September 25, 2002

Mr. Yoshi Tanabe
Waialua Sugar Company
1116 Whitmore Avenue
Wahiawa, HI 96786

Dear Mr. Tanabe:

Notice of Action
Revocation of Water Use Permits
Pump 10 (Well Nos. 3306-01 to 12; WUP No. 135), TMK 6-5-1:002
Mill Pumps (Well Nos. 3407-07 to 10, 13, 16, 17, 20 & 21; WUP No. 47), TMK 6-7-01:5

Waialua Ground Water Management Area, Oahu

This letter serves as your official notice of action by the Commission on Water Resource Management (Commission) on the above-referenced water use permits.

By a unanimous vote of the Commission at their meeting on September 18, 2002, the Commission:

1. Revoked WUP Nos. 47 and 135.

2. Commended Waialua Sugar Company for their voluntarily actions to expend the effort and financial resources to seal former agricultural wells that are no longer needed and may pose water resource threats, and also for their voluntary relinquishment of unused water allocations so that new reasonable-beneficial uses may proceed.

If you have any questions, please contact Lenore Nakama at 587-0218.

Sincerely,

LINNEL T. NISHIOKA
Deputy Director

LN: ss
2. In the event that the tax map key at the location of the water use is changed, the permittee shall notify the Commission in writing of the tax map key change within thirty (30) days after the permittee receives notice of the tax map key change.

MOTION: (RICHARDS/CHING)
To approve the submittal.
UNANIMOUSLY APPROVED.

6. Waialua Sugar Company REVOCATION OF WATER USE PERMITS, Pump 10 (Well Nos. 3306-01 to 12; WUP No. 135), Mill Pumps (Well Nos. 3407-07 to 10, 13, 16, 17, 20 & 21; WUP No. 47), TMK 6-7-01:5, Waialua Ground Water Management Area, Oahu

PRESENTATION OF SUBMITTAL: Lenore Nakama

RECOMMENDATIONS:

Staff recommends that the Commission:

1. Revoke WUP Nos. 47 and 135.

2. Commend WSCO for their voluntarily actions to expend the effort and financial resources to seal former agricultural wells that are no longer needed and may pose water resource threats, and also for their voluntary relinquishment of unused water allocations so that new reasonable-beneficial uses may proceed.

MOTION: (DELA CRUZ/NISHIDA)
To approve the submittal.
UNANIMOUSLY APPROVED.


PRESENTATION OF SUBMITTAL: Edwin Sakoda

AMENDED RECOMMENDATIONS:

That the Commission:

1. Find that ADC has shown diligence in proceeding with the project.

2. Extend the deadline for ADC to complete the project, from September 21, 2002 to November 22, 2002.

3. A report on the status of the project be made at the next Commission meeting in October 2002.
PERMITTEE:
Waialua Sugar Company
1116 Whitmore Avenue
Wahiawa, HI 96786

LANDOWNER:
Same

LOCATION MAP: See Exhibit 1

BACKGROUND:

On September 11, 1981, the Board of Land and Natural Resources approved the certification of Waialua Sugar Company's (WSCO) existing use of 6.620 mgd and 4.630 mgd from Pump 10 (Well Nos. 3306-01 to 12) and Mill Pumps (Well Nos. 3407-07 to 10, 13, 16, 17, 20 & 21; WUP No. 47), respectively. The water was used for sugarcane agriculture.

On June 2, 1993, the Commission on Water Resource Management (Commission) approved WSCO's voluntary reduction in permitted use from the Waialua Ground Water Management Area. This action resulted in the reduction of the allocation for Pump 10 from 6.620 mgd to 5.0 mgd (WUP No. 135). There was no change in the allocation for the Mill Pumps, which remained at 4.630 mgd (WUP No. 47).

On April 25, 2002, WSCO submitted an application to abandon/seal the Pump 10 battery of wells.
On May 9, 2002, a Well Abandonment Permit was issued for the Pump 10 battery, and on August 5, 2002, Well Abandonment Reports were received and accepted by the Commission.

On August 12, 2002, WSCO submitted an application to abandon/seal the Mill Pump battery of wells.

On August 28, 2002, a Well Abandonment Permit was issued for the Mill Pump battery. The permit cover letter notified WSCO that the staff was planning to recommend that the CWRM revoke the water use permit for the source because the source was to be abandoned and sealed.

On or about August 30, 2002, the staff contacted the WSCO representative and confirmed that WSCO has no objections to these proposed revocations.

RECOMMENDATION:

Staff recommends that the Commission:

1. Revoke WUP Nos. 47 and 135.

2. Commend WSCO for their voluntarily actions to expend the effort and financial resources to seal former agricultural wells that are no longer needed and may pose water resource threats, and also for their voluntary relinquishment of unused water allocations so that new reasonable-beneficial uses may proceed.

Respectfully submitted,

LINNEL T. NISHIOKA
Deputy Director

Exhibit 1 (Location Map)
ITEM 1

MINUTES OF THE MAY 19, 1993 MEETING

Unanimously approved as submitted (Cox/Nakata).

ITEM 2

OLD BUSINESS/REPORTS

Ms. Loui reported on two follow up items:

1) Guidelines for modification of the water use permits
   Staff finds that Administrative Rules 171-23 are clear regarding changes that require modification. Therefore, it was felt that guidelines are not necessary.

2) Guidelines for Emergency permits
   Still being worked on. Eventually, amendments to the Administrative Rules will be made to more clearly address emergency permits.

ITEM 3

WAIALUA SUGAR COMPANY, VOLUNTARY REDUCTION OF PERMITTED WATER USE IN THE WAIALUA GROUND WATER MANAGEMENT AREA, WAIALUA, OAHU

Mr. Sakoda submitted amended recommendations for the Commission review and action (see attached).

Mr. Cox had the following questions:

1) Are the statements regarding "dry years and "wet years" correct for that area and time?
   Rainfall data provided by Climate Center was utilized, it was jointly determined that these were wet and dry years based on actual rainfall information.

2) In terms of the water level in the aquifer, what has happened during the periods noted?
   The water level data for the Waialua Aquifer is not that good. No problems have been expressed. USGS is drilling in that area to get more data.

3) What length of time is being discussed in Waialua Sugar Company's (Waialua Sugar) statement: "We cannot afford to short ourselves of water. As we understand, we can exceed the permitted use during dry periods as may be required."
   No specifics have been set, it would be on a case by case basis.

Mr. Nakata asked:

1) Why was there a discrepancy in the amount of pumpage?
   Mr. Sakoda replied that Waialua Sugar was still in the process of converting from furrow to drip. During that time, fields lie fallow longer than normal.

2) What percentage of the acreage was under drip irrigation?
Milton Agadar, Waialua Sugar Irrigation Superintendent stated that approximately 90% is fed by drip irrigation from the Waialua Aquifer.

Mr. Martin provided testimony (see Commission file) urging the Commission to review all data presently available and consider imposing further allocation reductions. He also felt specific quantitative guidelines and protocols for administering dry period extractions need to be part of the State Water Resource Protection Plan and water use permit conditions.

Mr. Cox commented that unless more information was available he would be uncomfortable in trying set a time for the dry period because it would vary considerably from aquifer to aquifer. Mr. Sakoda agreed that a generalized guideline would be difficult to make because every situation would be different.

In regards to the word "voluntary", Mrs. Black suggested "agreement" because if there is no water, how could it be a "voluntary reduction". Mr. Sakoda stated that it is voluntary because the Water Code provides that a water user can voluntarily give up or reduce their allocation without going through the public hearing process.

Mr. Ing asked how the data was obtained for the graph and if all the active pumps were metered. Mr. Sakoda said data was submitted monthly by Waialua Sugar. Mr. Agadar responded that all the pumps are metered.

Mr. Ing asked why the 12-month moving average of pumping was used and if this was an industry practice. In Hawaii, 12-month moving averages have been used by the water industry.

Unanimously approved as amended (Cox/Nakata).

ITEM 4

HOUSING FINANCE AND DEVELOPMENT CORPORATION,
APPLICATION FOR A WELL CONSTRUCTION PERMIT, KEOPU-HFDC WELL 1 (WELL NO. 3957-03), NORTH KONA, HAWAII

The following items were discussed:

1) The nearby Haseko Well is not being pumped but is proposed to be pumped at 700 gallons per minute.

2) This well would be required to follow the CWRM’s pump test protocol, which is a seven day test. The best data possible will be obtained for input into the Groundwater Model currently being developed jointly by USGS/CWRM.

3) If the HFDC wells interfere with the Haseko well, the Hawaii County BWS would not award the full amount of water commitments to the wells.

4) There have been mixed results of the testing of the high level wells. Some have stabilized quickly while others have not.

Mr. Martin expressed concerns regarding ceded lands, the effects on other wells due to a first come-first serve process, and requirements for a water license.

Mr. Tam said public lands are set aside by executive order for county and other state department uses. Setting aside or transferring water to a sub-agency of the state for public purposes is not a transfer to a private entity. Therefore, the use by the counties of state lands for providing municipal water supply does not require a license under the Land Board or the Commission.

Unanimously approved (Cox/Nakata).
Chairperson and Members
Commission on Water Resource Management
State of Hawaii
Honolulu, Hawaii

Gentlemen:

Waialua Sugar Company
Voluntary Reduction of Permitted Water Use in the Waialua Aquifer System, Waialua Ground Water Management Area
Waialua, Oahu

Background: Present authorized uses of ground water in the Waialua Aquifer System of the Waialua Ground Water Management Area (GWMA) total 43.114 mgd. The sustainable yield for the Waialua Aquifer System (formerly called the Waialua Subarea) was originally 60 mgd when the Board of Land and Natural Resources adopted the sustainable yield in July 1981. The Commission on Water Resource Management, in October 1991, accepted an updated table of sustainable yields for Oahu. Under the updated table, the sustainable yield for the Waialua Aquifer System was reduced from 60 mgd to 40 mgd. The new sustainable yield was formally adopted by the Commission on March 17, 1993. Authorized uses now exceed the sustainable yield by 3.114 mgd.

The Commission staff has reviewed the authorized uses versus the actual uses in the entire Waialua GWMA. Allocations in the Waialua Aquifer System are as follows:

<table>
<thead>
<tr>
<th>Water User</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waialua Sugar Company</td>
<td>39.940 mgd</td>
</tr>
<tr>
<td>Honolulu BWS</td>
<td>2.730 mgd</td>
</tr>
<tr>
<td>Private Users</td>
<td>0.444 mgd</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>43.114 mgd</strong></td>
</tr>
</tbody>
</table>

Preliminary review of Waialua Sugar Company's pumpage data indicates that they have used less than 30 mgd of their 40 mgd allocation over the last five years (see attached graph). Water use by the Honolulu BWS and private users has not changed significantly.

Waialua Sugar Company calculated their irrigation requirements using the same methodology that Oahu Sugar Company used to determine their irrigation requirements in the Pearl Harbor area. Irrigation requirements were calculated for dry years (1983 - 1986) and wet years (1988 - 1991). Pumping required was calculated to be about 46 to 48 mgd for dry years and about 35 to 36 mgd for wet years.

Waialua Sugar Company has reviewed their water use over the past 20 years and, based on historical water use, conversion to drip irrigation, and other factors, has voluntarily reduced its permitted water use in the Waialua Aquifer System from 39.9 mgd to 36.0 mgd effective June 1, 1993. This voluntary reduction reduces the allocations in the Waialua Aquifer System to 39.174 mgd, which is less than the sustainable yield of 40 mgd, and allows an additional 0.826 mgd to be allocated.

In voluntarily reducing its allocation, Waialua Sugar Company states that they "want to be on record that sugar production is highly dependent upon water; without adequate water, yields will suffer. We cannot afford to short ourselves of water. As we understand, we can exceed the permitted use during dry periods as may be required" (See attached letter).
Chairperson and Members  
Commission on Water Resource Management  
State of Hawaii  
Honolulu, Hawaii

Gentlemen:

Additional Recommendations  
Waialua Sugar Company  
Voluntary Reduction of Permitted Water Use in the  
Waialua Aquifer System, Waialua Ground Water Management Area  
Waialua, Oahu

RECOMMENDATIONS:

1. That the Commission accept Waialua Sugar Company's voluntary reduction of permitted use in the Waialua Aquifer System, from 39.940 to 36.0 mgd, from the following sources:

<table>
<thead>
<tr>
<th>SOURCE</th>
<th>WELL NUMBER</th>
<th>EXISTING ALLOCATION</th>
<th>PROPOSED ALLOCATION</th>
<th>REDUCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pump 3</td>
<td>3505-01 to 20</td>
<td>3.052 mgd</td>
<td>1.552 mgd</td>
<td>-1.500 mgd</td>
</tr>
<tr>
<td>Pump 7</td>
<td>3407-11, 12</td>
<td>3.750 mgd</td>
<td>2.930 mgd</td>
<td>-0.82 mgd</td>
</tr>
<tr>
<td>Pump 10</td>
<td>3306-01 to 12</td>
<td>6.620 mgd</td>
<td>5.000 mgd</td>
<td>-1.620 mgd</td>
</tr>
<tr>
<td>TOTALS</td>
<td></td>
<td>13.422 MGD</td>
<td>9.482 MGD</td>
<td>-3.940 MGD</td>
</tr>
</tbody>
</table>

2. That the Commission consider giving Waialua Sugar Company priority to reobtain its permitted level of water usage over any other application should more water become available in the future. This recommendation is based on Section 13-171-19(d) of the Water Code administrative rules which states:

"A permitted user of water in an existing water management area, with a continuous reduced water usage, shall be given priority to reobtain its permitted level of water usage over any other application; provided that the use remains the same and is reasonable and beneficial and water is available."
Chairperson and Members  
Commission on Water Resource Management  
June 2, 1993

RECOMMENDATION:

That the Commission accept Waialua Sugar Company's voluntary reduction of permitted use in the Waialua Aquifer System, from 39.940 to 36.0 mgd. The 3.94 mgd reduction will be taken from sources in the Waialua Aquifer System presently being determined by Waialua Sugar Company. Staff will be working with them to determine the source-by-source reductions and will bring the results to the Commission for approval.

Respectfully submitted,  

RAE M. LOUI  
Deputy Director

Attach.

APPROVED FOR SUBMITTAL

KEITH W. AHUE, Chairperson
WAIALUA AQUIFER SYSTEM
WSCO. Use Vs. Allocation

WUP = 39.940 mgd
11.418 mgd

----- monthly use  --- 12-mon mov ave
May 12, 1993

Ms. Rae Loui
Deputy Director
State Water Commission
P. O. Box 621
Honolulu, Hawaii 96809

Dear Ms. Loui:

We have had several meetings over the past months to discuss Waialua Sugar Company's permitted water use from the Waialua aquifer. Waialua Sugar has a permitted use of 39.9 million gallons per day. When you add the permitted use of the City Water Department, you have a combined use which is higher than the sustainable yield.

<table>
<thead>
<tr>
<th>Water Source</th>
<th>Use (mgd)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waialua Sugar Company</td>
<td>39.9</td>
</tr>
<tr>
<td>Board of Water Supply</td>
<td>3.2</td>
</tr>
<tr>
<td>Total Sustainable Yield</td>
<td>40.0</td>
</tr>
<tr>
<td>Over Permitted Use</td>
<td>(3.1)</td>
</tr>
</tbody>
</table>

We have reviewed our water use over the past 20 years and while we have peaked at times over our permitted use, it appears we could reduce the permitted use given recent historical water use, conversion to drip irrigation and other factors.

Before going further, we want to be on record that sugar production is highly dependent upon water; without adequate water, yields will suffer. We cannot afford to short ourselves of water. As we understand, we can exceed the permitted use during dry periods as may be required.

Based on the above discussions and research into this matter, Waialua Sugar Company is voluntarily reducing its permitted water use in the Waialua aquifer from our current 39.9 million gallons per day to 36.0 million gallons per day effective June 1/93.

Sincerely,

Michael F. O'Brien
President
Dole Food Hawaii

cc: M. Agader
    J. A. Russell
    G. Yim
State of Hawaii
DEPARTMENT OF LAND AND NATURAL RESOURCES
Division of Water and Land Development
Honolulu, Hawaii

September 11, 1981

Chairman and Members
Board of Land and Natural Resources
State of Hawaii
Honolulu, Hawaii

Gentlemen:

Certification of Ground Water Withdrawals and Uses,
Waialua Ground Water Control Area, Oahu

The Waialua Ground Water Control Area was designated by the Board of
Land and Natural Resources on February 27, 1981 under authority of Chapter 177,
HRS, and Chapter 196 of Title 13, Administrative Rules entitled "Rules for the
Control of Ground Water Use in the State of Hawaii". The Department's regulatory
procedures provide for water users to declare their existing water uses within a
ninety-day period which ended June 4, 1981 and allows the Board 180 days to
certify the declared uses.

The recommended certification of total annual, average daily, and maximum
daily withdrawals for individual wells and/or well fields is tabulated in the
attachment, "Certification of Ground Water Withdrawals and Uses, Waialua Ground
Water Control Area", for the Waialua, Mokuleia, and Kawailoa Subareas. A com-
parison of the recommended quantity for certification and the sustainable yield
adopted by the Board on July 24, 1981 is tabulated below:

<table>
<thead>
<tr>
<th>Subarea</th>
<th>Sustainable Yield (mgd)</th>
<th>Recommended Certification (mgd)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waialua</td>
<td>68</td>
<td>51.512</td>
</tr>
<tr>
<td>Mokuleia</td>
<td>28</td>
<td>7.753</td>
</tr>
<tr>
<td>Kawailoa</td>
<td>18</td>
<td>5.380</td>
</tr>
</tbody>
</table>

The remaining ground water supplies may be withdrawn by obtaining
permits from the Board of Land and Natural Resources.

RECOMMENDATION:

That the Board certify the existing withdrawals and uses for each well
tabulated on the attached "Certification of Ground Water Withdrawals and Uses,
Waialua Ground Water Control Area" dated September 11, 1981, subject to any
special conditions and applicable laws, rules and regulations.

Respectfully submitted,

[Signature]
ROBERT T. CHEUCK
Manager-Chief Engineer

APPROVED FOR SUBMITTAL:

[Signature]
SUSUMO ONO, Chairman

Approved by the Board of Land & Natural Resources
at the meeting held on 9/11.
<table>
<thead>
<tr>
<th>User/Source</th>
<th>State Well No.</th>
<th>Total Wells</th>
<th>Use</th>
<th>Source Capacity (mgd)</th>
<th>5-yr. Ave. Withdrawal (mgd)</th>
<th>Use</th>
<th>Maximum Daily Withdrawal (mgd)</th>
<th>Total Annual Withdrawal (mgd)</th>
<th>Average Daily Withdrawal (mgd)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NATALUA Subarea</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waialua Sugar Co.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pump 1</td>
<td>3407-01, 02</td>
<td>5</td>
<td>Agr.</td>
<td>6.0</td>
<td>2.33</td>
<td>Agr.</td>
<td>6.0</td>
<td>1050.45</td>
<td>2.33</td>
</tr>
<tr>
<td>Pump 2</td>
<td>3308-07, 08</td>
<td>9</td>
<td>Agr./Dom.</td>
<td>10.0</td>
<td>4.37</td>
<td>Agr./Dom.</td>
<td>10.0</td>
<td>1595.05*</td>
<td>4.37*</td>
</tr>
<tr>
<td>Pump 2A</td>
<td>3207-07, 11 to 14</td>
<td>5</td>
<td>Agr./Dom.</td>
<td>7.0</td>
<td>4.45</td>
<td>Agr./Dom.</td>
<td>7.0</td>
<td>1308.49</td>
<td>3.586</td>
</tr>
<tr>
<td>Pump 3</td>
<td>35-8-01 to 20</td>
<td>20</td>
<td>Agr./Dom.</td>
<td>7.0</td>
<td>3.16</td>
<td>Agr./Dom.</td>
<td>7.0</td>
<td>29.42</td>
<td>0.108</td>
</tr>
<tr>
<td>Pump 7</td>
<td>3407-11, 12, 18, 19</td>
<td>4</td>
<td>Agr./Dom.</td>
<td>5.5</td>
<td>3.93</td>
<td>Agr./Dom.</td>
<td>5.5</td>
<td>1368.75</td>
<td>3.75</td>
</tr>
<tr>
<td>Pump 8</td>
<td>3506-03, 04</td>
<td>2</td>
<td>Agr./Dom.</td>
<td>3.0</td>
<td>1.66</td>
<td>Agr./Dom.</td>
<td>3.0</td>
<td>605.90*</td>
<td>1.66*</td>
</tr>
<tr>
<td>Pump 9</td>
<td>3406-02</td>
<td>1</td>
<td>Agr.</td>
<td>0.75</td>
<td>0.16</td>
<td>Agr.</td>
<td>0.75</td>
<td>58.4</td>
<td>0.16</td>
</tr>
<tr>
<td>Pump 10</td>
<td>3206-03 to 12</td>
<td>12</td>
<td>Agr.</td>
<td>12.0</td>
<td>6.62</td>
<td>Agr.</td>
<td>12.0</td>
<td>2416.30</td>
<td>6.62</td>
</tr>
<tr>
<td>Pump 17</td>
<td>3404-02</td>
<td>1</td>
<td>Agr./Dom.</td>
<td>15.0</td>
<td>8.63</td>
<td>Agr./Dom.</td>
<td>15.0</td>
<td>2992.37</td>
<td>0.190</td>
</tr>
<tr>
<td>Mill Pumps</td>
<td>3407-07 to 18, 16, 17, 19, 21</td>
<td>8</td>
<td>Agr.</td>
<td>10.0</td>
<td>4.62</td>
<td>Agr.</td>
<td>10.0</td>
<td>1549.95</td>
<td>4.63</td>
</tr>
<tr>
<td>Pump 24</td>
<td>3182-02</td>
<td>1</td>
<td>Agr.</td>
<td>4.50</td>
<td>2.50</td>
<td>Agr.</td>
<td>4.50</td>
<td>941.70</td>
<td>2.50</td>
</tr>
<tr>
<td>Pump 25</td>
<td>3203-02</td>
<td>1</td>
<td>Agr.</td>
<td>4.50</td>
<td>3.10</td>
<td>Agr.</td>
<td>4.50</td>
<td>1311.50</td>
<td>3.10</td>
</tr>
<tr>
<td>Pump 26</td>
<td>3203-02</td>
<td>1</td>
<td>Agr.</td>
<td>4.50</td>
<td>2.70</td>
<td>Agr.</td>
<td>4.50</td>
<td>1007.40</td>
<td>2.70</td>
</tr>
<tr>
<td>Subtotal (Waialua Sugar Co.)</td>
<td></td>
<td>70</td>
<td></td>
<td>89.75</td>
<td>48.38</td>
<td></td>
<td>89.75</td>
<td>17058.70</td>
<td>48.38</td>
</tr>
</tbody>
</table>

**Board of Water Supply**

<table>
<thead>
<tr>
<th>Users</th>
<th>State Well No.</th>
<th>Total Wells</th>
<th>Use</th>
<th>Source Capacity (mgd)</th>
<th>5-yr. Ave. Withdrawal (mgd)</th>
<th>Use</th>
<th>Maximum Daily Withdrawal (mgd)</th>
<th>Total Annual Withdrawal (mgd)</th>
<th>Average Daily Withdrawal (mgd)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waialua Wells</td>
<td>3405-01, 02</td>
<td>2</td>
<td>Mun.</td>
<td>4.32</td>
<td>1.72</td>
<td>Mun.</td>
<td>4.32</td>
<td>621.65</td>
<td>1.72</td>
</tr>
</tbody>
</table>

**Private Users**

<table>
<thead>
<tr>
<th>Users</th>
<th>State Well No.</th>
<th>Total Wells</th>
<th>Use</th>
<th>Source Capacity (mgd)</th>
<th>5-yr. Ave. Withdrawal (mgd)</th>
<th>Use</th>
<th>Maximum Daily Withdrawal (mgd)</th>
<th>Total Annual Withdrawal (mgd)</th>
<th>Average Daily Withdrawal (mgd)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kawaguchi, Howard</td>
<td>3506-07</td>
<td>1</td>
<td>Agr.</td>
<td>0.180</td>
<td>0.058</td>
<td>Agr.</td>
<td>0.180</td>
<td>21.17</td>
<td>0.058</td>
</tr>
<tr>
<td>Kawamata, Kongo</td>
<td>3406-03</td>
<td>1</td>
<td>Agr.</td>
<td>0.180</td>
<td>0.144</td>
<td>Agr.</td>
<td>0.180</td>
<td>36.5</td>
<td>0.1</td>
</tr>
<tr>
<td>Kunihiro, Shizue</td>
<td>3406-06, 3407-02</td>
<td>2</td>
<td>Agr.</td>
<td>0.180</td>
<td>0.144</td>
<td>Agr.</td>
<td>0.180</td>
<td>73.0</td>
<td>0.2</td>
</tr>
<tr>
<td>Oceanic Properties</td>
<td>3405-03, 04</td>
<td>2</td>
<td>Mun.</td>
<td>2.016</td>
<td>0.144</td>
<td>Mun.</td>
<td>2.016</td>
<td>365.0</td>
<td>1.0</td>
</tr>
<tr>
<td>Polynesian Shares</td>
<td>3406-08</td>
<td>1</td>
<td>Oth.</td>
<td>0.144</td>
<td>0.144</td>
<td>Oth.</td>
<td>0.144</td>
<td>52.56</td>
<td>0.144</td>
</tr>
<tr>
<td>Subtotal (Private Users)</td>
<td></td>
<td>7</td>
<td></td>
<td>2.36</td>
<td>0.202</td>
<td></td>
<td>2.36</td>
<td>548.23</td>
<td>1.502</td>
</tr>
</tbody>
</table>

**Total - Waialua Subarea**

<table>
<thead>
<tr>
<th>Users</th>
<th>State Well No.</th>
<th>Total Wells</th>
<th>Use</th>
<th>Source Capacity (mgd)</th>
<th>5-yr. Ave. Withdrawal (mgd)</th>
<th>Use</th>
<th>Maximum Daily Withdrawal (mgd)</th>
<th>Total Annual Withdrawal (mgd)</th>
<th>Average Daily Withdrawal (mgd)</th>
</tr>
</thead>
</table>

*For Agr./Dom. uses, specific quantities for each use are to be prorated when additional information becomes available.*

C9
<table>
<thead>
<tr>
<th>User/Source</th>
<th>State Well No.</th>
<th>Total Wells</th>
<th>Source Capacity (mgd)</th>
<th>5-yr. Ave. Withdrawal (mgd)</th>
<th>Use</th>
<th>Maximum Daily (mgd)</th>
<th>Total Annual (mgd)</th>
<th>Average Daily (mgd)</th>
<th>Withdrawal</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MOKULEIA Subarea</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waialua Sugar Co.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pump 5</td>
<td>3411-06, 06 to 17, 18</td>
<td>8</td>
<td>Agr. 8.5</td>
<td>2.55</td>
<td>Agr. 7.0</td>
<td>930.75</td>
<td>2.55</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pump 11</td>
<td>3409-13</td>
<td>1</td>
<td>Agr./Dom. 1.5</td>
<td>0.33</td>
<td>Agr./Dom. 1.5</td>
<td>153.30</td>
<td>0.42</td>
<td>40.15</td>
<td>0.11</td>
</tr>
<tr>
<td><strong>Subtotal (Waialua Sugar Co.)</strong></td>
<td></td>
<td>9</td>
<td>10.0</td>
<td>3.08</td>
<td>8.5</td>
<td>1,124.20</td>
<td>3.08</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Private Users</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Army - Billingham</td>
<td>3412-02</td>
<td>1</td>
<td>Dom. 0.720</td>
<td></td>
<td>Dom. 0.720</td>
<td>20.00</td>
<td>0.055</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Air Force - Keame Pt.</td>
<td>3314-03</td>
<td>1</td>
<td>Oth. 0.086</td>
<td>0.018</td>
<td>Oth. 0.086</td>
<td>6.47</td>
<td>0.011</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mokuleia Assoc.</td>
<td>2409-06</td>
<td>1</td>
<td>Dom. No data</td>
<td></td>
<td>Dom. No data</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Mokuleia Homesteads</td>
<td>3410-01</td>
<td>1</td>
<td>Agr./Dom. 1.512</td>
<td>1.5</td>
<td>Agr./Dom. 1.5</td>
<td>547.50*</td>
<td>1.5*</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3410-03</td>
<td>1</td>
<td>Agr./Dom. 1.5</td>
<td></td>
<td>Agr./Dom. 1.5</td>
<td>382.25</td>
<td>1.05</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3410-05</td>
<td>1</td>
<td>Agr. No. flow</td>
<td>0.1</td>
<td>To be sealed</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3310-01</td>
<td>1</td>
<td>Agr./Dom. 1.5</td>
<td></td>
<td>Agr./Dom. 1.5</td>
<td>73.00</td>
<td>0.20</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3310-02</td>
<td>1</td>
<td>Agr./Dom. 1.5</td>
<td></td>
<td>Agr./Dom. 1.5</td>
<td>73.00</td>
<td>0.20</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Subtotal (Private Users)</strong></td>
<td></td>
<td>8</td>
<td>5.318</td>
<td>2.118</td>
<td>5.306</td>
<td>1,628.45</td>
<td>4.273</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL - Mokuleia Subarea</strong></td>
<td></td>
<td>17</td>
<td>15.318</td>
<td>5.198</td>
<td>13.806</td>
<td>2,793.25</td>
<td>7.553</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>KAWAILOA Subarea</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waialua Sugar Co.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pump 4</td>
<td>3425-03 to 04, 05 to 06, 11 to 13</td>
<td>9</td>
<td>Agr. 14.8</td>
<td>5.53</td>
<td>Agr. 14.8</td>
<td>2,018.45</td>
<td>5.53</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Private Users</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meadow Gold Farm</td>
<td>3704-01</td>
<td>1</td>
<td>Ind. 0.648</td>
<td>0.430</td>
<td>Ind. 0.648</td>
<td>156.95</td>
<td>0.430</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL - Kawailoa Subarea</strong></td>
<td></td>
<td>10</td>
<td>16.448</td>
<td>5.96</td>
<td>16.448</td>
<td>2,175.40</td>
<td>5.960</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*For Agr./Dom. uses, specific quantities for each use are to be prorated when additional information becomes available.
Mr. Bill Moore  
Beylik Drilling, Inc.  
91-259-A Olai Street  
Kapolei, HI 96707

Dear Mr. Moore:

Well Abandonment Reports for Well Nos. 3306-01 to 12

We received your Well Abandonment Reports for the sealing of the Waialua Sugar Pump 10 Battery (Well Nos. 3306-01 to 12) on August 5, 2002 and acknowledge that it is complete. Thank you for your attention to this matter.

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

Sincerely,

LINNEL T. NISHIOKA  
Deputy Director

LN:ss

c: Yoshi Tanabe, Waialua Sugar Co.
TO 
COMMISSION ON WATER RESOURCE MANAGEMENT

P.O. BOX 621

HONOLULU, HI. 96809

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

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

COPIES DATE NO. DESCRIPTION
12 8/2/02 ABANDONMENT REPORTS

1 8/2/02 PERMIT

THESE ARE TRANSMITTED as checked below:

□ For approval  □ Approved as submitted  □ Resubmit ______ copies for approval
□ For your use  □ Approved as noted  □ Submit ______ copies for distribution
□ As requested  □ Returned for corrections  □ Return ______ corrected prints
□ For review and comment  □ __________________________

□ FOR BIDS DUE __________________________  □ PRINTS RETURNED AFTER LOAN TO US

REMARKS

ALL WELLS WERE SUCCESSFULLY SEALED. WE WERE SURPRISED BY THE QUANTITIES.

THE LOWER FORMATIONS WERE CAVERNOUS AND REQUIRED REPEATED TOPPING OFF.

GOOD THING WE QUOTED TIME AND MATERIAL.

COPY TO 1247M/ C FILE

SIGNED: Michelle Stant

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

WILLIAM C. MOORE
WELL CONSTRUCTION PERMIT TO ABANDON/SEAL

Waialua Sugar Pump 10 Battery, Well No. 3306-01 to 12

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 abandonment/sealing of Waialua Sugar Pump 10 Battery (Well Nos. 3306-01 to 12) along Poamoho Stream, Oahu, TMK 6-5-1:002, subject to the Hawaii Well Construction & Pump Installation Standards (1/23/97) which include but are not limited to the following conditions:

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

2. The owner or operator of any well which has been determined by the department or voluntarily declared by the owner or operator to be abandoned as defined in §13-168-2, after written notification, shall be required, at owner's or operator's expense, to re-case, cement, plug back, cap, or otherwise repair the well or fill and seal the well with cement in a manner approved by the commission.

3. The well construction permit application is incorporated into this permit by reference and is subject to the Hawaii Well Construction & Pump Installation Standards (January 23, 1997; HWCPIS). If the HWCPIS are not followed and as a consequence water is wasted or contaminated, a lien on the property may result.

4. The Well Abandonment Report form (attached) shall be submitted to the Commission on Water Resource Management within sixty (60) days after completion of the work.

5. The permittee shall comply with all applicable laws, rules, and ordinances.

6. The sealing shall be completed within two (2) years

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

Date of Approval: April 25, 2002
Expiration Date: None

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

Permittee's Signature: ___________________________ Date: 05/22/02
Printed Name: Yoshiaki Tanabe
Firm or Title: Waialua Sugar Company - VP

Contractor's Signature: ___________________________ License #: AC-21896 Date: 5-23-02
Printed Name: WILLIAM C. MOORE
Firm or Title: BEYLIK DRILLING, INC. - RME

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

Attachment

USGS
Department of Health/ Safe Drinking Water, Wastewater, and Clean Water Branches
Honolulu Board of Water Supply
Yoshi Tanabe, Waialua Sugar Co.
State of Hawaii
COMMISSION ON WATER RESOURCE MANAGEMENT
Department of Land and Natural Resources
WELL ABANDONMENT REPORT

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

1. State Well No. 33006-01 / Well Name WAIALUA SUGAR PUMP 10 BATTERY
2. Location / Address ALONG POAMOHO STREAM Island OAHU TMK 6-5-1:002
3. Contractor BEYLIK DRILLING INC Name of driller who performed work JOHN MOLE
4. Type of Rig / Construction 15 TON BOOM TRUCK Date of well sealing completion 5/22/02

Finished Grade Elevation 1.5 ft.

Check Material Used
Grout Seal: ☐ Cement ☒ Sand/Cement Ratio 1/1

Measured Depth of Blank Casing 112.67 ft.
Total Measured Depth 312.7 ft.

Remarks:
GRAVEL FILL 312.7 TO 252.7 60'
SAND FILL 252.7 TO 247.7 5'
1:1 GROUT 247.7 TO TOP OF TEE 247.7'

GRAVEL 13 TONS
1:1 GROUT 21 CU. YARDS

Well Abandonment
Contractor (print) BEYLIK DRILLING INC. C-57 Lic. No. AC-21896
Signature
Date 7/31/02

Applicant (print) WAIALUA SUGAR CO. YOSHI HIRANO
Signature
Date 7/31/02
State of Hawaii
COMMISSION ON WATER RESOURCE MANAGEMENT
Department of Land and Natural Resources

WELL ABANDONMENT REPORT

Instructions: Please print in ink or type and send completed report (with attachments, if applicable) to the Commission on Water Resource Management, P.O. Box 621, Honolulu, Hawaii 96809. The Commission may not accept incomplete reports. This form shall be submitted within 60 days of the completion of work. For assistance, please consult the Hawaii Well Construction and Pump Installation Standards or call the Regulation Branch at 587-0226. For further information and updates to this application form, visit http://www.state.hi.us/dlnr/cwrm.

1. State Well No. 3306-02
   Well Name WAIALUA SUGAR PUMP 10
2. Location / Address ALONG POAMOHO STREAM Island OAHU TMK 6-5-1:002
3. Contractor BEYLIK DRILLING, INC.
   Name of driller who performed work JOHN MOLE
4. Type of Rig / Construction 15 TON BOOM TRUCK
   Date of well sealing completion 5/23/02

Finished Grade Elevation 1.5 ft. Casing Diameter 12 in.

Check Material Used

- Grout:  
  - Cement
  - Sand/Cement Ratio 1/1
  - GRAVEL
  - FILL
  - SAND PLUG

Total Measured Depth 320.6 ft.

Measured Depth of Blank Casing 114 ft.

Remarks:

- GRAVEL FILL 320.6 TO 278.6 42'
- SAND PLUG 278.6 TO 273.6 5'
- 1:1 GROUT 273 TO TOP OF TEE 273.6'
- GRAVEL 11 TONS
- 1:1 GROUT 21 CU. YARDS

Well Abandonment Contractor (print) BEYLIK DRILLING, INC. C-57 Lic. No. AC-21896
Signature [Signature]
Date 7/26/02

Applicant (print) WAIALUA SUGAR CO., YOSHI TANABE
Signature
Date 07/31/02

WAR Form (2-900)
WELL ABANDONMENT REPORT

1. State Well No. 3306-03 / Well Name WAIALUA SUGAR PUMP 10
2. Location / Address ALONG POAMOHO STREAM Island OAHU T MK 6-5-1:002
3. Contractor BEYLIK DRILLING INC. Name of driller who performed work JOHN MOLE
4. Type of Rig / Construction 15 TON BOOM TRUCK Date of well sealing completion 5/28/02

Finished Grade Elevation 1.5 ft.

Casing Diameter 12 in.

Measured Depth of Blank Casing 110.8 ft.

Measured Depth of Perforated Casing N/A ft.

Measured Depth of Open Hole 210.6 ft.

Total Measured Depth 318.9 ft.

Check Material Used

Grout Seal: □ Cement □ Sand/Cement Ratio 1/1

Remarks:

GRAVEL FILL 318.9 TO 265.9 53'
SAND PLUG 265.9 TO 260.9 5'
1:1 GROUT 260.9 TO TOP OF TEE 260.9'

GRAVEL FILL 18 TONS
1:1 GROUT 56 CU. YARDS

Well Abandonment Contractor (print) BEYLIK DRILLING INC C-57 Lic. No. AC-21896
Signature

Date 7/26/02

Applicant (print) WAIALUA SUGAR CO. YOSHI TANABE
Signature

Date 7/31/02

WAR Form (2/00)
WELL ABANDONMENT REPORT

1. State Well No. 3306-04 / Well Name WAIALUA SUGAR PUMP 10
2. Location / Address ALONG POAMOHO STREAM Island OAHU TMK 6-5-1:002
3. Contractor BEYLIK DRILLING INC. Name of driller who performed work JOHN MOLE
4. Type of Rig / Construction 15 TON BOOM TRUCK Date of well sealing completion 5/29/02/

Finished Grade Elevation 1.5 ft.

Casing Diameter 12 in.

Check Material Used
Grout Seal: □ Cement ○ Sand/Cement Ratio 1 / 1

Total Measured Depth 342.2 ft.

Measured Depth of Blank Casing 110.29 ft.

342.2 TO
-340.7 MSL

Measured Depth of Perforated Casing N/A ft.

Measured Depth of Open Hole 231.9 ft.

Remarks:
GRAVEL FILL 342 TO 280.2 62'
SAND PLUG 280.2 TO 275.2 5'
1:1 GROUT 275 TO TOP OF TEE 275'

GRAVEL FILL 11 TONS
1:1 GROUT 24 CU. YARDS

Well Abandonment
Contractor (print) BEYLIK DRILLING INC.
Signature
Applicant (print) WAIALUA SUGAR CO YOSH TANAKA
Signature

C-57 Lic. No. AC-21896
Signature Date 7/26/02
Signature Date 07/31/02

WAR Form (2/00)
1. State Well No. 3306-05 / Well Name WAIALUA SUGAR PUMP 10
2. Location / Address ALONG FOAMOHO STREAM Island OAHU TMK 6-5-1:002
3. Contractor BEYLIK DRILLING INC. Name of driller who performed work JOHN MOLE
4. Type of Rig / Construction 15 TON BOOM TRUCK Date of well sealing completion 5/29/02

Finished Grade Elevation 1.5 ft. Casing Diameter 12 in.

Check Material Used
Grout Seal: ☐ Cement ☒ Sand/Cement Ratio 1 / 1

Measured Depth of Blank Casing 110.29 ft.
Measured Depth of Perforated Casing NA ft.
Measured Depth of Open Hole 204.9 ft.

Remarks:

- GRAVEL FILL 315.2 TO 253.2 62'
- SAND PLUG 253.2 TO 248.2 5'
  1:1 GROUT 248.2 TO TOP OF TEE 248.2'
- GRAVEL FILL 10 TONS
- 1:1 GROUT 21 CU. YARDS

Well Abandonment
Contractor (print) BEYLIK DRILLING INC. C-57 Lic. No. AC-21896
Signature William C. Wiesner Date 7/26/02
Applicant (print) WAIKIKI SUGAR CO. YOSHI TAKAMA
Signature Date 6/21/02
1. State Well No. 3306-06  
2. Location / Address ALONG POAMOHO STREAM  
3. Contractor BEYLK DRILLING INC.  
4. Type of Rig / Construction 15 TON BOOM TRUCK  

<table>
<thead>
<tr>
<th>Remarks:</th>
<th>Depth (ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRAVEL FILL</td>
<td>320.5 TO 256.5</td>
</tr>
<tr>
<td>SAND PLUG</td>
<td>256.5 TO 251.5</td>
</tr>
<tr>
<td>1:1 GROUT</td>
<td>251.5 TO TOP OF TEE</td>
</tr>
<tr>
<td>GRAVEL FILL</td>
<td>21 TONS</td>
</tr>
<tr>
<td>1:1 GROUT</td>
<td>21 CU. YARDS</td>
</tr>
</tbody>
</table>

Well Abandonment
Contractor (print) BEYLK DRILLING INC.  
Applicant (print) WAIALUA SUGAR CO. YOSHITAKA

Signature [Signature]
Date 7/26/02

C-57 Lic. No. AC-21896

Applicant (print) WAIALUA SUGAR CO. YOSHITAKA
Signature [Signature]
Date 07/1/02

WAR Form (2/00)
**State of Hawai‘i**
**COMMISSION ON WATER RESOURCE MANAGEMENT**
**Department of Land and Natural Resources**

**WELL ABANDONMENT REPORT**

Instructions: Please print in ink or type and send completed report (with attachments, if applicable) to the Commission on Water Resource Management, P.O. Box 821, Honolulu, Hawaii 96809. The Commission may not accept incomplete reports. This form shall be submitted within 60 days of the completion of work. For assistance, please consult the Hawaii Well Construction and Pump Installation Standards or call the Regulation Branch at 808-225-2225. For further information and updates to this application form, visit [http://www.state.hi.us/dlnr/cwrm](http://www.state.hi.us/dlnr/cwrm).

---

1. **State Well No.** 3306-07  
2. **Well Name** WAIALUA SUGAR PUMP 10  
3. **Location / Address** ALONG POAMOHO STREAM Island OAHU TMK 6-5-1:002  
4. **Contractor** BEYLIK DRILLING INC.  
5. **Name of driller who performed work** JOHN MOLE

---

<table>
<thead>
<tr>
<th>Remarks</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>GRAVEL FILL</td>
<td>306.1 TO 256.1</td>
</tr>
<tr>
<td>SAND PLUG</td>
<td>256.1</td>
</tr>
<tr>
<td>1:1 GROUT</td>
<td>256.1 TO TOP OF TEE</td>
</tr>
<tr>
<td>GRAVEL FILL</td>
<td>12 TONS</td>
</tr>
<tr>
<td>1:1 GROUT</td>
<td>21 CU. YARDS</td>
</tr>
</tbody>
</table>

---

**Well Abandonment**
**Contractor (print)** BEYLIK DRILLING INC.
**C-57 Lic. No.** AC-21896
**Signature**  
**Date** 7/26/02
**Applicant (print)** WAIALUA SUGAR CO YOSHI TANABE
**Signature**  
**Date** 07/23/02

---

WAR Form (2/00)
State of Hawaiʻi
COMMISSION ON WATER RESOURCE MANAGEMENT
Department of Land and Natural Resources

WELL ABANDONMENT REPORT

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

1. State Well No. 3306-08  
   Well Name WAI ALUA SUGAR PUMP 10  

2. Location / Address ALONG POAMHO STREAM  
   Island OAHU  
   TMK 6-5-1: 002  

3. Contractor BEYLIK DRILLING INC.  
   Name of driller who performed work JOHN MOLE  

4. Type of Rig / Construction 15 TON BOOM TRUCK  
   Date of well sealing completion 6/10/02  

Finished Grade Elevation 1.5 ft.  
Casing Diameter 12 in.  

Check Material Used  
Grout Seal: ☐ Cement  
☐ Sand/Cement Ratio 1/1  

Total Measured Depth 315.8 ft.  

Measured Depth of Blank Casing 109.25 ft.  
Measured Depth of Perforated Casing N/A ft.  
Measured Depth of Open Hole 206.5 ft.  

Remarks:

<table>
<thead>
<tr>
<th>Remarks</th>
<th>Depth (ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRAVEL FILL</td>
<td>315.8 TO 271.8</td>
</tr>
<tr>
<td>SAND PLUG</td>
<td>271.8 TO 269.8</td>
</tr>
<tr>
<td>1:1 GROUT</td>
<td>269.8 TO TOP OF TEE</td>
</tr>
<tr>
<td>GRAVEL FILL</td>
<td>10 TONS</td>
</tr>
<tr>
<td>1:1 GROUT</td>
<td>22 CU. YARDS</td>
</tr>
</tbody>
</table>

Well Abandonment
Contractor (print) BEYLIK DRILLING INC.  
C-57 Lic. No. AC-21896  

Signature  
Date 7/26/02  

Applicant (print) WAI ALUA SUGAR CO. YOSHIFUJIO  

Signature  
Date 07/28/01  

WAR Form (2/800)
1. State Well No. 3306-09  
Well Name WAIALUA SUGAR PUMP 10
2. Location / Address ALONG POAMHIO STREAM  
Island OAHU  
TMK 6-5-1:002
3. Contractor BEYLK DRILLING INC.  
Name of driller who performed work JOHN NOLE
4. Type of Rig / Construction 15 TON BOOM TRUCK  
Date of well sealing completion 6/10/02

Finished Grade Elevation 1.5 ft.
Casing Diameter 12 in.

Check Material Used
Grout Seal: ☐ Cement  
☐ Sand/Cement Ratio 1/1

Total Measured Depth 316.6 ft.

Measured Depth of Blank Casing 107.6 ft.
Measured Depth of Perforated Casing N/A ft.
Measured Depth of Open Hole 209 ft.

Remarks:
GRAVEL FILL 316.9 TO 246 70'
SAND PLUG 246 TO 243 3'
243 TO TOP OF TEE 243.6'
GRAVEL FILL 9 TONS
1:1 GROUT 22 CU. YARDS

Well Abandonment
Contractor (print) BEYLK DRILLING INC.  
C-57 Lic. No. AC-21896
Signature [Signature]
Date 7/26/02

Applicant (print) WAIALUA SUGAR CO. YOSHITAKE
Signature [Signature]
Date 07/21/02
1. State Well No. 3306-10
2. Location / Address ALONG POAMOHO STREAM Island OAHU TMK 6-5-1:002
3. Contractor BEYLIK DRILLING INC. Name of driller who performed work JOHN MOLE
4. Type of Rig / Construction 15 TON BOOM TRUCK Date of well sealing completion 6/12/02

Finished Grade Elevation 1.5 ft.
Casing Diameter 12 in.

Check Material Used
Grout Seal: □ Cement □ Sand/Cement Ratio 1/1

Total Measured Depth 309.2 ft.

Measured Depth of Blank Casing 116.8 ft.
Measured Depth of Perforated Casing N/A ft.
Measured Depth of Open Hole 192.4 ft.

Remarks:
GRAVEL FILL 309.2 TO 261.2 48'
SAND PLUG 261.2 TO 258.2 3'
1:1 GROUT 258 TO TOP OF TEE 238'
GRAVEL FILL 11 TONS
1:1 GROUT 22 CU. YARDS

Well Abandonment
Contractor (print) BEYLIK DRILLING INC.
Signature
Applicant (print) WAIALUA SUGAR CO.
Signature

WAR Form (2/00)
1. State Well No. 3306-11  
2. Location / Address ALONG POAMOHO STREAM  
3. Contractor BEYLICK DRILLING INC.  
4. Type of Rig / Construction 15 TON BOOM TRUCK  

Well Name WAIALUA SUGAR PUMP 10  
Island OAHU  
TMK 6-5-1:002  
Date of well sealing completion 6/14/02  

Finished Grade Elevation 1.5 ft.  
Casing Diameter 12 in.  

Check Material Used  
Grout Seal:  
☐ Cement  
☒ Sand/Cement Ratio 1/1  
Measured Depth of Blank Casing 20.65 ft.  
Total Measured Depth 305.7 ft.  

Remarks:  
GRAVEL FILL 305.7 TO 255.7 50'  
SAND PLUG 255.7 TO 252.7 3'  
1:1 GROUT 252.7 TO TOP OF TEE 252'  
GRAVEL FILL 12 TONS  
1:1 GROUT 22 CU. YARDS  

Well Abandonment Contractor (print) BEYLICK DRILLING INC.  
C-57 Lic. No. AC-21896  
Signature W. C. Moore Date 7/26/02  
Applicant (print) WAIALUA SUGAR CO. WUSHI TANAK  
Signature  Date 07/31/02  

WAR Form (2.900)
1. State Well No. 3306-12  
2. Well Name WAIALUA SUGAR PUMP 10
3. Location / Address ALONG POAMOHO STEAM Island OAHU TMK 6-5-1:002
4. Contractor BEYLK DRILLING INC. Name of driller who performed work JOHN MOLE
5. Type of Rig / Construction 15 TON BOOM TRUCK Date of well sealing completion 6/14/02

6. Finish Grade Elevation 1.5 ft
7. Casing Diameter 12 in.
8. Check Material Used
   - Grout Seal: ☐ Cement  ☑ Sand/Cement Ratio 1 / 1
9. Total Measured Depth 315.8 ft
10. Measured Depth of Blank Casing 112.9 ft
11. Measured Depth of Perforated Casing N/A ft
12. Measured Depth of Open Hole 202.9 ft
13. Remarks:
    - GRAVEL FILL 315 TO 251.8 64'
    - SAND PLUG 251.8 TO 248.8 3'
    - 1:1 GROUT 248.8 TO TOP OF TEE 248'
    - GRAVEL FILL 15 TON
    - 1:1 GROUT 28 CU. YARDS

Well Abandonment
Contractor (print) BEYLK DRILLING INC. C-57 Lic. No. AC-21896
Signature Date 7/26/02
Applicant (print) WAIALUA SUGAR  CO. YOSHI TANADE
Signature Date 7/31/02

WAR Form (2/06)
WELL CONSTRUCTION PERMIT TO ABANDON/SEAL

Waialua Sugar Pump 10 Battery, Well No. 3306-01 to 12

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 abandonment/sealing of Waialua Sugar Pump 10 Battery (Well Nos. 3306-01 to 12) Along Poamoho Stream, Oahu, TMK 6-5-1:002, subject to the Hawaii Well Construction & Pump Installation Standards (1/23/97) which include but are not limited to the following conditions:

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

2. The owner or operator of any well which has been determined by the department or voluntarily declared by the owner or operator to be abandoned as defined in §13-168-2, after written notification, shall be required, at owner's or operator's expense, to re-case, cement, plug back, cap, or otherwise repair the well or fill and seal the well with cement in a manner approved by the commission.

3. The well construction permit application is incorporated into this permit by reference and is subject to the Hawaii Well Construction & Pump Installation Standards (January 23, 1997; HWCPIS). If the HWCPIS are not followed and as a consequence water is wasted or contaminated, a lien on the property may result.

4. The Well Abandonment Report form (attached) shall be submitted to the Commission on Water Resource Management within sixty (60) days after completion of the work.

5. The permittee shall comply with all applicable laws, rules, and ordinances.

6. The sealing shall be completed within two (2) years.

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

Date of Approval: April 25, 2002
Expiration Date: None

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

Permittee's Signature: ___________________________ Date: 05/22/02
Printed Name: Yoshiaki Tanabe Firm or Title: Waialua Sugar Company - VP
Contractor's Signature: ___________________________ License #: AC-21896 Date: 5-23-02
Printed Name: WILLIAM C. MOORE Firm or Title: BEYLIK DRILLING, INC. - RME

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

Attachment

USGS
Department of Health/ Safe Drinking Water, Wastewater, and Clean Water Branches
Honolulu Board of Water Supply
Yoshi Tanabe, Waialua Sugar Co.
TO
STATE OF HAWAII - DLNR
COMMISSION ON WATER RESOURCE MGMT.
P.O. BOX 621
HONOLULU, HI 96809

WE ARE SENDING YOU ☒ Attached  ☐ Under separate cover via __________ the following items:
☐ Shop drawings  ☐ Prints  ☐ Plans  ☐ Samples  ☐ Specifications
☐ Copy of letter  ☐ Change order  ☐ ____

<table>
<thead>
<tr>
<th>COPIES</th>
<th>DATE</th>
<th>NO.</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td>WELL CONSTRUCTION PERMIT</td>
</tr>
</tbody>
</table>

THESE ARE TRANSMITTED as checked below:
☒ For approval  ☐ Approved as submitted  ☐ Resubmit ______ copies for approval
☐ For your use  ☐ Approved as noted  ☐ Submit ______ copies for distribution
☒ As requested  ☐ Returned for corrections  ☐ Return ______ corrected prints
☐ For review and comment  ☐ ________________________________

☐ FOR BIDS DUE ________________________________  ☐ PRINTS RETURNED AFTER LOAN TO US

REMARKS

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

COPY TO YOSHI TANABE WAIALUA SUGAR CO

SIGNED: ________________________

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

WILLIAM C. MOORE
FACSIMILE TRANSMISSION

DATE: MAY 17 2002
TO: EWRM - OILC
ATTN: LENORE NAKAMA
FROM: BILL MORE
FAX NO.: 567-0719 - 0293
REF: WELL AB ENVELOPMENT PERMIT WELL 3306-017D 12

LENORE:
This letter is to notify
the Commission of our intent to
begin drilling the referenced "wells"
commencing May 20 2002.

Schedule of Events:

1. Gravel fill (PERMIT APPLICATION)

2. 1:1 Grout filling to surface

Note: Gravel 3/4 - 1" Basaltic gravel
Grout 1:1 - 6 Ameron mix 55/1X RCG

We intend to begin grouting of
one well Wednesday May 22nd. There
after, grouting and filling is done
concurrently. (i.e. grouting and grouting)
Work is completed.
To: George Ushimura

From: Hiram Young

Pls review and comment on Hawaiian Dredging and Construction comments. If appropriate, I'll include in an addendum.

Hiram
May 9, 2002

Mr. Bill Moore
Beylick Drilling, Inc.
91-259-A Ola Street
Kapolei, HI 96707

Dear Mr. Moore:

Well Abandonment Permit
Waialua Sugar Pump 10 Battery (Well Nos. 3306-01 to 12)

Enclosed are two (2) copies of your approved Well Construction Permit for the captioned well(s) which authorizes well abandonment/sealing activities. As part of the Chairperson's approval, the following special conditions were added and are part of your permit under Permit Condition 7:

Special Conditions

1. The sealing of the wells may be done on the basis of the salinity profiles, as shown in Table 2 of the application.

2. A separate Well Abandonment Report shall be filed for each well in the battery.

To validate your permit, please sign and have the landowner sign both permit originals and return one for our files.

IMPORTANT - The well owner is responsible for all conditions of the permit. This includes ensuring that the licensed contractor, submits a completed Well Abandonment Report form (enclosed) within sixty (60) days after the well construction work is completed. Be advised that you may be subject to fines of up to $1000 per day for any violations of your permit conditions.

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

Aloha,

GILBERT S. COLOMA-AGARAN
Chairperson

Enclosures

c: Yoshi Tanabe, Wailua Sugar Co.
WELL CONSTRUCTION PERMIT TO ABANDON/SEAL

Waialua Sugar Pump 10 Battery, Well No. 3306-01 to 12

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 abandonment/sealing of Waialua Sugar Pump 10 Battery (Well Nos. 3306-01 to 12) Along Poamoho Stream, Oahu, TMK 6-5-1:002, subject to the Hawaii Well Construction & Pump Installation Standards (1/23/97) which include but are not limited to the following conditions:

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

2. The owner or operator of any well which has been determined by the department or voluntarily declared by the owner or operator to be abandoned as defined in §13-168-2, after written notification, shall be required, at owner's or operator's expense, to re-case, cement, plug back, cap, or otherwise repair the well or fill and seal the well with cement in a manner approved by the commission.

3. The well construction permit application is incorporated into this permit by reference and is subject to the Hawaii Well Construction & Pump Installation Standards (January 23, 1997; HWCPIS). If the HWCPIS are not followed and as a consequence water is wasted or contaminated, a lien on the property may result.

4. The Well Abandonment Report form (attached) shall be submitted to the Commission on Water Resource Management within sixty (60) days after completion of the work.

5. The permittee shall comply with all applicable laws, rules, and ordinances.

6. The sealing shall be completed within two (2) years.

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

Date of Approval: April 25, 2002
Expiration Date: None

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

Permittee's Signature: ___________________________ Date:________________________

Printed Name: ___________________________ Firm or Title: ___________________________

Contractor's Signature: ___________________________ License #: ___________________________ Date:________________________

Printed Name: ___________________________ Firm or Title: ___________________________

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

Attachment c: USGS
Department of Health/ Safe Drinking Water, Wastewater, and Clean Water Branches
Honolulu Board of Water Supply
Yoshi Tanabe, Waialua Sugar Co.
<table>
<thead>
<tr>
<th>F</th>
<th>YR</th>
<th>APP</th>
<th>D</th>
<th>SRC/CTR</th>
<th>COST</th>
<th>PROJECT</th>
<th>PH</th>
<th>ACT</th>
<th>AMOUNT</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td>02</td>
<td>326</td>
<td>C</td>
<td>1026</td>
<td>0752</td>
<td>--------</td>
<td>6</td>
<td>1</td>
<td>$(1) $25.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(3)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(4)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>TOTAL</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$25.00</td>
</tr>
</tbody>
</table>

Remarks:
- Line (1): Well No. 3306-01 to 12 (WCPA)
- Line (2)
- Line (3)
- Line (4)

PAY TO THE ORDER OF DEPT. OF LAND & NATURAL RESOURCES

TWENTY-FIVE AND 00/100 DOLLARS

BEYLIK DRILLING INC.
DBA ROSCOE MOSS HAWAII
91-259 A OLAI STREET
KAPOLEI, HI 96707

DATE APRIL 23, 2002

59-102/1213 94

$25.00

APPLICATION FOR PERMIT (ABANDONMENT & SEALING OF WAIALUA SUGAR PUMP 10 BATTERY)

1247M

$25.00
<table>
<thead>
<tr>
<th>Approved Well No.</th>
<th>Well Name</th>
<th>Applicant</th>
<th>Driller</th>
<th>Type</th>
<th>Well Construction</th>
<th>Pump Installation</th>
</tr>
</thead>
<tbody>
<tr>
<td>12/12/2001</td>
<td>Hawi 1</td>
<td>Hawaii DWS</td>
<td>AC-21896</td>
<td>PUMP</td>
<td>1/31/2002 2/18/2002</td>
<td></td>
</tr>
</tbody>
</table>

Wednesday, May 01, 2002
Ms. Linne L. Nishioka - Deputy Director  
Commission on Water Resource Management  
Department of Land and Natural Resources  
State of Hawaii  
P. O. Box 621  
Honolulu, Hawaii 96809

Dear Ms. Nishioka:

Application to Seal the Waialua Sugar Company Pump 10 Well Battery,  
State Nos. 3306-01 to 12 - Waialua, Oahu, Hawaii

Attached are an application to seal Wells 3306-01 to 12 in Waialua, Oahu and $25 filing fee. The proposed sealing of the wells would utilize a combination of gravel, sand seal, and cement similar to the recently completed sealing of the WP-4 wells in Waikele Gulch. Although Bulletin 4, Records of the Drilled Wells on the Island of Oahu, Hawaii indicates the "depth to top of aquifer" varies from 147 to 169 feet, CTD profiles show that the producing zones in the unweathered volcanics are about 100 feet deeper (these profiles are appended to the application). The proposed gravel fill is based on the CTD profiles.

Sincerely,

[Signature]
Tom Nance

Attachments

cc: Yoshi Tanabe - Waialua Sugar Co.  [Fax only: 1 page]  
     Bill Moore - Beylik Drilling, Inc.  [Fax only: 1 page]
State of Hawaii
COMMISSION ON WATER RESOURCE MANAGEMENT
Department of Land and Natural Resources
APPLICATION FOR PERMIT

4-12-02

For Official Use Only:

Instructions: Please fill in all forms completely and attach the following supporting documentation:
- A copy of your state well permit number and expiration date;
- A topographic map showing the location of your property and any well sites on your property;
- A description of the equipment you plan to use for your proposed work;
- A statement that you understand the terms and conditions of the permit.

For further information and updates to this application form, visit http://www.state.hi.us/dlnr/cwrm.

APPLICANT INFORMATION:

1. (a) □ WELL OWNER:

Waiʻalua Sugar Co.
Mailing Address: 1116 Whittmore Avenue
Wahiawa, Hawaii 96786
Phone: 621-3220

Fax: 621-7410
E-mail: ________________________________

(b) □ LAND OWNER:

Waiʻalua Sugar Co.
Mailing Address: 1116 Whittmore Avenue
Wahiawa, Hawaii 96786
Phone: 621-3220

Fax: 621-7410
E-mail: ________________________________

(c) □ CONTRACTOR:

Beylik Drilling, Inc.
Mailing Address: 91-259-A Olai Street
Kapolei, Hawaii 96707
Phone: 682-5554

Fax: 882-5866
E-mail: ________________________________

2. WELL NAME:

Waiʻalua Sugar Pump 10 Battery
Island: Oahu

Address: Along Poamoho Stream

Tax Map Key: 6 5 1 002

3. PROPOSED WORK: (check all that apply)

(a) □ Construct New Well
(b) □ Modify Existing Well
(c) □ Install New Pump*
(d) □ Modify Pump*

*State Well No.: 3306-01 to 12

4. CONSTRUCTION:

□ Drilled
□ Dug
□ Shaft
□ Tunnel

5. PROPOSED PUMPING RATE:

N/A gallons per minute together.

6. PROPOSED USE: (check all that apply)

□ Domestic (individual, noncommercial water system)
□ Municipal (including hotels, stores, etc.)
□ Irrigation (crop)
□ No. of Acres:
□ Industrial
□ Military
□ Other (explain):

7. (a) PROPOSED AMOUNT OF WITHDRAWAL:

N/A gallons per day

(b) METHOD OF FLOW MEASUREMENT:

□ Flowmeter □ Open-pipe □ Weir □ Orifice □ Other (explain):

OTHER IMPORTANT INFORMATION:

8. LEGAL REQUIREMENTS: If required, these permits must be obtained before the Commission can legally issue a permit.

Conservation District Use Permit (CDUP) To find out if a CDUP is necessary, call DLNR Land Division at 587-0414
□ Not Required if required, data approved

Environmental Impact Statement (EIS) or Environmental Assessment (EA) To determine if an EIS or EA is necessary, call OEQC at 586-4185
□ Not Required if required, data published in OEQC bulletin

Special Management Area Permit (SMAP) To determine if a SMAP is necessary: on Oahu, call 527-5374; on Hawaii, call 981-8288; for Maui county, call 270-7235; on Kauai, call 241-6077.
□ Not Required if required, data approved

9. REMARKS, EXPLANATIONS:

Refer to Attached Sheets

For official use only

 latitude

 longitude

Aquifer System No.

State Well No.

WAIPPA Form 821/01
10. PROPOSED WELL SECTION (Please attach schematic if different from diagram provided below)

Elevation at top of casing ______________ ft., msl*

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

Ground Elevation: ______________ ft., msl*

Cement Grout: ______________ 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 (min.3): ______________ in.

Rock or Gravel Packing: ______________ ft.

Material:
- Crushed Basalt
- Rounded Gravel

Estimated Water Level Elevation: ______________ ft., msl*

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

Total Length: ______________ ft.
Nominal Diameter: ______________ in.
Wall Thickness: ______________ in.
Bottom Elevation: ______________ ft., msl*

Open Casing:
- Perforated
- Screen

Total Length: ______________ ft.
Nominal Diameter: ______________ in.
Wall Thickness: ______________ in.
Bottom Elevation: ______________ ft., msl*

Open Hole:
- Length: ______________ ft.
- Diameter: ______________ in.
- Bottom Elevation: ______________ ft., msl*

* 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 - Limit = (Water Elevation - Ground Elevation) / 4)

Example: Estimated = 2 ft. Water Level Elev. Bottom Elevation of Well Limit = \( (2 - \frac{18.5}{4}) = 13.5 \) ft.

Solid Casing Material:

Carbon Steel: compliant with (check one or more):
- ANSI/AWWA C200
- API Spec. SL
- ASTM A53
- ASTM A139

And compliant with (check one or more):
- ASTM A242
- Type E
- Type S
- Grade B
- Other

ABS Plastic conforming to ASTM F480 and ASTM D1527: (check one):
- Schedule 40
- Schedule 80

PVC Plastic conforming to ASTM F490 and (ASTM D1785 or ASTM D2241): (check one): (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. SL
- ASTM A53
- ASTM A139

And compliant with (check one or more):
- ASTM A242
- 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
- Schedule 120

PVC Plastic conforming to ASTM F490 and (ASTM D1785 or ASTM D2241): (check one):
- Schedule 40
- Schedule 80
- Schedule 120

Thermoset Plastic: (check one):
- Filament Wound Resin Pipe conforming to ASTM D2996
- Centrifugally Cast Resin Pipe conforming to ASTM 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

Refer to the Attached Tables and Descriptions.
10. PROPOSED WELL SECTION
(please attach schematic if different from diagram provided below)

For non-salt water Basal Wells - bottom elevation of well should not be deeper than 1/4 of aquifer thickness or, Bottom Elevation of Well Limit = \( \frac{5}{4} \text{Water Level Elevation} \)


Solid Casing:
- Carbon Steel: compliant with (check one or more): ANSI/AWWA C200, API Spec. 5L, ASTM A53, ASTM A139
- PVC Plastic conforming to ASTM F480 and ASTM D3517 (check one): Schedule 40, Schedule 80, Schedule 120
- Thermoset Plastic: (check one): Filament Wound Resin Pipe conforming to ASTM D3296, Centrifugally Cast Resin Pipe conforming to ASTM D3297, Glass Fiber Reinforced Resin Pressure Pipe conforming to AWWA C350, PTFE Fluorocarbon Tube conf. to ASTM D3296, FEP Fluorocarbon Tube conf. to ASTM D3296

Open Casing:
- Carbon Steel: compliant with (check one or more): ANSI/AWWA C200, API Spec. 5L, ASTM A53, ASTM A139
- PVC Plastic conforming to ASTM F480 and ASTM D3517 (check one): Schedule 40, Schedule 80, Schedule 120
- Thermoset Plastic: (check one): Filament Wound Resin Pipe conforming to ASTM D3296, Centrifugally Cast Resin Pipe conforming to ASTM D3297, Glass Fiber Reinforced Resin Pressure Pipe conforming to AWWA C350, PTFE Fluorocarbon Tube conf. to ASTM D3296, FEP Fluorocarbon Tube conf. to ASTM D3296

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 = \( \frac{5}{4} \text{Water Level Elevation} \)


Solid Casing Material:
- Carbon Steel: compliant with (check one or more): ANSI/AWWA C200, API Spec. 5L, ASTM A53, ASTM A139
- And compliant with (check one or more): ASTM A424, Type E, Type S, Grade B, Other
- 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 D3296, Centrifugally Cast Resin Pipe conforming to ASTM D3297, Glass Fiber Reinforced Resin Pressure Pipe conforming to AWWA C350, PTFE Fluorocarbon Tube conforming to ASTM D3296, FEP Fluorocarbon Tube conforming to ASTM D3296

Open Casing Material:
- Carbon Steel: compliant with (check one or more): ANSI/AWWA C200, API Spec. 5L, ASTM A53, ASTM A139
- And compliant with (check one or more): ASTM A424, Type E, Type S, Grade B, Other
- Stainless Steel: (check one): ASTM A409, Type E, Type S, Grade B, Other
- 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 D3296, Centrifugally Cast Resin Pipe conforming to ASTM D3297, Glass Fiber Reinforced Resin Pressure Pipe conforming to AWWA C350, PTFE Fluorocarbon Tube conforming to ASTM D3296, FEP Fluorocarbon Tube conforming to ASTM D3296

Refer to the Attached Tables and Descriptions
State of Hawaii
COMMISSION ON WATER RESOURCE MANAGEMENT
Department of Land and Natural Resources
APPLICATION FOR PERMIT

Well Construction and/or Pump Installation

Instructions: Please print in ink or type and send completed application with attachments to the Commission on Water Resource Management, P.O. Box 621, Honolulu, Hawaii 96809. Application must be accompanied by 5 copies and a non-refundable filing fee of $25.00 payable to the Dept. of Land and Natural Resources. The Commission may not accept incomplete applications. For assistance, call the Regulation Branch at 587-0225.

For further information and updates to this application form, visit http://www.state.hi.us/dlnr/cwrm.

APPLICANT INFORMATION: (Fill out all three, if applicable, and place a check next to the primary contact)

1. (a) □ WELL OWNER: Wai'alu Sugar Co. □ LAND OWNER: Wai'alu Sugar Co.
   Mailing Address: 1166 Whimtmore Avenue Wahiawa, Hawaii 96786
   Contact Person: Yoshi Tanabe
   Phone: 621-3220
   Fax: 621-7410 E-mail:

   (b) □ LAND OWNER: Wai'alu Sugar Co.
   Mailing Address: 1166 Whimtmore Avenue Wahiawa, Hawaii 96786
   Contact Person: Yoshi Tanabe
   Phone: 621-3220
   Fax: 621-7410 E-mail:

   (c) □ CONTRACTOR: Beylik Drilling, Inc.
   Mailing Address: 91-259-A O'ai Street Kapolei, Hawaii 96707
   Contact Person: Bill Moore
   Phone: 682-5866 E-mail:
   Lic #: AC-21896

WELL & PUMP INFORMATION: (Please fill in the diagram on the back of this form.)

2. WELL NAME: Wai'alu Sugar Pump 10 Battery
   Island: Oahu
   Address: Along Poamoho Stream
   Tax Map Key: 6 5 1 002
   Zone: Not Required
   Sec: Not Required
   Plat: Not Required
   Parcel: Not Required

   Attach: a portion of a 7.5-Minute Series USGS topographic map (scale 1:24,000) with well location labeled and indicate the name of the quad map
   (b) a property tax map, showing well location referenced to established property boundaries

3. PROPOSED WORK: (check all that apply)
   □ Construct New Well
   □ Modify Existing Well
   □ Install New Pump
   □ Modify Pump

   *State Well No.: 3306-01 to 12
   (If unknown, please call Commission at 587-0225)

4. CONSTRUCTION:
   □ Drilled
   □ Dug
   □ Shaft
   □ Tunnel
   Is this well part of a battery of wells? □ Yes □ No (Please describe)
   All wells manifolded together.

5. PROPOSED PUMPING RATE:
   N/A gallons per minute

6. PROPOSED USE: (check all that apply)
   □ Municipal (including hotels, stores, etc.)
   □ Domestic (individual, noncommercial water system)
   □ Irrigation (crop)
   □ Industrial
   □ No. of Acres:
   □ Military
   □ Other (explain):

7. (a) PROPOSED AMOUNT OF WITHDRAWAL:
   N/A gallons per day
   (b) METHOD OF FLOW MEASUREMENT:
   □ Flowmeter
   □ Open-pipe
   □ Weir
   □ Orifice
   □ Other (explain):

8. OTHER IMPORTANT INFORMATION:
   □ LEGAL REQUIREMENTS: If required, these permits must be obtained before the Commission can legally issue a permit.
   Conservation District Use Permit (CDUP): To find out if a CDUP is necessary, call DLNR Land Division at 587-0414
   □ Not Required
   □ Environmental Impact Statement (EIS) or Environmental Assessment (EA): To determine if an EIS or EA is necessary, call OECG at 586-4185
   □ Not Required
   □ Special Management Area Permit (SMAP): To determine if a SMAP is necessary: on Oahu, call 527-5374; on Maui, call 587-0225; for Hawaii County, call 527-7235; on Kauai, call 241-6677.
   □ Not Required
   □ If required, date approved

9. REMARKS, EXPLANATIONS:
   Refer to Attached Sheets

   (If more space is needed, please attach additional sheet)

NOTE: Signing below indicates the signatories understand and swear that the information provided on this application is accurate and true to the best of their knowledge. Further, the signatories understand that approval of this application attaches the following standard conditions: 1) the proposed work is to be completed within two (2) years of the approval date; 2) the contractor shall submit to the Commission a well completion/abandonment report within 60 days after the completion date of the permitted work; 3) monthly water use data shall be submitted to the Commission; 4) such approval shall not constitute a determination of correlative water rights and shall not guarantee the pump capacity of future use up to the permitted pump capacity; 5) in the event that the application is not completed correctly, any permit may be suspended until the item is brought in to compliance, and any work done while the permit is in suspension may result in fines of up to $1000/day.

Well Owner
(legal)
Wai'alu Sugar Co.
Signature:
Date:

Landowner
(legal)
Wai'alu Sugar Co.
Signature:
Date:

Contractor
(legal)
Beylik Drilling, Inc.
Signature:
Date:

For official use only
Latitude
Aquifer System No.
State Well No.

For Official Use Only:
WCP/IPA Form 8/21/01
Proposed Sealing of the Waialua Sugar Pump 10 Wells
(State Nos. 3306-01 to 12)
Waialua, Oahu, Hawaii

After Beylik Drilling, Inc. had cleared access to each of the 12 wells and milled 6-inch holes through the flanges at the top of the well casings, measurements of the well depths and CTD profiles of each well were made (Table 1 and the attached graphs). The sharp salinity breaks evident in almost all of the CTD profiles occur at depths significantly deeper than the "Depth to top of aquifer" designations in "Records of Drilled Wells on the Island of Oahu, Hawaii," Bulletin 4 of the Division of Hydrography (Old Well Nos. 323 A to L, also attached).

Sealing of the wells would be based on the CTD profiles. As compiled in Table 2, the lower 42 to 70 feet would be filled with gravel, followed by a 5-foot sand seal and then cement grouting to the top of the casing flanges.
# Table 1

## Measured Well Depths and Approximate Elevations

<table>
<thead>
<tr>
<th>Well No.</th>
<th>Approximate Ground Elevation (Feet MSL)</th>
<th>Total Depths (Feet)</th>
<th>Elevation at Bottom (Feet MSL)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Below Ground</td>
<td>Below Top Flange of Tee</td>
</tr>
<tr>
<td>1</td>
<td>55.6</td>
<td>366.8</td>
<td>312.7</td>
</tr>
<tr>
<td>2</td>
<td>55.5</td>
<td>374.6</td>
<td>320.6</td>
</tr>
<tr>
<td>3</td>
<td>56.2</td>
<td>373.6</td>
<td>318.9</td>
</tr>
<tr>
<td>4</td>
<td>57.9</td>
<td>398.6</td>
<td>342.2</td>
</tr>
<tr>
<td>5</td>
<td>55.9</td>
<td>369.6</td>
<td>315.2</td>
</tr>
<tr>
<td>6</td>
<td>50.3</td>
<td>369.3</td>
<td>320.5</td>
</tr>
<tr>
<td>7</td>
<td>48.8</td>
<td>353.4</td>
<td>306.1</td>
</tr>
<tr>
<td>8</td>
<td>48.1</td>
<td>362.3</td>
<td>315.8</td>
</tr>
<tr>
<td>9</td>
<td>47.1</td>
<td>362.2</td>
<td>316.6</td>
</tr>
<tr>
<td>10</td>
<td>49.4</td>
<td>357.1</td>
<td>309.2</td>
</tr>
<tr>
<td>11</td>
<td>50.2</td>
<td>354.4</td>
<td>305.7</td>
</tr>
<tr>
<td>12</td>
<td>53.9</td>
<td>368.2</td>
<td>315.8</td>
</tr>
</tbody>
</table>

**Note:** All elevations based on the flange on the top of all tees being at 1.50 feet (MSL).
Table 2

Proposed Sealing of the Wells Based on the Salinity Profiles

<table>
<thead>
<tr>
<th>Well No.</th>
<th>Gravel Fill Depths (Feet)</th>
<th>Linear Feet</th>
<th>Sand Seal Depths (Feet)</th>
<th>Linear Feet</th>
<th>Cement Depths (Feet)</th>
<th>Linear Feet</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Bottom to 307</td>
<td>60</td>
<td>307 to 302</td>
<td>5</td>
<td>302 to Casing Tee</td>
<td>248</td>
</tr>
<tr>
<td>2</td>
<td>Bottom to 333</td>
<td>42</td>
<td>333 to 328</td>
<td>5</td>
<td>328 to Casing Tee</td>
<td>274</td>
</tr>
<tr>
<td>3</td>
<td>Bottom to 321</td>
<td>53</td>
<td>321 to 316</td>
<td>5</td>
<td>316 to Casing Tee</td>
<td>261</td>
</tr>
<tr>
<td>4</td>
<td>Bottom to 337</td>
<td>62</td>
<td>337 to 332</td>
<td>5</td>
<td>332 to Casing Tee</td>
<td>275</td>
</tr>
<tr>
<td>5</td>
<td>Bottom to 308</td>
<td>62</td>
<td>308 to 303</td>
<td>5</td>
<td>303 to Casing Tee</td>
<td>248</td>
</tr>
<tr>
<td>6</td>
<td>Bottom to 305</td>
<td>64</td>
<td>305 to 300</td>
<td>5</td>
<td>300 to Casing Tee</td>
<td>252</td>
</tr>
<tr>
<td>7</td>
<td>Bottom to 303</td>
<td>50</td>
<td>303 to 298</td>
<td>5</td>
<td>298 to Casing Tee</td>
<td>256</td>
</tr>
<tr>
<td>8</td>
<td>Bottom to 318</td>
<td>44</td>
<td>318 to 313</td>
<td>5</td>
<td>313 to Casing Tee</td>
<td>267</td>
</tr>
<tr>
<td>9</td>
<td>Bottom to 292</td>
<td>70</td>
<td>292 to 287</td>
<td>5</td>
<td>287 to Casing Tee</td>
<td>242</td>
</tr>
<tr>
<td>10</td>
<td>Bottom to 309</td>
<td>48</td>
<td>309 to 304</td>
<td>5</td>
<td>304 to Casing Tee</td>
<td>256</td>
</tr>
<tr>
<td>11</td>
<td>Bottom to 304</td>
<td>50</td>
<td>304 to 299</td>
<td>5</td>
<td>299 to Casing Tee</td>
<td>251</td>
</tr>
<tr>
<td>12</td>
<td>Bottom to 304</td>
<td>64</td>
<td>304 to 299</td>
<td>5</td>
<td>299 to Casing Tee</td>
<td>247</td>
</tr>
</tbody>
</table>

**Note:** All depths are from the present ground surface and are rounded to the nearest foot.
WAILUA SUGAR WELL 3306-11 (OLD 323-K)
APRIL 5, 2002

DEPTH INTO WATER (FEET)

CONDUCTIVITY (MICROSEIEMS/CNM)

TEMPERATURE (DEG F)

75.0
74.5
74.0
73.5
73.0
72.5
72.0
71.5
71.0

0 25 50 75 100 125 150 175 200 225 250 275 300 325 350

75.0
74.5
74.0
73.5
73.0
72.5
72.0
71.5
71.0
Territory of Hawaii

JOSEPH B. POINDEXTER, Governor
Louis M. Whitehouse, Commissioner of Public Lands

DIVISION OF HYDROGRAPHY

MAX H. CARSON, Chief Hydrographer

Bulletin 4

RECORDS OF THE DRILLED WELLS ON THE ISLAND OF OAHU, HAWAII

BY HAROLD T. STEARNS
Geologist in Charge
Hawaiian Ground-Water Investigations
U. S. Geological Survey

and

KNUTE N. VAKSVIK
Artesian Well Engineer, U. S. Geological Survey

Prepared in cooperation with the Geological Survey,
United States Department of Interior

Printed in the
Territory of Hawaii, United States of America
AUGUST 1938

Distributed by the U. S. Geological Survey, Honolulu, Oahu, and Spreckelsville, Maui, T. H.
Observations—Well 322 (Continued)


Logs

Observations

Bench mark, top of priming plug on any pump: altitude 4.61 ft.