kaikodo Hawaii, Inc, is submitting the attached permit for well construction and pump installation.

Attached is the $25.00 filing fee. If there are any questions, please call the undersign.

Very truly yours,

John Stubbart
President

cc: Mr. Howard Rogers, c/o Kaikodo America, Inc.
APPLICATION FOR PERMIT:
[X] WELL CONSTRUCTION PERMIT  [X] PUMP INSTALLATION PERMIT

Instructions: Please print and send completed application with attachments to the Commission on Water Resources Management, P. O. Box 621, Honolulu, Hawaii 96803. Application must be accompanied by a non-refundable filing fee of $25.00 payable to the Department of Land and Natural Resources. The Commission may not accept incomplete applications. For assistance, call the Resolution Branch 647-0225.

1. A) WELL OWNER: 
   Firm Name: Kaikodo Hawaii, Inc. 
   Contact Person: Howard Rogers 
   Phone: 212-223-0121
   Address: c/o Kaikodo America, Inc. 
   164 64th St.
   New York, NY 10021

   B) LANDOWNER: 
   Firm Name: Kaikodo Hawaii, Inc. 
   Contact Person: Howard Rogers 
   Phone: 212-223-0121
   Address: c/o Kaikodo America, Inc. 
   164 64th St.
   New York, NY 10021

C) CONTRACTOR 
   Name: Wai'eli Drilling & Development
   Phone: (808) 324-1420
   Address: 78-6740 Makolea St., 
   Kailua-Kona, HI 96740
   Contractor's License No.: C-16543

2. WELL LOCATION: ONOMEA WELL #1 
   Island: Hawaii 
   Address: Onomea, Hawaii 
   Tax Map Key: 2-7-10:3
   (Attach a UGS map (scale 1"=2000') and property tax map showing well location referenced to established property boundaries.)

3. A) PROPOSED WORK
   [X] Drill New Well 
   [] Modify existing well 
   [X] Install New Pump 
   [] Alter Location 
   [] Re-drill 
   [] Deepen 
   [] Abandon/Seal

   B) WELL TYPE 
   [ ] Dug 
   [ ] Bored 
   [X] Driven 
   [ ] Radial
   Is this well part of a battery of wells? [ ] Yes [X] No
   (Briefly describe the proposed work and fill in the diagram on the back of this form.)

4. PROPOSED PUMP INFORMATION: Rated Pump Capacity 10 (gpm)
   Motor: [X] Electric 
   rated hp - 1.5 hp

5. PROPOSED USE
   [ ] Municipal (including hotels, stores, etc.) 
   [X] Domestic (individual, non-commercial water systems) 
   [ ] Irrigation (specify): 
   State Land Use District: [ ] Urban [X] Agriculture [ ] Rural [ ] Conservation 
   County Zoning (describe): Agriculture 20

6. A) PROPOSED AMOUNT OF WITHDRAWAL: 8,000 gallons per day

   B) METHOD OF FLOW MEASUREMENT: [X] Flow-meter 
   [ ] Open pipe 
   [ ] Orifice Plate 
   [ ] Weir

7. PENDING ACTIONS: [ ] CDUA [ ] SMA [ ] EIS [ ] EA [X] NONE [ ] Other

8. REMARKS: This well is to be used to replace the domestic supply presently supplied by tunnel located off the property. The tunnel connection is to be terminated by June of 1998.

Signing below indicates that the applicant understands that, if the permit requested is granted by the Commission on Water Resources Management, the proposed work is to be completed within two (2) years from the approval date. In addition, the contractor shall submit to the Commission a well completion report, well abandonment report, or both, within 30 days after 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 approval of the proposed permit shall not constitute a determination of correlative water rights and shall not guarantee the pump capacity or future use up to the
EXIST. GROUND ELEV. = 330'

- Grout upon pump installation.
- Pump base, 2'x2', reinforced concrete
- 6" I.D. Steel Casing, 0.25" wall thickness
- 3" Grout filled annulus
- 12" Bore Hole, 1.25" pump column
- Water Level at +10' +/- elev.
- Elev. 0'
- Grunfos submersible motor and pump, 10 gpm, intake at -5 feet
- Bottom of Casing, ELEV. = (-10')
- Steel shoe
- 5" Diameter Open Hole (as required)
- Bottom of Well, ELEV. = -20'