FIGURE 4
WELLS IN THE VICINITY OF WAIALE WELLS 1 & 2
FIGURE 1
LOCATION OF THE WAIALE WELLS,
THE 16" OFFSITE TRANSMISSION MAIN,
AND MAUI BUSINESS PARK - PHASE 2

WAIALE WELLS
AND 0.6 MG
STORAGE TANK

KAHULUI

16" OFFSITE TRANSMISSION
MAIN

McGerrow Village

Puunene
Mr. Bill Moore
Beylik Well Drilling and Pump Service
91-259A Olai Street
Kapolei, HI 96707

Dear Mr. Moore:

Extension of Pump Installation Permit for Well No. 5129-04 & 05

This is in response to your email dated April 16, 2011 requesting an extension for the completion date of the Waiale Wells 1 & 2 (Well No. 5129-04 & 05). Your request is approved. Your new completion date is June 8, 2012. All other conditions of your permit remain the same.

The original permit was issued in 2006. This is the third extension for the pump installation permit. If more time is needed beyond 2012, you may need to reapply or address the Commission.

If you have any questions, please contact Charley Ice of the Commission staff at 587-0218 or toll-free at 984-2400 (Maui), extension 70218.

Sincerely,

WILLIAM M. TAM
Deputy Director

Ct:ss

c: A&B Properties
   Tom Nance Water Resource Engineering
   Maui Department of Water Supply
<table>
<thead>
<tr>
<th>FROM: ROY</th>
<th>DATE: OCT 6 2009</th>
<th>SUSPENSE DATE: 10/21/09</th>
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<tr>
<td>TO:</td>
<td>INIT. TO:</td>
<td>FOR:</td>
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<tr>
<td></td>
<td></td>
<td>PLEASE:</td>
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<td>CHONG, R.</td>
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<tr>
<td>ENGLAND, D.</td>
<td>__</td>
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Thanks

Engineering Report in Library
### DLNR - CHAIRPERSON'S OFFICE DEPARTMENT ROUTESLIP

**DATE:** 10/2/09  
**TO:** CWRM

### CC:
- __ CHAIRPERSON  
- __ DEPUTY DIRECTOR  
- __ DEPUTY WATER  
- __ ATG/LAND TRANS.  
- __ BOC  
- __ CWRM  
- __ DAR  
- __ DATA  
- __ DOBOR  
- __ DOCARE  
- __ DOFAW  
- __ ENG.  
- __ FISCAL  
- __ KIRC  
- __ LAND  
- __ OCCL  
- __ PARKS  
- __ PERSONNEL  
- __ PIO  
- __ SHPD

### ACTION APPROVED BY:

### ACTION:
- [ ] Draft reply for my signature*
- [ ] Direct reply – copy to me*
- [ ] Investigate - reply to me*
- [ ] Update/comment – reply to me*
- [ ] For your information/files
- [ ] Distribute to office staff
- [ ] Other (see below comments)

*For tracking purposes, please refer to log number

### COMMENTS/REMARKS:
- Also, confirm if LD is a water deposit
- From the BID is needed?
Mr. Thomas E. Arizumi, Chief  
Environmental Management Division  
Department of Health  
P.O. Box 3378  
Honolulu, HI 96801-3378  

Dear Mr. Arizumi:  

SUBJECT: Waiale Well 2 Engineering Report  
FILE NO.: 5129-05  
TMK NO.: (2) 3-8-007:101  

Thank you for the opportunity to review the subject document. The Commission on Water Resource Management (CWRM) is the agency responsible for administering the State Water Code (Code). Under the Code, all waters of the State are held in trust for the benefit of the citizens of the State, therefore, all water use is subject to legally protected water rights. CWRM strongly promotes the efficient use of Hawaii's water resources through conservation measures and appropriate resource management. For more information, please refer to the State Water Code, Chapter 174C, Hawaii Revised Statutes, and Hawaii Administrative Rules, Chapters 13-167 to 13-171. These documents are available via the Internet at http://www.hawaii.gov/dlnr/cwrm.

Our comments related to water resources are checked off below.

☒ 1. We recommend coordination with the county to incorporate this project into the county's Water Use and Development Plan. Please contact the respective Planning Department and/or Department of Water Supply for further information.

☐ 2. We recommend coordination with the Engineering Division of the State Department of Land and Natural Resources to incorporate this project into the State Water Projects Plan.

☒ 3. We recommend coordination with the Hawaii Department of Agriculture (HDOA) to incorporate the reclassification of agricultural zoned land and the redistribution of agricultural resources into the State's Agricultural Water Use and Development Plan (AWUDP). Please contact the HDOA for more information.

☐ 4. We recommend that water efficient fixtures be installed and water efficient practices implemented throughout the development to reduce the increased demand on the area's freshwater resources. Reducing the water usage of a home or building may earn credit towards Leadership in Energy and Environmental Design (LEED) certification. More information on LEED certification is available at http://www.usgbc.org/leed. A listing of fixtures certified by the EPA as having high water efficiency can be found at http://www.epa.gov/watersense/pp/index.htm.

☐ 5. We recommend the use of best management practices (BMP) for stormwater management to minimize the impact of the project to the existing area's hydrology while maintaining on-site infiltration and preventing polluted runoff from storm events. Stormwater management BMPs may earn credit toward LEED certification. More information on stormwater BMPs can be found at http://hawaii.gov/dbedt/czm/initiative/lid.php.

DRF-GN 03/02/2006
6. We recommend the use of alternative water sources, wherever practicable.

7. There may be the potential for ground or surface water degradation/contamination and recommend that approvals for this project be conditioned upon a review by the State Department of Health and the developer’s acceptance of any resulting requirements related to water quality.

Permits required by CWRM:
Additional information and forms are available at www.hawaii.gov/dlnr/cwm/form.htm.

8. The proposed water supply source for the project is located in a designated water management area, and a Water Use Permit is required prior to use of water.

9. A Well Construction Permit(s) is (are) required before the commencement of any well construction work.

10. A Pump Installation Permit(s) is (are) required before ground water is developed as a source of supply for the project.

11. There is (are) well(s) located on or adjacent to this project. If wells are not planned to be used and will be affected by any new construction, they must be properly abandoned and sealed. A permit for well abandonment must be obtained.

12. Ground-water withdrawals from this project may affect streamflows, which may require an instream flow standard amendment.

13. A Stream Channel Alteration Permit(s) is (are) required before any alteration can be made to the bed and/or banks of a stream channel.

14. A Stream Diversion Works Permit(s) is (are) required before any stream diversion works is constructed or altered.

15. A Petition to Amend the Interim Instream Flow Standard is required for any new or expanded diversion(s) of surface water.

16. The planned source of water for this project has not been identified in this report. Therefore, we cannot determine what permits or petitions are required from our office, or whether there are potential impacts to water resources.

OTHER:

The Well Construction Permit is acceptably finished; the current Pump Installation Permit to licensed contractor C-17737 will expire April 17, 2011. The estimated sustainable yield of the underlying Kahului Aquifer is 1 mgd; current pumpage was on the order of 25 mgd until January of this year, when it dropped to near zero. This level of pumpage (primarily for irrigation) toward the eastern aquifer boundary is presumably supported by sugar cane irrigation recharge. In addition, this project location is presumably supported by acknowledged “substantial leakage” from the Waiale Reservoir. Given potential loss of recharge at some point, natural sustainable yield may not support pumping these wells at this level without incurring increased salinity.

If there are any questions, please contact Charley Ice at 587-0218.

Sincerely,

KEN C. KAWAHARA, P.E.
Deputy Director

DRF-GN 03/02/2006
MEMO and ROUTE SLIP (ver. 07/21/09) 08/24/09

WCR 1 Check for Well No. 5129-05 (regulation/survey route)  

1. From Charley Ryan (initial) 

2. Well Log Check Geology Code for Well Index: THF Fm Name:モノマム D. England (initial) 

3. Pump Tests Check Diane England (initial) 

   Yes No 
   Step-Drawdown Test: followed WCPI Stds analysis attached □ □ □<70 gpm no test required 
   Constant Rate Test: followed WCPI Stds analysis attached □ □ □<50 gpm no test required 
   Potential Well Interference: □ □ 
   Potential Stream Impacts: □ □ 
   Additional Testing or Data Required: □ □ 
   Pump Test Comments Attached: □ □ 
   Proposed Pump Capacity is OK: □ □ 

4. Construction Check Mitch Ohye (initial) R. Torres (initial) 

   Yes No If no, describe deficiency 
   data complete □ □ Exceeds the max limit by...? not so sure 
   followed Special Cond & elevations □ □ 
   well database updated □ □ 
   location change significant? (SMA, CD, TMK) □ □ 

5. Charley Ryan (initial) take action based on above analysis 

   ATTACHMENTS FOR PUMP INSTALLATION PERMIT (2x): 
   1 COVER LETTER  _______  
   2 COUNTY COMMENTS (DWS/SMA) _______  
   3 DOH COMMENTS _______  
   4 DLNR COMMENTS (LD/OCC/DP) _______  
   5 WCR 1 Accept _______  
   6 WELL CONST. COMPLETION CERTIFICATE _______  
   7 USGS MAP UPDATED _______  
   8 PARCELS CHECK _______  
   9 WELL DATABASE INPUT CHECK _______  
   10 PUMP TEST WORKSHEET _______  
   11 WELL AS-BUILT CHECK PRINT _______  

   not necessary – only WCP or BOTH. 
   To be sent to driller/pump installer 
   To Landowner 
   Staff internal checks 

6. Roy (initial) check (Entered WCR 1/WCCC accept date into database) 
7. Susan Hoagbin (initial) finalize 
8. Ken (initial) signature 
9. Mitch (initial) Entered PIP issue date if attached/required 
10. Charley Ryan File
Ms. Diane Bevilaqua  
A&B Properties, Inc.  
P.O. Box 156  
Kahului, HI 96733

Dear Ms. Bevilaqua:

Certificate of Well Construction Completion for Well No. 5129-05 (TMK (2) 3-8-007:101)

We are pleased to inform you that the Well Construction work permitted for the Waiale Well 2 (Well No. 5129-05) is complete and acceptable.  

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

1. Before this well can be pumped on a regular basis, a certificate of pump installation completion must be obtained.
2. If the well is not in use it must be properly capped.
3. If the well is to be abandoned then the landowner must cause a licensed contractor to apply for a well abandonment permit in accordance with §13-168-12(f), HAR, prior to any well sealing or plugging work.
4. In the event that the well operator and/or landowner changes, the Commission shall be notified prior to the change.
5. In the event the benchmark in the concrete base of the well is altered in any way, an updated version of the Well Elevation page of the Well Completion Report Part I shall be submitted to the Commission. If a licensed surveyor had estimated the original benchmark elevation then a licensed surveyor must establish the new benchmark elevation. The Well Elevation portion of the Well Completion Report Part I can be obtained by contacting Commission staff or at our website at www.hawaii.gov/dlnr/cwrmlresourcesyermits.htm.

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

If you have any questions, please contact Charley Ice of the Commission staff at 587-0218 or toll-free at 984-2400 (Maui), extension 70218.

Sincerely,

KEN C. KAWAHARA, P.E.  
Deputy Director

Cc: Maui Department of Water Supply  
    Water Resources International, Inc.
September 2, 2009

Mr. Blaise Clay
Water Resources International, Inc.
P.O. Box 44520
Kawaihae, HI 96778

Dear Mr. Clay:

Well Completion Report Part I for Well No. 5129-05

We received your Well Completion Report Part I for the Waiale Well 2 (Well No. 5129-05) on August 20, 2009 and acknowledge that it is complete.

This completes your obligation under the well construction permit. A certificate of well construction completion will be issued to the well operator/landowner and you will receive a copy. This certificate transfers responsibility of specific aspects of well usage and maintenance from you to the well operator/landowner.

If you have any questions, please contact Charley Ice of the Commission staff at 587-0218.

Sincerely,

KEN C. KAWAHARA, P.E.
Deputy Director

cc: A&B Properties, Inc.
1. State Well No.: 5129-05  Well Name: Waiale Well #2  Island: Maui
2. Address: Kahului, Maui, Hawaii  Tax Map Key: (2) 3-8-007:101
4. Drilling method used during construction: Rotary  Percussion  Other (describe)
5. Date Well Construction (drilled,cased,grouted) completed: 7/2/09
6. Was the subject well cored? Yes  No
7. Step-Drawdown Test completed? Yes  No
8. Constant Rate Aquifer Test completed? Yes  No
9. Initial encountered during drilling  Reference point elevation  Depth to water (feet) = Water Level ft. above mean sea level (see note below) Date/time of measurement
   (this should also be filled in on the driller's log)  Ground = 184.28 ft. msl  180.95 3.33 6/3/09 2pm
10. Just prior to casing installation  Ground = 184.26 msl  180.95 3.33 6/30/09 7am
11. After casing installation  (this information should be before any pump tests are performed with casing installed)
   If this reference point is not the benchmark, the difference between the benchmark and this point is:
   Chloride: 33 ppm, Temperature: 75.5°F
   Reference point = 202 ft.
   Date/time of measurement:
   7/8/09 10:00 am
12. As-built section filled in completely
13. Photograph of well and concrete pad showing benchmark on concrete pad attached
14. GPS coordinates provided in degrees, minutes, seconds
15. If a pump is not planned to be installed, please describe (below in the remarks section) how well is secured to prevent unauthorized access (example: lockable cover, threaded coupling, etc.)
16. Remarks: Threaded Coupling, Lockable

Licensed Driller (print) Blaise Clay  C-57 Lic. No. 17727
Signature  Date August 13, 2009
12. AS-BUILT WELL SECTION

(Please attach as-built if different from diagram provided below)

Elevation at top of casing 186.5 ft., msl*
(to nearest 0.01 ft.)

Ground Elevation: 184.00 ft., msl XX Surveyed □ Estimated

Bench mark elevation:
184.30 ft., msl*
□ (Surveyed to nearest 0.01 ft.) □ (Estimated)

Grouting method:
X) Positive displacement (if annular space is less than two inches, attach photo of tremie)
□ Other

Cement Grout: 170 ft.
(min. 70% of distance from ground elevation to top of water surface or 500 ft., whichever is less.)

3.125 in.
Annular space between hole and casing (1.5" for positive displacement, 3" for other methods):

Rock or Gravel Packing:

Material:
□ Crushed Basalt
□ Rounded Gravel

Water Level Elevation:
3.33 ft., msl*

Total Depth 217 ft.

*msl = mean sea level

Solid Casing Material:
Carbon Steel: compliant with (check one or more): □ ANSI/AWWA C200 □ API Spec. 5L □ ASTM A53 XX ASTM A139
And compliant with (check one or more): □ ASTM A242 or A606 □ Type E □ Type S XX Grade B □ Other
Stainless Steel: (check one):
□ ASTM A409 (production wells) □ ASTM A312 (monitor wells)

ABS Plastic conforming to ASTM F480 and ASTM D1527: (check one) □ Schedule 40 □ Schedule 80
PVC Plastic conforming to ASTM F480 and (ASTM D1785 or ASTM D2241): (check one) □ Schedule 40 □ Schedule 80 □ Schedule 120
Thermoset Plastic: (check one)
□ Filament Wound Resin Pipe conforming to ASTM D2996
□ Centrifugally Cast Resin Pipe conforming to ASTM D2997
□ Reinforced Plastic Mortar Pressure Pipe conforming to ASTM D3517
□ Glass Fiber Reinforced Resin Pressure Pipe conforming to AWWA C950
□ PTFE Fluorocarbon Tubing conforming to ASTM D3296
□ FEP Fluorocarbon Tubing conforming to ASTM D3296

Open Casing Material:
Carbon Steel: compliant with (check one or more): □ ANSI/AWWA C200 □ API Spec. 5L □ ASTM A53 XX ASTM A139
And compliant with (check one or more): □ ASTM A242 or A606 □ Type E □ Type S XX Grade B □ Other
Stainless Steel: (check one):
□ ASTM A409 (production wells) □ ASTM A312 (monitor wells)

ABS Plastic conforming to ASTM F480 and ASTM D1527: (check one) □ Schedule 40 □ Schedule 80
PVC Plastic conforming to ASTM F480 and (ASTM D1785 or ASTM D2241): (check one) □ Schedule 40 □ Schedule 80 □ Schedule 120
Thermoset Plastic: (check one)
□ Filament Wound Resin Pipe conforming to ASTM D2996
□ Centrifugally Cast Resin Pipe conforming to ASTM D2997
□ Reinforced Plastic Mortar Pressure Pipe conforming to ASTM D3517
□ Glass Fiber Reinforced Resin Pressure Pipe conforming to AWWA C950
□ PTFE Fluorocarbon Tubing conforming to ASTM D3296
□ FEP Fluorocarbon Tubing conforming to ASTM D3296

HAWAII WELL CONSTRUCTION AND PUMP INSTALLATION STANDARDS
Please refer to the HAWAII WELL CONSTRUCTION AND PUMP INSTALLATION STANDARDS to ensure that your as-built is in compliance with applicable standards.

WCR1 Form 6/12/07 Page 2 of 5
In addition to the driller's log, if a geologic log was prepared, please submit with this form.

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<th>Rock Description</th>
<th>Water Level</th>
<th>CI</th>
<th>Dates</th>
<th>Depths (ft.)</th>
<th>Rock Description</th>
<th>Water Level</th>
<th>CI</th>
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Remarks:

WCRI Form 6/12/07 Page 3 of 5
Well Elevation

6-5-29-05 HIAMELE 2

Benchmark Elevation 184.30

Attach photos of completed well and concrete pad showing benchmark location.

I certify that the elevation shown above:

1) Was done in accordance with acceptable surveying practices
2) Is accurate to the nearest 0.01 ft.
3) Is referenced to mean sea level

Surveyor
10928 License No. 8/5/09 Date
New Well Location:
Lat: N20°51'15"
Long: W156°28'59"

SKETCH OF WELL LOCATION
(Referenced to permanent landmark, i.e. building, road, fence, etc.)
Provide Latitude and Longitude of well referenced to NAD83 to nearest second

Attach photos of completed well and concrete pad
**STEP-DRAWDOWN PUMP TEST DATA**

(next required for wells producing < 100,000 gpd or 70 gpm)

<table>
<thead>
<tr>
<th>Suggested Elapsed Time (min)</th>
<th>Actual Elapsed Time (min)</th>
<th>Depth to water (nearest 0.1 ft)</th>
<th>Drawdown S (unadjusted to nearest 0.1 ft)</th>
<th>Pumping rate Q (at least 3 steps) (gpm)</th>
<th>EC (µmhos)</th>
<th>CI (mg/l)</th>
<th>Temp. °F or °C</th>
<th>Remarks</th>
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**Step 2 begin?**

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Observation Well No.

Distance between Obs. & Pumped Well ______ ft.

Reference pt. for depth to water ______ ft. msl

Static Water Level @ start of test ______ ft. msl

Water level measurements by:  
Electrical sounder  
Pressure transducer  
Airline

START TEST Date: 7/9/09  Time of day: 8:45 AM

Flow Meter Reading Start: 90569035 gallons

Suggested Actual Depth Drawdown Pumping Data in this table is for:

Elapsed Elapsed to rate Temp.

Start test/ Step 1

Start pump

Chloride sample taken

Step 2 begin?
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Data in this table is for:
- Pumped Well
- Observation Well

Remarks: (unadjusted (at least 3 or nearest to nearest steps) °C)

Remarks (min) (min)
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<th>Drawdown S (unadjusted to nearest 0.1 ft)</th>
<th>Pumping rate Q (at least 3 steps) (gpm)</th>
<th>EC (µhos)</th>
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Max possible duration, water level or quality did not stabilize for any 24 period

Begin recovery data next page
Flow meter reading at end of pumped period: 90623000 gals

1. starting pumping rate Q
2. minimum length of step period of constant pumping rate
3. minimum mandatory Chloride (Cl⁻) measurement/sampling at end of every step
4. Use same ending drawdown figure as start for recovery
### Data in this table is for:
- [X] Pumped Well
- [ ] Observation Well

**Remarks**
- Pump off, start recovery

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**END TEST** Date: 7/9/09    Time of day: 11:40 AM

**ADDITIONAL REMARKS:**

Person in charge of pump test (print): **Tracy Underwood**

Signature: **Tracy Underwood**

The signature above indicates that the data reported on this form is accurate and true to the best of the person's knowledge who operated this pump test.
## CONSTANT-RATE PUMP TEST DATA

(not required for wells producing < 50 gpm)

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Water level measurements by:  
- ☐ electrical sounder  
- ☐ pressure transducer  
- ☑ airline

START TEST  
Date: 7/4/09  
Time of day: 12:00

Flow Meter Reading Start: 90623000 gallons

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<th>Actual elapsed time (min)</th>
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Data in this table is for:  
- ☐ Pumped Well  
- ☐ Observation Well

Remarks:

- Start test
- Start pump/CI taken
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Max possible duration, water level or quality did not stabilize for any 24 hour period

Begin recovery data next page
Flow meter reading at end of pumped period: 93582900 gals

1 Chloride sampling required
2 Use same ending drawdown figure as start for recovery
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END TEST  Date: 7/13/09  Time of day: 3:00 PM

ADDITIONAL REMARKS: ________________________________

Person in charge of pump test (print): Tracy Underwood

Signature: ________________________________

The signature above indicates that the data reported on this form is accurate and true to the best of the person's knowledge who operated this pump test.
LETTER OF TRANSMITTAL

Date: August 17, 2009  WRI Job No. 588

RE: Waiale Well 2
Maui, Hawaii
Well No. 5129-05

WE ARE SENDING YOU

Attached the following items:

- Shop Drawings
- Prints
- Plans
- Samples
- Specifications

COPIES

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THESE ARE TRANSMitted as checked below:

- For approval
- Approved as submitted
- Resubmit copies for approval
- For your use
- Approved as noted
- Submit copies for distribution
- As requested
- Returned for corrections
- Return corrected prints
- For review and comment
- FOR BIDS DUE

PRINTS RETURNED AFTER LOAN TO US

REMARKS

COPY TO
Tom Nance Water Resource Engineering - email
A & B Properties - email
Honolulu - email
WRI Job File - hard copy

SIGNED
Laura Carbine
Executive Assistant
Pump Test Analysis – Comments

Well ID: 5129-05
Analysis Date: 8/26/09
Geologist: Diane England

Test Date: 7/9/09

Step Drawdown Test

Deviations From Pump Test Requirements
1. No deviations from the “Pump Test Requirements” guidance

Other Comments
1. None.

Constant Rate Pumping Test

Deviations From Pump Test Requirements
1. No deviations from the “Aquifer Pump Test Procedures” guidance.

Drawdown Curve Comments
2. Estimated K=6,700 ft/d. Estimated T = 330,000 ft²/d.

Well Interference & Stream Impacts

1. Based on preliminary analysis, no adverse stream or well impacts are expected.

Other Comments
1. None.

Proposed Pump Capacity OK? : YES
WELL ID: 5129-05

Island: Maui
Test Date: 7/9/2009
Analysis Date: 8/26/2009

INPUT

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Depths to:

| Water level (DTW) | 181 Feet |
| Top of Aquifer | 181 Feet |
| Base of Aquifer | 218 Feet |

Annular Fill:

| across screen | Open Hole |
| above screen | Cement |

Aquifer Material: Permeable Basalt

FLOW RATE: 512 GPM

COMPUTED

Aquifer thickness = 37 Feet
Slope = 0.072622 Feet/log10

K = 6700 is greater than extreme maximum of 6000 for Permeable Basalt
K = 6700 is greater than likely maximum of 100 for Permeable Basalt

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

K = 6,700 ft/d; T = 250,000 ft²/d

Analysis Program: USGS Aquifer Test Analysis Spreadsheets v.1.2, Open File Report 02-197
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Constant Rate Pump Test
Well 5129-05 (7-9-09)

Pumping Rate
Well 5129-05 (7-9-09)
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Weighted Average: 512.00
Step Drawdown Test
Well 5129-05 (7-9-09)

Time (min)

Drawdown (feet)

Pumping Rate
Well 5129-05 (7-9-09)

Time (min)
Pumping Rate (gpm)
## Step-Drawdown Test (05129-05)

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I've asked 3x, and after 3 weeks, I'm proceeding.

O.K.

Ryan is also checking on a couple of outstanding WCAs for Blaine. Check within to make sure nothing egregious we're overlooking on Blk. 13E.
Mr. Blaise Clay  
Water Resources International, Inc.  
P.O. Box 44520  
Kawaihae, HI 96743  

Dear Mr. Clay:

Pump Installation Permit  
Waiaie Well 2 (Well No. 5129-05)

Enclosed are two (2) originals of your approved Pump Installation Permit for the captioned well(s) that authorize permanent pump installation work for your well(s). As part of the Chairperson's approval, the following special conditions were added and are part of your permit under Permit Condition 14:

**Special Conditions**

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

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

Please sign both permit originals and return one copy to the Commission office for our files.

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

If you have any questions, please call Charley Ice of the Commission staff at 587-0218.

Sincerely,

[Signature]

LAURA H. THEILEN  
Chairperson

Enclosure

c: A&B Properties, Inc.  
USGS  
Maui DWS
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 Waiale Well 2 (Well No. 5129-05) at TMK (2) 3-8-007:101, Maui, subject to the Hawaii Well Construction & Pump Installation Standards (HWCPIS - February 2004) which include but are not limited to the following conditions:

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

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

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

4. The pump installation permit shall be for installation of a 500 gpm rated capacity, or less, pump in the well. This permanent capacity may be reduced in the event that the pump test data does not support the capacity.

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

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

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

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

9. The pump installation permit application and, if relevant, any related staff submittal approved by the Commission are incorporated into this permit by reference.

10. If the HWCPIS are not followed and as a consequence water is wasted or contaminated, a lien on the property may result.

11. Any variances from the HWCPIS shall be approved by the Chairperson prior to invoking the variance.

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

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

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

Date of Approval: April 17, 2009
Expiration Date: April 17, 2011

LAURA H. THIELLEN, 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 shall not commence work until I and the pump installer have signed, dated, and returned the permit to the Commission. I understand that this permit is not to be transferred to any other entity. I also understand that non-compliance with any permit condition may be grounds for revocation and fines of up to $5,000 per day starting from the permit date of approval.

Installer's Signature: 
Printed Name: Blaise Clay

C-57, C-57a, or A License #: C-17737
Firm or Title: Water Resources International, Inc.

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

Attachments
April 21, 2009

Mr. Blaise Clay
Water Resources International, Inc.
P.O. 44520
Kawaihae, HI 96743

Dear Mr. Clay:

Well Construction Permit
Waiale Well 2 (Well No. 5129-05)

Enclosed are two (2) copies of your approved Well Construction Permit for the captioned well(s) that authorize well construction activities but excludes installation work for a permanent pump. As part of the Chairperson’s approval, the following special conditions were added and are part of your permit under Permit Condition 17:

Special Conditions

1. Attached for your information are copies of the Department of Health’s (DOH) review comments. Please note DOH’s requirements related to discharge of effluent from well drilling and testing activities. Also, please contact the Noise Radiation and Indoor Air Quality Branch at 586-4700 to check compliance with construction noise permit requirements for this project.

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

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

4. Attached for your information is a copy of your county’s Department of Water Supply comments related to their concerns.

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

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

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

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

If you have any questions, please call Charley Ice of the Commission staff at 587-0218.

Sincerely,

Chairperson

Enclosures

C: A&B Properties, Inc. (with applicable comments – DOH SDWB, WWB, CWB, HEER, Land Division, DHP, DWS)
USGS
Maui DWS
WELL CONSTRUCTION PERMIT

Waiale Well 2, Well No. 5129-05

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

In accordance with Department of Land and Natural Resources, Commission on Water Resource Management's Administrative Rules, Section 13-168, entitled "Water Use, Wells, and Stream Diversion Works", this document permits the construction and testing of Waiale Well 2 (Well No. 5129-05) at TMK (2) 3-8-007:101, Maui, subject to the Hawaii Well Construction & Pump Installation Standards (HWCPIS - February 2004) which include but are not limited to the following conditions:

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

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

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

4. In basal ground water, the depth of the well may not exceed one-fourth (1/4) of the theoretical thickness (41 times initial head) of the basal ground water unless otherwise authorized by the Chairperson. If it can be shown that the well does not tap basal ground water then this condition may be waived after consultation with and acceptance by Commission staff. However, in no instance can the well be drilled deeper than one-half (1/2) of the theoretical thickness without Commission approval.

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

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

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

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

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

10. The well construction permit application and, if relevant, any related staff submittal approved by the Commission are incorporated into this permit by reference.

11. If the HWCPIS are not followed and as a consequence water is wasted or contaminated, a lien on the property may result.

12. Any variances from the HWCPIS shall be approved by the Chairperson prior to invoking the variance.

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

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

15. 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.

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

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

Date of Approval: April 17, 2009
Expiration Date: April 17, 2011

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

Driller's Signature: __________________________ C-57 License #: C-17737 Date: __________________________

Printed Name: Blaise Clay Firm or Title: Water Resources International, Inc.

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

Attachment
April 21, 2009

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

Dear Mr. Godwin:

Cancellation of Well Construction and Pump Installation Permits
Waiale Well 2 (Well No. 5129-05)

Please note that the well owner has informed us through their agent that the drilling contractor for this project has changed. We are therefore cancelling your permits and reissuing them to another contractor.

If you have any questions, please contact Charley Ice of our staff at (808) 587-0218.

Sincerely,

KEN C. KAWAHARA, P.E.
Deputy Director

CI:ss

c: Tom Nance Water Resource Engineering
Water Resources International, Inc.
Mr. Ken Kawahara  
Deputy Director  
Commission on Water Resource Management  
Department of Land and Natural Resources  
State of Hawaii  
P. O. Box 621  
Honolulu, Hawaii  96809  

Attention:  Charley Ice  

Dear Mr. Kawahara:

Change of Drilling Contractor for  
Waiale Well 2 (State No. 5129-05) in Kahului, Maui

The Well Construction Permit issued for Waiale Well 2 (State No. 5129-05) was signed by William Godwin of Beylik Drilling & Pump Service, Inc. A&B Properties, Inc. has subsequently decided to use Water Resources International (WRI) as the drilling contractor. Based on a discussion with Charley Ice of your staff, I have attached an application signed by Blaise Clay of WRI. If you need anything else, please let me know.

Sincerely,

Tom Nance

cc:  Diane Bevilacqua - A&B  [Email only]  
     Blaise Clay - WRI  [Email only]

Attachment
# WELL LOCATION INFORMATION

<table>
<thead>
<tr>
<th>1. STATE WELL NO. (if already assigned)</th>
<th>2. WELL NAME</th>
<th>3. ISLAND</th>
<th>4. TMK</th>
</tr>
</thead>
<tbody>
<tr>
<td>5129-05</td>
<td>Waiakea Well No. 2</td>
<td>Maui</td>
<td>3 - 8 - 07 - 101</td>
</tr>
</tbody>
</table>

The following must be attached before this application is accepted as complete:
- Portion of 7.5-Minute Series USGS topographic map (scale 1:24,000) with well location labeled and include the name of the quad map
- Property tax map, showing well location referenced to established property boundaries
- Photograph of the proposed well site
- A schematic diagram showing the well site, access road and proposed well infrastructure
- For dug wells, attach a grading plan with cross section profiles showing existing and final grades

## WELL OPERATOR'S NAME/COMPANY

A&B Properties, Inc.

<table>
<thead>
<tr>
<th>Well Operator's Contact</th>
<th>Well Operator's Mailing Address</th>
<th>Well Operator's Phone</th>
<th>Well Operator's Fax</th>
<th>Well Operator's E-mail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diane Bevilacqua</td>
<td>P.O. Box 156, Kahului, Maui, Hawaii 96733</td>
<td>808-872-4302</td>
<td>808-871-7497</td>
<td><a href="mailto:dbevilacqua@abprop.com">dbevilacqua@abprop.com</a></td>
</tr>
</tbody>
</table>

## PROPOSED WELL CONSTRUCTION

### 7. Proposed Work

<table>
<thead>
<tr>
<th>Proposed Work</th>
<th>8. Construction Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constrict New Well</td>
<td>Drilled</td>
</tr>
<tr>
<td>Modify Existing Well</td>
<td>Dug</td>
</tr>
<tr>
<td>Abandon/Seal Well</td>
<td>Shaft</td>
</tr>
<tr>
<td>Replace Pump</td>
<td>Tunnel</td>
</tr>
</tbody>
</table>

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

- 500

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

- 350,000

### 9. Is this well part of a battery of wells?

- Yes

## PROPOSED USE

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

- Yes

- Domestic Number of units to be served:

## OTHER LEGAL REQUIREMENTS

If required, items 21, and 22. must be obtained before the Commission can legally issue a permit.

### 21. Conservation District Use Permit (CDUP)

- Well is in Conservation District: Required, CDUP date approved

### 22. Special Management Area Permit (SMAP)

- Required, SMA date approved

## OTHER REMARKS

This is the second well of a private water system that will be constructed to supply A&B's Maui Business Park.
PROPOSED WELL SECTION

(Please attach schematic if different from diagram provided below)

Elevation at top of casing: **182 ft., msl**

Minimum of 2' Radius & 4" Thick Concrete Pad (to contain benchmark surveyed to nearest 0.01 ft.)

Ground Elevation: **180 ft., msl**

Bearing information in accordance with coastal resources

- **Cement Grout:** 170 ft. (min. 70% of distance from ground elevation to top of water surface or 500 ft., whichever is less.)
- **Annular space between hole and casing:** 3” for other methods:
- **Rock or Gravel Packing:** None
- **Material:** Crushed Basalt
- **Estimated Water Level Elevation:** 4 ft., msl

**Solid Casing: (8+90%) x (Ground Elev.-Water Level Elev.)**

- **Total Length:** 175 ft.
- **Nominal Diameter:** 14 in.
- **Wall Thickness:** 0.375 in.
- **Bottom Elevation:** 5 ft., msl

**Open Casing:**

- **Total Length:** 30 ft.
- **Nominal Diameter:** 14 in.
- **Wall Thickness:** 0.3125 in.
- **Bottom Elevation:** -25 ft., msl

**Open Hole:**

- **Length:** 10 ft.
- **Diameter:** 12 in.
- **Bottom Elevation:** -35 ft., msl

**Waiaile Well No. 2**

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

For non-salt water Basal Wells - bottom elevation of well should not be deeper than 1/4' of aquifer thickness or,

Bottom Elevation of Well Limit = \(\text{Water Elevation} \times \frac{4}{1} - \text{Water Level Elev.} \times \frac{4}{1}\) = -18.5 ft.

**Solid Casing Material:**

- **Carbon Steel:** compliant (check one or more):
  - ANSI/AWWA C200
  - API Spec. 5L
  - ASTM A53
  - ASTM A139
  - *And compliant (check one or more):*
    - ASTM A242 (or A606)
    - **Type E**
    - **Type S**
    - **Grade B**
    - **Other**
  - **Stainless Steel:** (check one):
    - ASTM A409 (production wells)
    - ASTM A312 (monitor wells)
  - **ABS Plastic conforming to ASTM F480 and ASTM D1527:** (check one): **Schedule 40**
  - **PVC Plastic conforming to ASTM F480 and (ASTM D1785 or ASTM D2241):** (check one): **Schedule 40**
  - **Thermoset Plastic:** (check one):
    - Filament Wound Resin Pipe conforming to ASTM D2996
    - Centrifugally Cast Resin Pipe conforming to ASTM D2997
    - Reinforced Plastic Mortar Pressure Pipe conforming to ASTM D3517
    - Glass Fiber Reinforced Resin Pressure Pipe conforming to AWWA C950
    - PTFE Fluorocarbon Tubing conforming to ASTM D3296
    - **FEP Fluorocarbon Tubing conforming to ASTM D3296**

**Open Casing Material:**

- **Carbon Steel:** compliant (check one or more):
  - ANSI/AWWA C200
  - API Spec. 5L
  - ASTM A53
  - ASTM A139
  - *And compliant (check one or more):*
    - ASTM A242 (or A606)
    - **Type E**
    - **Type S**
    - **Grade B**
    - **Other**
  - **Stainless Steel:** (check one):
    - ASTM A409 (production wells)
    - ASTM A312 (monitor wells)
  - **ABS Plastic conforming to ASTM F480 and ASTM D1527:** (check one):
    - **Schedule 40**
    - **Schedule 80**
  - **PVC Plastic conforming to ASTM F480 and (ASTM D1785 or ASTM D2241):** (check one):
    - **Schedule 40**
    - **Schedule 80**
  - **Thermoset Plastic:** (check one):
    - Filament Wound Resin Pipe conforming to ASTM D2996
    - Centrifugally Cast Resin Pipe conforming to ASTM D2997
    - Reinforced Plastic Mortar Pressure Pipe conforming to ASTM D3517
    - Glass Fiber Reinforced Resin Pressure Pipe conforming to AWWA C950
    - PTFE Fluorocarbon Tubing conforming to ASTM D3296
    - **FEP Fluorocarbon Tubing conforming to ASTM D3296**
January 16, 2009

Ref: 5129-05.wcp

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

Dear Mr. Godwin:

Well Construction Permit
Waiale Well 2 (Well No. 5129-05)

Enclosed are two (2) copies of your approved Well Construction Permit for the captioned well(s) that authorize well construction activities but excludes installation work for a permanent pump. As part of the Chairperson's approval, the following special conditions were added and are part of your permit under Permit Condition 17:

Special Conditions

1. Attached for your information are copies of the Department of Health's (DOH) review comments. Please note DOH's requirements related to discharge of effluent from well drilling and testing activities. Also, please contact the Noise Radiation and Indoor Air Quality Branch at 586-4700 to check compliance with construction noise permit requirements for this project.

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

3. Attached for your information is a copy of your county's Department of Water Supply comments related to their concerns. These comments echo the Commission's expressed concern that reliance should not be made upon continued potability of this well, as it may be dependent upon recharge from irrigation subject to a pending decision in a contested case hearing concerning stream diversions that support that irrigation.

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

No withdrawal of water shall be made other than for testing purposes until a certificate of pump installation completion has been issued by the Commission.
Please sign both permit originals and return one for our files. For copies of the aquifer pump test worksheet, please call staff or visit www.state.hi.us/dlnr/cwrm/forms.htm.

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

If you have any questions, please call Charley Ice of the Commission staff at 587-0218 or toll-free at 984-2400 (Maui), extension 70218.

Sincerely,

[Signature]
LAURA H. THIELEN
Chairperson

Enclosures

c: A&B Properties, Inc.
   USGS
   Maui DWS
WELL CONSTRUCTION PERMIT
Waiale Well 2, Well No. 5129-05

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

In accordance with Department of Land and Natural Resources, Commission on Water Resource Management's Administrative Rules, Section 13-168, entitled "Water Use, Wells, and Stream Diversion Works", this document permits the construction and testing of Waiale Well 2 (Well No. 5129-05) at TMK 3-8-007:101, Maui, subject to the Hawaii Well Construction & Pump Installation Standards (HWCPIS - February 2004) which include but are not limited to the following conditions:

1. The Chairperson of the Commission on Water Resource Management (Commission), P.O. Box 621, Honolulu, HI 96809, shall be notified, in writing, at least two (2) weeks before any work authorized by this permit commences and staff shall be allowed to inspect installation activities in accordance with §13-168-15, Hawaii Administrative Rules (HAR).
2. This permit shall be prominently displayed, or made available, at the site of construction work until work is completed.
3. The well construction permit shall be for construction and testing of the well only. The permittee shall coordinate with the Chairperson and conduct a pumping test in accordance with the HWCPIS (the latest pump test worksheet can be obtained by contacting Commission staff or at www.hawaii.gov/dilar/cwrm/resources_permits.htm). The permittee shall submit to the Chairperson the test results as a basis for supporting an application to install a permanent pump. No permanent pump may be installed until a pump installation permit is approved and issued by the Chairperson.
4. In basal ground water, the depth of the well may not exceed one-fourth (1/4) of the theoretical thickness (41 times initial head) of the basal ground water unless otherwise authorized by the Chairperson.
5. The permittee shall incorporate mitigation measures to prevent construction debris from entering the aquatic environment, to schedule work to avoid periods of high rainfall, and to revegetate any cleared areas as soon as possible.
6. In the event that historically significant remains such as artifacts, burials or concentrations of shells or charcoal are encountered during construction, the permittee shall stop work and immediately contact the Department of Land and Natural Resources’ State Historic Preservation Division. Work may recommence only after written concurrence by the State Historic Preservation Division.
7. The proposed well construction shall not adversely affect existing or future legal uses of water in the area, including any surface water or established instream flow standards. This permit or the authorization to construct the well shall not constitute a determination of correlative water rights.
8. The Well Completion Report Part I shall be submitted to the Chairperson within sixty (60) days after completion of work (please contact staff or visit www.hawaii.gov/dilar/cwrm/resources_permits.htm for current form).
9. The permittee shall comply with all applicable laws, rules, and ordinances; non-compliance may be grounds for revocation of this permit.
10. The well construction permit application and, if relevant, any related staff submittal approved by the Commission are incorporated into this permit by reference.
11. If the HWCPIS are not followed and as a consequence water is wasted or contaminated, a lien on the property may result.
12. Any variances from the HWCPIS shall be approved by the Chairperson prior to invoking the variance.
13. The work proposed in the well construction permit application shall be completed within two (2) years from the date of permit approval, unless otherwise specified. The permit may be extended by the Chairperson upon a showing of good cause and good-faith performance. A request to extend the permit shall be submitted to the Chairperson no later than the date the permit expires.
14. If the well is not to be used it must be properly capped. If the well is to be abandoned during the course of the project then the permittee must apply for a well abandonment permit in accordance with §13-168-12(0), HAR, prior to any well sealing or plugging work.
15. 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.
16. This permit shall apply to the location shown on the application only. If the well is to be relocated, the permittee shall apply for a new well construction/pump installation permit in accordance with §13-168-12(0), HAR.
17. Special conditions in the attached cover transmittal letter are incorporated herein by reference.

Date of Approval: December 31, 2008
Expiration Date: December 31, 2010

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

Driller’s Signature: ______________________ C-57 License #: AC-21896 Date: ______________________
Printed Name: Bill Godwin Firm or Title: Beylik Well Drilling and Pump Service, Inc.

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

Attachment
Ref: 5129-05.pip

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

Dear Mr. Godwin:

Pump Installation Permit
Waiale Well 2 (Well No. 5129-05)

Enclosed are two (2) originals of your approved Pump Installation Permit for the captioned well(s) that authorize permanent pump installation work for your well(s). As part of the Chairperson's approval, the following special conditions were added and are part of your permit under Permit Condition 14:

**Special Conditions**

1. If the elevation benchmark needs to be altered, the permittee, well operator, and/or well owner shall ensure that the benchmark is transferred (or the well resurveyed) and documentation of the new benchmark shall be submitted to the Commission within sixty (60) days after the pump is installed.
2. Attached for your information are copies of the Department of Health's (DOH) review comments. Please note DOH's requirements related to discharge of effluent from well drilling and testing activities. Also, please contact the Noise Radiation and Indoor Air Quality Branch at 586-4700 to check compliance with construction noise permit requirements for this project.
3. Attached for your information is a copy of the State Department of Land and Natural Resources Land Division's comments related to water lease requirements.
4. Attached for your information is a copy of your county's Department of Water Supply comments related to their concerns.

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

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

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

If you have any questions, please call Charley Ice of the Commission staff at 587-0218.

Sincerely,

Laura H. Thielen
Chairperson

Enclosure

c: A&B Properties, Inc. (with applicable comments – DOH SDWB, WWB, CWB, HEER, Land Division, MDWS)
USGS
Maui DWS
PUMP INSTALLATION PERMIT
Waiale Well 2, Well No. 5129-05

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

In accordance with Department of Land and Natural Resources, Commission on Water Resource Management's Administrative Rules, Section 13-168, entitled "Water Use, Wells, and Stream Diversion Works", this document permits the pump installation for Waiale Well 2 (Well No. 5129-05) at TMK 3-8-007:101, Maui, subject to the Hawaii Well Construction & Pump Installation Standards (HWCPIS - February 2004) which include but are not limited to the following conditions:

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

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

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

4. The pump installation permit shall be for installation of a 500 gpm rated capacity, or less, pump in the well. This permanent capacity may be reduced in the event that the pump test data does not support the capacity.

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

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

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

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

9. The pump installation permit application and, if relevant, any related staff submittal approved by the Commission are incorporated into this permit by reference.

10. If the HWCPIS are not followed and as a consequence water is wasted or contaminated, a lien on the property may result.

11. Any variances from the HWCPIS shall be approved by the Chairperson prior to invoking the variance.

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

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

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

Date of Approval: December 31, 2008
Expiration Date: December 31, 2010

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

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

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

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

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

FROM: CHARLEY
DATE: ************* SUSPENSE DATE: ______________________

TO: ANAKALEA, P. INIT. TO: KUNIMURA, I. INIT. FOR: Approval
BAUER, G. NAKAMA, L. Signature
CHING, F. NAKANO, D. Information
DANBABA, S. OHYE, M.
FUJII, N. SAKODA, E.
GOODING, K. SUBIA, S.
1 HARDY, R. SWANSON, S.
HIGA, D. UYENO, D.
ICE, C. YODA, K.
IMATA, R. YOSHINAGA, M.

PLEASE:
1 Review & Comment
2 Take Action
3 Type Draft
4 Type Final
5 File
6 Xerox ______ copies

WELL NUMBER 5129-05

Waiale Well 2

WELL CONSTRUCTION

ATTACHMENTS FOR WELL CONSTRUCTION PERMIT:
1 COVER LETTER
2 PERMIT (2x)
3 COMMENTS: SDWB
4 WWB
5 CWB
6 HEER
7 LD
8 HP
9 GCCL
10 SMA
11 WELL CHECK PRINTOUT

PUMP INSTALLATION

ATTACHMENTS FOR PUMP INSTALLATION PERMIT:
1 COVER LETTER
2 PERMIT (2x)
3 COMMENTS: SDWB
4 WWB
5 CWB
6 HEER
7 LD
8 HP
9 GCCL
10 SMA
11 GLENN'S WORKSHEET

TO BE SENT TO APPLICANT

MOW'S

Note: PIP for 5129-04 (exp.) will require chloride data missing from WCR 1.

why did we accept
us yet? seems
wrong can be
corrected. No. 8? (see editor)

summon process 5129-05 here. NOE
under separate rate.
RFC 2008/0129

County of Maui.
IT Security measures will reject attachments larger than 12 MB, and will block or quarantine high-risk file types in attachments.

4/5/09

agreed that "potable" nature of this will be understood to be any unreliable for reasons stated in this connected letter. R.O. switch may be needed in future.

Should also note that PIP expired for 5129-04 12/18/08
Mr. Jeffrey S. Hunt, Director
Planning Department
County of Maui
250 South High Street
Wailuku, HI 96793

Dear Mr. Hunt:

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

We would appreciate your comments on the captioned application with regard to the SMA permitting requirements specific to your division. Please respond by returning this cover memo form by December 31, 2008. If we do not receive comments or a request for additional review time by this date, we will assume you have no comments.

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

Sincerely,

Laura H. Thieilen
Chairperson

RESPONSE:

[ ] This well project [ ] requires [x] does not require a SMA. If a SMA is required it [ ] has [ ] has not been approved and [ ] is [ ] is not currently active.

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

[ ] No objections

[ ] Other comments:

Contact Person: Jeffrey Duck
Phone: 270-6275

Signed: Jeffrey Duck
Date: 1/5/09
December 30, 2008

Ms. Laura H. Thielen, Chairperson
State of Hawaii Department of Land and Natural Resources
Commission on Water Resource Management
P.O. Box 621
Honolulu, Hawaii 96809

Re: Well Construction/Pump Installation Permit Application
Waiale Well 2 (Well No. 5129-05)
TMK: 3-8-007:101

Dear Ms. Thielen:

Thank you for the opportunity to comment on this well construction/pump installation permit application. Please find attached a copy of our comment letter of December 8, 2006 to the application for Waiale Well No. 5129-04.

Aquifer Status and Proposed Amount of Withdrawal
Withdrawals of permitted wells in Kahului aquifer are far exceeding the sustainable yield of 1 MGD. We are concerned about how permitting additional municipal wells would affect the reliability of these wells and the effect on the overall aquifer, especially if sugar cane irrigation should cease over Kahului aquifer.

Water Quality and Ground Water Protection
We have concerns about the potable water quality of wells in this area due to current and historic potential contaminant sources. Current and former potential contaminant sources in this area include large scale pesticide use, car wreck storage, and recycling facilities. DBCP from former pesticide applications was detected in Reynolds 1 well. We recommend that the proposed source not be permitted for potable use. We understand the applicant is currently proposing a private water system. However, should dedication to the county be proposed in the future, any other use than irrigation would likely not be accepted.

In order to protect ground water resources, we recommend that Best Management Practices (BMPs) designed to prevent contamination through and to the proposed well be implemented. Sample BMPs are enumerated below.

"By Water All Things Find Life"

The Department of Water Supply is an Equal Opportunity provider and employer. To file a complaint of discrimination, write: USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington DC 20250-9410. Or call (202) 720-5964 (voice and TDD)
1. Inspect exposed parts of the well periodically for problems such as: cracked or corroded well casing, broken or missing well cap, damage to protective casing, settling and cracking of surface seals.
2. Slope the area around the well so that surface runoff drains away from the well.
3. Provide a well cap or sanitary seal to prevent unauthorized use of or entry into the well.
4. Provide for sediment removal or well cleaning as necessary.
5. Have the well tested once a year for fecal coliform or other constituents that may be of concern.
6. Keep accurate records of any well maintenance, such as disinfection or sediment removal, that might require use of chemicals in the well.
7. Avoid mixing or using pesticides, fertilizers, herbicides, degreasers, fuels, or other pollutants near the well.
8. Do not locate any type of potentially polluting activity up slope from the well.

Should you have any questions, please contact our Water Resources and Planning Division at (808)244-8550.

Sincerely,

Jeffrey K. Eng, Director

attachment:
DWS letter dated December 8, 2006

c: engineering division
December 8, 2006

Mr. Dean Nakano, Acting Deputy Director  
State of Hawaii Department of Land and Natural Resources  
Commission on Water Resource Management  
P.O. Box 621  
Honolulu, Hawaii 96809

RE: Well Construction/Pump Installation Permit Application  
Waiale No. 1 Well, TMK: (2) 3-8-07:101

Dear Mr. Nakano:

Thank you for the opportunity to comment on this well construction/pump installation permit application.

Aquifer Status and Proposed Amount of Withdrawal
The proposed well would withdraw 0.350 MGD for municipal use from the Kahului aquifer. Only 33 of 147 wells in Kahului aquifer have reported withdrawals in the Commission on Water Resources Management (CWRM) database. The proposed well would not have an immediate effect on existing DWS wells, but it could have an impact on the overall aquifer, especially if sugar cane irrigation should cease over the Kahului aquifer.

Ground Water Protection
We have concerns about the potable water quality of wells within Kahului aquifer. The drilling site is not optimal for a potable source due to current and historic potential contaminant sources. The Department and the applicant have discussed dedication to the County of this well. We have proposed to the applicant to consider and discuss alternative sites which may experience lower risk of contamination. We request that CWRM not issue the subject permits until the Department and the applicant had the opportunity to discuss alternative well sites.

In order to protect ground water resources, we encourage the applicant to adopt Best Management Practices (BMPs) designed to prevent contamination through and to the proposed well. Sample BMPs

"By Water All Things Find Life"
are as enumerated below.

1. Inspect exposed parts of the well periodically for problems such as: cracked or corroded well casing, broken or missing well cap, damage to protective casing, settling and cracking of surface seals
2. Slope the area around the well so that surface runoff drains away from the well
3. Provide a well cap or sanitary seal to prevent unauthorized use of or entry into the well
4. Provide for sediment removal or well cleaning as necessary
5. Have the well tested once a year for fecal coliform or other constituents that may of concern
6. Keep accurate records of any well maintenance, such as disinfection or sediment removal, that might require use of chemicals in the well.
7. Avoid mixing or using pesticides, fertilizers, herbicides, degreasers, fuels, or other pollutants near the well
8. Do not locate any type of potentially polluting activity up slope from the well

Should you have any questions, please contact our Water Resources and Planning Division at (808) 244-8550.

Sincerely,

[Signature]

George Y. Tsuji, Director

C: Engineering Division

C:\WPdocs\Well cnstrx PJP comments\Waialae No. 1 Well 5120-04 CWRM.wpd
STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES 
COMMISSION ON WATER RESOURCE MANAGEMENT 
HONOLULU, HAWAII 96819 

December 1, 2008

TO: 
Honorable Chiyome L. Fukino, M.D., Director
Department of Health
Attention: Director's Office
Tomas See, Chief, Wastewater Branch
Stuart Yamada, Chief, Safe Drinking Water Branch
Alec Wong, Chief, Clean Water Branch
Dr. Keith Kawaoka, Office of Hazard Evaluation and

FROM: 
Laura H. Thielen, Chairperson
Commission on Water Resource Management

SUBJECT: Well Construction/Pump Installation Permit Application
Waiakea Well 2 (Well No. 5129-05)

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

We would appreciate your comments on the captioned application for any conflicts or inconsistencies with the programs, plans, and objectives specific to your department. Please respond by returning this cover memo form by December 31, 2008. If we do not receive comments or a request for additional review time by this date, we will assume that you have no comments.

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

Class: Attachment(s)

RESPONSE

This well qualifies as a source which will serve as a source of potable water to a public water system (defined as serving 25 or more people at least 60 days per year or has 15 or more service connections) and must receive Director of Health approval for 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 plans include using this source increases to meet the public water system definition, the Director of Health will revoke approval 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 outlets 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 potable purposes and is not subject to Safe Drinking Water Regulations.

For the applicant's information, a source of non-potable wastewater contamination (if any) is located near the proposed well (information attached).

An NPDES permit is required.

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

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

No comments/problems

Contact Person: MICHAEL MUYALWA Phone: __________

Signed: __________ Date: __________
CWRM Application Source: Waiale Well 2
(State Well No. 5129-05)

Safe Drinking Water Branch Engineering Section

This well may qualify as a source that serves a regulated public water system. Federal and state regulations define a public water system as a system that serves 25 or more individuals at least 60 days per year or has at least 15 service connections. All public water system owners and operators are required to comply with Hawaii Administrative Rules, Title 11, Chapter 20, Rules Relating to Potable Water Systems.

All new public water systems are required to demonstrate and meet minimum capacity requirements prior to their establishment. This requirement involves demonstration that the system will have satisfactory technical, managerial and financial capacity to enable the system to comply with safe drinking water standards and requirements.

Projects that propose development of new sources of potable water serving or proposed to serve a public water system must comply with the terms of HAR 11-20-29. This section requires that all new public water system sources be approved by the Director of Health prior to its use. Such approval is based primarily upon the submission of a satisfactory engineering report, which addresses the requirements set in Section 11-20-29.

The engineering report must identify all potential sources of contamination and evaluate alternative control measures, which could be implemented to reduce or eliminate the potential for contamination, including treatment of the water source. In addition, water quality analyses for all regulated contaminants, performed by a laboratory certified by the State Laboratories Division of the state of Hawaii, must be submitted as part of the report to demonstrate compliance with all drinking water standards. Additional parameters may be required by the Director for this submittal or additional tests required upon his or her review of the information submitted.

All public water system sources must undergo a source water
source.

For further information concerning the application of capacity, new source approval, operator certification, source water assessment, backflow/cross-connection prevention or other regulated public water system programs, please contact the Safe Drinking Water Branch Engineering Section at 586-4258.

**Underground Injection Control (UIC)**

In general, a shallow well, or a well that recharges quickly from local rainfall, should not be used as a potable water source because such a well increases the risk of having unsatisfactory groundwater quality that when consumed may compromise health. Factors that directly influence a well's groundwater quality include wastewater disposal systems (cesspools, septic systems, drainage wells), lawn/garden/crop-growing activities, and even the proximity to the ocean where salt water intrusion may occur.

The siting of a drinking water source below the UIC line affects the allowed potential for new injection well construction. New injection wells will then be prohibited within setback areas defined in Chapter 11-23. We suggest that surrounding landowners be informed of this proposed action because it may affect the development potential of the properties within the setback area.

Questions about UIC may be directed to Chauncey Hew at 586-4258.

**Additional Comments (identify from which SDWB Section):**

On the Proposed Well Section page, there is no rock or gravel packing between the bottom of cement grout section and bottom elevation of open casing.

**CWRM Well Application Standard Comments (SDWB)**

Vers. 6/1/07
STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
P.O. BOX 321
HONOLULU, HAWAII 96803

December 1, 2008

TO: Honorable Chiyoume L. Fukino, M.D., Director
Department of Health
Attention: Director's Office
Tomas See, Chief, Wastewater Branch
Stuart Yamada, Chief, Safe Drinking Water Branch
Alex Wong, Chief, Clean Water Branch
Dr. Keith Kawaoka, Office of Hazard Evaluation and Emergency Response

FROM: Laura H. Thielen, Chairperson
Commission on Water Resource Management

SUBJECT: Well Construction/Pump Installation Permit Application
Waiale Well 2 (Well No. 5129-05)

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

We would appreciate your comments on the captioned application for any conflicts or inconsistencies with the programs, plans, and objectives specific to your department. Please respond by returning this cover memo form by December 31, 2008. If we do not receive comments or a request for additional review time by this date, we will assume that you have no comments.

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

Class
Attachment(s)

RESPONSE:

[ ] This well qualifies as a source which will serve as a source of possible water to a public water system (defined as serving 25 or more people at least 60 days per year or has 15 or more service connections) and must receive Director of Health approval prior to its use to comply with Hawaii Administrative Rules (HAR), Title 11, Chapter 20, Rules Relating to Public 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 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 possible and non-potable systems by an air gap or an approved backflow preventer, and by clearly labeling all non-potable systems with warning signs to prevent inadvertent consumption of non-potable water. Backflow prevention devices should be regularly 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 [ ] is not located near the proposed well site (information attached).

[ ] An NPDES permit is required

[ ] Other relevant DHIC regulations, information, or recommendations are attached

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

[ ] No comments/objections

Contact Person: Richard Palmer
Phone: 586-0957
Signed: Richard Palmer
Date: 16 Dec 2008
TO: Honorable Chiyome L. Fukino, M.D., Director  
Department of Health  
Attention: Director’s Office  
Thomas See, Chief, Wastewater Branch  
Stuart Yamada, Chief, Safe Drinking Water Branch  
Alec Wong, Chief, Clean Water Branch  
Dr. Keith Kawaoaka, Office of Hazard Evaluation and Emergency Response

FROM: Laura H. Thielen, Chairperson  
Commission on Water Resource Management

SUBJECT: Well Construction/Pump Installation Permit Application  
Waiale Well 2 (Well No. 5129-05)

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

We would appreciate your comments on the captioned application for any conflicts or inconsistencies with the programs, plans, and objectives specific to your department. Please respond by returning this cover memo form by December 31, 2008. If we do not receive comments or a request for additional review time by this date, we will assume that you have no comments.

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

CLASS Attachment(s)

RESPONSE:

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

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

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

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

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

[ ] An NPDES permit is required.

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

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

[ ] No comments/objections

Contact Person: Roland Tejano on Maui  
984-8232

Signed: Date: 12-05-08
TRANSMITTED FOR YOUR REVIEW AND COMMENT IS A COPY OF THE CAPTIONED WELL CONSTRUCTION/PUFF INSTALLATION PERMIT APPLICATION.

WE WOULD APPRECIATE YOUR COMMENTS ON THE CAPTIONED APPLICATION FOR ANY CONFLICTS OR INCONSISTENCIES WITH THE PROGRAMS, PLANS, AND OBJECTIVES SPECIFIC TO YOUR DEPARTMENT. PLEASE RESPOND BY RETURNING THIS COVER MEMO FORM BY DECEMBER 31, 2008. IF WE DO NOT RECEIVE COMMENTS OR A REQUEST FOR ADDITIONAL REVIEW TIME BY THIS DATE, WE WILL ASSUME THAT YOU HAVE NO COMMENTS.

PLEASE FIND THE ATTACHED MAPS TO LOCATE THE PROPOSED WELL. IF YOU HAVE ANY QUESTIONS ABOUT THIS PERMIT APPLICATION, REQUEST ADDITIONAL INFORMATION, OR REQUEST ADDITIONAL REVIEW TIME, PLEASE CONTACT CHARLEY ICE OF THE COMMISSION STAFF AT 587-0218.

ATTACHMENT(S)
The Department of Health, Clean Water Branch (CWB) 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 (HAR), Title 11, Chapter 55, Appendix I, effective October 22, 2007. Treated process wastewater effluent covered by this general permit includes well drilling slurries, lubricating fluids wastewater, and well purge wastewater. This general permit does not cover well pump testing. The applicable Notice of Intent (NOI) Forms and filing fee shall be submitted at least 30 calendar days before the start of discharge to the:

Department of Health
Clean Water Branch
919 Ala Moana Boulevard, Room 301
Honolulu, Hawaii 96814-4920

The CWB-NOI Forms are available online at http://www.hawaii.gov/health/environmental/water/cleanwater/forms/genl-index.html. Inquiries may be directed to the CWB at (808) 586-4309 or by fax (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 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 the 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.
3. For Construction Activities Disturbing One (1) or More Acres of Total Land Area

By HAR, Title 11, Chapter 55, Appendix C, effective October 22, 2007, an NPDES permit or Notice of General Permit Coverage is required before the start of the construction activities that result in the disturbance of one (1) or more acres of total land area, including clearing, grading, and excavation. The total land area includes a contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules under a larger common plan of development or sale. An NOI (see Comment No. 1, above) shall be submitted 30 calendar days before to the start of construction activities.
TO: Morris Atta, Administrator
   Land Division
FROM: Ken C. Kawahara, P.E., Deputy Director
      Commission on Water Resource Management
SUBJECT: Well Construction/Pump Installation Permit Application
         Waiale Well 2 (Well No. 5129-05) TMK 3-8-007:101

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

We would appreciate your comments on the captioned application with regard to the programs, plans, and objectives specific to your division. **Please respond by returning this cover memo form by December 31, 2008.** If we do not receive comments or a request for additional review time by this date, we will assume you have no comments.

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

RESPONSE:

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

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

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

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

[ ] No objections

[ ] Other comments: **Original source of private title is Grant 31 to statehood.**

Contact Person: Gary Martin Phone: 587-0421

Signed: Gary Martin Date: DEC 18 2008
January 6, 2009

Mr. Ken Kawahara  
Deputy Director  
State of Hawai’i, Commission on Water Resource Management  
P.O. Box 621  
Honolulu, Hawai’i 96809

Dear Mr. Kawahara:

Wailuku/Waikapu Ahupua‘a, Wailuku District, Island of Maui 
TMK: (2) 3-8-007:101 (Portion)

Thank you for the opportunity to provide comments on the submittal for the proposed project, which was received by our staff on December 3, 2008. Our review is based on reports, maps, and aerial photographs maintained at the State Historic Preservation Division (SHPD).

The submittal includes plans for the installation of a well in an area that is known to contain human skeletal remains. The subject area is located within undulating Aeolian sand dune deposits. Significant historic properties have been documented in the immediate area such as human burial features and possibly surface and sub-surface cultural deposits. We previously provided comments for various actions/phases of projects on the parcel and recommended archaeological investigations.

We accepted an archaeological monitoring report for Wai‘ale Well 1 (Well No. 5129-04). We understand grubbing and grading had already occurred on the subject parcel, prior to the commencement of the archaeological monitoring program. No historic properties were identified during archaeological monitoring of the well. Had we been given the opportunity to comment on the well project prior to installation, we would have recommended a project specific archaeological assessment/inventory survey (LOG NO: 2007.0923 DOC NO: 0806PC51).

The proposed construction activities will occur in Aeolian sand dune deposits, which are known to contain both isolated and clustered human burial features. There is always a high probability of encountering significant buried cultural remains throughout this area. We consistently recommend archaeological monitoring during all ground-altering activities for any proposed construction activities in the vicinity. It is also possible that historic surface or subsurface remnant features are still present in sections of the subject area in fill or original deposits.

We believe historic archaeological properties and/or previously disturbed historic archaeological properties may be present in the proposed project area, which may be impacted by the proposed well. In
order for this project to have “no historic properties affected”, we recommend the following conditions be attached to this permit:

1). An archaeological inventory survey shall be conducted by a qualified archaeologist. A report documenting the archaeological work shall be submitted to the SHPD for review and approval. The report shall follow HAR Chapter 13-276, and at a minimum should include: (1) Detailed site/resource descriptions; (2) GIS maps: 1:24,000 scale project overview with site locations and zoomed-in version(s) showing site/resource locations, features, and site boundaries; (3) accurate UTM site/resource coordinates; (4) Stratigraphic profile scale drawings; (5) photographs (with scale) of features, diagnostic artifacts, etc. and site overviews (with cardinal direction); (6) functional analysis; (7) valid interpretations; (8) appropriate significance evaluation criteria; and, when possible (9) \(^{14}\)C dates, float analysis, lithic analysis, etc.

2). If significant historic sites are found, then proposed mitigation (i.e., monitoring plan, burial treatment plan, data recovery plan, preservation plan) shall be submitted for review and approval by SHPD.

Please direct any inquiries about this review or any archaeological concerns to Jenny Pickett at the Maui office of the SHPD at (808) 243-4641. The Maui SHPD may also be contacted at (808) 243-1285 or (808) 243-4640.

Aloha,

\[\text{Nancy McMahon} \]
Nancy McMahon
Historic Preservation Manager
State Historic Preservation Division

c: Dept of Planning, FAX (808) 270-7634
Maui Cultural Resources Commission, Dept. of Planning, 250 S. High Street, Wailuku, HI 96793
December 1, 2008

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

Dear Mr. Godwin:

Well Construction/Pump Installation Permit Application for Well No. 5129-05

We acknowledge receipt, on October 22, 2008, of your completed Well Construction/Pump Installation permit application and filing fee for the Waiale Well 2 (Well No. 5129-05). You can expect your application to be processed within ninety (90) days from this date.

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

By this acceptance letter, we are also notifying the well operator/landowner that water may not be pumped for purposes other than testing until the certificate of well construction/pump installation completion letter is issued to the well operator and landowner. Additionally, the permitted pump capacity described on the pump installation permit may be reduced in the event that the pump test does not support the capacity. No certificate of pump installation will be issued until the Commission has determined that the pump capacity will not have adverse effects on the aquifer, other nearby wells, or streams. In other words, you may need to remove the pump and install a smaller pump at the Commission’s discretion before you can withdraw water for purposes other than testing.

If you have any questions about your permit application, please contact Charley Ice of the Commission staff at 587-0218.

Sincerely,

KEN C. KAWAHARA, P.E.
Deputy Director

CI:ss
Attachment

c: A & B Properties, Inc.
TO: Honorable Chiyome L. Fukino, M.D., Director
   Department of Health
   Attention: Director’s Office
   Tomas See, Chief, Wastewater Branch
   Stuart Yamada, Chief, Safe Drinking Water Branch
   Alec Wong, Chief, Clean Water Branch
   Dr. Keith Kawaoka, Office of Hazard Evaluation and Emergency Response

FROM: Laura H. Thielen, Chairperson
   Commission on Water Resource Management

SUBJECT: Well Construction/Pump Installation Permit Application
   Waialae Well 2 (Well No. 5129-05)

December 1, 2008

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

We would appreciate your comments on the captioned application for any conflicts or inconsistencies with the programs, plans, and objectives specific to your department. Please respond by returning this cover memo form by December 31, 2008. If we do not receive comments or a request for additional review time by this date, we will assume that you have no comments.

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

RESPONSE:

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

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

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

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

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

An NPDES permit is required.

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

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

No comments/objections

Contact Person: ___________________________ Phone: ___________________________

Signed: ___________________________ Date: ___________________________
December 1, 2008

TO: Morris Atta, Administrator
    Land Division

FROM: Ken C. Kawahara, P.E., Deputy Director
    Commission on Water Resource Management

SUBJECT: Well Construction/Pump Installation Permit Application
    Waiale Well 2 (Well No. 5129-05) TMK 3-8-007:101

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We would appreciate your comments on the captioned application with regard to the programs, plans, and objectives specific to your division. Please respond by returning this cover memo form by December 31, 2008. If we do not receive comments or a request for additional review time by this date, we will assume you have no comments.

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

CI:ss
Attachment(s)

RESPONSE:

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

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

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

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

[ ] No objections

[ ] Other comments:

Contact Person: ____________________________ Phone: ________________

Signed: ____________________________ Date: ________________
TO: Dr. Puaalaokalani Aiu, Administrator
    Historic Preservation
FROM: Ken C. Kawahara, P.E., Deputy Director
      Commission on Water Resource Management
SUBJECT: Well Construction/Pump Installation Permit Application
         Waiale Well 2 (Well No. 5129-05) TMK: 3-8-007:101

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

We would appreciate your comments on the captioned application with regard to the programs,
plans, and objectives specific to your division. Please respond by returning this cover memo form by
December 31, 2008. If we do not receive comments or a request for additional review time by this date,
we will assume you have no comments.

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

RESPONSE:

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

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

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

Contact Person: ___________________________ Phone: ________________

Signed: ___________________________ Date: ________________
Mr. Jeffrey S. Hunt, Director  
Planning Department  
County of Maui  
250 South High Street  
Wailuku, HI 96793  

Dear Mr. Hunt:

Special Management Area Use Permit Requirements for  
Well Construction/Pump Installation Permit Application  
Waiale Well 2 (Well No. 5129-05)  

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

We would appreciate your comments on the captioned application with regard to the SMA permitting requirements specific to your division. Please respond by returning this cover memo form by December 31, 2008. If we do not receive comments or a request for additional review time by this date, we will assume you have no comments.

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

Sincerely,

Laura H. ThieLEN  
Chairperson

RESPONSE:

[ ] This well project [ ] requires [ ] does not require a SMA. If a SMA is required it [ ] has [ ] has not been approved and [ ] is [ ] is not currently active.

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

[ ] No objections

[ ] Other comments:

Contact Person: ___________________ Phone: ___________________

Signed: ___________________ Date: ___________________
December 1, 2008

Mr. Jeffery K. Eng, Director
Department of Water Supply
County of Maui
200 South High Street
Wailuku, HI 96793

Dear Mr. Eng:

Well Construction/Pump Installation Permit Review
Well Construction/Pump Installation Permit Application
Waiale Well 2 (Well No. 5129-05)

Transmitted for your review and comment is a copy of the captioned Well Construction/Pump Installation permit application. If you have any comments on this application, please submit them by December 31, 2008. If we do not receive comments we will assume you have no comments.

If you have any questions about this permit application, please contact Charley Ice of the Commission staff at 587-0251.

Sincerely,

[Signature]

Laura H. Thielen
Chairperson

Cl: ss
Attachment
**Commission on Water Resource Management**

**Route Slip for New Applications**

**From:** CHARLEY  
**Date:** 23-Oct-08  
**Suspense Date:** 30-Oct-08

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**WELL NUMBER:** 3129-05  
**WELL NAME:** **Waiale 2**  
**WUP Number:**

- **☑ WELL CONSTRUCTION**
- **☑ PUMP INSTALLATION**
- **☐ WUPA**

**Attachments for Application Processing** - Both applicant & staff generated

1. **TRANS. LETTER**
2. **PERMIT PROCESS TABLE**
3. **CWRM MAP**
4. **APPL. FORM (11 COPIES)**
5. **USGS MAPS (11 COPIES)**
6. **TAX MAPS (11 COPIES)**
7. **PARCEL OWNER VERIF.**
8. **DCC A LICENSE SCREEN PRINTOUT**
9. **ALL INFO FILLED IN**
10. **BACKGROUND CHECK**
11. **$25 FEE DEPOSIT SLIP**
12. **DHP/CDUP/SMA PRE-SCREEN**

**(SMA map printout http://gis.hicentral.com/website/parcelzoning/viewer.htm, or INGRID'S SMA/CD MAP)**

**(LUC map printout http://luc.state.hi.us/luc_maps.htm, or INGRID'S SMA/CD MAP)**

**Folder:**
- **☐ MADE NEW FILE FOLDER, ATTACHED**
- **☐ FILE FOLDER ALREADY MADE, IN FILE CABINET**

**Incomplete Action Dates:**

**DATE**  
**ACTION**

- Please address (see email string) extend prior samples; require longer test period; testing monitoring

- Wait 6 mo. 10/24
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Thursday, October 23, 2008
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REMARKS:
LINE (1) Prescott Well
LINE (2) Kapaa Cannery
LINE (3) Kawela Plantation Well 2A & 3A
LINE (4) Waiale Well No. 2
LINE (5) 
LINE (6)
LINE (7)
LINE (8)
LINE (9)
LINE (10)
Mr. Ken C. Kawahara  
Deputy Director  
Commission on Water Resource Management  
Department of Land and Natural Resources  
State of Hawaii  
P. O. Box 621  
Honolulu, Hawaii  96809  

Dear Mr. Kawahara:

Well Construction/Pump Installation Permit Application  
for Waiale Well No. 2 in Kahului, Maui

Attached is a Well Construction/Pump Installation permit application, filing fee, and other attachments for Waiale Well No. 2 in Kahului, Maui. The drilling contractor will be Beylik Drilling & Pump Service, Inc. If you have any questions, please feel free to call me or Diane Bevilacqua of A&B Properties at 808-872-4302. Thank you for your attention to this matter.

Sincerely,

Tom Nance

cc: Diane Bevilacqua - A&B Properties  [ Email only: 11 pages ]  
Bill Godwin - Beylik  [ Email only: 11 pages ]

Attachments
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 96808. Application must be accompanied by 10 copies and a non-refundable filing fee of $25.00 payable to the Dept. of Land and Natural Resources. The Commission may not accept incomplete applications. For assistance, call the Regulation Branch at 808-323-4226. For further information and updates to this application form, visit http://www.hawaii.gov/dlnr/cwm.

WELL LOCATION INFORMATION

1. STATE WELL NO. (if already assigned)
2. WELL NAME
3. ISLAND
4. TMK

The following must be attached before this application is accepted as complete:
- A schematic diagram showing the well site, access road and proposed well infrastructure
- Photograph of the proposed well site
- For dug wells, attach a grading plan with cross section profiles showing existing and finish grades

5. WELL OPERATOR'S NAME/COMPANY
   A&B Properties, Inc.
   Well Operator's Contact
   Diane Bevilacqua

6. LANDOWNER'S NAME/COMPANY
   A&B Properties, Inc.
   Landowner's Contact
   Diane Bevilacqua

Other requirements:
- A&B Properties, Inc. • Permit is in suspension may result in fines of up to $25,000
- 23. State Historic Preservation Division (SHPD) of the Department of Land and Natural Resources
- 22. Special Management Area Permit (SMAP)
- 21. Conservation District Use Permit (CDUP)
- 9. Is this well part of a battery of wells?
- Additional remarks, explanations, etc. (attach additional sheet if more space is needed)

PROPOSED WELL CONSTRUCTION

7. Proposed Work
   • Construct New Well
   • Modify Existing Well
   • Abandon/Seal Well
   • Construction Type
     • Drilled
     • Sand Shale
     • Tunnel

8. Construction Date
   10. Proposed Work
      • Install New Pump
      • Replace Pump

11. Proposed Pumping Rate, gpm
    (gallons per minute)
    500

12. Proposed Amount of Withdrawal, gpd (gallons per day)
    350,000

13. Method of flow measurement
    • Flowmeter
    • Other (explain)

PROPOSED PUMP INSTALLATION

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

Ken T. Nomura - License No. LS-7633

OTHER LEGAL REQUIREMENTS

- 21. Conservation District Use Permit (CDUP)
- 22. Special Management Area Permit (SMAP)

For Official Use Only:

Notes:
- This is the second well of a private water system that will be constructed to supply A&B's Maui Business Park.
**PROPOSED WELL SECTION**

*Please attach schematic if different from diagram provided below*

Elevation at top of casing: 182 ft., msl*

Hole Diameter: 21 in.

Minimum of 2' Radius & 4" Thick Concrete Pad (to contain benchmark surveyed to nearest 0.01 ft.)

Ground Elevation: 160 ft., msl^

Cement Grout: 170 ft. (min. 70% of distance from ground elevation to top of water surface or 500 ft., whichever is less.)

Annular space between hole and casing (1.5' for positive displacement, 3' for other methods):

3 in.

Total Depth: 215 ft.

Rock or Gravel Packing:

None ft.

Material:

☐ Crushed Basalt
☐ Rounded Gravel

Estimated Water Level:

Elevation: 4 ft., msl*

Solid Casing: (~ 90% x (Ground Elev.-Water Level Elev))

Total Length: 175 ft.

Nominal Diameter: 14 in.

Wall Thickness: 0.375 in.

Bottom Elevation: 5 ft., msl*

Open Casing:

☐ Perforated
☐ Screen

Total Length: 30 ft.

Nominal Diameter: 14 in.

Wall Thickness: 0.3125 in.

Bottom Elevation: -25 ft., msl*

PUMP INSTALLATION STANDARDS:

Minimum 1'' (25 mm) x 1'' (25 mm) schedule pipe at the time of application filing. Final elevations of well components shall be submitted in the Well Completion/Well Abandonment reports and referenced to a benchmark which has been established by a surveyor licensed by the State.

For non-salt water Basal Wells - bottom elevation of well should not be deeper than 1/4 of aquifer thickness or, Bottom Elevation of Well Limit = (Water Elevation + 4 ft. Water Level Elev. / 4) + 1.6 ft.

Example: Estimated + 2 ft. Water Level Elev. → Bottom Elevation of Well Limit = (2 - 1.6 ft.) = +18.5 ft.

Solid Casing Material:

Carbon Steel: compliant with (check one or more):

☐ ANSI/AWWA C200
☐ API Spec. 5L
☐ ASTM A53
☐ ASTM A139

Stainless Steel: (check one):

☐ ASTM A409 (production wells)
☐ ASTM A312 (monitor wells)

ABS Plastic conforming to ASTM F480 and ASTM D1527: (check one):

☐ Schedule 40
☐ Schedule 80

PVC Plastic conforming to ASTM F480 and (ASTM D1785 or ASTM D2241): (check one):

☐ Schedule 40
☐ Schedule 80
☐ Schedule 120

Thermoset Plastic: (check one):

☐ Filament Wound Resin Pipe conforming to ASTM D2996
☐ Centrifugally Cast Resin Pipe conforming to ASTM D2997
☐ Reinforced Plastic Mortar Pressure Pipe conforming to ASTM D3517
☐ Glass Fiber Reinforced Resin Pressure Pipe conforming to AWWA C950
☐ PTFE Fluorocarbon Tubing conforming to ASTM D3296
☐ FEP Fluorocarbon Tubing conforming to ASTM D3266

Open Casing Material:

Carbon Steel: compliant with (check one or more):

☐ ANSI/AWWA C200
☐ API Spec. 5L
☐ ASTM A53
☐ ASTM A139

Stainless Steel: (check one):

☐ ASTM A409 (production wells)
☐ ASTM A312 (monitor wells)

ABS Plastic conforming to ASTM F480 and ASTM D1527: (check one):

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☐ Schedule 40
☐ Schedule 80
☐ Schedule 120

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☐ Glass Fiber Reinforced Resin Pressure Pipe conforming to AWWA C950
☐ PTFE Fluorocarbon Tubing conforming to ASTM D3296
☐ FEP Fluorocarbon Tubing conforming to ASTM D3266

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

Waiale Well No. 2

*Wells shall be constructed per (PLEASE ATTACH SCHEMATIC IF DIFFERENT FROM DIAGRAM PROVIDED BELOW)*

**INSTALLATION STANDARDS**

To ensure that your as-built is in compliance with applicable standards.

**CONSTRUCTION**

Grouting method:

☐ Positive displacement
☐ Other

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

For non-salt water Basal Wells - bottom elevation of well should not be deeper than 1/4 of aquifer thickness or, Bottom Elevation of Well Limit = (Water Elevation  + 4 ft. Water Level Elev. / 4) + 1.6 ft.

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☐ ASTM A53
☐ ASTM A139

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☐ ASTM A312 (monitor wells)

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☐ Schedule 40
☐ Schedule 80

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☐ Schedule 80
☐ Schedule 120

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☐ ANSI/AWWA C200
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☐ PTFE Fluorocarbon Tubing conforming to ASTM D3296
☐ FEP Fluorocarbon Tubing conforming to ASTM D3266
Waiale Well 2 Would be Located at the Foot of the Rubble Pile at Left
(Existing Waiale Well 1 is Just to the Right of the Right Side of the Photo)
FIGURE 2
SITE PLAN OF THE WAIALE WELLS
AND 0.60 MG TANK
FIGURE 1
LOCATION OF WAIALE WELL 1, THE 16" OFFSITE TRANSMISSION MAIN, AND MAUI BUSINESS PARK - PHASE 2
SCALE: 1" = 2000'