Commission on Water Resource Management

PROPOSED KAHALUU
DEEP MONITOR WELL SITE
North Kona, Hawaii

Water Resource Associates, Consulting Hydrologist
Memorandum

To: RECORD
CC:
From: M. Ohye
Date: 11/14/2005
Re: Auslog Winch Unit No. 2 at Kahaluu Monitor Well, Kailua-Kona

November 8, 2005

Arrived on site at 0930 hrs. Proceeded to ready equipment for logging when we discovered that Carpenter Ants had infested the Auslog electric winch used to lower the CTD (Conductivity, Temperature, Depth) probe down the well. We attempted to clean and try to get it working, but all the gears, controls, and cable had seized up. It seems the acid that the ants produce had corroded everything and the equipment is a total loss. Sampling tool and Conductivity probe are O.K.. We returned on Nov.10 to fog the structure housing our equipment with insecticide. Will remove Auslog winch from inventory.
December 11, 2000

MEMORANDUM FOR THE RECORD

FROM: Dan Lum  
SUBJECT: Installation of Handar Logging System, Kahaluu Deep Monitor Well (3457-04), North Kona

As a part of CWRM's Deep Monitor Wells Projects, on Thursday November 30, 2000, with the assistance of Dean Uyeno and Mitch Ohye (CWRM), a Handar 555-C1 data logging unit with a 15 psi pressure transducer (50 ft. vented cable) was installed in the Kahaluu Deep Monitor Well to measure and record water levels. A photo of the monitor well is attached.

Pertinent setup data included:

1. Elevation of top of 10" casing cover plate: 310.86 ft.
2. Depth to water: 309.29 ft. (2:47 pm)
3. Resulting head: 1.57 ft., msl
5. Therefore, offset value is: -5.34 ft. (6.91-5.34 = 1.57 ft.)

NOTE: On 12/5/00, it was discovered that the offset value was mistakenly set to -6.33 ft. instead of to -5.34 ft. Therefore, on the next site visit the offset value must be reset to -5.34 ft.

DAN LUM

Attach.
c: Dean Nakano
   Glenn Bauer
COMMISSION ON WATER RESOURCE MANAGEMENT

FROM: Mitchell          DATE: 12-1-00       SUSPENSE DATE:_____________________

<table>
<thead>
<tr>
<th>TO</th>
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<th>TO</th>
<th>INIT.</th>
<th>FOR:</th>
<th>PLEASE:</th>
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<td>BAUER, G.</td>
<td></td>
<td>LUM, A.</td>
<td></td>
<td>Approval</td>
<td>See Me</td>
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<tr>
<td>CHING, F.</td>
<td></td>
<td>NAKAMA, L.</td>
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<td>Signature</td>
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<td>UYENO, D.</td>
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<tr>
<td>JINNAI, R.</td>
<td></td>
<td>YODA, K.</td>
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<tr>
<td>KUNIMURA, I.</td>
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</table>

Handar Unit #3

Installed in Kahaluu Deep on 11-30-00.
Mr. Andrew Monden
Department of Land and Natural Resources
Land Division
Engineering Branch
via messenger

Dear Mr. Monden:

Well Completion Report for Well No. 3457-04

We received your Well Completion Report Part I for the Kahaluu Deep Monitor Well (Well No. 3457-04) on October 31, 2000 and acknowledge that it is complete.

If you have any questions, please contact Ryan Imata of the Commission staff at 587-0255 or toll-free at 974-4000 (Hawaii), 274-3141 (Kauai), 984-2400 (Maui), or 1-800-468-4644 (Lanai & Molokai).

Sincerely,

[Signature]

LINNEL T. NISHIOKA
Deputy Director

Rl:ky
WATER LEVEL MEASUREMENT.
1. **Pump Tests Check**
   - Glenn Bauer (initial)
   - Step-Drawdown Test:
     - followed WCPI Stds
     - analysis attached
     - proposed pump cap o.k.
   - Aquifer Pump Test:
     - followed WCPI Stds
     - T & S analysis attached
   - Well Interference:
     - estimated Steady-State drawdown at 1-mile radius is ___ ft.
     - analysis attached
     - Stream Surface Water Impacted:
   - If yes, identify most probable stream

2. **Construction Check**
   - Mitch Ohye (initial)
   - data complete
   - followed WCPI Stds
   - well database updated

3. Charley/Lenore/Ryan (initial) take action based on above analysis

4. Roy (initial) check

5. Susan Subia (initial) finalize

6. Linnel (initial) signature

7. Charley/Lenore/Ryan File
November 3, 2000

MEMORANDUM FOR THE RECORD

FROM: Dan Lum

SUBJECT: Installation of Handar Data Logger in Kahaluu Deep Monitor Well, Hawaii

Party of Glenn Bauer, Mitch Ohye, Neal Fujii and myself arrived at the site approximately 8:30 am. In a light rain we installed the solar panel on the roof and the Handar Logger on the wall and plugged in the solar panel to the logger.

We probed the monitor tube, but could not establish a good reading of the water level or bottom of the tube. Further, the depth of the tube was determined to be approximately 316 ft. below the concrete slab elevation of 309 ft., or approximately 7 ft. shy of the design depth of -15 ft., msl.

It was concluded that the tube needs to be cleared of debris or cuttings by pressurizing the tube with air as required in the contract.

A heavy rainstorm abruptly occurred about 10:30 am and we decided to terminate the work without completing the installation.

c: Glenn Bauer
Dean Nakano
## WELL COMPLETION REPORT

### PART I. WELL CONSTRUCTION REPORT

<p>| | |</p>
<table>
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<tr>
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<tbody>
<tr>
<td>1. State Well No.:</td>
<td>3457-04</td>
</tr>
<tr>
<td>2. Location/Address:</td>
<td>Kahaluu</td>
</tr>
<tr>
<td>Island:</td>
<td>Hawaii</td>
</tr>
<tr>
<td>Tax Map Key:</td>
<td>7-8-10: 28</td>
</tr>
</tbody>
</table>

#### 3. Drilling Company:

**WAI'ELI DRILLING & DEVELOPMENT**

#### 4. Name of driller who performed work:

**RODNEY COUCH**

#### 5. Type of rig/construction:

**CABLE TOOL/ROTARY**

#### 6. Date(s) Well Construction and pump tests (if any) completed:

**8/29/00**

#### 7. GROUND ELEVATION (referenced to mean sea level, msl): 308 ft.

Well Bench Mark (description/location): **Base of water tank**

#### 8. DRILLER'S LOG:

*Please attach geologic log (if available or if required by permit)*

<table>
<thead>
<tr>
<th>Depths (ft.)</th>
<th>Rock Description, Water Level, Dates, etc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 738'</td>
<td>mostly loose &amp; unconsolidated</td>
</tr>
<tr>
<td></td>
<td>to all the way</td>
</tr>
</tbody>
</table>

(If more space is needed, continue on back.)

#### 9. Total depth of well below ground: 738 ft.

#### 10. Hole size:

- 14 inch dia. from 0 ft. to 323 ft. below ground
- 7 1/2 inch dia. from 323 ft. to 738 ft. below ground
- __________ inch dia. from __________ ft. to __________ ft. below ground

#### 11. Casing installed:

- 8 in. I.D. x .312 in. wall solid section to 323 ft. below ground
- 6" in. I.D. x .250 in. wall perforated section to 738 ft. below ground

Casing Material/Slot Size: **A53A/ 1/8 x 2 1/2"**

#### 12. Annulus:

- Grouted from Surface ft. below ground to 293 ft. below ground
- Gravel packed from 293 ft. below ground to 323 ft. below ground
- 323 ft. below ground

#### 13. Initial water level: 309 ft. below ground

Date and time of measurement: **7/25/00 12 pm**

#### 14. Initial chlorides: __________ ppm

Date and time of sampling: __________

#### 15. Initial temperature: __________ °F

Date and time of measurement: __________

#### 16. PUMPING TESTS:

**Reference Point (R.P.) used:** N/A, 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 drawings attached? Yes No

#### 19. Other remarks/comments: (On back of this form)

**Well Drilling Contractor:** WAI'ELI DRILLING Contractor # C-57 Lic. No. C 16543

**Date:** 10/10/00

**Surveyor:** Chrsyal Thomas Yamasaki

**Lic. No.:** LS-4331

**Date:** 10-13-00

**Applicant:** ANDREW M. MONSEN

**Date:** 10/26/00
September 28, 2000

Bob Richardson
Wa'elei Drilling & Development
P.O. Box 5685
Kailua Kona Hawaii 96745

RE: Elevation on Well Casing of Kahaluu Monitoring Well
TMK: 7-8-10: 28 (3rd Division)

Gentlemen:

Pursuant to your request, we have determined that the elevation of the top of the well casing is 309.26 feet MSL and that the temporary bench mark set ("O" cut) on the west face of the tank is at an elevation of 308.72 feet MSL.

If you have any questions, or if you need additional information, please feel free to contact the undersigned.

Very truly yours,

WES THOMAS ASSOCIATES

Crystall Thomas Yamaseki, L.P.L.S.

The elevations are based on the USGS Bench Marks on the Kailua Pier in Kailua Village.

BENCHMARK "Tidal 4YY 1958" 9.46 MLLW
BENCHMARK Stamped "8" 7.85 MLLW
The bench marks were converted to MSL us the customary 0.8 adjustment.
TO:       Linnel Nishioka, Deputy Director  
          Commission on Water Resources Management  
FROM:    Andrew Monden, Chief Engineer  
SUBJECT: Well No. 3457-04, Job No. 16-HC-C, Kahaluu Deep Monitor Well  
          Kahaluu, North Kona, Hawaii  

Transmitted for your files is the Well Completion Report for the subject well.  

Should you have any questions, please call Mr. Dickey Lee of the Inspection Section at Ext. 7-0280.  

DL:ka  
Attach.
TO: Dean Nakano  
Commission on Water Resources Management

FROM: Andrew Monden, Chief Engineer

SUBJECT: Job No. 16-HC-C, Well No. 3457-04, Kahaluu Deep Monitor Well  
Kahaluu, North Kona, Hawaii

A final inspection was held on October 18, 2000. Present at the site were as follows:

Dickey Lee, Glenn Bauer, Morris Ota – DLNR  
Dale Stromquist, Bob Richardson – Wai’eli Drilling & Development  
Mel Kaneshiro – Mel Kaneshiro General Construction

The project was constructed in accordance with the project plans and specifications, and it was accepted on October 18, 2000.

The surveyor’s certified benchmarks are as follows:

Top of concrete slab (adjacent to well head) = 308.99 feet  
Top of monitor tube cap = 310.18 feet  
Top of well head cap = 310.86 feet
TO: Dean Nakano  
Commission on Water Resource Management

FROM: Andrew Monden, Chief Engineer

SUBJECT: Job No. 16-HC-C, Well No. 3457-04, Kahaluu Deep Monitor Well  
Kahaluu, North Kona, Hawaii

As stated in your Well Construction Permit of June 14, 1999, returned for your files is a signed  
Well Construction Permit for the subject project.

Should you have any questions, please call Dickey Lee of the Inspection Section at  
Ext. 7-0280.

DL:ka  
Encl.
TO: Dean Nakano
Commission on Water Resource Management

FROM: Timothy E. Johns, Chairperson
Commission on Water Resource Management

Subject: Well Construction Permit
Kahaluu Deep Monitor Well (Well No. 3457-04)

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 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 13.

Special Conditions

1. Attached for your Information is a copy 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. No pump test is required.

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. However, in accordance with the Commission’s April 15, 1998 Declaratory Ruling No. DEC-ADM98-G5, which states that:

“Permanent pump installation for capacities between 0-70 gpm and where the proposed use is for private individual needs in non-ground-water management areas may be allowed prior to the final pump installation permit issuance. When required as a condition of the well construction permit, subsequent pumping tests shall validate the acceptability of the permanent pump. The permanent pump installed prior to final pump installation permit issuance is subject to removal if the testing shows that a smaller pump is required to reduce the potential of affecting neighboring wells and localized upconing at the applicant’s well.”

a permanent pump may be installed prior to the permanent pump installation permit issuance. If you qualify and wish to take advantage of this ruling, please include a written request to install the permanent pump prior to final pump installation permit issuance when you return to us your validated well construction permit.

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.

IMPORTANT - Drilling work may not proceed without a validated permit returned to the Commission. Please provide all the information in this packet to your well drilling contractor. The permittee 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 starting from the permit approval date.

If you have any questions, please contact Ryan Imata.

Rt: ss
Enclosures
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 Kahaluu Deep Monitor Well (Well No. 3457-04) at North Kona, Hawaii, TMK 7-5-10:16B, 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 and staff shall be allowed to inspect installation activities in accordance with §13-168-15, Hawaii Administrative Rules.

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 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.

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 (692-8015) 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 instream flow 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, masl) 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; 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 (January 23, 1997; HWCPIS). If the HWCPIS are not followed and as a consequence water is wasted or contaminated, a lien on the property may result.

10. The permit may be revoked by the Commission 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.

11. If the well is not to be used it must be properly capped. If the well is to be abandoned then the permittee must apply for a well abandonment permit in accordance with §13-169-12(f) prior to any well sealing or plugging work.

12. 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.

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

Date of Approval: June 7, 1999
Expiration Date: June 7, 2001

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 driller 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: Edwin I. Sakoda Date: 6/15/99
Printed Name: Edwin I. Sakoda Firm or Title: Acting Deputy
Driller's Signature: C-57 License # Date: 10/21/99
Printed Name: C. Orle Strickler Firm or Title: Driller - Water Engr. Department

Please sign both copies of this permit, return one to the Chairperson, and retain the other for your records.
The Department of Health, Clean Water Branch has the following comments:

1. 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, Chapter 11-55, 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
TO: Dean Nakano  
Commission on Water Resource Management

FROM: Timothy E. Johns, Chairperson  
Commission on Water Resource Management

Subject: Well Construction Permit  
Kahaluu Deep Monitor Well (Well No. 3457-04)

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If you have any questions, please contact Ryan Imata.

RI:ss  
Enclosures
Kahaluu Deep Monitor Well, Well No. 3457-04

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 Kahaluu Deep Monitor Well (Well No. 3457-04) at North Kona, Hawaii, TMK 7-5-10:168, 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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   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; non-compliance may be grounds for revocation of this permit.

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11. If the well is to be abandoned 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.

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TIMOTHY E. JOHN, Chairperson
Commission on Water Resource Management

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Permittee's Signature: ____________________________ Date: __________
Printed Name: ____________________________ Firm or Title:
Driller's Signature: ____________________________ C-57 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

USGS
Department of Health's Safe Drinking Water, Wastewater, and Clean Water Branches
Hawaii Department of Water Supply
FROM: RYAN


SUSPENSE DATE:

TO:

INIT.

TO:

INIT.

FOR:

PLEASE:

BAUER, G.

CHING, F.

FUJII, N.

HARDY, R.

HIGA, D.

HIRANO, E.

ICE, C.

IMATA, R.

JINNAI, R.

JOHNS, T.

KUNIMURA, I.

LUM, A.

NAKAMA, L.

NAKANO, D.

NAKOY, E.

SUBIA, S.

SWANSON, S.

UWAINA, J.

UYENO, D.

YODA, K.

4 Approval

4 Signature

5 Information

1 Review & Comment

Take Action

Type Draft

Type Final

File

Signature

Xerox copies

____________________________

WELL CONSTRUCTION

PUMP INSTALLATION PERMIT FOR:

3457-04 Kanaiun Monitor well

ATTACHMENTS FOR WELL CONSTRUCTION PERMIT:

1 COVER LETTER

2 PERMIT (2x)

3 PUMP TEST

4 DOH COMMENTS

5 WCR FORM

6 USGS MAP

7 TMK CHECK

8 DATABASE PRINTOUT

9 WELL CHECK PRINT

TO BE SENT TO APPLICANT

FOR OFFICE USE ONLY

ATTACHMENTS FOR PUMP INSTALLATION PERMIT:

1 COVER LETTER

2 PERMIT (2x)

3 DOH COMMENTS

4 WCR FORM

5 WUR FORM

6 USGS MAP

7 TMK CHECK

8 DATABASE PRINTOUT

9 GLENN'S WORKSHEET

TO BE SENT TO APPLICANT

FOR OFFICE USE ONLY
TO: Honorable Bruce Anderson, Director
Department of Health
Attention: Dennis Tulang, Wastewater Branch
William Wong, Safe Drinking Water Branch

FROM: Timothy E. Johns, Chairperson
Commission on Water Resource Management

SUBJECT: Well Construction Permit Application
Kahaluu Deep Monitor Well (Well No. 3457-04)

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 May 21, 1999.

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.

RI:ss
Attachment(s)

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, §11-20-29.

- 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).

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

No comments/objections

Contact Person: William Wong
Phone: 586-4258

Signed: William Wong
Date: 05/12/99
The Department of Health, Clean Water Branch has the following comments:

1. **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, Chapter 11-55, 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
TO: Dean Nakano  
Commission on Water Resource Management

FROM: Edwin T. Sakoda, Acting Deputy Director  
Commission on Water Resource Management

SUBJECT: Well Construction Permit Application for Well No. 3457-04

We acknowledge receipt, on April 29, 1999, of your completed well construction permit application for the Kahaluu Deep Monitor Well (Well No. 3457-04). You can expect your application to be processed within ninety (90) days from this date.

If you have any questions about your permit application, please contact Mr. Ryan Imata.

RI:ss
STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
P.O. BOX 621
HONOLULU, HAWAII 96809

MAY 6, 1999

TO: Honorable Bruce Anderson, Director
   Department of Health
   Attention: Dennis Tulang, Wastewater Branch
   William Wong, Safe Drinking Water Branch

FROM: Timothy E. Johns, Chairperson
       Commission on Water Resource Management

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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.

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[ ] For the applicant's information, a source of possible wastewater contamination [ ] is [ ] 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: ___________________________ Phone: ___________________________

Signed: ___________________________ Date: ___________________________
TO: Honorable Bruce Anderson, Director
Department of Health
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William Wong, Safe Drinking Water Branch

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

[ ] No comments/objections, NO RECORDS

Contact Person: Levi N. Kajiwara
Phone: 586-4274

Signed: Levi N. Kajiwara
Date: 5-17-99
State of Hawaii
Department of Land and Natural Resources
Commission on Water Resource Management
ATTENTION: MR. DEAN NAKANO
P.O. Box 621
Honolulu, HI 97809

WELL CONSTRUCTION PERMIT APPLICATION
KAHALUU DEEP MONITOR WELL
KAHALUU, NORTH KONA, HAWAII
TAX MAP KEY 7-8-10:28

Enclosed is the signed well construction permit application for the above-mentioned well.

If you have any questions, please call Mr. Glenn Ahuna at 961-8790.

Milton D. Pavao, P.E.
Manager

GGA:pt

Enc.

...Water brings progress...
APPLICATION FOR PERMIT

WELL Construction or □ Pump Installation

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 96809. Application must be accompanied by 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.

1. APPLICANT: (circle primary contact a, b, or c) Primary Fax: 587-0219
   (a) WELL OWNER
   Firm Name: CWRM, DLRN
   Contact Person: Dean Nakano
   Address: 2115 PUNUPOWI ST., Hilo, HI 96720
   (b) LANDOWNER
   Firm Name: Hawaii Dept of Water Supply
   Contact Person: Glenn Ahuna
   Address: 25 Aupuni St., Hilo, HI 96720
   (c) CONTRACTOR
   Firm Name: N/A
   Contact Person: 
   Address: 

2. WELL LOCATION/NAME: Kahaluu Deep Monitor Well Island: Hawaii
   Address: Kahaluu, N. Kona, Hawaii
   Tax Map Key: 7-8-101:28

   Attach the relevant portion of (a) a 7.5-Minute Series USGS topographic map (scale 1"=24,000), and (b) a property tax map, showing well location referred to established property boundaries.

3. (a) PROPOSED WORK: Drill New Well  □ Deepen  □ Install New Pump  □ Modify Existing Well  □ Redrill  □ Modify Pump  □ Abandon/Seal  □ Replace Pump
   * Be sure to complete and submit well abandonment report upon completion of work.
   (b) WELL TYPE:  □ Dug  □ Bored  □ Driven  □ Grilled  □ Radial
   Is this well a part of a battery of wells?  □ Yes  □ No
   (Briefly describe and fill in the diagram on the back of this form.)

4. PROPOSED PUMP INFORMATION: Rated Pump Capacity: ______ gallons per minute
   Pump Type:  □ Deep Well Turbine  □ Rotary  □ Submersible  □ Rotary-Displacement  □ Centrifugal
   □ Rotary-Gear  □ Impulse  □ Impulse  □ Other(explain)
   Motor:  □ Diesel  □ Gas  □ Electric, rated horsepower:
   If Pump Replacement, Existing Pump Capacity: ______ gallons per minute

5. PROPOSED USE:  □ Municipal (including hotels, stores, etc.)  □ Domestic (individual, noncommercial water sys.)
   □ Irrigation (crop)  □ Other, monitoring  □ Industrial
   □ Dwelling Units  □ Acres
   □ Military

6. (a) PROPOSED AMOUNT OF WITHDRAWAL: ______ gallons per day
   (b) METHOD OF FLOW MEASUREMENT:  □ Flow-meter  □ Orifice Plate  □ Weir

7. PENDING ACTIONS:  □ CDUA  □ SMA  □ EIS  □ EA
   Completion Date: 

8. REMARKS, EXPLANATIONS:

   (If more space is needed, continue on back)

Understand that approval of this application attaches the following standard conditions: 1) the proposed work is to be completed within two (2) years of the approval date; 2) the contractor shall submit to the Commission a well completion/abandonment report within 30 days after the completion date of the permitted work; 3) monthly water use data shall be submitted to the Commission; 4) such approval shall not constitute a determination of correlative water rights and shall not guarantee the pump capacity or future use up to the permitted pump capacity.

Jenn Owner: CWRM, DLRN

lander: Hawaii Dept of Water Sup

Contractor: N/A

signature: [Signature]

Date: [Date]

For Official Use Only:

Phone: [Phone]

Fax: [Fax]

Address: [Address]

N/A

As required by State law, water use data for this water well is to be submitted to the Department of Land and Natural Resources at the State of Hawaii, Water Resource Management, 25 Aupuni St., Hilo, HI 96720.

[Signature] [Date]

Landowner: Hawaii Dept of Water Supply

Contractor: N/A

[Signature] [Date]

For Official Use Only:

Phone: [Phone]

Fax: [Fax]

Address: [Address]

N/A

As required by State law, water use data for this water well is to be submitted to the Department of Land and Natural Resources at the State of Hawaii, Water Resource Management, 25 Aupuni St., Hilo, HI 96720.

[Signature] [Date]

[Signature] [Date]

[Signature] [Date]
9. PROPOSED WELL SECTION

<table>
<thead>
<tr>
<th>Elevation at top of casing</th>
<th>Ground Elevation: 310 ft, msl*</th>
</tr>
</thead>
<tbody>
<tr>
<td>312 ft, msl. (surveyed to nearest 0.01 ft)</td>
<td></td>
</tr>
<tr>
<td>Cement Grout: 280 ft. (70% distance surface to water)</td>
<td></td>
</tr>
<tr>
<td>Rock Packing: 40 ft.</td>
<td></td>
</tr>
<tr>
<td>Hole Diameter: 14 in. (allow 3° annular space)</td>
<td></td>
</tr>
<tr>
<td>Total Depth: 730 ft. (≤10 x head)</td>
<td></td>
</tr>
</tbody>
</table>

Casing: Solid

<table>
<thead>
<tr>
<th>Material</th>
<th>ASME A-53 Steel</th>
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</thead>
<tbody>
<tr>
<td>Length</td>
<td>320 ft.</td>
</tr>
<tr>
<td>Diameter</td>
<td>6 in. ID</td>
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<tr>
<td>Wall thickness</td>
<td>5/16 in.</td>
</tr>
</tbody>
</table>

Casing: Perforated Screen

<table>
<thead>
<tr>
<th>Material</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td></td>
</tr>
<tr>
<td>Diameter</td>
<td></td>
</tr>
<tr>
<td>Wall thickness</td>
<td></td>
</tr>
<tr>
<td>Openings</td>
<td>sq. in./A.F.</td>
</tr>
</tbody>
</table>

Open Hole:

<table>
<thead>
<tr>
<th>Length</th>
<th>410 ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diameter</td>
<td>10 in.</td>
</tr>
</tbody>
</table>

*Approximate elevation at time of filing application. Ground elevation above mean sea level (msl) by a surveyor licensed by the State must be submitted at start of construction. Final elevations of well components shall be submitted in the well completion/well abandonment reports.
KAHALUU DEEP MONITOR WELL
Kahaluu, North Kona, Hawaii

Proposed Section

Hinged and Lockable Steel Cap
Concrete Pad
Ground Elev.: 310 ft., approx.

18"

Grouted Annulus
3" minimum

ASTM A-53 Steel Casing
6" ID x 5/16" Wall

Grout Seal

Rock Packing

6" x 10" Increaser
with Shoe

Open Hole
10" minimum dia.

S.W.L.

20 ft.

14" Drill Hole

2" Steel Pipe
strapped to casing
(bottom 15 ft.
perforated).

Elev.: -10 ft.

140 ft.

320 ft.

730 ft.

Elev.: -420 ft.

NOT TO SCALE

Preliminary Design
Kahaluu Deep Monitor Well
Commission on Water Resource Management

PROPOSED
WELL SECTION

Water Resource Associates
105Kahaluu3