WATER USE PERMIT NO. 176

This report has been prepared in accordance with 13-171-22(b) of the Hawaii Revised Statutes requiring a 20-year review of issued water use permits to determine permit compliance. Following is a summary of permit information, site characteristics, methodology, findings, and recommendations for this State permit file.

Permit Information

Water User: Hawaiian Electric Company
Landowner of Source: Hawaiian Electric Company

Permitted Withdrawal Rate: 14.40 mgd (Based upon a 12-month moving average)
Water Management Area: Malakole
Island: Oahu
Aquifer Sector/System: Ewa Caprock/Malakole
System Sustainable Yield: 1000 mg/l
Water Type: Salt
Original CWRM Date: August 14th, 1992
Standard Conditions: 1, 4, 8, 10, 14, 20, 26
Special Conditions: None

Water Source

State Well Number(s): 1806-15, 1806-16, 1806-17, 1806-18
Well Name: HECO Cooling
Water Source TMK Number(s): 1st Division, 9-1-014:014
State Land Use Classification(s): Urban
County Zoning Classification(s): I-2
Geographical Coordinates:
Well No. 1806-15 Latitude 21° 18' 24.4" North
Longitude 158° 06' 19.6" West
Well No. 1806-16 N/A – Well has not been drilled
Well No. 1806-17 N/A – Well has not been drilled
Well No. 1806-18 N/A – Well has not been drilled
End Use

- End Use TMK Number(s): 1st Division, 9-1-014:014
- State Land Use Classification(s): Urban
- County Zoning Classification(s): I-2
- Beneficial Use Explanation: Use for industrial cooling water

Background Information

Water Use Permit 176 was approved during the August 14th, 2006 Commission on Water Resource Management meeting. This water source has not yet been put into use by Hawaiian Electric Company. As such, there are no water use or salinity records on file for any of the wells. Standard conditions 1, 4, 8, 10, 14, 20 & 26 are the governing conditions for this water use permit. A complete list of all standard and special conditions is given in the permit file.

Field Investigation Information

- Contact: Robert Isler
- Site Address: [Redacted]

Brown and Caldwell conducted a field investigation on March 18th, 2008 from 1:00 p.m. until 2:00 p.m. with Mr. Alvin Kurisu, who is an associate of Mr. Robert Isler. During this time, type of water usage was verified, GPS coordinates of well head(s) were recorded, and property TMK information was verified. The wellhead and water usage area were visually inspected to assess compliance with permit conditions. Visual inspection of water loss/waste was limited to outdoor areas within the usage boundary. Reference the TMK and GIS maps in the permit file for a visual representation of the site.

Summary of Findings for Water Use Permit No. 176

Of the four wells governed by Water Use Permit 176, only State Well No. 1806-15 has been drilled. At the time of this report, the other three wells were not in existence. State Well No. 1806-15 sits on TMK parcel 9-1-014:014 at 21' 18’ 24.4” N, 158° 06' 19.6” W, with a real time accuracy of ±27 feet. The wells were planned to supply cooling tower water to a proposed HECO facility in the mid-1990's. Reference the Appendix for photographs of State Well No. 1806-15.

The following are a list of standard condition(s) that the permittee is found to be in non-compliance with:
(10) The applicant shall provide and maintain an approved meter or other appropriate device or means for measuring and reporting total water usage. Water usage shall be measured on a monthly basis and reported to the Commission.

Since water use is not being reported to the Commission, the permittee is found to be in violation of Standard Condition (10). Note that this particular variation of the condition does not mandate salinity reporting.

(20) The permit may be revoked if work is not started within six months of the date of issuance or if work is suspended or abandoned for six months. The work proposed in the permit application shall be completed within two years from the date of permit issuance.

Since it has been over 15 years since the date of permit issuance and the work proposed in the permit application is still not complete, the Commission has the right to revoke WUP 176 if deemed necessary.

Recommendations

- Address the following discrepancies between the Commission’s electronic database and actual field investigation findings:
  - State land use and county zoning classifications
- Address violation of Standard Condition (10) regarding non-reporting of water use
- Since work has not been completed within two years of permit issuance, address the stipulations given in Standard Condition (20) and determine if the permit should be revoked.
20-Year Water Use Permit Review
Water Use Permit No. 176

APPENDIX

Field Investigation Photographs
Water Use Permit Survey
(Please complete one survey form for each WUP)

WUP Number: 176
Well Number(s): 1806 - 15 to 18

Contact Information (of the person who will be present at site visit):
Name: Robert Isler

Best time to reach for phone interview: 7:00 am - 4:00 pm M-F

Property Information (of the water use/well location):

Well Location TMK (list all if multiple wells present): _____________
Water Use TMK (list all if used on multiple lots): ____________

Water Use/Well Information:

Is the water source currently in use?  Yes ☐ No ☑
If no, please explain: Permits were obtained for power plant development, which was deferred until 2009. The permits for wells 1806 - 16 to 18 were canceled by Curly on March 5, 2006.

What are you currently using the water for? (example: “Use for 45 acres of diversified agriculture and 3 residences”): The water is not currently being used. A new request for well & pump permits will be submitted in 2008 for in conjunction with the planned power generating station.

Is a flow meter installed and working properly?  Yes ☐ No ☑
If no, please explain: Well not used, well drilled and tested, but pump never installed.

Do you submit monthly water use reports to the State?  Yes ☐ No ☑
If no, please explain: No water currently being used.

Field Investigations:

A representative from Brown and Caldwell will be visiting wells in your area over the next several months between the times of 9:00 am and 5:00 pm. Each site investigation will take approximately 1-2 hours. Please indicate up to three potential days of the week and availability times for an on-site inspection of the well location and verification of water use compliance. The permit holder must provide Brown and Caldwell with at least five (5) working days notice of the need to reschedule.

Option #1 Date (M-F): 11/17/06 Time: 9:00 am ☑ 12:00 pm ☐ 3:00 pm ☑
Option #2 Date (M-F): 11/24/06 Time: 9:00 am ☑ 12:00 pm ☐ 3:00 pm ☑
Option #3 Date (M-F): 11/31/06 Time: 9:00 am ☑ 12:00 pm ☑ 3:00 pm ☐

Once this survey is returned, a Brown and Caldwell representative will be contacting you to conduct a phone interview and finalize the exact date and time of your field investigation. Please fax/mail completed surveys by December 12th, 2007 and direct any questions related to this survey to Mr. Milo Smith of Brown and Caldwell at:

1099 Alakea Street, Suite #2400
Honolulu, HI 96813
Tel: (808) 203-2661
Fax: (808) 533-0226
mcsmith@brwncald.com

For Official Use Only

Received: Infomation Updated: Phone Interview Complete: Notes/Comments:
FYI - just got off the phone with Tom Nance.

He's having a hard time convincing the HECO people (Mr. Isler), that they should come in for a WUPA to update things. Explained to Tom that the overriding issue is HECO has not used their 14.4 mgd allocation and run the risk of losing it for 4-yr non-use. Also, this will be shown in our 20-yr review report to the upcoming legislature and it would be cleaner if HECO was proactive in the matter rather than waiting for someone in the legislature or public to demand the CWRM revoke. --I agree entirely --and this is what I explained to Bob Isler on the phone. It's a saltwater source to be used for industrial purposes. While it may not be material to our regulation of HECO's water use, it would help for us to have a better understanding of the reluctance to submit a WUPA. I think we should push a bit more on this, in anticipation of not only the exposure of HECO's WUP 176 to the 20-yr review, but the potential for CWRM's exposure for a finding from the Legislature that we are not enforcing the conditions of existing WUPs. HECO feels entitled to the water, but the Code states clearly otherwise - I don't know what else to say.

In any case, they feel our letter holding up their new well pump installation permit shouldn't be held up over this issue. However, since a new well would mean a change to WUP 176 source condition listing I think we need to modify the WUP. However, if the new well can be ID'd as on of the original wells not drilled (1806-16, 17, or 18) then arguably no need to change WUP 176. Thoughts?

(1) If we agreed to go this route, I assume we would simply assign the new well one of the old well numbers and process the WCPIA as usual? I see this as a less desirable option; if we do this to accommodate HECO's concern about having to apply for a WUP modification, will we then be expected to make a similar accommodation (or accommodations/exceptions) for other permit holders when we proceed with enforcement or permit revocations for non-use following the 20-yr review? We should consider the implications for how this could affect our treatment of other WUP holders.

(2) Also, there is this question regarding the permit status, which I posed to you a couple weeks ago, following my review of the record (this may be a CWRM-only concern):

B. We do not have a signed copy of the permit from the applicant in the file. Would the signature have been required after Attorney General review or on the provisional permit that was sent on August 19, 1992, following the Commission's approval? Back then yes. Nowadays no (for both AG and applicant signatures). Knew this would come back to haunt us. Should discuss with AG

WUP 176 - 14.4 mgd, zero use since WUP approval.
*3 wells not drilled in 1993, but covered by WUP 176

1806-16, 17, 18

**Well 1806-23 constructed 2008 (new WCPI Permits). Capacity - 1.224 mgd.

**Well 1806-16 16 17.18 use covered by WUP No. 176.
FYI - just got off the phone with Tom Nance.

He's having a hard time convincing the HECO people (Mr. Isler), that they should come in for a WUPA to update things. Explained to Tom that the overriding issue is HECO has not used their 14.4 mgd allocation and run the risk of losing it for 4-yr non-use. Also, this will be shown in our 20-yr review report to the upcoming legislature and it would be cleaner if HECO was proactive in the matter rather than waiting for someone in the legislature or public to demand the CWRM revoke. HECO feels entitled to the water, but the Code states clearly otherwise - I don't know what else to say.

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Roy,

The WUP file history for this project is unclear and may warrant discussion with our AGs to determine its validity. Key points and questions that may have bearing on an application from HECO to modify its permit and further discussions with the company and Tom Nance are explained below.

A. The Commission unanimously approved the staff recommendation to issue the permit, which was issued as a "Water Use, Well Construction, and Pump Installation Permit." The Reasonable and Beneficial Use is listed as "Industrial cooling," and the following conditions apply:

1. The water use permit shall be for the reasonable-beneficial use described in this permit.
2. The proposed use shall not adversely affect existing future legal uses...[standard language]
3. Modification of any permit condition shall be approved by the Commission.
4. The applicant shall comply with all applicable laws, rules, and ordinances.
5. The applicant shall provide and maintain an approved meter...[standard language]
6. The permit may be revoked if work is not started within six months of the date of issuance or if work is suspended or abandoned for six months. The work proposed in the permit application shall be completed within two years from the date of permit issuance.
7. The permit shall be subject to review by the Attorney General.

Does Condition 1 constrain the use to only "industrial cooling," or is it implied that the approved use is for any industrial purpose? The application at the time allowed only for "Industrial" to be applied for. Not sure. As I mentioned we came up with the major and sub categories of water use, partly due to change in use considerations. Also, the Code defines "Change in Use" as: means any modification or change in water use from or to domestic, municipal, military, agriculture (including agricultural processing), or industrial uses. So I think industrial cooling to industrial other is still industrial. However, like you said, there are other modification considerations like reducing their allocation that could require modification or revocation.

Condition 7: Appears that this was #20 of 19 permits issued between Sept. 1989 and Aug. 1992, which were never issued. There is a Sept. 8, 1992 memo to Johnson Wong in the Land/Transportation Division (DLNR) requesting his review of the permit as approved by the Commission-- looks like a standard intradepartment review request. The memo states:

...In lieu of sending and "official" water use permit to the applicant, we will send a
letter notifying the applicant that the Commission approved their permit and that the actual permit will be issued following review by the Attorney General. ...

B. We do not have a signed copy of the permit from the applicant in the file. Would the signature have been required after Attorney General review or on the provisional permit that was sent on August 19, 1992, following the Commission's approval? Back then yes. Nowadays no (for both AG and applicant signatures). Knew this would come back to haunt us. Should discuss with AGs

C. The permit was issued for completion of four wells; only one well, 1806-15, was constructed and no pump was installed. (Well 1806-15 was completed in April 1993.) The well has never been used for its intended purpose. HECO currently uses it for cathodic protection, which requires no withdrawal (Bob Isler, HECO, pers. comm.). Do any of these actions violate Condition 6 of WUP 176, such that the permit is rendered invalid? It is grounds for revocation, but not automatic rendering of invalidation. If we revoke, we need to take to the CWRM for official action.

D. HECO has never exercised the water allocation authorized by WUP 176, neither partially nor in whole. They applied for and were approved for 14.4 mgd for "industrial cooling." In response to a request from the Commission in 1993, HECO stated that it could reduce their average annual use to 12.96 mgd.

While these matters have little bearing on the acceptance and processing of HECO's well construction/pump installation permit application (Well No. 1806-23) and approval of the well construction permit, they will need to be resolved before we approve permanent pump installation, as we have discussed. Bob Isler is going to send the missing information, which will complete the application. He was relieved to know that processing of the well construction permit application does not have to be delayed until the water use permit questions are resolved. That's good.

I have the file if you want to review anything. In the mean time, I'll continue working on the well construction permit application. ok

-Denise
Correction-- WUP 176 was #20 of 20 permits approved (correction to my comment on Condition 7). -dm

----- Forwarded by Denise E Mills/DLNR/StateHiUS on 08/13/2008 07:33 AM -----

To Roy Hardy/DLNR/StateHiUS
cc
bcc
Subject Fw: WUP 176 - HECO "cooling wells"

Roy,

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I have the file if you want to review anything. In the mean time, I'll continue working on the well construction permit application.

- Denise
Declaratory Ruling No. DEC-ADM97-A1

Declaratory Order on:
Delegation of Water Use Permit Modification Approval
Meeting Certain Criteria to the Chairperson

BACKGROUND:

The Honolulu Board of Water Supply (BWS) requested modifications/adjustments of permitted uses within a water management area to reflect the actual pumpages at existing municipal supply sources which are driven by system demands. Requested increases were small and ranged from 0.012 to 0.390 mgd. To balance these increases, BWS proposed to reduce permitted uses at other sources within the same aquifer system so that no net change occurs. The modification was approved at the Commission meeting on October 22, 1997.

ANALYSIS/ISSUES:

Section 174C-57 HRS states:

"A permittee may seek modification of any term of a permit. A permittee who seeks to change the use of water subject to the permit, whether or not such change in use is of a material nature, or to change the place of use of the water or to use a greater quantity of water than allowed under the permit or to make any change in respect to the water which may have a material effect upon any person or upon the water resource, shall make application pursuant to section 174C-51 in respect to such a change."

BWS submitted a letter request for these proposed modifications, rather than making application(s) pursuant to §174C-51 HRS that would be subject to the full permitting process, which provides for public notice and objections.

However, §174C-57 HRS also provides:

"County agencies are exempt from the requirements of this section except where the modification involves a change in the quantity of water to be used or where the new use would adversely affect the quality of the water or quantity of use of another permittee."

Although BWS' modification request involved increases in the quantity of water used at specific sources, the net change in total permitted municipal uses within the aquifers is zero. The modifications would result in more optimal operation of BWS' interconnected system.
BWS' proposal seeks to optimize pumpage and minimize potential overpumpage violations at these sources. The Commission's records of BWS pumpage supports this proposal. Because the proposed allocation changes result in no net change within the same aquifers, and because the adjustments reflect actual historical pumpages, no adverse impacts to water resources or other existing legal uses are anticipated.

This optimization exercise can and should be extended to non-county agency permittees where the permittees may have multiple wells within the same aquifer system. A declaratory ruling that clarifies the statute and Administrative Rule regarding water use permit modifications and delegates the authority to the Chairperson to approve future such modification requests would be beneficial to the staff.

RECOMMENDATION:

That the Commission adopt the following declaratory order:

DECISION AND ORDER:

The Commission delegates the approval of water use permit modifications to the Chairperson for allocation adjustments that meet the following criteria:

1. The net change in permitted use within an aquifer is zero.

2. The modification would result in more efficient and optimal operation of multiple sources under a single operator.

3. No adverse impacts to water resources or other existing legal uses are anticipated.

4. End use location and type remain unchanged.


APPROVED BY THE COMMISSION ON WATER RESOURCE MANAGEMENT AT ITS MEETING ON NOVEMBER 19, 1997

APPROVED AND SO ORDERED:

MICHAEL D. WILSON, Chairperson
Dear Ms. Loui:

Subject: Warning of Potential Water Shortages
Ewa Caprock Water Management Area
Well Numbers 1806-15 to 18

Your letter dated June 10, 1993, asked that all permittees submit a water shortage plan should the Commission declare a water shortage situation in the Ewa Caprock Ground Water Management Area. HECO is willing to cooperate and participate in voluntary temporary water use reductions from the subject wells. At this time, we cannot provide you with a firm amount of water reduction that would be consistent with our operational plans. The exact reductions HECO could accommodate would depend upon our water requirements for power generation at the time. As indicated in our permit application, the water will be used to support a future power plant, primarily for cooling and other plant purposes.

To help support your planning activities we have reviewed the preliminary design of the power plant. A 10% reduction in the average annual water use rate is conceivable based on our understanding that the water use rate permitted by the Commission is based on a 12 month average amount. Therefore, it is conceivable that the average annual water use rate could be reduced from 14.4 mgd to 12.96 mgd provided that HECO is not precluded from pumping more than 12.96 million gallons (say 14.4 million gallons) in any one day as long as the annual water use rate averages 12.96 mgd.

If you have any questions, please contact Mr. Ken Fong at...

Sincerely,

[Signature]

Brenner Munger, Ph.D., P.E.
Manager
Engineering Department
(808) 543-7110
Ms. Rae M. Loui, Deputy Director  
State Dept. of Land and Natural Resources  
Commission on Water Resource Management

Subject: Warning of Potential Water Shortages  
Ewa Caprock Water Management Area

Dear Ms. Loui:

HECO is interested in participating in the development of the Ewa Caprock Regional Plan as proposed in your letter of June 10, 1993. Please provide me with the appropriate information and the schedule of meetings to discuss this issue.

The water shortage plan that you requested is being prepared and will be sent to you at a later date.

For additional information, please contact Roy Uemura at [Redacted]  

We look forward to working with you and your staff on this water management effort.

Sincerely,

[Signature]

Thomas C. Simmons  
Manager

cc: E. Y. Hirata  
R. B. Munger  
R. T. Uemura  
GPD-cf
Warning of Potential Water Shortages
Ewa Caprock Water Management Area

The Commission has recently approved additional temporary water use permits in the Ewa Caprock Water Management Area. As a part of these approvals, the Commission has directed staff to issue a formal warning of potential future ground water shortages in this water management area to all other existing water use permittees.

The reason for concern is that as urbanization continues to replace existing sugarcane, there is potential for the caprock water to increase beyond usable brackish limits unless the irrigation recharge supplied to the caprock by Oahu Sugar Company (OSCo.) is replaced by some other means. It is possible that by 1995, recharge from sugarcane irrigation may completely cease.

Staff is presently working on the Ewa Caprock Regional Plan which is, in part, an effort to bring about alternative sources to supply non-potable demands in the Ewa region. This effort is to supplement and provide a back-up non-potable source to the caprock aquifer. If you are interested in participating in this regional plan, please contact us.

Staff is also requesting all permittees, who have not done so already, to submit a water shortage plan. Your water shortage plan simply identifies what you are willing to do should the Commission declare a water shortage situation in the Ewa Caprock Ground Water Management Area and can be as short as a one page letter. In a water shortage situation, the Commission may require temporary reductions in pumpage from all sources. The Commission is required by law to formulate a plan to implement such area-wide reductions, which should accommodate, include, and be consistent with your plans. Therefore, your help, by submitting your water shortage plan, is greatly needed in formulating the Commission's overall Water Shortage Plan.

If you have any questions, please contact Roy Hardy at [redacted].

Sincerely,

RAE M. LOUI
Deputy Director

RH:ko
PUBLIC NOTICE

Application for a Water Use Permit
Pearl Harbor Water Management Area, Oahu

An application for the following water use permit has been received and is hereby made public in accordance with Department of Land and Natural Resources Administrative Rules 13-171, "Designation and Regulation of Water Management Areas."

Hawaiian Electric Company Cooling Wells (Well Nos. 1806-15 to 18)
APPLICANT: Hawaiian Electric Company

Date Application Received: June 6, 1992
Source of Water Supply: Seawater Aquifer, Caprock Subarea, Pearl Harbor Water Management Area.
Location of Well: Campbell Industrial Park, Oahu, at Tax Map Key: 9-1-14:14.
Quantity Requested: 14,400,000 gallons per day.
Proposed Water Use: For industrial cooling.
Place of Water Use: Hawaiian Electric Company Barbers Point Tank Farm at Campbell Industrial Park.

Written objections or comments on the application for water use may be filed by any person who has property interest in any land within the hydrologic unit of the source of water supply or who will be directly and immediately affected by the proposed water use. Written objections shall: (1) state property or other interest in the matter; (2) set forth questions of procedure, fact, law, or policy, to which objections are taken; and (3) state all grounds for objections to the proposed permits. Send written objections by July 22, 1992, to the Commission on Water Resource Management.

COMMISSION ON WATER RESOURCE MANAGEMENT

[Signature]
RAE M. LOUI
WILLIAM W. PATY
Chairperson

Dated: JUN 25 1992

Publish in: Honolulu Star Bulletin issues of July 3 and 10, 1992
The Honorable William W. Paty, Chairperson
Commission on Water Resource Management

Dear Mr. Paty:

Water Use Permits

Thank you for the opportunity to comment on the following applications for water use in Water Management Areas:

- Honolulu BWS Kaipapau Well (3655-03)
- Hawaiian Electric Waiau Tunnel 1806-15 to 19

The application for Kaipapau Well in Hauula (Windward Water Management Area) provides so little information, it is not possible to evaluate. Are there wells nearby that might be affected? What is the expected effect on adjacent Kaipapau Stream? Why is this well not in service at the present? Why is its proposed use 24 hours per day? How does this proposal relate to the overall BWS plan for the Windward Area? We believe no action should be taken until such issues are fully addressed.

The Waiau Tunnel application appears to remedy the wasting of 3.0 to 3.5 Mgd of potable water. Fuller information is desirable in order to understand such an obviously beneficial proposal.

Warmest aloha,

Hoaliku L. Drake, Chairman
Hawaiian Homes Commission
# CHECKLIST for WATER USE PERMITS

WATER MANAGEMENT AREA: **Pearl Harbor**

<table>
<thead>
<tr>
<th>WELL OWNER:</th>
<th>LANDOWNER:</th>
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<td>Firm Name:</td>
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<td>Contact Person:</td>
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SOURCE NAME or LOCATION: **HECO Cooling Wells**

WELL NUMBER: **3-1806-15 to 19**

- Date application received: **6-1-92**
- Date acknowledged receipt/request more info:
- Date application accepted:
- Suspense date (no hearing = 90 days):
- Suspense date (hearing = 180 days):
- Date filing fee deposited: **RCVD 6-4-92**
- Application sent to following:

<table>
<thead>
<tr>
<th>Date sent</th>
<th>Comments received</th>
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<tr>
<td>Mayor</td>
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<td>County Council</td>
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<td>Dept. of Hawn Home Lands</td>
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<td>Dept. of Health/WIC Program</td>
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<td>Office of Hawn Affairs</td>
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<td>State Hist Pres Div</td>
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<td>County water board/dept</td>
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<td>Sierra Club L.D.F.</td>
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<td>Eric H.</td>
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Dates of Public Notice: **3-28 and 4-13 July 1992**

- Suspense date for objections:
- Date of hearing, if any:

- Date agenda due: **5 Aug 92**
- Date submittal due: **5 Aug 92**
- Date submittal sent to applicant:

- Date application approved or disapproved: **disapproved**
- Date applicant notified of decision:

REMARKS: Process well construction permit concurrently

revised: **5-21-91**
AES Barbers Point, Inc.

FACSIMILE TRANSMISSION

DATE: August 10, 1992                                      File No.: 13.1000

TO: Mr. Ed Sakoda                                      FAX NO: 587-0219

FROM: Carmen for Dan Rothaupt

SUBJ: Public Notice                                      Fax No.

Total No. of pages: 1

In response to the attached fax dated August 6, 1992, we have no comments.

Sincerely,

Carmen

---

AES Barbers Point, Inc.
STATE OF HAWAI'I
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
P. O. BOX 921
HONOLULU, HAWAI'I 96802

FACSIMILE TRANSMITTAL PAGE

Please deliver the following pages to:

Name: Dan Rothaupt
Company: AES Barbers Point, Inc.
From: Ed Sakoda
Date: 8-6-92 Time: 10:56 am
Message: We sent this to your old address - sorry it's so late. FAX comments if any

Total number of pages (including Transmittal Page): 2

* * * * * * *

If you do not receive all of the pages legibly, please call back ** ** ** ** **
PUBLIC NOTICE

Application for a Water Use Permit
Pearl Harbor Water Management Area, Oahu

An application for the following water use permit has been received and is hereby made public in accordance with Department of Land and Natural Resources Administrative Rules 19-171, "Designation and Regulation of Water Management Areas."

Hawaiian Electric Company Cooling Wells (Well Nos. 1806-15 to 18)
APPLICANT: Hawaiian Electric

Date Application Received: June 6, 1992
Source of Water Supply: Seawater Aquifer, Caprock Subarea, Pearl Harbor Water Management Area.
Location of Wall: Campbell Industrial Park, Oahu, at Tax Map Key: 9-1-14:14.
Quantity Requested: 14,400,000 gallons per day.
Proposed Water Use: For industrial cooling.
Place of Water Use: Hawaiian Electric Company Barbers Point Tank Farm at Campbell Industrial Park.

Written objections or comments on the application for water use may be filed by any person who has property interest in any land within the hydrologic unit of the source of water supply or who will be directly and immediately affected by the proposed water use. Written objections shall: (1) state property or other interest in the matter; (2) set forth questions of procedure, fact, law, or policy, to which objections are taken; and (3) state all grounds for objections to the proposed permits. Send written objections by July 22, 1992, to the Commission on Water Resource Management.

COMMISSION ON WATER RESOURCE MANAGEMENT

[Signature]
RAE H. LOUI
WILLIAM W. PATY
Chairperson

Dated: JUL 25, 1992

Publish in: Honolulu Star Bulletin issues of July 3 and 10, 1992
Although listed numerically, some items were taken out of sequence to accommodate requests by the applicants.

**ITEM 1**

**MINUTES OF THE JULY 15, 1992 MEETING**

Mr. Cox asked that "Mr. Horita" (on page 2, fourth paragraph from the bottom) be changed to Mr. Chee.

Unanimously approved as amended (Cox/Fujimura).

Mr. Martin of Native Hawaiian Advisory Council (NHAC) asked that their comments be reflected in the minutes on page 6, Item 10 (see attached). Mr. Cox stated that Dr. Chun's statement was reflected in the second to the last paragraph on page 6. Mr. Martin felt that Dr. Chun's position regarding the Molokai Golf application was not reflected accurately.

**ITEM 2**

**HAWAIIAN ELECTRIC COMPANY, APPLICATION FOR A WATER USE PERMIT, HECO COOLING WELLS, CAMPBELL INDUSTRIAL PARK, OAHU**

Mr. Nakata inquired how the water was disposed. Mr. Sakoda believed it does not go into the same aquifer but to a deeper aquifer for disposal. Mr. Damon Runyon, consultant for the applicant, added that the disposed cooling water would be going into injection wells which would have to be permitted according to DOH regulations. The supply of water is coming from approximately 100 feet and would be returned to 400 feet.

Unanimously approved (Chun/Cox).

**ITEM 3**

**MAKAKILO GOLF CORP., APPLICATION FOR A TEMPORARY WATER USE PERMIT, FORT BARETTE WELL, MAKAKILO GOLF COURSE, OAHU**

Mr. Fujimura asked for clarification regarding the condition that the water applied to the golf course be 200 mg/l or less.

Mr. Sakoda stated that was the condition on the caprock well after it is desalted. Mr. Tom Nance, representing the applicant, added that the other source being used is water purchased from Waiahole Ditch. The mix of the waters is well under the 200 mg/l.

Chairperson Paty asked what phase the Course was in. Mr. Bob Imose replied that they were ready to plant. Planting had been delayed for about six months due to a lack of water. Trees have been planted and are being watered by hand.
The Commission on Water Resource Management has directed that all water use permits be reviewed by your office before they are issued.

The Commission has sent a total of nineteen water use permits to your office for review since July 1989. None of the permits have been issued.

Attached is a water use permit for Hawaiian Electric Company Cooling Wells (Well Nos. 1806-15 to 18) which was approved by the Commission on August 19, 1992. We would appreciate your review of the permit at your earliest convenience. In lieu of sending an "official" water use permit to the applicant, we will send a letter notifying the applicant that the Commission approved their permit and that the actual permit will be issued following review by the Attorney General. We will include a copy of the approved Commission submittal with the letter.

If you have any questions, please contact Ms. Rae M. Loui, Deputy Director, at

Attach.
PEARL HARBOR GROUND WATER MANAGEMENT AREA
WATER USE, WELL CONSTRUCTION, AND PUMP INSTALLATION PERMIT

Applicant: Hawaiian Electric Company
Address: [redacted]
Water Management Area: Pearl Harbor
Subarea: Seawater Aquifer, Caprock Subarea
Well Name: HECO Cooling Wells (Well Nos. 1806-15 to 18)
Amount of Withdrawal (Average Annual): 14,400,000 gallons per day
Reasonable-Beneficial Use: Industrial cooling
Area or Projects Served: Hawaiian Electric Company Barbers Point Tank Farm at Campbell Industrial Park

The applicant is hereby granted a permit to withdraw and use water from the source identified above, in accordance with Chapter 174C, HRS, State Water Code, Chapter 13-171, Hawaii Administrative Rules, subject to the following conditions:

1. The water use authorized by this permit shall be for the reasonable-beneficial use described in this permit.
2. The proposed use shall not adversely affect existing or future legal uses of water in the area, including any surface water or established instream flow standards.
3. Modification of any permit condition shall be approved by the Commission.
4. The applicant shall comply with all applicable laws, rules, and ordinances.
5. The applicant shall provide and maintain an approved meter or other appropriate device or means for measuring and reporting total water usage. Water usage shall be measured on a monthly basis and reported to the Commission.

6. The permit may be revoked if work is not started within six months of the date of issuance or if work is suspended or abandoned for six months. The work proposed in the permit application shall be completed within two years from the date of permit issuance.

7. The permit shall be subject to review by the Attorney General.

The issuance of this permit was approved by the Commission on Water Resource Management at its meeting on August 19, 1992.

I have read the conditions and terms of this permit and understand them. I accept and agree to meet these conditions as a prerequisite and underlying condition of my ability to proceed.

Applicant's Signature: ____________________________ Date: ________________

Printed Name: ________________________________

Firm or Title: _________________________________

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

Gentlemen:

I am pleased to inform you that the Commission on Water Resource Management approved your application for a water use permit for Hawaiian Electric Company Cooling Wells (Well Nos. 1806-15 to 18) at its meeting on August 19, 1992.

The permit will be sent to the Attorney General for review prior to being issued. The approved Commission submittal is attached for your files.

If you have any questions, please call Ms. Rae M. Loui, Deputy Director, at [Blank].

Very truly yours,

[Signature]

WILLIAM W. PATY

Enc.
Chairperson and Members  
Commission on Water Resource Management  
State of Hawaii  
Honolulu, Hawaii  

Gentlemen:

Hawaiian Electric Company  
Application for a Water Use, Well Construction, and Pump Installation Permit  
Hawaiian Electric Company Cooling Wells, Campbell Industrial Park, Oahu  

Applicant: Hawaiian Electric Company  
Landowner: Same  

Action Requested: Approval of a water use, well construction, and pump installation permit to drill and test, install pumps, and to use 14,400,000 gallons per day from four Hawaiian Electric Company Cooling Wells (Well Nos. 1806-15 to 18) for industrial cooling.


Project Location/Tax Map Key: The proposed wells are located at Campbell Industrial Park, at Tax Map Key: 9-1-14:14, Oahu.

Well Description (typical):

- Ground elevation: 16 ft.
- Casing diameter: 16 inches
- Solid casing depth: 50 ft.
- Screen casing depth: 120 ft.
- Open hole: none
- Total depth: 120 ft.
- Grouted annulus: 0 to 45 ft.

Impact on Surrounding Wells: No adverse impacts are expected.

Water Availability: The wells will be located in the seawater aquifer, Caprock Subarea. Sustainable yield of the seawater aquifer has not been determined. Water use permits for 11,784 mgd from the aquifer have been issued to date, mainly for industrial cooling and firefighting.

Public Notice: In accordance with DLNR Administrative Rules, a public notice was published in the Star Bulletin on July 3 and 10, 1992. In addition, copies of the public notice were sent to the Mayor's office, the County Council, the Department of Health, the Department of Hawaiian Home Lands, the Office of Hawaiian Affairs, the State Historic Preservation Division, the Honolulu Board of Water Supply, and to other interested parties. Written comments to the proposed permit were to be submitted to the Commission by July 22, 1992. There were no objections to the application.
RECOMMENDATION:

That the Commission approve the issuance of a water use permit to Hawaiian Electric Company to use 14,400,000 gallons per day of seawater for industrial cooling, subject to the following conditions:

1. The water use authorized by the permit must be for the reasonable-beneficial use described in the permit.
2. The proposed use shall not adversely affect existing or future legal uses of water in the area, including any surface water or established instream flow standards.
3. Modification of any permit condition shall be approved by the Commission.
4. The applicant shall comply with all applicable laws, rules, and ordinances.
5. The applicant shall provide and maintain an approved meter or other appropriate device or means for measuring and reporting total water usage. Water usage shall be measured on a monthly basis and reported to the Commission.
6. The permit may be revoked if work is not started within six months of the date of issuance or if work is suspended or abandoned for six months. The work proposed in the permit application shall be completed within two years from the date of permit issuance.
7. The permit shall be subject to review by the Attorney General.

Respectfully submitted,

RAE M. LOUI
Deputy Director

WILLIAM W. PATY, Chairperson

Attach.

APPROVED FOR SUBMITTAL:
HECO Cooling Wells
(Well Nos. 1806-15 to 18)
HECO Cooling Wells
(Well Nos. 1806-15 to 18)
PUBLIC NOTICE

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COMMISSION ON WATER RESOURCE MANAGEMENT

[Signature]
RAE M. LOUI
WILLIAM W. PATY
Chairperson

Dated: JUN 25 1992

Publish in: Honolulu Star Bulletin issues of July 3 and 10, 1992
WELL ABANDONMENT REPORT

Well Name or Location: 

State Well No.: 

Tax Map Key: 

Date work completed: 

Form completed by: 

Land Owner: 

Applicant: 

Drilling Contractor: 

Measured Depth: __ ft. (blank csg.) 

Measured Depth: __ ft. (bottom of csg.) 

Measured Depth: __ ft. (top of sandfill) 

Measured Depth: __ ft. (total depth of well) 

Finished Grade El.: __ ft. 

Check material used: 

□ Cement 

□ Sand/Cement 

Sand/Cement ratio: __/1 

(Return completed form to the Division of Water and Land Development, P.O. )
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COMMISSION ON WATER RESOURCE MANAGEMENT

RAE M. LOUI
WILLIAM W. PATY
Chairperson

Dated: JUN 25 1992

Publish in: Honolulu Star Bulletin issues of July 3 and 10, 1992
STATE OF HAWAII
REQUISITION & PURCHASE ORDER

DEPARTMENT OF LAND AND NATURAL RESOURCES

NOTICE TO VENDORS

Conditions of purchase are listed on the back side of this purchase order. Please read carefully. Payments may be delayed if all steps are not followed.

Hawaii Newspaper Agency
Honolulu Star Bulletin

The State of Hawaii is an EQUAL EMPLOYMENT OPPORTUNITY and AFFIRMATIVE ACTION employer. We encourage the participation of women and minorities in all phases of employment.

QUAN. UNIT DESCRIPTION OBJECT UNIT PRICE AMOUNT

PUBLIC NOTICE - Application for a Water Use Permit - Pearl Harbor WMA, Oahu

Publish in issues of XXXX July 3 & 10, 1992

See attached notice.

587-0216

592

01 621 G 92 044 C 4000 0726 000000 00 070 $400.00

COPY #1 - VENDOR

STATE ACCOUNTING FORM C-03
JULY 1, 1993 (REVISED)
CONDITIONS - READ CAREFULLY

1. Prices include delivery charges unless otherwise stated.

2. Show purchase order number, date, appropriation symbol, and discounts allowed on all invoices.

3. The State reserves the right to reject any items supplied that are not in accordance with specifications even though payment has been made in order to obtain discounts.

4. This is not a purchase order unless assigned a P.O. number and authenticated by authorized signature.

5. Send original and three (3) copies of invoice. (The Original invoice is required under sections 40-56 and 40-57, Hawaii Revised Statutes, before payments can be made.)

6. Vendor and purchaser recognize that in actual economic practice, overcharges resulting from antitrust violations are in fact usually borne by the purchaser. Therefore, vendor hereby assigns to purchaser any and all claims for such overcharges as to goods and materials purchased in connection with this order or contract, except as to overcharges which result from antitrust violations commencing after the price is established under this order or contract and which are not passed on to the purchaser under an escalation clause.
# State of Hawaii
## COMMISSION ON WATER RESOURCE MANAGEMENT
### Department of Land and Natural Resources
#### Division of Water Resource Management

**APPLICATION FOR WATER USE PERMIT**
- [ ] GROUNDWATER  
- [ ] SURFACE WATER

**INSTRUCTIONS:** Please print or type and send completed application with attachments to the Division of Water and Land Development, P.O. Box 573, Honolulu, Hawaii 96809. Application must be accompanied by a non-refundable filing fee of $125.00 payable to the Department of Land and Natural Resources. (Filing fee waived for government agencies.) If necessary, phone 548-1542. Hydrology/Geology Section for assistance.

### 1. WATER MANAGEMENT AREA
- Pearl Harbor Water Management Area, Caprock Aquifer, Malakole Sector

### 2. (a) WELL/DIVERSION OWNER:
- **Firm Name:** Hawaiian Electric Company
- **Contact Person:** [Redacted]

### (b) LANDOWNER:
- **Firm Name:** Hawaiian Electric Company
- **Contact Person:** [Redacted]

### 3. SOURCE TYPE:
- [ ] Spring
- [ ] Dike-confined
- [ ] Stream
- [ ] Perched
- [ ] Basal
- [ ] Caprock

### 4. SOURCE NAME AND NUMBER
- See well permit submitted with this application
- **(well or stream diversion name/number)**

### 5. SOURCE LOCATION:
- **Island:** Oahu
- **Tax Map Key:** 9-1-14:14
- **Address:** [Redacted]

(Attach a USGS map (scale 1"=2000') and property tax map showing source location referenced to established property boundaries.)

### 6. LOCATION OF PROPOSED WATER USE (if different from #5)
(Indicate location of water use on same map showing source location.)

### 7. QUANTITY OF WATER REQUESTED
- **14,400,000 gallons per day**

### 8. QUALITY OF WATER REQUESTED (check appropriate box)
- [ ] Fresh
- [ ] Brackish
- [ ] Salt
- [ ] Potable
- [ ] Non-Potable

### 9. PROPOSED USE
- [ ] Municipal (including hotels, stores, etc)
- [ ] Military
- [ ] Domestic (individual, noncommercial water sys.)
- [ ] Industrial
- [ ] Irrigation (specify)
- [ ] Other (specify)

### 10. DESCRIBE ANY POTENTIAL RESTRICTIONS ON USE (i.e., instream standards, seasonal variations)
- None

### 11. PROPOSED TIME OF WATER WITHDRAWAL OR DIVERSION
- **24 hrs. a day**

### 12. PROPOSED METHOD OF TAKING THE WATER
- [ ] Artesian Flow
- [ ] Diverted Flow
- [ ] Centrifugal Pump
- [ ] Submersible Pump
- [ ] Vertical Turbine Pump

### 13. NO. OF RESIDENTIAL OR COMMERCIAL UNITS TO BE SERVED (specify)
- **NA**

### 14. TOTAL ACRES PROPOSED FOR IRRIGATION
- Type of Crop

### 15. REMARKS, EXPLANATIONS
(if more space is needed, continue on back side)

---

**Owner (print):** Hawaiian Electric Co.
**Signature:** [Redacted]
**Date:** 7/22/92

**Landowner (print):** Hawaiian Electric Co.
**Signature:** [Redacted]
**Date:** 7/22/92

---

For Official Use Only:
**Date Received:** [Redacted]
**Hydrologic Unit:** [Redacted]
**Diversion Works No.:** 1806-156.18
**State Well No.:** [Redacted]

---

HECO 140 WIRE
Four wells and pumps will be used to supply 14.4 MGD for cooling purposes. Heated effluent will be reinjected at a depth interval of approximately 200 to 400 feet on site, approximately 1500 feet makai (west) of the production wells.
WATER USE PERMIT NO. 176

This report has been prepared in accordance with 13-171-22(b) of the Hawaii Revised Statutes requiring a 20-year review of issued water use permits to determine permit compliance. Following is a summary of permit information, site characteristics, methodology, findings, and recommendations for this State permit file.

Permit Information

<table>
<thead>
<tr>
<th>Permit Information</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water User:</td>
<td>Hawaiian Electric Company</td>
</tr>
<tr>
<td>Landowner of Source:</td>
<td>Hawaiian Electric Company</td>
</tr>
<tr>
<td>Permitted Withdrawal Rate:</td>
<td>14.40 mgd (Based upon a 12-month moving average)</td>
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<tr>
<td>Water Management Area:</td>
<td>Malakole</td>
</tr>
<tr>
<td>Island:</td>
<td>Oahu</td>
</tr>
<tr>
<td>Aquifer Sector/System:</td>
<td>Ewa Caprock/Malakole</td>
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<tr>
<td>System Sustainable Yield:</td>
<td>1000 mg/l</td>
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<tr>
<td>Water Type:</td>
<td>Salt</td>
</tr>
<tr>
<td>Original CWRM Date:</td>
<td>August 14th, 1992</td>
</tr>
<tr>
<td>Standard Conditions:</td>
<td>1, 4, 8, 10, 14, 20, 26</td>
</tr>
<tr>
<td>Special Conditions:</td>
<td>None</td>
</tr>
</tbody>
</table>

Water Source

<table>
<thead>
<tr>
<th>Water Source Details</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>State Well Number(s):</td>
<td>1806-15, 1806-16, 1806-17, 1806-18</td>
</tr>
<tr>
<td>Well Name:</td>
<td>HECO Cooling</td>
</tr>
<tr>
<td>Water Source TMK Number(s):</td>
<td>1st Division, 9-1-014:014</td>
</tr>
<tr>
<td>State Land Use Classification(s):</td>
<td>Urban</td>
</tr>
<tr>
<td>County Zoning Classification(s):</td>
<td>I-2</td>
</tr>
<tr>
<td>Geographical Coordinates:</td>
<td></td>
</tr>
<tr>
<td>Well No. 1806-15</td>
<td>Latitude 21° 18' 24.4” North</td>
</tr>
<tr>
<td></td>
<td>Longitude 158° 06' 19.6” West</td>
</tr>
<tr>
<td>Well No. 1806-16</td>
<td>N/A – Well has not been drilled</td>
</tr>
<tr>
<td>Well No. 1806-17</td>
<td>N/A – Well has not been drilled</td>
</tr>
<tr>
<td>Well No. 1806-18</td>
<td>N/A – Well has not been drilled</td>
</tr>
</tbody>
</table>
End Use

End Use TMK Number(s): 1st Division, 9-1-014:014
State Land Use Classification(s): Urban
County Zoning Classification(s): I-2
Beneficial Use Explanation: Use for industrial cooling water

Background Information

Water Use Permit 176 was approved during the August 14th, 2006 Commission on Water Resource Management meeting. This water source has not yet been put into use by Hawaiian Electric Company. As such, there are no water use or salinity records on file for any of the wells. Standard conditions 1, 4, 8, 10, 14, 20 & 26 are the governing conditions for this water use permit. A complete list of all standard and special conditions is given in the permit file.

Field Investigation Information

Contact: Robert Isler
Site Address: Brown and Caldwell conducted a field investigation on March 18th, 2008 from 1:00 p.m. until 2:00 p.m. with Mr. Alvin Kurisu, who is an associate of Mr. Robert Isler. During this time, type of water usage was verified, GPS coordinates of well head(s) were recorded, and property TMK information was verified. The wellhead and water usage area were visually inspected to assess compliance with permit conditions. Visual inspection of water loss/waste was limited to outdoor areas within the usage boundary. Reference the TMK and GIS maps in the permit file for a visual representation of the site.

Summary of Findings for Water Use Permit No. 176

Of the four wells governed by Water Use Permit 176, only State Well No. 1806-15 has been drilled. At the time of this report, the other three wells were not in existence. State Well No. 1806-15 sits on TMK parcel 9-1-014:014 at 21° 18' 24.4" N, 158° 06' 19.6" W, with a real time accuracy of ±27 feet. The wells were planned to supply cooling tower water to a proposed HECO facility in the mid-1990's. Reference the Appendix for photographs of State Well No. 1806-15.

The following are a list of standard condition(s) that the permittee is found to be in non-compliance with:
The applicant shall provide and maintain an approved meter or other appropriate device or means for measuring and reporting total water usage. Water usage shall be measured on a monthly basis and reported to the Commission.

Since water use is not being reported to the Commission, the permittee is found to be in violation of Standard Condition (10). Note that this particular variation of the condition does not mandate salinity reporting.

The permit may be revoked if work is not started within six months of the date of issuance or if work is suspended or abandoned for six months. The work proposed in the permit application shall be completed within two years from the date of permit issuance.

Since it has been over 15 years since the date of permit issuance and the work proposed in the permit application is still not complete, the Commission has the right to revoke WUP 176 if deemed necessary.

Recommendations

- Address the following discrepancies between the Commission’s electronic database and actual field investigation findings:
  - State land use and county zoning classifications
- Address violation of Standard Condition (10) regarding non-reporting of water use
- Since work has not been completed within two years of permit issuance, address the stipulations given in Standard Condition (20) and determine if the permit should be revoked.
20-Year Water Use Permit Review
Water Use Permit No. 176

APPENDIX

Field Investigation Photographs
Figure 1 – State Well No. 1806-15

Figure 2 – Well shaft for State Well No. 1806-15
Water Use Permit Survey
(Please complete one survey form for each WUP)

Contact Information (of the person who will be present at site visit):
Name: Robert Isler

Best time to reach for phone interview: 7:00 am - 4:00 pm  M-F

Property Information (of the water use/well location):
Address: 91-196 Hauula St
City: Kapolei,HI Zip: 96707

Well Location TMK (list all if multiple wells present): 9-1-14:14
Water Use TMK (list all if used on multiple lots): 9-1-14:14

Water Use/Well Information:
Is the water source currently in use? Yes ☐ No ☒
If no, please explain: Permits were obtained for power plant development, which was deferred until 2009. The permits for wells 1806 - 16 to 18 were canceled by Curta on March 1, 2006.

What are you currently using the water for? (example: "Use for 45 acres of diversified agriculture and 3 residences"): The water is not currently being used. A new request for well 4 pump permits will be submitted in 2008 in conjunction with the planned power generating station.

Is a flow meter installed and working properly? Yes ☐ No ☒
If no, please explain: Well not used, well drilled and tested, but pump never installed

Do you submit monthly water use reports to the State? Yes ☐ No ☒
If no, please explain: No water currently being used

Field Investigations:
A representative from Brown and Caldwell will be visiting wells in your area over the next several months between the times of 9:00 am and 5:00 pm. Each site investigation will take approximately 1-2 hours. Please indicate up to three potential days of the week and availability times for an on-site inspection of the well location and verification of water use compliance. The permit holder must provide Brown and Caldwell with at least five (5) working days notice of the need to reschedule.

Option #1 Date (M-F): 11/17/08 Time: 9:00 am ☒ 12:00 pm ☐ 3:00 pm ☐
Option #2 Date (M-F): 11/24/08 Time: 9:00 am ☒ 12:00 pm ☐ 3:00 pm ☐
Option #3 Date (M-F): 11/31/08 Time: 9:00 am ☒ 12:00 pm ☐ 3:00 pm ☐

Once this survey is returned, a Brown and Caldwell representative will be contacting you to conduct a phone interview and finalize the exact date and time of your field investigation. Please fax/mail completed surveys by December 12th, 2007 and direct any questions related to this survey to Mr. Milo Smith of Brown and Caldwell at:
1099 Alaakea Street, Suite #2400
Honolulu, HI 96813
Tel: (808) 203-2661
Fax: (808) 533-0226
mcsmith@brwncald.com

For Official Use Only
Received: 1/2/09 Information Updated: 1/4/09 Phone Interview Complete: 3/11/09
Notes/Comments: ___________________________________
Phone Interview

WUP Number: 176  Well Number(s): 1306-15 to -18

Contact Name: Robert Tyler  Phone Number: __________

Attempt #1: Date/Time: 3/7/08 (2:00)  Result: Left Message
Attempt #2: Date/Time: 3/11/08 (1:00)  Result: Returned Call

Well Location TMK(s): 9-1-014:014
Water Use TMK(s): 9-1-014:014

Water Source Address: [Redacted]
City: [Redacted]

Currently using water source?  Yes  No  X

How often is the water source being used?  Daily  Weekly  Monthly  N/A - Not in use

How long have you been using this water source?:  Not in use

Has there been any rezoning of the water source/water use properties?  Yes  No  X

If no, explain:

Have you reported the rezoning to the State?  Yes  No  No  N/A  X

Scheduled field investigation day/time: 3/18/08 @ 11:00

Meeting w/ Alvin Kurisu at the security gate
220-3560 (cell)

Notes (Special directions, site conditions, potential hazards, general notes, etc.):

Comments To Make:
• Although we prefer that you do not change your scheduled field investigation time, if you require a reschedule, you must provide Brown and Caldwell with at least five (5) working days notice of the need to reschedule.
• A representative from Brown & Caldwell will be making a reminder phone call to you sometime during the week prior to your scheduled field investigation.
• It is very important that you provide access to the site at the day and time agreed upon. Due to a very tight schedule, if you fail to provide access at the agreed upon time and/or do not reschedule with at least a five (5) working day notice, a makeup date will not be allowed.
• If for some reason you don't know where your well head is located, it would be a good idea to locate it prior to your field investigation to help make the visit go quickly and smoothly.

Interviewed By: M.S.  Date: 3/11/08  Time: 11:00
Field Investigation Checklist

WUP Number: 176
Well Number(s): 1806-15

Water Source
Well Location TMK(s): 9-1-014
Well Head GPS Coordinates: Latitude: 21° 18' 24.4" N Longitude 106° 06' 19.6" W
Well Type: Drilled, No Pump Installed
Currently using water source? Yes ☐ No ☒
Notes/Comments: ____________________________

Is there a flow meter installed? Yes ☐ No ☒
Is the flow meter operational? Yes ☐ No ☒
Notes/Comments: ____________________________

Water Use
Water Use TMK(s): 9-1-014
What is the water being used for? Water not used
Is the water being used within the permitted boundaries? Yes ☐ No ☒
If no, explain: N/A - Not Used
Is there any observed wasting of water or water loss? Yes ☐ No ☒
If no, explain: ____________________________
Are the permit conditions being complied with? Yes ☐ No ☒
If no, explain: ____________________________

Other
Photographs of: Water Source ☒ Water Meter ☐ Usage Area ☐ Pump/Motor ☐
General Notes/Comments: Only Well No. 1806-15 has been drilled; wells were for a new HELO Facility that was suspended.
No water being used from 1806-15.

Investigated By: M.S. Date: 3/13/06 Time: 1:00

[Notes and Comments added by the investigator]
**Standard Conditions List**

1. The water described in this water use permit may only be taken from the location described and used for the reasonable beneficial use described at the location described above. Reasonable beneficial uses means "the use of water in such a quantity as is necessary for economic and efficient utilization, which is both reasonable and consistent with State and County land use plans and the public interest." (HRS § 174C-3)

2. The right to use ground water is a shared use right.

3. The water use must at all times meet the requirements set forth in HRS § 174C-49(a), which means that it:
   a. Can be accommodated with the available water source;
   b. Is a reasonable-beneficial use as defined in HRS § 174C-3;
   c. Will not interfere with any existing legal use of water;
   d. Is consistent with the public interest;
   e. Is consistent with State and County general plans and land use designations;
   f. Is consistent with County land use plans and policies; and
   g. Will not interfere with the rights of the Department of Hawaiian Home Lands as provided in Section 221 of the Hawaiian Homes Commission Act and HRS § 174C-101(a).

4. The ground-water use here must not interfere with surface or other ground-water rights or reservations.

5. The ground-water use here must not interfere with interim or permanent instream flow standards. If it does, then:
   a. A separate water use permit for surface water must be obtained in the case an area is also designated as a surface water management area;
   b. The interim or permanent instream flow standard, as applicable, must be amended.

6. The water use authorized here is subject to the requirements of the Hawaiian Homes Commission Act, as amended, if applicable.

7. The water use permit application and submittal, as amended, approved by the Commission at its <Insert Date> meeting are incorporated into this permit by reference.

8. Any modification of the permit terms, conditions, or uses may only be made with the express written consent of the Commission.

**Variations of Standard Condition (8) are as follows:**
   i. Modification of any permit condition shall be approved by the Commission. Modification of any permit condition without notification may result in the revocation of the water use permit.
9. This permit may be modified by the Commission and the amount of water initially granted to the permittee may be reduced if the Commission determines it is necessary to:
   a. Protect the water sources (quantity or quality);
   b. Meet other legal obligations including other correlative rights;
   c. Insure adequate conservation measures;
   d. Require efficiency of water uses;
   e. Reserve water for future uses, provided that all legal existing uses of water as of June, 1987 shall be protected;
   f. Meet legal obligations to the Department of Hawaiian Home Lands, if applicable; or
   g. Carry out such other necessary and proper exercise of the State’s and the Commission's police powers under law as may be required.

Prior to any reduction, the Commission shall give notice of its proposed action to the permittee and provide the permittee an opportunity to be heard.

10. An approved flowmeter(s) must be installed to measure monthly withdrawals and a monthly record of withdrawals, salinity, temperature, and pumping times must be kept and reported to the Commission on Water Resource Management on forms provided by the Commission on a monthly basis (attached).

Variations of Standard Condition (10) are as follows:
   i. The applicant shall keep monthly pumpage estimates to be submitted annually to the Commission.
   ii. An approved flowmeter(s) need not be installed to measure monthly withdrawals and a monthly record of withdrawals, salinity, temperature, and pumping times must be kept and reported to the Commission on Water Resource Management on forms provided by the Commission on a yearly basis (attached).
   iii. An approved flowmeter(s) must be installed to measure withdrawals and a monthly record of withdrawals, water-levels, salinity, and temperature must be kept and reported to the Commission on a monthly basis in accordance with the Commission's September 16, 1992 action on reporting requirements.
   iv. Approved flowmeters must be installed to measure monthly withdrawals and a monthly record of withdrawals must be kept and reported to the Commission on Water Resource Management on a monthly basis.
   v. An approved flowmeter(s) must be installed to measure monthly withdrawals and a monthly record of withdrawals, salinity, temperature, and pumping times must be kept and reported to the Commission on Water Resource Management on forms provided by the Commission on a quarterly/yearly basis (attached).
   vi. An approved flowmeter shall be installed to measure water withdrawals.
   vii. An approved flowmeter(s) must be installed to measure withdrawals; and a record of the withdrawals must be kept and reported to the Department of
Land and Natural Resources, Division of Water and Land Development, P.O. Box 373, Honolulu, HI 96809, on a **monthly** basis.

viii. Although not stated as a condition of the permit § 13-168-7 HAR requires you to keep a record of your **monthly** total pumpage, water level, salinity, and water temperature. This information **must be** submitted to the Commission on a regular monthly basis using the enclosed water use report form.

ix. An approved flowmeter shall be installed and the withdrawal from Well 1851-73 shall be recorded and reported to DLNR on a **monthly** basis by the owner and/or operator of the well.

x. The withdrawals from these wells shall be recorded and reported to the DLNR on a **monthly** basis by the BWS.

xi. The applicant shall provide and maintain an approved meter or other appropriate device or means for measuring and reporting water usage on a **monthly** basis.

xii. The applicant shall provide and maintain an approved meter or other appropriate device or means for measuring and reporting water usage. Water usage shall be measured on a **monthly** basis and reported to the Commission.

xiii. The applicant shall provide and maintain an approved meter or other appropriate device or means for measuring and reporting water usage. Water usage shall be measured on a **monthly** basis and reported to the Commission along with water level and salinity measurements.

11. This permit shall be subject to the Commission’s periodic review of the **<Aquifer>** Aquifer System’s sustainable yield. The amount of water authorized by this permit may be reduced by the Commission if the sustainable yield of the **<Aquifer>** Aquifer System, or relevant modified aquifer(s), is reduced.

12. A permit may be transferred, in whole or in part, from the permittee to another, if:
   a. The conditions of use of the permit, including, but not limited to, place, quantity, and purpose of use, remain the same; and
   b. The Commission is informed of the transfer within ninety days.

Failure to inform the department of the transfer invalidates the transfer and constitutes a ground for revocation of the permit. A transfer, which involves a change in any condition of the permit, including a change in use covered in HRS § 174C-57, is also invalid and constitutes a ground for revocation.

13. The uses(s) authorized by law and by this permit do not constitute ownership rights.

14. The permittee shall request modification of the permit as necessary to comply with all applicable laws, rules, and ordinances that will affect the permittee’s water use.

15. The permittee understands that under HRS § 174C-58(4), that partial or total nonuse, for reasons other than conservations, of the water allowed by this permit for a period of four (4) continuous years or more may result in a permanent revocation as to the amount of water not in use. The Commission and the permittee may enter
into a written agreement that, for reasons satisfactory to the Commission, any period of nonuse may not apply towards the four-year period. Any period of nonuse which is caused by a declaration of water shortage pursuant to section HRS § 174C-62 shall not apply towards the four-year period or forfeiture.

16. The permittee shall prepare and submit a water shortage plan within 30 days of the issuance of this permit as required by HAR § 13-171-42(c). The permittee's water shortage plan shall identify what the permittee is willing to do should the Commission declare a water shortage in the <Aquifer>Ground-Water Management Area.

17. The water use permit shall be subject to the Commission's establishment of instream standards and policies relating to the Stream Protection and Management (SPAM) program, as well as legislative mandates to protect stream resources.

18. The permittee understands that any willful violation of any of the above conditions or any provisions of HRS § 174C or HAR § 13-171 may result in the suspension or revocation of this permit.

19. Special conditions in the attached cover transmittal letter or attached exhibits are incorporated herein by reference.

20. If the ground-water source does not presently exist, the new well shall be completed, i.e. able to withdraw water for the proposed use on a regular basis, within twenty-four (24) months from the date the water use permit is approved.

**Variations of Standard Condition (20) are as follows:**

i. The permit may be revoked if work is not started within six months of the date of issuance or if work is suspended or abandoned for six months. The work proposed in the permit application shall be completed within two years from the date of permit issuance.

21. This permit may not be transferred or the use rights granted by this permit sold or in any other way alienated. Pursuant to HRS § 174C-59 and the requirements of Chapter 174C, the Commission on Water Resource Management has the authority to allow the transfer of the permit and the use rights granted by this permit in a manner consistent with HRS § 174C-59. Any such transfer shall only occur with the Commission's prior express written approval. Any sale, assignment, lease, alienation, or other transfer of any interest in this permit shall be void.

22. The water use permit granted shall be an interim water use permit, pursuant to HRS § 174C-50. The final determination of the water use quantity shall be made within five (5) years of the filing of the application to continue the existing use.

23. The water use permit shall be issued only after agricultural review.

24. That scheduled adjustments to Oahu Sugar Co. permitted use shall be initiated upon discontinuance of agricultural uses.
25. The issuance of this permit was approved by the Commission on Water Resource Management at its meeting on <Insert Date>.

26. The permit shall be subject to the review by the Attorney General.

27. The permit holder may be required to relinquish this permit at any time or specified time after issuance to the Board of Land and Natural Resources in accordance with Chapter 166 of Title 13.

28. The applicant shall obtain the necessary land acquisition documents from the Hawaii Housing Authority.
Special Conditions List

1. Should an alternate permanent source of water be found for this use, then the Commission reserves the right to revoke this permit, after a hearing.

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.

3. The applicant shall contact the Environmental Management Division, State Department of Health, at 586-4304, concerning “GUIDELINES APPLICABLE TO GOLF COURSES IN HAWAII” date <Insert Date & Version #>.

4. Standard Condition 10 is emphasized, to report consumption on a regular basis.

5. The applicant may continue this existing use of ground water within the limits approved by the Commission, and the actual issuance of the interim permit shall not be a reason to interrupt this existing use.

6. This interim water use permit shall cease to become interim and shall be subject to HRS § 174C-55 upon administrative review of the quantity within five (5) years, provided that all conditions of the use (including the review of the quantity which shall not be greater than the amount initially granted) remain the same. Enforcement of the allocation limit shall be stayed pending staff’s review and issuance of a permanent water use permit.

7. As-built drawings of the well and pump, and a complete pumping test record shall be submitted within sixty (60) days.

8. In the event the pump tests show that aquifer boundary conditions do not support the requested withdrawals, the Commission reserves the right to amend this permit, after a hearing, to a level that is supported by the pump tests.

9. The existing use may be continued within the levels approved by the Commission, and the actual issuance of the permit document shall not be a reason to interrupt the approved level of use.

10. The filing of an application by Kukui, Inc. for a new or modified water use permit for the Kualapuu Aquifer in excess of 2.0 mgd (total system withdrawal) shall be just cause for re-consideration of this interim permit by the Commission.

11. Upon completion of a new transmission line for the transport of water use by Well #17, the permit shall be modified to reduce the allocation amount by the additional 79,220 gallons per day allocated for use of the Molokai Irrigation System.

12. Within six (6) months from the date of approval of a water use permit for the well, the applicant shall conduct a feasibility study and submit a report describing...
alternative sources of nonpotable water for irrigation uses at the resort area. It is suggested that the developer consider use of dual lines in the subdivisions so that effluent may be used in the existing reuse system. Another consideration is the development of brackish water wells in the Kaluakoi Aquifer system for mixing with the effluent generated at the resort.

13. Within six (6) months from the date of approval of a water use permit for the well, the application shall evaluate the filter back discharges into Kakaako Gulch to determine if excessive preventable waste is occurring and identify possible measures to eliminate or reduce such waste. The evaluation shall be conducted in cooperation with the Commission staff and staff of the Department of Health's Safe Drinking Water Branch, which regulates the drinking water system.

14. Within six (6) months from the date of approval of a water use permit for the well, the applicant shall 1) implement a leakage control and detection system and compete repairs to prevent such leakage and 2) implement use of xeriscaping and low-flow fixtures.

15. Action on the future use portion of the water use permit application for Well #17 (Well No. 0901-01) is deferred pending the establishment of existing uses in the aquifer. Kukui Inc.'s application for uses in excess of those uses existing on July 15, 1992 will be considered "new" uses and will be taken up by the Commission as soon as other existing use applications have been decided. In the interim,
   a. The Commission shall recognize that there is disagreement between the applicant's staff calculations of reasonable-beneficial existing use
   b. The Applicant will have the burden of proof to show within six (6) months reasonable-beneficial existing use calculations that support the applicant's request as opposed to staff's calculations.
   c. The Commission's enforcement of the approved existing use allocation will be suspended for six (6) months.

16. The permittee shall submit a notice of intent and written request to continue the use at least ninety (90) days prior to the expiration of the interim five-year permit.

17. The Commission shall delegate to Maui Department of Water Supply the authority to allocate the use of water for municipal purposes, as provided in §174C-48(b).

18. Maui Department of Water Supply shall be exempt from the requirements for permit modifications, as provided in §174C-57(c).

19. The permittee must meter water use and monitor chloride concentrations on a monthly basis and submit monthly reports of water use and chloride concentrations to the Commission.

20. Standard Condition 16 is waived for saltwater wells.

21. The permit will be revoked if (1) stream monitoring shows that pumping the well reduces stream flow, or (2) the electromagnetic resistivity survey indicates that the
well was drilled into a dike compartment, unless the applicant submits a petition for an amendment to the interim instream flow standard with the well completion report. However, no use of the water may be made without a Pump Installation Permit, which cannot be issued during consideration of the amendment of the interim instream flow standard.

22. The applicant shall present the results of the electromagnetic resistivity survey, pump tests, and stream monitoring to a community meeting as well as to the Commission.

23. A final determination of water use quantity shall be made within five (5) years of the filing date of the application (<Insert Date>) to continue existing use.

24. The applicant shall implement, by December 31, 1995, a biological and hydraulic monitoring program for a minimum 2-year period that: 1) documents the existing operating procedure, 2) seeks to identify the impacts of all operating alternatives on Waikolu Stream, and 3) seeks to identify the effectiveness of weir modifications (Dam No. 1). This program shall incorporate the three new wells, Wells #4-6 (Well Nos. 0855-06, -05, &-04, respectively), which may be pumped within the approved limits, for monitoring and testing purposes only. Further, semi-annual reports summarizing data and preliminary findings shall be submitted to the Commission. It is suggested that the Department of Agriculture work with the State Division of Aquatic Resources and other affected agencies to prepare the monitoring program in light of the difficult technical questions raised by this application. A particular concern is the coordination of this monitoring program with the ongoing National Park Service study by Anne Brasher. A draft of this plan shall be submitted to the Commission staff within ninety (90) days for technical review and comment. Results of the monitoring program shall be used to make recommendations to the Commission on any additional use of the wells, and shall be made readily available to all interested parties.

25. That the Commission approves the well construction permit for the Kamiloloa-Waiola Well (Well No. 0759-01), subject to the standard well construction conditions and the special conditions for the pumping well for the aquifer tests.

26. That the Commission authorizes the Chairperson to approve and issue a pump installation permit upon acceptance of adequate pump test result, subject to the standard pump installation conditions.

27. Should the well be used for back-up domestic supply, applicant is advised to contact DOH or otherwise ensure safe drinking water quality is maintained.

28. The applicant shall follow the agreed monitoring plan.

29. If pesticides used by the applicant are found in ground or surface water and can be traced to the applicant's use, the CWRM may revoke the permit immediately upon such finding.
30. Issuance of the interim permit shall be withheld until the reservation of water for DHHL is set by rule. Applicant may continue this existing use within the approved limits.

31. The applicant shall submit well modification and pump installation permit applications for administrative approval by chairperson prior to beginning any work required to complete well.

32. Should any stream flow impacts result from use, petition to amend interim instream flow standards shall be submitted.

33. Should any dewatering result from use, pumping shall cease immediately.

34. Shall submit accurate schematic diagram of distribution system for the battery of 5 wells.

35. Shall be subject to a 6-month independent audit & monitoring.

36. Final pump capacity shall be determined from pump test results & approved administratively by signature of chair.

37. The permittee shall seek and submit to the Commission within ninety (90) days written confirmation from the Department of Land Utilization of the non-conforming use.

38. Pumping shall cease immediately if the chloride reports show that the brackish water developed in the well exceeds 1,000 mg/l of chloride, unless a variance from the chloride limit has been granted. The authority to approve future variance requests is delegated to the chairperson.

39. The duration of the interim permit shall be:
   a. To July 1, 2006, or
   b. Until treated wastewater is available and acceptable for use, or
   c. Until such time that a significant change in permitted, actual, or projected uses or water supply occurs.

40. Action on any interim permit may be initiated by the Commission or any permittee upon letter request or pursuant to §174C-57 Haw. Rev. Stat. (Modification of permit terms).

41. This permit is approved under the assumption that wastewater will become available for reuse as an alternative supply source.

42. Require adherence to the chloride sampling protocol and the submittal of weekly chloride data. The authority to approve variances from the weekly reporting requirement is delegated to the Chairperson.

43. Require adherence to the Conservation Conditions.
44. In the event a water shortage is declared by the Commission, permittees in the <Insert Aquifer System> shall comply with the <Insert Aquifer System> water shortage plan adopted by the Commission.

45. The permittee shall contact the Department of Health, Clean Water Branch and obtain the necessary discharge permit(s).

46. Permit shall be interim and replaces existing WUP for 2051-07 & 11.

47. Applicant shall submit an acceptable archaeological inventory survey report to DHP. If historic sites affected, a plan to mitigate these affects must be accepted by DHP and completed by applicant.

48. Should the well be used for back-up domestic supply, applicant is advised to contact DOH or otherwise ensure safe drinking water quality is maintained.

49. (The permittee) may report monthly pumpage on yearly basis.

50. Prior to issuance of any permits, must submit filing fee for after-the-fact pump installation permit.

51. The term of this permit shall be twenty years from the date of issuance of the permit with a five-year Board review to determine compliance with the provisions of the permit.

52. The amount of water to be withdrawn under this permit shall be 0.19 mgd, averaged annually, for irrigation use. This permitted use of 0.19 mgd when added to a preserved use of 0.27 mgd amounts to a total of 0.46 mgd, averaged annually, which may be withdrawn from well 1646-01.

53. The use authorized by the permit must not interfered substantially and materially with existing individual household uses and existing uses.

54. The use of this well shall be subject to the shortage and emergency powers of the Board of Land and Natural Resources (BLNR).

55. This permit may be suspended or revoked, in accordance with Chapter 166.

56. The permit holder may be required to relinquish this permit to BLNR, in accordance with Chapter 166.

57. The withdrawal from Well 1646-10 shall be recorded and reported to DLNR on a monthly basis by the permittee.

58. In the event that emergency water use occurs, the permittee shall notify the Commission in writing within one (1) day of pumping, to inform the Commission as to the nature of the emergency and the expected duration of the emergency. A water
use report shall also be filed pursuant to Standard Condition 10 and Administrative Rule 13-168-7.

59. Note DOH’s requirements related to non-potable water systems (attached to original permit).

60. Standard Condition 16 requiring the submittal of a water shortage plan is waived.

61. All non-potable spigots and piping shall be clearly labeled as “DO NOT DRINK, NON-POTABLE” to prevent direct human consumption.

62. Standard Condition 10 is modified. Due to the inability to take water level measurements, the requirement to measure monthly water levels is waived. In addition, as long as the U.S. Geological Survey is collecting and analyzing the chloride content of the well water, the requirement for the permittee to measure and report chlorides is also waived.

63. Well elevation components must be surveyed by a licensed surveyor and this information must be submitted to commission prior to issuance of permanent permit.

64. The permittee shall obtain approvals from the Department of Health and the U.S. Environmental Protection Agency prior to use of the water.

65. This water use permit, WUP No. <Insert #>, shall supersede WUP No. <Insert #>.

66. WUP No. <Insert #> is revoked.

67. Standard Condition 17 is waived.

68. Standard Condition 22 for interim water use permits shall not apply.

69. To supplement our records, we request that you provide a map of the Galbraith Est. lands west of Wahiawa (2100 ac+) and the associated TMK’s for use area.

70. Deferred action on portion requested for golf course irrigation pending further refinement of irrigation requirement and a feasibility study for utilization of surface water sources, including Wahiawa Reservoir.

71. Written justification be provided for any 'cushion' of 0.5 mgd.

72. The water use permit shall be an interim permit. The duration of the interim permit shall be until treated wastewater is available and acceptable for use. The permittee shall continue discussions with Honolulu Board of Water Supply regarding the use of reclaimed water.

73. The permittee is put on notice that this is a qualified approval in that this permit may be modified or revoked prior to the expiration of the interim permit if the
Commission decides that the use of additional basal ground water for dust control and landscape irrigation is not reasonable-beneficial use.

74. The permittee encouraged to use drought-tolerant landscaping to conserve water.

75. Should the applicant provide written evidence that the county DHCD approves a 201E exemption for the elderly affordable housing project then the applicant may modify a corresponding portion of their existing aquacultural use to be used by the exemption approved project within the Commission approved water use permit limits under recommendation 5.

76. The applicant shall obtain a water lease/permit from Land Division prior to actual use of the well water.

77. Require the permittee to sign a contract by May 14, 1998 with the City Department of Wastewater Management to buy and use 0.400 mgd of R-1 water for a corresponding reduction in allocation for Well Nos. 1900-02, 17 to 20, and 1901-03.

78. Standard Condition 9 is waived.

79. Standard Condition 10 is modified to exempt the permittee from monthly measurements of salinity and temperature.

80. Standard Condition 10 is waived.

81. Applicant must seek a determination from BLNR and Land Mgt Div as to whether water license required. If required, license must be obtained prior to issuance of permit. If not, permit will be issued w/out further action.

82. Commission defers action on use in excess of 452,000 gpd pending additional info from BWS and further staff analysis.

83. The permit shall be subject to the Commission's sustainable yield review by December 1990.

84. The Commission shall delegate to the Honolulu Board of Water Supply the authority to allocate the use of water for municipal purposes, in accordance with §174C-48(b) HRS.

85. Honolulu Board of Water Supply shall be exempt from the requirements of permit modifications as provided in §174C-57.

86. BWS must participate in discussions, to be coordinated by Commission Staff, regarding a monitoring program to address impacts to Kaneohe Bay water quality, prior to any action on applications for future municipal uses.

87. A pump installation permit application must be made and approved prior to the installation of a permanent pump.
88. The water withdrawn shall be 0.7 mgd for municipal use.

89. The installed pump capacity of the well shall not be more than 700 gpm or 1.01 mgd.

90. The term of permit shall automatically expire twelve months from the date of issuance.

91. The Honolulu Board of Water Supply may continue to submit monthly water data on their own form, provided that the data are submitted in a format that is acceptable to the Commission staff.

92. Standard Condition 7 shall not apply.

93. Standard Condition 22 shall not apply.

94. Standard Condition 10 is modified to exempt the permittee from monthly measurements of salinity and temperature.

95. This permit shall be subject to conditions providing for stream restoration if the Commission determines that additional water should be returned to the streams.

96. HECO 1 mgd for industrial use

97. Campbell Estate 1 mgd for municipal use through BWS, by separate agreement with HECO

98. BWS 1 mgd for municipal use.

99. The permit shall be subject to the Commission’s sustainable yield review by <Insert Date>.

100. The applicant shall obtain the current version of the Department of Health’s Guidelines Applicable to Golf Courses in Hawaii. Where relevant and viable, items of the guidelines should be implemented and sustained appropriately. To obtain the current version, contact the Safe Drinking Water Branch, Environmental Management Division at <Contact Information>.

101. The future use portion of the application shall be deferred until existing uses in the Koolauloa area are established.

102. The water to be withdrawn under this permit shall be a total of 0.03 mgd (0.02 mgd preserved plus an additional 0.01 mgd permitted use), averaged annually, for domestic and irrigation use

103. Existing well 1851-09 shall be properly sealed by a licensed drilling contractor. A well modification permit application, enclosed, shall be submitted to the Department for approval of the well sealing. A filing fee for sealing the well will not be required.
104. The permittee is required to test the source using a certified private laboratory and submit the test results to the Commission within three (3) months. The Commission will then forward the results to the Department of Health for their review. The Department of Health recommends that the well be routinely tested for microbiological and chemical parameters thereafter.

105. The permittee is required to submit a completed Registration of Well and Declaration of Water use by <Insert Date>.

106. The permittee shall contact the Department of Health for a written determination on the status of their water system and comply with any Department of Health requirements for monitoring and testing.

107. In the event that the original spring source decontaminates, the new well authorized will be shut down.

108. That within each aquifer the total permitted use shall not exceed the sustainable yield.

109. That any water available for allocation shall be for in-district use.

110. That scheduled reductions to Oahu Sugar Co. permitted use shall be initiated upon final termination of an Osco lease or sub-lease, whichever occurs later.

111. That permits for water use issued in accordance with the proposed schedule shall be interim permits subject to review and adjustment by 1995.

112. That the permit shall be an interim permit for a new use which is afforded to existing users as specified in §13-171-20.

113. That the original allocation of 0.200 mgd shall be taken to hearing for possible revocation at a later date to complete the transfer of the water use permit entirely to Well No. 3407-02. This revocation would reduce the current allocation afforded to the Kunihiro Well (Well No. 3406-06) to zero.

114. This allocation incorporates the unspecified domestic needs of the applicant and therefore necessitates a single meter be installed at the well.

115. Should any impacts to nearby wells or streams be established by the use of this well, the applicant shall address these issues to the satisfaction of the Commission.

116. If an economically feasible nonpotable source is identified, the applicant shall convert to the alternative nonpotable source.

117. The permit shall be subject to the Chairperson's approval of a water use plan recommending possible measures to prevent or minimize saltwater contamination and establish courses of action to follow should the aquifer become to saline to use.
118. Permittee shall provide the necessary end-use information on the 10th residence to allow regulation of the use under Chapter 174C.

119. Standard Conditions 10 & 18 shall not apply.

120. Standard Condition 10 is modified to exempt the permittee from the requirement to install a flowmeter. Salt water withdrawals may instead be estimated based on pumping capacity and run time.

121. The applicant shall review the existing year long period of pumpage and streamflow data and provide analysis on ground and surface water interaction. Deadline is January 25, 1994.

122. The water use permit for Well Nos. 2301-27 to -32 for 0.75 mgd (WUP No. 419) shall be revoked upon issuance of a pump installation permit for the well.

123. The permittee shall use mulching to decrease evaporative losses and manage irrigation scheduling to minimize water demand.

124. The permittee shall submit a detailed agricultural plan to support any future water use permit application for increased agricultural use at this parcel.

125. If not already obtained, the permittee shall seek and obtain any necessary permits from the Department of Health for the proposed discharge to Malaekahana Stream.

126. Standard Condition 10 is modified to waive the requirement for installing a water meter on Well Nos. 2358-21, 22, and 29. The permittee shall install a water meter on Well No. 2358-26 to measure total monthly flow through the discharge line. This quantity should then be assumed to be the rate of natural flow from the other three wells for monthly reporting purposes.

127. The permit shall be effective upon submittal of documentation by Navy that it has met the DOH requirements for a public system.

128. This WUP shall be subject to Army's application for a WUP to reduce the permitted use of the Army's Schofield Shaft (2901-02 to 04, 10) by 0.208 mgd to a new total of 5.648 mgd. The Army's application shall be submitted within 60 days after the approval of this WUP or this WUP shall be void. Approval of the modification request shall be obtained from the CWRM prior to use of Well No. 3100-02 and issuance of this WUP.

129. Navy shall submit an after-the-fact PIPA, and approval of the permit shall be obtained prior to use of the well.

130. The well shall not be used for drinking water purposes unless it is properly tested and treated.
131. This permit is approved subject to reclaimed water becoming a practical alternative and provided that the Department of Health approves the reuse application.

132. Should any opae ula be recovered in the well water, the permittee shall notify the Division of Aquatic Resources and provide specimens to the Division of Aquatic Resources for analysis.

133. If a single meter at the well is used, the Commission shall allow an additional 1,000 gallons per day to the water use permit amount for the domestic needs of two residences, although a permit for individual domestic consumption is not required. Otherwise, the applicant must provide a meter to separately measure the irrigation consumption.

134. This permit is approved under the requirement that conversion to either: 1) treated wastewater becoming available for reuse as an alternative supply source, provided that Department of Health concerns over the use of treated effluent over the potable water aquifer have been addressed; and/or 2) other nonpotable source becoming available will occur in a timely manner.

135. These permits shall be subject to a review of actual use within four years for possible modification of the permitted amount.

136. The permit shall be reviewed in two (2) years for possible additional revocation due to nonuse.

137. The allocation is based on the projects listed in Exhibit 5 (of Item 10 of the May 20, 1998 Staff Submittal), except for the Queen's Beach GC (TMK 139-11-2,3), Lot 9 (TMK 139-17-51), and Varsity Place (TMK 128-24-35).

138. Kamehameha Schools Bishop Estate/Honolulu Board of Water Supply shall transfer the water use permit within ninety (90) days of the effective date of the transfer of the pump station to the Honolulu Board of Water Supply, pursuant to §174C-59 Hawaii Revised Statutes.

139. The permittee shall ensure that the water is recycled by either directing it into the Waiahole Ditch for use by downstream farmers (subject to the approval of the Agribusiness Development Corporation's Board) or into Waikiki Farm's existing irrigation system.

140. The permittee shall file a completed application to modify WUP No. 758 to reduce the allocation by 0.100 mgd within 60 days. If a completed water use permit modification application is not received within 60 days from this submittal's date, then the subject water use permit application (WUPA No. 767) shall be deemed denied without prejudice without the need for another hearing.

141. The water withdrawn shall be for municipal use. No improvements to the existing sources are required as the existing source capacities are greater than the increase.
142. Water license must be determined through LM.

143. Proposed other uses will be considered at a later date.
Hawaiian Electric Company

Gentlemen:

I am pleased to inform you that the Commission on Water Resource Management approved your application for a water use permit for Hawaiian Electric Company Cooling Wells (Well Nos. 1806-15 to 18) at its meeting on August 19, 1992.

The permit will be sent to the Attorney General for review prior to being issued. The approved Commission submittal is attached for your files.

If you have any questions, please call Ms. Rae M. Loui, Deputy Director, at

Very truly yours,

WILLIAM W. PATY

Enc.
Chairperson and Members
Commission on Water Resource Management
State of Hawaii
Honolulu, Hawaii

Gentlemen:

Hawaiian Electric Company
Application for a Water Use, Well Construction, and Pump Installation Permit
Hawaiian Electric Company Cooling Wells, Campbell Industrial Park, Oahu

Applicant: Hawaiian Electric Company
P.O. Box 2750

Landowner: Same

Action Requested: Approval of a water use, well construction, and pump installation permit to drill and test, install pumps, and to use 14,400,000 gallons per day from four Hawaiian Electric Company Cooling Wells (Well Nos. 1806-15 to 18) for industrial cooling.


Project Location/Tax Map Key: The proposed wells are located at Campbell Industrial Park, at Tax Map Key: 9-1-14:14, Oahu.

Well Description (typical):

| Ground elevation: | 16 ft. |
| Casing diameter:   | 16 inches |
| Solid casing depth:| 50 ft. |
| Screen casing depth: | 120 ft. |
| Open hole:         | none |
| Total depth:       | 120 ft. |
| Grouted annulus:   | 0 to 45 ft. |

Impact on Surrounding Wells: No adverse impacts are expected.

Water Availability: The wells will be located in the seawater aquifer, Caprock Subarea. Sustainable yield of the seawater aquifer has not been determined. Water use permits for 11.784 mgd from the aquifer have been issued to date, mainly for industrial cooling and firefighting.

Public Notice: In accordance with DLNR Administrative Rules, a public notice was published in the Star Bulletin on July 3 and 10, 1992. In addition, copies of the public notice were sent to the Mayor’s office, the County Council, the Department of Health, the Department of Hawaiian Home Lands, the Office of Hawaiian Affairs, the State Historic Preservation Division, the Honolulu Board of Water Supply, and to other interested parties. Written comments to the proposed permit were to be submitted to the Commission by July 22, 1992. There were no objections to the application.
RECOMMENDATION:

That the Commission approve the issuance of a water use permit to Hawaiian Electric Company to use 14,400,000 gallons per day of seawater for industrial cooling, subject to the following conditions:

1. The water use authorized by the permit must be for the reasonable-beneficial use described in the permit.
2. The proposed use shall not adversely affect existing or future legal uses of water in the area, including any surface water or established instream flow standards.
3. Modification of any permit condition shall be approved by the Commission.
4. The applicant shall comply with all applicable laws, rules, and ordinances.
5. The applicant shall provide and maintain an approved meter or other appropriate device or means for measuring and reporting total water usage. Water usage shall be measured on a monthly basis and reported to the Commission.
6. The permit may be revoked if work is not started within six months of the date of issuance or if work is suspended or abandoned for six months. The work proposed in the permit application shall be completed within two years from the date of permit issuance.
7. The permit shall be subject to review by the Attorney General.

Respectfully submitted,

RAE M. LOUI
Deputy Director

WILLIAM W. PATY, Chairperson

APPROVED FOR SUBMITTAL:

WILLIAM W. PATY, Chairperson
APPLICATION FOR WATER USE PERMIT

GROUNDWATER or SURFACE WATER

INSTRUCTIONS: Please print or type and send completed application with attachments to the Division of Water and Land Development, P.O. Box 373, Honolulu, Hawaii 96809. Application must be accompanied by a non-refundable filing fee of $113.00 payable to the Department of Land and Natural Resources. (Filing fee waived for government agencies.) If necessary, phone 548-7542. Hydrology/Geology Section for assistance.

1. WATER MANAGEMENT AREA
   Pearl Harbor Water Management Area, Caprock Aquifer, Malakole Sector

2. (a) WELL/DIVERSION OWNER:
   Firm Name: Hawaiian Electric Company
   Contact Person: Mr. Ken Fong
   Address:

   (b) LANDOWNER:
   Firm Name: Hawaiian Electric Company
   Contact Person: Mr. Ken Fong

3. SOURCE TYPE:
   Spring
   Dike-confined
   Stream
   Perched
   Basal
   Caprock

4. SOURCE NAME AND NUMBER
   See well permit submitted with this application (well or stream diversion name/number)

5. SOURCE LOCATION:
   Island: Oahu
   Tax Map Key: 9-1-14:14
   Address: Lot #2997 Hanua Street, Ewa Beach
   (Attach a USGS map (scale 1"=2000') and property tax map showing source location referenced to established property boundaries.)

6. LOCATION OF PROPOSED WATER USE (If different from #5)
   (Indicate location of water use on same map showing source location.)

7. QUANTITY OF WATER REQUESTED
   14,400,000 gallons per day

8. QUALITY OF WATER REQUESTED (check appropriate box)
   Fresh
   Brackish
   Salt
   Potable
   Non-Potable

9. PROPOSED USE
   Municipal (Including hotels, stores, etc)
   Private
   Domestic (Individual, noncommercial water sys.)
   Irrigation (specify)
   Military
   Industrial
   Other (specify)

10. DESCRIBE ANY POTENTIAL RESTRICTIONS ON USE (I.E., INSTREAM STANDARDS, SEASONAL VARIATIONS)
    None

11. PROPOSED TIME OF WATER WITHDRAWAL OR DIVERSION
    24 hrs. a day
    (Indicate hours of operation)

12. PROPOSED METHOD OF TAKING THE WATER
    Artesian Flow
    Diverted Flow
    Centrifugal Pump
    Submersible Pump
    Vertical Turbine Pump

13. NO. OF RESIDENTIAL OR COMMERCIAL UNITS TO BE SERVED (specify)
    NA

14. TOTAL ACRES PROPOSED FOR IRRIGATION
    NA
    Type of Crop

15. REMARKS, EXPLANATIONS
    (If more space is needed, continue on back side)

Owner (print) Hawaiian Electric Co.
Landowner (print) Hawaiian Electric Co.
Signature
Date 5/22/92

For Official Use Only: Hydrologic Unit: Diversion Works No.
Date Received State Well No. 1806-156/18
Date Accepted

[Stamp] OHEO LAND WORKS
MEMO and ROUTE SLIP (ver4/29/10/10)

WCR 2 Check for Well No. _1806-16_ (GW regulation route)

1. From Roy ___ (initial)

**Pump Tests Check (special condition of PIP? Yes/No)**

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
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<tr>
<td>Step-Drawdown Test:</td>
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<tr>
<td>Aquifer Pump Test:</td>
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**Potential Well Interference:**

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<td>Potential Stream Impacts:</td>
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<tr>
<td>Additional Testing or Data Required:</td>
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<tr>
<td>Pump Test Comments Attached:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proposed Pump Capacity is OK:</td>
<td>☑</td>
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</table>

2. **Pump Installation Check**

<table>
<thead>
<tr>
<th></th>
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<th>No</th>
<th>NA</th>
<th>If no, describe deficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>data complete followed Special Cond &amp; Elevations well database updated</td>
<td>☑</td>
<td>☐</td>
<td>☐</td>
<td></td>
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</tbody>
</table>

**ATTACHMENTS FOR ACCEPTANCE:**

1. WCR2 ACCEPTANCE LETTER
2. PUMP INST. COMPLETION CERTIFICATE
3. METER INSTALL. REPORT (IF NECESSARY)
4. WUR FORM (if necessary)
5. USGS MAP UPDATED
6. PARCEL CHECK
7. WELL DATABASE INPUT CHECK
8. PUMP TEST WORKSHEET
9. PUMP As-Built CHECK PRINT

To be sent to driller

To be sent to landowner/operator

Staff internal checks

3. Roy ___ (initial) check (Entered WCR 2/PICC accept date into database)

4. Susan H. ___ (initial) finalize

5. Bill ______ (initial) signature

6. Charley/ Ryan File
Mr. Robert Isler
Hawaiian Electric Company, Inc.

Dear Mr. Isler:

Certificate of Pump Installation Completion for CIP Generating Station Supply Well No. 1
Well No. 1806-16 (TMK 9-1-014:014)

We are pleased to inform you that the Pump Installation work permitted for the CIP Generating Station Supply Well No. 1 (Well No. 1806-16) is complete and acceptable and welcome you as a new member to the community of well owners and ground water users in Hawaii. This certificate of pump installation completion allows you to commence pumping your well for reasonable & beneficial water use.

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

1. If the well is not in use it must be properly capped.

2. 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.

3. In the event that the well operator and/or landowner changes, the Commission shall be notified prior to the change.

4. 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 www.hawaii.gov/dlnr/cwrm/forms.htm.
5. Your approved pump has a capacity of 850 gpm at a head of 200.8 ft. In the future, pump replacements of equal or lesser capacity will not require an additional permit from the Commission, but will require the submission of a Well Completion Report Part II by the licensed pump installer. If the pump replacement is greater than the existing pump, you will need to apply for a new pump installation permit.

6. The landowner shall cause the well operator to maintain the installed meter or other appropriate means for measuring and reporting withdrawals and water levels, and appropriate devices or means for measuring chlorides and temperature. These data shall be measured monthly and reported to the Commission on a monthly basis, on forms provided by the Chairperson (attached), in accordance with §13-168-7, HAR. Blank water use report forms are also available at www.hawaii.gov/dlnr/cwrmlresources_permits.htm

7. The proposed use shall not adversely affect existing or future legal uses of water in the area, including any surface water or established instream flow standards. The authorization to drill a well and/or install a pump shall not constitute a determination of correlative water rights. The landowner and well operator are notified that the quantity of water taken from the well and/or the pump capacity could be reduced by the Commission in the future.

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 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 Ryan Imata of the Commission staff at [redacted]

Sincerely,

[Signature]

WILLIAM M. TAM
Interim Deputy Director

RI:ss
Encl: Water Use Report Forms

c: Beylik Drilling and Pump Service, Inc.
January 18, 2011

Mr. Bill Moore  
Beylik Drilling and Pump Service, Inc.  

Dear Mr. Moore:

Well Completion Report Part II for Well No. 1806-16

We received your Well Completion Report Part II for the CIP Generating Supply Well No. 1 (Well No. 1806-16) on May 5, 2010 and acknowledge that it is complete.

This completes your obligations under the pump installation permit. A certificate of pump installation completion will be issued to the well operator/landowner and you will receive a copy. The certificate transfers responsibility of all aspects of well usage and maintenance from you to the well operator/landowner.

If you have any questions, please contact Ryan Imata of the Commission staff at [redacted]

Sincerely,

[Signature]

WILLIAM M. TAM
Interim Deputy Director

RI:ss

c: Hawaiian Electric Company, Inc.
TO
COMMISSION ON WATER RESOURCE MANAGEMENT

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>04/28/10</td>
<td></td>
<td>CIP GEN STATION SUPPLY WELL—WELL COMPLETION REPORT: PART II</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>STATE WELL NO.: 1806-16</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 1626M/C FILE

SIGNED: ____________________________

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

WILLIAM "BILL" MOORE
State of Hawaii  
COMMISSION ON WATER RESOURCE MANAGEMENT  
Department of Land and Natural Resources  
WELL COMPLETION REPORT - PART II  
Pump Installation

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 587-2226. For updates to this form or additional information, please visit our website at http://www.hawaii.gov/dlnr/cwrm/.

1. State Well No.: 1806-16  
Well Name: CIP GEN STATION SUPPLY WELL  
Island: OAHU

2. Address: [Redacted]  
Tax Map Key: (1) 9-1-014:014

3. Pump Installation Company: BEVLIK DRILLING & PUMP SERVICE, INC.

4. Date Pump Installed: 04/12/2010

5. PERMANENT PUMP INFORMATION  
* NOTE: TWO IDENTICAL PUMPS

<table>
<thead>
<tr>
<th>Pump Type, Make, Serial No.</th>
<th>VERTICAL LINE SHAFT - FLOWSERVE - 0908NS01141-1-2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated Capacity</td>
<td>850 gpm at head of: 200.8 ft.</td>
</tr>
<tr>
<td>Motor Type, H.P., Voltage, rpm</td>
<td>VHS - 60 - 460 - 1770</td>
</tr>
</tbody>
</table>

6. Method of flow measurement:  
- Flowmeter w/ totalizer  
- Other, explain and attach schematic

7. Fill in the as-built section on the other side of this sheet.

8. Attach the rating curve for the installed pump.

9. Attach photograph of well clearly showing the benchmark on the concrete pad, the well head, and the method of flow measurement.

10. Well Owner  
Company: Hawaiian Electric Company, Inc.  
Contact: Date Quitnosio (Operations) / Alvin Kurisu (Engineering)

<table>
<thead>
<tr>
<th>Address</th>
<th>Phone</th>
<th>Fax</th>
</tr>
</thead>
<tbody>
<tr>
<td>P.O. Box 2740, Honolulu, HI 96740</td>
<td>543-4110 / 543-7745</td>
<td>same as Well Owner</td>
</tr>
</tbody>
</table>

11. Land Owner  
Company: Hawaiian Electric Company, Inc.  
Contact: same as Well Owner

<table>
<thead>
<tr>
<th>Address</th>
<th>Phone</th>
<th>Fax</th>
</tr>
</thead>
<tbody>
<tr>
<td>P.O. Box 2740, Honolulu, HI 96740</td>
<td>same as Well Owner</td>
<td>same as Well Owner</td>
</tr>
</tbody>
</table>

12. Remarks

---

Pump Installation Contractor (print) BEVLIK DRILLING & PUMP SERVICE, INC.  
Lic. No. AC-21896  
Signature: [Signature]  
Date: 04/28/10
7. AS-BUILT PUMP SECTION

(Bench mark elevation surveyed to nearest 0.01 ft. = 13.5 ft. mean sea level)

Elevation of top of chase tube = N/A ft. mean sea level

* NOTE: OPEN P.T. ACCESS THRU GRATE

Pump intake depth = 19.58 ft. (referenced to bench mark)

Chase tube depth = N/A ft. (referenced to bench mark)

If airline installed, bottom of airline elevation = N/A ft. mean sea level
Design Conditions

850 USGPM  200.8 Ft.

Certified Performance Test

By: Michael A. Hansen   Date: 12-Aug-09

FLOWSERVE

MODEL  12EMM
Speed  1785
Test and Curve Number  12EMMW23
2 things:

- PIP for Well 1806-16, to Beylik.
Mr. Bill Godwin
Bevlilk Drilling & Pump Services, Inc.

Dear Mr. Godwin:

Pump Installation Permit
CIP Gen Station Supply Well #1 (Well No. 1806-16)

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). Please note that this well, which you recently constructed, was previously assigned Well No. 1806-23. We have corrected this well number to No. 1806-16 to align with HECO’s existing water use permit (WUP No. 176) for the CIP generating station, which was originally approved in 1992. 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. Please contact the state of Hawaii, Department of Health’s Noise, Radiation, and Indoor Air Quality Branch at 586-4700 for information on construction noise abatement standards and compliance requirements for this project.

2. 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 Denise Mills of the Commission staff at [redacted]

Sincerely,

Laura H. ThieLEN
Chairperson

Enclosure

c: Hawaiian Electric Company
    USGS
    Honolulu Board of Water Supply
PUMP INSTALLATION PERMIT
CIP Gen Station Supply Well #1, Well No. 1806-16

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 CIP Gen Station Supply Well #1 (Well No. 1806-16) at TMK (I) 9-1-014:014, Oahu, 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 850-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: May 22, 2009
Expiration Date: May 22, 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 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 #: C-21896 Date: ____________________________
Firm or Printed Name: Bill Godwin Title: Beylik Drilling & Pump Services, Inc.

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

Attachments
May 27, 2009

Mr. Robert Isler
Hawaiian Electric Company, Inc.

Dear Mr. Isler:

Status of Water Use Permit for CIP Generating Station
WUP No. 176 (Well Nos. 1806-15, -16, -17, and -18), TMK (1) 9-1-014:014

Your water use permit, WUP No. 176, was originally approved by the Commission on Water Resources Management (Commission) in 1992, and authorizes ground water withdrawals from the Ewa Caprock Aquifer of up to 14.4 million gallons per day on a 12-month moving average basis. When the Commission approved your water use permit, it also approved the construction of four non-potable supply wells, Well Nos. 1806-15 to -18. In 1993, only Well No. 1806-15 was constructed, but we understand that it has never been pumped as a source of water supply. The other three wells were not constructed.

In July 2008, you submitted a new well construction/pump installation permit application for one well at the generating facility. We issued the well construction permit for this well, which was assigned state well number 1806-23, in December 2008. We are currently reviewing the well completion report part I for this well, which we received from your drilling contractor on April 27, 2009, and will soon issue the pump installation permit to your contractor. To facilitate completion of the pump installation work and to hasten your ability to use this well, we have determined that this newly permitted well should have been assigned one of the well numbers that was originally approved for your facility but not constructed. Hence, we have corrected the number of the CIP Generating Station Supply Well #1 to Well No. 1806-16. This correction will allow you to use this well, as allowed by WUP No. 176, without modification at this time. However, your permit should be modified in the near future to reflect your estimated water needs for the facility, as discussed below.

As you know, pursuant to HRS § 174C-56, the Commission recently completed a 20-year review of all water use permits approved since the State Water Code was promulgated in 1987. Based on the 20-year review report for WUP No. 176 and your responses to a survey that was conducted as part of this review, it is clearly documented that HECO has used no ground water at the generating station source since the water use permit was approved in 1992 and Well No. 1806-15 was constructed in 1993. With the recent well construction, it appears you are proceeding now with development plans now that will require a source of industrial supply. However, the combined proposed capacity of wells 1806-15 and 1806-16, which is 4.824 mgd (3.6 mgd plus 1.224 mgd, respectively) is only 33% of the total water withdrawals allowed by your water use permit. In fact, we understand from our staff’s conversation with you last August that you may not need 14.4 mgd to supply your needs at the facility.
In response to the findings of the 20-year review and to address our concern that your existing water use permit allocates a much larger quantity of water use than may be needed for at the generating station, we would like to work with you to align the permitted quantity with your estimated water needs. To assist us with this process, please respond to this letter no later than August 3, 2009, with one of the following two actions:

1. Submit a plan and schedule for developments at the CIP generating station that will require the use of non-potable water to support your operations. Please include an estimate (or estimates, if phased development is planned) of the total quantity of non-potable water that will be needed and a schedule showing when you expect begin using the additional supply (supplies). If you anticipate that 14.4 mgd will be needed at a future date, this documentation should support that projected need.

2. If you know now that your estimated water needs will be lower than currently allocated and that the water use permit should be modified to reduce the allocation, please submit a water use permit application to modify WUP No. 176.

As staff explained to you last year, the Commission may revoke a water use permit for partial or total nonuse, for reasons other than conservation, of the water allowed by the permit for a period of 4 continuous years or longer. [See HRS § 174C-58(4).] Because HECO has not used any of the water currently allowed under WUP No. 176, as documented in the 20-year review report for this permit, we feel it is important to advise you that this permit may be subject to at least partial revocation. We would rather work with you to reconcile the questions relating to your permit than initiating the revocation process without your assistance.

If you have any questions please call Denise Mills of the Commission staff at [number]

Sincerely,

KEN C. KAWAHARA, P.E.
Deputy Director

DEM:ss

c: Tom Nance
All,

Well numbering correction, CIP Gen Station Supply Well #1 -- Changed to Well No. 1806-16

Following our review of the existing water use permit for HECO's cooling wells (WUP No. 176), which was originally approved in 1992 for use of four nonpotable supply wells (Well Nos. 1806-15 to -18), we are changing the number of CIP Gen Station Supply Well #1 to Well No. 1806-16. (When we approved the well construction permit last year, we assigned a new number, 1806-23.)

You will receive a formal letter from us explaining this change. Please make a note of this change in your records and refer to Well No. 1806-16 on all future correspondence and reports concerning the new well.

Please contact me if you have questions.
--Denise

Denise E. Mills
HYDROLOGIST

Hawaii Department of Land and Natural Resources
Commission on Water Resource Management
TO
STATE OF HAWAII
DEPT OF LAND AND NATURAL RESOURCES

WE ARE SENDING YOU

☐ Attached  ☐ Under separate cover via ___________________________ the following items:
☐ Shop drawings  ☐ Prints  ☐ Plans  ☐ Samples  ☐ Specifications
☐ Copy of letter  ☐ Change order

<table>
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<th>DATE</th>
<th>NO.</th>
<th>DESCRIPTION</th>
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<td>1</td>
<td>12/8/08</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 9419G / C FILE

SIGNED: [Signature]
WILLIAM GODWIN
VICE PRESIDENT

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

CIP Generating Station Supply Well #1, Well No. 1806-23

Note: This permit shall be prominently displayed at the well 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 (§ 13-168, HAR), entitled "Water Use, Wells, and Stream Diversion Works," this document permits the construction and testing of the CIP Generating Station Supply Well #1 (Well No. 1806-23) at TMK (1) 9-1-014:014, Oahu, 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.

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/cwrmlforms.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 pump capacity authorized under 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.

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 at (808) 652-1510. 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/cwrmlforms.htm for the most 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 any related staff submittal approved by the Commission are incorporated into this permit by reference. This permit is also subject to the HWCPIS. If the HWCPIS are not followed and as a consequence water is wasted or contaminated, a lien on the property may result.

11. 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 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.

12. 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.

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

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

Date of Approval: December 3, 2008
Expiration Date: December 3, 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 No.: AC-21896
Printed Name: William R. Goodwin

Firm or Title: Beylik Drilling & Pump Services, Inc.

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

Attachment
FACSIMILE TRANSMITTAL

From: Denise Mills
Date: December 8, 2008
Pages Including Header: 3
Subject: Well No. 1806-23, CIP Generating Station #1

To: Bill Godwin
Company: Beylik Drilling
Fax Number: [redacted]
Phone Number:

Notes/Comments:
Here's the permit! --denise

Thank you very much Denise.

Bill
WELL CONSTRUCTION PERMIT

CIP Generating Station Supply Well #1, Well No. 1806-23

In accordance with Department of Land and Natural Resources, Commission on Water Resource Management’s Administrative Rules, Section 13-168 (§ 13-168, HAR), entitled “Water Use, Wells, and Stream Diversion Works,” this document permits the construction and testing of the CIP Generating Station Supply Well #1 (Well No. 1806-23) at TMT (1) 9-1-014-014, Oahu, 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 96804, 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 §13-168-13, Natural Administrative Rules.

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/cwmd/hwcpis.htm). The permittee shall submit to the Chairperson the test results as a basis for approving 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 pump capacity calculated when the pump installation permit may be reduced in the event that the test pump does not support the capacity.

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

5. The permittee shall incorporate mitigation measures to prevent construction debris from entering the aquatic environment, 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 at (808) 681-1510. Work may recommence only after written concurrence from 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. A permit or the authorization to construct the well shall not constitute a determination of cumulative 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/cwmd/hwcpis.htm for the most 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 any related staff submitted approved by the Commission are incorporated into the permit by reference. This permit is also subject to the HWCPIS if the HWCPIS are not followed and as a consequence water is wasted or contaminated, a lien on the property may result. Any variances from the HWCPIS shall be approved by the Chairperson prior to invoking the variance.

11. 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.

12. 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 §13-168-120, HAR, prior to any well sealing or plugging work.

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, contractors, employees, subcontractors, and agents, under this permit or relating to or connected with the granting of this permit.

14. 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 §13-168-120, HAR.

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

Date of Approval: December 3, 2008
Expiration Date: December 3, 2010

I have read the conditions and terms of this permit and understand them. I accept and agree to meet those 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: [Signature]
C-57 License No.: AC-31896
Date: 12-8-08

Printed Name: [Signature]
Firm or Title: Byeik Drilling & Pump Services, Inc.

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

Attachment
MESSAGE CONFIRMATION

NAME/NUMBER : 96823083
PAGE : 3
START TIME : DEC-08-2008 10:01 AM MON
ELAPSED TIME : 00'32"
MODE : STD ECM
RESULTS : [ O.K. ]

FACSIMILE TRANSMITTAL

To: Bill Godwin
Company: Beylik Drilling
Fax Number: [Redacted]
Phone Number:

From: Denise Mills
Date: December 8, 2008
Pages Including Header: 3

Subject: Well No. 1806-2A, CIP Generating Station #1

Notes/Comments:
Here's the permit! —denise
FACSIMILE TRANSMITTAL

To: Bill Godwin
Company: Beylik Drilling
Fax Number: [redacted]
Phone Number:

From: Denise Mills
Date: December 8, 2008
Pages Including Header: 3
Subject: Well No. 1806-23, CIP Generating Station #1

Notes/Comments:
Here's the permit!! --denise
December 5, 2008

Ref: 1806-23 wcp

Mr. Bill Godwin
Beylik Drilling & Pump Services, Inc.

Dear Mr. Godwin:

Well Construction Permit
CIP Generating Station Supply Well #1 (Well No. 1806-23)

Enclosed are two (2) copies of your approved Well Construction Permit for the captioned well. This permit authorizes well construction activities, but excludes installation work for a permanent pump. As part of the Chairperson’s approval, the following special condition has been added and is part of your permit under Permit Condition 15:

Special Condition

1. Please contact the State Department of Health’s Noise Radiation and Indoor Air Quality Branch at 586-4700 for information on construction noise abatement standards and compliance requirements for this project.

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. You may obtain the Commission’s aquifer pumping test worksheet from our website at http://www.state.hi.us/dlnr/cwrn/resources_permits.htm or by contacting our staff.

IMPORTANT - Drilling work shall not commence until a fully signed permit is returned to the Commission. The signed permit shall be prominently displayed or made available at the well site during all well construction work. 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 Denise Mills of the Commission staff at [number]

Sincerely,

[Signature]
LAURA H. THIELEN
Chairperson

Enclosures

c: Hawaiian Electric Company
    USGS
    Honolulu Board of Water Supply
WELL CONSTRUCTION PERMIT

CIP Generating Station Supply Well #1, Well No. 1806-23

Note: This permit shall be prominently displayed at the well 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 (§ 13-168, HAR), entitled "Water Use, Wells, and Stream Diversion Works," this document permits the construction and testing of the CIP Generating Station Supply Well #1 (Well No. 1806-23) at TMK (1) 9-1-014:014, Oahu, 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.

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 at www.hawaii.gov/dller/cwrm/forms.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 pump capacity authorized under 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.

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 at (808) 652-1510. 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/dller/cwrm/forms.htm for the most 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 any related staff submittals approved by the Commission are incorporated into this permit by reference. This permit is also subject to the HWCPIS. 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. 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.

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

Date of Approval: December 3, 2008
Expiration Date: December 3, 2010

LAURA H. THELEN, 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 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 No.: AC-21896
Date: ____________________________

Printed Name: ____________________________
Firm or
Title: Beylik Drilling & Pump Services, Inc.

Please sign both copies of this permit, return one to the Chairperson, and retain the other for your records.
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<th>FROM: Denise</th>
<th>DATE: 12/4</th>
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**Please:**
- See Me
- Review & Comment
- Take Action
- Type Draft
- Type Final
- File
- Xerox ___ copies

---

Bill Godwin signed Item #24 of Weipa yesterday. They want to start drilling on Monday 12/17. Any chance we could rush this through so I could fax to him tomorrow?
Ref: 1806-23 wcp

Mr. Bill Godwin
Beylik Drilling & Pump Services, Inc.

Dear Mr. Godwin:

Well Construction Permit
CIP Generating Station Supply Well #1 (Well No. 1806-23)

Enclosed are two (2) copies of your approved Well Construction Permit for the captioned well. This permit authorizes well construction activities, but excludes installation work for a permanent pump. As part of the Chairperson's approval, the following special condition has been added and is part of your permit under Permit Condition 15:

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IMPORTANT - Drilling work shall not commence until a fully signed permit is returned to the Commission. The signed permit shall be prominently displayed or made available at the well site during all well construction work. 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 Denise Mills of the Commission staff at [redacted].

Sincerely,

Laura H. ThieLEN
Chairperson

Enclosures

c: Hawaiian Electric Company
   USGS
   Honolulu Board of Water Supply
WELL CONSTRUCTION PERMIT

CIP Generating Station Supply Well #1, Well No. 1806-23

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

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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 any related staff submittal approved by the Commission are incorporated into this permit by reference. This permit is also subject to the HWCPIS. If the HWCPIS are not followed and as a consequence water is wasted or contaminated, a lien on the property may result. Any variances from the HWCPIS shall be approved by the Chairperson prior to invoking the variance.

11. 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.

12. 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.

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. 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.

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

Date of Approval: December 3, 2008
Expiration Date: December 3, 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 No.: AC-21896 Date:
Printed Name: Firm or Title: Beylik Drilling & Pump Services, Inc.

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

Attachment
Denise:

This email is to confirm the fact that HECO has entered into a contract with Beylik Drilling and Pump Service to drill the supply well at JCIP (State No. 1806-23). Bill Godwin is authorized to sign the well construction application.

Tom

--

Tom Nance Water Resource Engineering
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<tr>
<th>FROM: Denise</th>
<th>DATE: 10/8/08</th>
<th>TO: CHENG, C.</th>
<th>INIT:</th>
<th>TO: KUNIMURA, I.</th>
<th>INIT: 1</th>
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If questions - please see letter dated Aug 18 - re: WUP No. 176.
October 3, 2008

Mr. Robert Isler
Hawaiian Electric Company, Inc.

Dear Mr. Isler:

Letter of Assurance for Well No. 1806-23

We have completed the review process for your Well Construction/Pump Installation Permit application, which we received on July 31, 2008. Your well construction permit and pump installation permits are ready to be issued. However, in accordance with the State Water Code, §174C-84(a), these permits can only be issued to a licensed contractor and, to date, one has not been identified for your well work.

Once you have selected a licensed contractor, please have the contractor sign and return to the Commission a copy of the original application, upon which a permit will be immediately issued, provided that the following conditions are met:

1. The contractor has no outstanding issues with the Commission.
2. There are no significant changes to the application.
3. There have been no significant changes to applicable laws, rules or regulations since the application date.
4. There have been no significant changes to hydrogeologic conditions since the application date.

Additionally, the issues we identified regarding your water use permit for the cooling wells (WUP No. 176), as identified in our August 18, 2008 letter, need to be resolved before we issue the pump installation permit. A pump may be installed for well and aquifer testing under your well construction permit, but you will not be allowed to install a permanent pump or pump the well for any purpose other than testing without a pump installation permit.

If you have any questions, please contact Denise Mills of the Commission staff at [redacted].

Sincerely,

KEN C. KAWAHARA, P.E.
Deputy Director

DM:ss

c: Tom Nance Water Resource Engineering
August 18, 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
CIP Generating Station Supply Well No. 1 (Well No. 1806-23) TMK (1) 9-1-014:014

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 September 18, 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 Denise Mills of the Commission staff at [Redacted].

DM:ss
Attachment(s)

RESPONSE:

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

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

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

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

[ ] No objections

[XX] Other comments: Original source of private title was issued prior to statehood.

Contact Person: Gary Martin
Phone: [Redacted]

Signed: [Signature]
Date: AUG 25 2008
FROM: DENISE
DATE: 5-Aug-08
SUSPENSE DATE: 12-Aug-08

TO: CHING, F.                      TO: KUNIMURA, I.
    FUJII, N.                          Mills, D.
    GOODING, K.                       NAKAMA, L.
    HARDY, R.                         OHYE, M.
    HIGA, D.                         SAKODA, E.
    HOAGBIN, S.                     SWANSON, S.
    ICE, C.                          UYENO, D.
    IMATA, R.                        YODA, K.
    KAWAHARA, K.

WELL NAME CIP Generating Station Supply No. 1 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.  MLS PRINTOUT
8 CONTRACTOR VERIF.  DCCA LICENSE SCREEN PRINTOUT
9 ALL INFO FILLED IN  
10 BACKGROUND CHECK  
11 $25 FEE DEPOSIT SLIP
12 DHP/CIDUP/SCMA 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

   ✔  #23 - no documentation SHDP

   ✔  Can route for review for LOA purpose

   ✔  Needs a WUPA before we issue any PIP

   ✔  WUPA 176, and see if Dec-Adm97-1 applies.

   ✔  1806-1544pm 18-only - 15 constructed.

8/13/08  SHDP documentation received.

Consultation of SHDP done
August 18, 2008

Mr. Robert Isler
Hawaiian Electric Company, Inc.

Dear Mr. Isler:

Well Construction/Pump Installation Permit Application for Well No. 1806-23

We acknowledge receipt, on July 31, 2008, of your Well Construction/Pump Installation permit application and filing fee for the Hawaiian Electric Company, Inc.’s (HECO’s) proposed CIP Generating Station Supply Well No. 1 (Well No. 1806-23). However, applications for permits are required to be made by a contractor with a valid and active C-57, C-57a, or A license and who will perform the work, in accordance with the State Water Code, §174C-84(a), HRS.

Because you have not identified a qualified contractor, your application will not be accepted as complete until a qualifying contractor signs and completes sections 24 and 25 on the application form. We will, however, process your incomplete application for review, and if the review warrants issuance of a permit, we will issue a letter of assurance in lieu of the permit. The letter of assurance will indicate that a permit will be issued when the contractor signs the application and the following conditions are met: (a) the contractor has no outstanding issues with the Commission; (b) there have been no significant changes to the application; (c) there have been no significant changes to applicable laws, rules or regulations; and (d) there have been no significant changes to hydrologic conditions at the proposed well site.

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.

The cover letter from Tom Nance, of Tom Nance Water Resource Engineering, that accompanied your permit application noted that “[T]he intent is to add this well under HECO’s Water Use Permit (WUP) No. 176.” The proposed use of the well water is for an industrial purpose (i.e., combustion turbine water injection for air emissions control), which is consistent with the current category of use authorized under WUP 176. However, our review of the status
of your allocation for the existing well on the property (Well No. 1806-15) has identified some questions about your current allocation and projected water needs for the project, which require modification of WUP 176 to reconcile your past allocation for anticipated future water needs. You should be aware that WUP 176 could be revoked entirely for nonuse, which will be highlighted in our upcoming 20-year review to the 2009 legislature as required by the Water Code (174-C56, HRS). Also, we understand that HECO may not actually need the entire existing allocation of 14.4 mgd. A water use permit modification application may be an appropriate process for re-examining and adjusting HECO’s allocation to meet your projected needs for the project and to address these issues. These questions will need to be resolved before we can authorize installation of a permanent pump in the well, or pumping of the well for any purpose except for aquifer and well testing. As explained by Commission staff in a recent phone conversation, you are required to submit a Ground Water Use Permit Application (form GWUPA-N) to modify WUP 176. The application can be downloaded from our website at: http://hawaii.gov/dlnr/cwm.

By this letter, we are also notifying you that upon completion of the well construction work required under the permit, a certificate of well construction completion will be issued to HECO to transfer all responsibility for well care and maintenance from the driller to HECO. Until that time, the driller is responsible for complying with all conditions of the permit.

If you have any questions about your permit application, please contact Denise Mills of the Commission staff at [Contact Information].

Sincerely,

KEN C. KAWAHARA, P.E.
Deputy Director

DM:ss
Attachment

c: Hawaiian Electric Company, Inc.
   Tom Nance Water Resource Engineering
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 September 18, 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 Denise Mills of the Commission staff at [DM:ss]

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. [lease number]

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

[ ] No objections

[ ] Other comments:

Contact Person: ___________________________ Phone: ___________________________

Signed: ___________________________ Date: ___________________________
August 18, 2008

Mr. Clifford Lum, Manager and Chief Engineer
Board of Water Supply
City and County of Honolulu

Dear Mr. Lum:

Well Construction/Pump Installation Permit Review
Well Construction/Pump Installation Permit Application
CIP Generating Station Supply Well No. 1 (Well No. 1806-23)

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 September 18, 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 Denise Mills of the Commission staff at [redacted].

Sincerely,

[Signature]
Laura H. ThieLen
Chairperson

DM:ss
Roy,

The WUP file history for this project is unclear and may warrant discussion with our AGs to determine its validity. Key points and questions that may have bearing on an application from HECO to modify its permit and further discussions with the company and Tom Nance are explained below.

A. The Commission unanimously approved the staff recommendation to issue the permit, which was issued as a "Water Use, Well Construction, and Pump Installation Permit." The Reasonable and Beneficial Use is listed as "Industrial cooling," and the following conditions apply:

1. The water use permit shall be for the reasonable-beneficial use described in this permit.
2. The proposed use shall not adversely affect existing future legal uses...[standard language]
3. Modification of any permit condition shall be approved by the Commission.
4. The applicant shall comply with all applicable laws, rules, and ordinances.
5. The applicant shall provide and maintain an approved meter...[standard language]
6. The permit may be revoked if work is not started within six months of the date of issuance or if work is suspended or abandoned for six months. The work proposed in the permit application shall be completed within two years from the date of permit issuance.
7. The permit shall be subject to review by the Attorney General.

Does Condition 1 constrain the use to only "industrial cooling," or is it implied that the approved use is for any industrial purpose? The application at the time allowed only for "Industrial" to be applied for. Not sure. As I mentioned we came up with the major and sub categories of water use, partly due to change in use considerations. Also, the Code defines "Change in Use" as: means any modification or change in water use from or to domestic, municipal, military, agriculture (including agricultural processing), or industrial uses. So I think industrial cooling to industrial other is still industrial. However, like you said, there are other modification considerations like reducing their allocation that could require modification or revocation.

Condition 7: Appears that this was #20 of 19 permits issued between Sept. 1989 and Aug. 1992, which were never issued. There is a Sept. 8, 1992 memo to Johnson Wong in the Land/Transportation Division (DLNR) requesting his review of the permit as approved by the Commission-- looks like a standard intradepartment review request. The memo states:

...In lieu of sending and "official" water use permit to the applicant, we will send a
letter notifying the applicant that the Commission approved their permit and that the actual permit will be issued following review by the Attorney General. ...

B. We do not have a signed copy of the permit from the applicant in the file. Would the signature have been required after Attorney General review or on the provisional permit that was sent on August 19, 1992, following the Commission's approval? Back then yes. Nowadays no (for both AG and applicant signatures). Knew this would come back to haunt us. Should discuss with AGs

C. The permit was issued for completion of four wells; only one well, 1806-15, was constructed and no pump was installed. (Well 1806-15 was completed in April 1993.) The well has never been used for its intended purpose. HECO currently uses it for cathodic protection, which requires no withdrawal (Bob Isler, HECO, pers. comm.). Do any of these actions violate Condition 6 of WUP 176, such that the permit is rendered invalid? It is grounds for revocation, but not automatic rendering of invalidation. If we revoke, we need to take to the CWRM for official action.

D. HECO has never exercised the water allocation authorized by WUP 176, neither partially nor in whole. They applied for and were approved for 14.4 mgd for "industrial cooling." In response to a request from the Commission in 1993, HECO stated that it could reduce their average annual use to 12.96 mgd.

While these matters have little bearing on the acceptance and processing of HECO's well construction/pump installation permit application (Well No. 1806-23) and approval of the well construction permit, they will need to be resolved before we approve permanent pump installation, as we have discussed. Bob Isler is going to send the missing information, which will complete the application. He was relieved to know that processing of the well construction permit application does not have to be delayed until the water use permit questions are resolved. That's good.

I have the file if you want to review anything. In the mean time, I'll continue working on the well construction permit application. ok

-Denise
Thank you, Bob.

This should complete your application. I'll let you know if we need anything more before we can accept it for processing, but this was the only information I noted when I reviewed your application yesterday.

-Denise

Denise E. Mills
HYDROLOGIST
Hawaii Department of Land and Natural Resources
Commission on Water Resource Management

"Isler, Robert" <robert.isler@heco.com>

Denise, 

In response to your request regarding HECO's Well/Pump Permit application, attached are three items which document SHPD's review and acceptance of the CIP1 project plans. The note below briefly identifies what these attachments are. Please let me know if you need anything further regarding this matter. Thank you.

From: Perry White [mailto:pwhite@psi-hi.com]
Sent: Wednesday, August 13, 2008 8:06 AM
To: [name]
Cc: Isler, Robert; [name]
Subject: Re: Supply Well Application: Documentation of SHPD Consultation

Dear Tom:
This is in response to Bob Isler's e-mail request for backup concerning consultation with SHPD. The "big picture message is that CWRM needs to understand that the wells were part of the entire package that SHPD reviewed and approved.

With that in mind, I have attached three files:
• The SHPD comment letter on the Draft EIS for the project. In it they say they do not have a problem so long as there is appropriate monitoring.
• The monitoring plan that was submitted to SHPD.
• SHPD's letter approving that plan.
Please call if there is anything else you need or if you want to discuss any of this.

Perry

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---

From: Perry White
Sent: Wednesday, August 13, 2008 8:06 AM
To: tom@tnwe.com
Cc: Isler, Robert
Subject: Re: Supply Well Application: Documentation of SHPD Consultation

Dear Tom:

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- The SHPD comment letter on the Draft EIS for the project. In it they say they do not have a problem so long as there is appropriate monitoring.
- The monitoring plan that was submitted to SHPD.
- SHPD's letter approving that plan.

Please call if there is anything else you need or if you want to discuss any of this.

Perry

---

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message and all copies.


2008-02-14 HECO CIP Monitor Pin SHPD approval let.pdf
February 14, 2008

Mike Carson
International Archaeological Research Institute, Inc.

Dear Mr. Carson:

TMK: (1) 9-1-014:014 and 9-1-026:038 ( Portions)

Thank you for the opportunity to review the aforementioned archaeological monitoring plan. We accept this plan as satisfying the requirements of Hawai‘i Administrative Rules (HAR) 13-279. Thank you for submitting a plan of excellent quality.

Please contact Lauren Morawski (O‘ahu Archaeologist) at [redacted] if you have any questions or concerns regarding this letter.

Aloha,

Nancy McMahon
Acting Archaeology Branch Chief and Kaua‘i Archaeologist
State Historic Preservation Division

LM
March 23, 2006

Mr. Robert Isler
HECO, Inc.

Dear Mr. Isler

SUBJECT: Chapter 6E-8 Historic Preservation Review – Draft Environmental Impact Statement-HECO, Campbell Industrial Park Generating Station & Transmission Additions Hono'uli'uli Ahupua'a, 'Ewa District, Island of O'ahu TMK: (1) 9-1-various plats & parcels, 9-2-various plats & parcels

Thank you for the opportunity to review the aforementioned project, which we received on February 3, 2006. You provided this office with a brief cover letter and a Draft Environmental Impact Statement (DEIS). The proposed undertaking involves the construction of a new fossil-fueled electrical generating station, a new 138kV overhead transmission line, and associated improvements in and around Campbell Industrial Park.

As summarized in the DEIS, the proposed undertaking has been evaluated for its potential for adverse effects on archaeological, historic, and cultural resources. An archaeological assessment of the project area was conducted by International Archaeological Research Institute (IARI), Inc. (Carson 2005), including a field inspection. This study did not reveal any surface archaeological material, and documented little or no soil deposit within which historically-significant subsurface deposits might exist. Commercial sugarcane operations have disturbed nearly the entire project area.

In general, the project area is dominated by exposed coral; and, the probability of encountering subsurface sites, including burials, is relatively low. However, one portion of the project area, near Kahe Point, has a higher probability of preserving subsurface sites where sand and/or alluvial layers occur under fill deposits. One subsurface burial has previously been documented in this general area, although not within the proposed project area. In order to mitigate against adverse effects to historically-significant resources that may be present in this area, the DEIS calls for the implementation of an archaeological monitoring program, in accordance with Hawaii Administrative Rules (HAR) Chapter 13-279.

Two individuals with specific knowledge of the project area (Mr. Shad Kane and Ms. Nettie Tiffany) were also interviewed in order to assess possible adverse cultural effects associated with the proposed undertaking. Based on these interviews, and on other oral-historical sources, the DEIS concludes that the proposed undertaking will have minimal or no impact on Hawaiian culture, its practices and/or traditions.
We concur with the findings of the archaeological assessment by IARI, and with the mitigation recommendations. We look forward to reviewing an archaeological monitoring plan, and continuing to consult on this project.

Please call Dr. Chris Monahan at [redacted] if you have any questions regarding this letter.

Aloha,

[Signature]

Melanie Chinen, Administrator
State Historic Preservation Division

CM

Cc: Mr. Matthew Higashida, Department of Planning and Permitting, City & County of Honolulu
Ms. Genevieve Salmonson, Office of Environmental Quality Control
Archaeological Monitoring Plan
Proposed Generating Station and Substation
at Campbell Estate Industrial Park,
Island of O'ahu, State of Hawai'i
Portions of O'ahu Island Tax Map Keys (TMK) 9-1-014:014 and 9-1-026:038

by
Mike T. Carson, Ph.D.

Prepared for
Planning Solutions, Inc.

INTERNATIONAL ARCHAEOLOGICAL RESEARCH INSTITUTE, INC.
JANUARY 2008
Archaeological Monitoring Plan Proposed Generating Station and Substation
at Campbell Estate Industrial Park, Island of O'ahu, State of Hawai‘i

Portions of O'ahu Island Tax Map Keys (TMK) 9-1-014:014 and 9-1-026:038

by
Mike T. Carson, Ph.D.

Prepared for
Planning Solutions, Inc.

International Archaeological Research Institute, Inc.

January 2008
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3. Major features of the 'Ewa Plain cultural landscape ............................................................................................... 6
1: INTRODUCTION

International Archaeological Research Institute, Inc. (IARI) has prepared this archaeological monitoring plan for a proposed generation site and substation at Campbell Estate Industrial Park (CEIP), O'ahu Island, Hawai'i (Figs. 1 and 2). Both parcels are within a highly industrialized zone of Campbell Estate Industrial Park. IARI conducted an archaeological assessment of the areas that would be directly impacted by the proposed generating station and transmission additions (Carson 2005). This investigation, conducted for the Draft Environmental Impact Statement (DEIS), did not find any surface archaeological remains. The study concluded, on the basis of background research and field observations, that the presence of unseen (subsurface) remains was unlikely. It therefore recommended no further investigations for resource identification. Despite the low probability that subsurface remains would be encountered at either the generation site or substation, HECO (in the DEIS) committed to archaeological monitoring during construction in order to mitigate possible adverse effects to historically-significant resources that might be revealed as a result of construction. The Hawai'i State Historic Preservation Division (SHPD) concurred with this recommendation (SHPD 2006—comments attached in Appendix A). This monitoring plan is prepared in accordance with Hawaii Administrative Rules (HAR) Chapter 13-279.

This archaeological monitoring plan briefly summarizes the project context (including physical, cultural and historical, and archaeological settings), describes the investigative procedures (including contextual research, field protocol, data analyses, disposition of materials, and schedule of deliverables).
Figure 1. Project location, shown on a portion of U.S. Geological Survey (USGS) 7.5-minute series quadrangle map.
Figure 2. Detail of project vicinity.
2: PROJECT CONTEXT

A brief discussion of the project context presents a basis to interpret any historical or archaeological resources in the project area, as well as to assess the overall historical and archaeological significance of the surrounding general vicinity. The context is described in terms of the physical, cultural and historic, and archaeological settings.

The following contextual synopsis is only a brief summary, as several detailed overviews already are available for archaeological investigations in the ‘Ewa Plain (Athens et al. 1999; Carson 2005; Ceglhorn and Davis 1990; Davis 1990; McDermott et al. 2000; Tuggle 1997a, 1997b; Tuggle and Tomonari-Tuggle 1997; Wickler and Tuggle 1997).

2.1: PHYSICAL SETTING

The project area (see Fig. 1) is within 1 km (0.625 miles) of the shoreline in the ‘Ewa Plain, described as a hot, dry, low-lying, and mostly flat expanse of emerged reef limestone. Much of the exposed reef is about 7.5 m above present sea level (Macdonald et al. 1983:420-421), having formed during an interglacial period about 114,000 to 131,000 years ago (Szabo et al. 1994). A soil survey described the project area as "coral outcrop," consisting of "cemented calcareous sand" (Foote et al. 1972:29). Mean annual rainfall is less than 600 mm (Giambelluca et al. 1986:138), but it is highly episodic in nature with rare events of intense rainfall punctuating extended dry periods.

The shallow soils, coralline substrate, and very low rainfall impose significant limits for potential land use, yet plant cultivation is possible. Industrial-scale sugarcane plantations have been successful in the ‘Ewa Plain landward of the project area.

2.2: CULTURAL LANDSCAPE AND HISTORICAL SETTING

The project area is within the ahupua’a (traditional Hawaiian land unit) of Honouliuli, in the moku (district) of ‘Ewa on the southwest coast of O‘ahu (Fig. 3; see also Fig. 1). The project area is north of a small traditional settlement area at Kalaeloa, and it occupies a portion of the Plain of Kaupe’a.

Tuggle (1997b:21) summarizes the cultural significance of the ‘Ewa Plain for both commoners and elites in traditional Hawaiian society:

For the common people who struggled for survival in this land, the ‘Ewa Plain was a place of small villages, One‘ula and Kualaka‘i and Kalaeloa, and their deities were Kū‘ulakai and Lono. For the royalty of ‘Ewa, their priests and priest-astronomers, this was the plain of Kaupe’a and of Pu‘uokapolei; this was the plain of the sun, and their gods were Kāne and Kapo‘ulakīna‘u.

According to Kamakau (1961:47, 49), the Plain of Kaupe’a was the ao kuewa of O‘ahu, a place for homeless souls with no other rightful place. Tuggle (1997b:20) notes that the “sparsely settled and harsh region of Kaupe’a seems an appropriate setting for this spiritual realm.” The current project area is in the west portion of this plain.
Figure 3. Major features of the 'Ewa Plain cultural landscape (after Tuggle 1997b).
The traditional cultural landscape and physical character of 'Ewa underwent major changes due to new land use patterns within the last 150 years. Ranching and then sugarcane plantation activities were dominant in the late 19th through middle 20th centuries. Military and industrial developments have been prominent in some areas since the middle 20th century. Tuggle and Tomonari-Tuggle (1997:23-47) reviewed the historic and modern land use changes in detail.

Historic and modern activities have massively altered the land surrounding the project area. Sugarcane fields were extensive throughout much of the 'Ewa Plain, particularly north of the project area. Since the abandonment of the sugarcane plantations, considerable industrial and residential development has occurred, and the immediate project vicinity has been transformed by industrial developments.

2.3: ARCHAEOLOGICAL SETTING

The project area consists of land with modern infrastructure such as roads and buildings, but subsurface cultural materials may be present. These materials may be isolated occurrences, or they may be within larger layers. Given the modern industrial developments in the vicinity, subsurface cultural layers may have been disturbed, truncated, or otherwise altered.

The history of archaeological investigations in and around the Barbers Point area has been reviewed in detail elsewhere (Tuggle and Tomonari-Tuggle 1997:49-55). Numerous resource identification and data recovery projects have been completed in this part of the 'Ewa Plain but not precisely within the current project area (Athens et al. 1999; Burgett and Rosendahl 1992; Carson 2005; Cleghorn and Davis 1990; Davis 1990; Hammatt and Folk 1981; Haun 1991; Hommon 1989; Landrum and Schilz 1993; McDermott et al. 2000; Miller 1993; O'Hare et al. 1996; Schilz and Landrum 1994; Sinoto 1976, 1978, 1979; Tuggle 1997a, 1997b; Tuggle and Tomonari-Tuggle 1997; Welch 1987; Wickler and Tuggle 1997; Wulzen and Rosendahl 1996; Yoklavich et al. 1995).

A synthesis of archaeological, paleontological, and paleoenvironmental investigations has supported a robust model of the chronology of human settlement and human-environment relations in the 'Ewa Plain (Athens et al. 2002). This synthesis concludes first settlement and human-induced environmental changes in O'ahu around A.D. 900 to 1000, although the earliest occupation of the 'Ewa Plain was not evident until after A.D. 1250. More substantial settlement and land use in the 'Ewa Plain was delayed until after ca. A.D. 1350.

No surface-visible archaeological or historical features are in the project area, but elsewhere in the 'Ewa Plain they include: a) sinkholes used for cultivation, temporary shelters, or burials; b) C-shaped structures; c) thick-walled, rectangular house ruins; d) platform or terrace foundations; e) low walls or alignments; f) mounds or piles of cobbles; and g) piles of fire-cracked limestone (Tuggle 1997b). The structural remains are "universally made of limestone slabs and cobbles" (Tuggle 1997b:15). Most of the structural remains are found near sinkholes, perhaps because the sinkhole areas were untouched by historic and modern land alterations that obliterated structural features elsewhere in the 'Ewa Plain.

The project area is located north of a presumed coastal village at Kalaeloa, where the thin soils may have been used previously for growing crops in support of the coastal settlement. As Tuggle (1997b:14) noted: "Virtually nothing is known of the Hawaiian occupation of the sugar plantation area, but presumably the soil covering and some runoff from the Waianae valleys would have provided a base for agricultural occupation of this region."

While previous construction excavations on and around the project site have not uncovered identifiable archaeological materials, subsurface layers on the project site conceivably may contain: a) post-Contact bottle glass, ceramic fragments, metal objects, and other materials from nearby settlements of the
1800s to early 1900s; and b) dispersed charcoal, limited food remains, and possibly low frequency of artifacts of pre-Contact origin, dating to the 1200s or later. In addition, while the available information indicates that it is unlikely, burial features may be present. The post-Contact materials likely are incorporated in upper layers of recent construction fill. The pre-Contact materials may be in discontinuous remnant layers or lenses beneath the recent construction fill.
3: INVESTIGATIVE PROCEDURES

The investigative procedures are described in terms of: 1) contextual research; 2) field protocol; 3) data analyses; 4) disposition of materials; and 5) schedule of deliverables. These procedures are proposed to meet the goal of identifying, documenting, and evaluating archaeological or historical resources potentially encountered during monitoring of planned construction activities in the project area.

3.1: CONTEXTUAL RESEARCH

Additional contextual research will be undertaken only if items are encountered during the course of construction. If they are, the additional research will focus on documentary and archival records relevant to evaluate and interpret the archaeological and historic resources that are found. Section 2 of this archaeological monitoring plan provides only minimal information necessary to frame the current work. Prior archaeological reports are available at the SHPD library. Additional archaeological, historical, cultural, and general environmental information may be available in documents and archives at the same facility, as well as in the library collections of the University of Hawai'i at Mānoa.

3.2: FIELD PROTOCOL

A pre-construction meeting will be held between the construction contractor and the archaeological monitor to clarify the project scope, schedule, and monitoring procedures. The construction contractor will be responsible to provide an accurate map of the planned construction work, including clear delineation of all areas of excavation and ground disturbance. Any safety issues or concerns also may be discussed during this meeting.

In general, an archaeological monitor will be on-call at all times during ground disturbing construction activities. Should construction workers encounter artifacts or other archaeological remains, they will notify the on-call monitor, who will instruct the contractor to cease work in the immediate area of the find(s). The monitor will conduct a field inspection as soon as reasonably possible, undertake any needed mitigation, and remain on site during construction for as long as needed.

In addition, the archaeological monitor will be present to observe at least the initial excavations for equipment foundations at the generation site and for the storm water retention basin at the substation site. Monitoring at these locations will continue after initial field observations if the monitor deems that there is a likelihood of encountering significant archaeological remains, especially burials (i.e., there is no need to monitor fill or the excavation of reef rock). Otherwise, the monitor will be available on-call for the remaining excavations.

Monitoring will entail visual inspection of the excavations, exposed trench profiles, and back-dirt spoil piles for any archaeological or historical materials. These materials may appear singly, in concentrations, or in associated layers.

The primary duties of the archaeological monitor will be to identify subsurface cultural materials and to document them in appropriate detail if they are present. Documentation minimally will include recording of location, spatial dimensions to the extent detectable, content, and stratigraphic context. In some cases,
additional recording and in-field sampling may be necessary to evaluate the function, association, and chronology of artifacts, midden, or layers.

Construction excavation may be halted for short periods when cultural materials or layers need to be documented. However, construction work may proceed in other areas (with monitoring, if appropriate).

Locations and boundaries of monitored areas will be recorded primarily by measurements matched in the construction engineering drawings of the project area, georeferenced in a Geographic Information System (GIS). If appropriate, then a professional-grade global positioning system (GPS, such as Trimble Pro-XR or XH) will be used to record precise points and lines of excavated areas, specific findings, and other topographic reference features.

Stratigraphy of cultural and non-cultural layers will be documented in accordance with U.S. Department of Agriculture (USDA) Soil Conservation Service standards, including notation of color, texture, consistence, lower boundary, and other qualities. Profiles were recorded for each trench or excavation area, with a primary emphasis to document the characteristics and context of cultural deposits. If no cultural deposits are present, then only small representative sections of profiles will be recorded.

Where cultural deposits are present, measured samples will be collected for later data analyses. Locations of samples will be specified in profile illustrations. Sample volumes will be measured in liters, using standard-sized bags or graduated buckets. Samples will be retained in bulk for later wet-screening through 1/8 and/or 1/16-inch wire mesh (as appropriate) to ensure maximum recovery of archaeological and historical material.

In cases where specific isolated artifacts, charcoal, or other cultural materials are observed, they will be recorded in situ if possible, and they may be collected individually rather than as parts of bulk samples.

If human remains are identified in subsurface context, the archaeological monitor will give notice for a halt to construction work in the immediate vicinity, secure the location with the remains, and contact the SHPD immediately (tel. 692 8015; on weekends or holidays call DOCARE at tel. 643 3567). At the same time, the county medical examiner (tel. 768 3090) and the police department (tel. 911) will be notified in accordance with HAR §13-300-40. All skeletal remains or burial features discovered during monitoring are considered inadvertent discoveries, and disposition of these remains will be determined by the SHPD in accordance with HAR §13-300-40. Human skeletal remains in the project area may include both human remains once associated with burial pits and human remains that may not have been associated with pit features. The human skeletal remains encountered could be those of Native Hawaiians, but also could include the bones of Caucasian, Asian, or other post-Contact residents of the islands.

The archaeological monitor will maintain a daily log of activities, noting times of arrival and departure at the job site, times of specific activities, and work-related events and observations. The daily log also will include notes about any safety meetings or other periodic meetings with the construction crew or other staff.

The archaeological monitor will be responsible for maintaining accurate records of areas that were excavated, at what depth excavation halted, the observed stratigraphy, and any findings of archaeological or historical materials. These records will be in the form of textual notes, maps, profile illustrations, and photographs.
3.3: DATA ANALYSES

Data analyses will concern mapping and geographic information, surface-visible features, stratigraphy, and recovered samples of midden contents. All analyses will be conducted at suitable facilities in O'ahu. This will be done only in the event that the monitoring described above in Section 3.2 identifies significant resources.

Digital mapping data and other geographic information will be integrated in a single geographic information system (GIS) for consistency of reference and ease of management. All data will be compiled in Universal Transverse Mercator (UTM) Zone 4 North, using the North American Datum (NAD) of 1983 for compatibility with the Hawai'i Statewide GIS used by SHPD and other government agencies.

Stratigraphy will be recorded in the field for construction excavations as appropriate, and all controlled archaeological excavations (should the latter be required). The goal will be to formulate a stratigraphic sequence for areas immediately surrounding locations where significant remains are encountered (if any). The resulting project-wide relative sequence of layers will allow more precise understanding of the timing and inter-relationships of different cultural deposits that may be present.

The measured bulk samples from field collections will be wet-screened through 1/8-inch (3.2-mm) and/or 1/16-inch (1.6-mm) wire mesh to facilitate identification of artifacts, charcoal, shellfish remains, and non-human animal bones. Material types will be separated for more specific identification, with counts and weights tabulated as appropriate.

Artifacts will be compared with forms and functions of other known specimens and compared with reference collections.

Non-human animal remains (e.g., shells and bones) will be identified to the Genus or other lowest taxonomic unit possible.

Samples of charcoal specimens will be identified taxonomically. This procedure will allow partial characterization of past vegetation communities in different time intervals, and it will enable selection of short-lived specimens most appropriate for radiocarbon dating.

If appropriate samples are collected, then radiocarbon dating will be performed for selected charcoal samples at a recognized dating laboratory. Extended counting or accelerated mass spectrometry (AMS) procedure will be used for more precise date ranges, as well as for dating small individual wood charcoal specimens of known taxa. Only short-lived plant taxa (e.g., Chenopodium) or plant parts (e.g., fruit cases) should be used for dating samples to minimize the problem of in-built age in the resulting date.

3.4: DISPOSITION OF MATERIALS

All excavated materials, field photographs, digital mapping information, and other original data will be transferred to the client at the conclusion of this project for long term storage (assuming the SHPD does not offer to assume responsibility for the material). The archaeological monitor will see that all materials are suitably organized, packed, and inventoried for long term storage.
3.5: SCHEDULE OF DELIVERABLES

Within 14 days of completion of the field effort, a brief end-of-field summary will be provided. This summary will identify the dates of field work, scope of any major findings, and outline of tasks and schedule to complete any remaining data analyses and reporting requirements.

Within 90 days of completion of the fieldwork effort, a detailed technical report of all findings will be provided in draft form for review by the client and SHPD. Within 45 days of receipt of review comments concerning the draft report, a final report will be produced, incorporating any appropriate changes in response to the review comments.
4: REFERENCES

Athens, J. Stephen, H. David Tuggle, Jerome V. Ward, and David J. Welch
2002 Avifaunal extinctions, Vegetation Change, and Polynesian Impacts in Prehistoric Hawai‘i. Archaeology in Oceania 37: 57-78.

Athens, J. Stephen, Jerome V. Ward, H. David Tuggle, and David J. Welch

Burgett, Berdina, and Paul H. Rosendahl

Carson, Mike T.

Cleghorn, Paul L., and Bertell D. Davis (editors)

Davis, Bertell D.

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Giambelluca, Thomas W., Michael A. Nullet, and Thomas A. Schroeder
1986 Rainfall Atlas of Hawai‘i. Report R76. Water Resources Research Center, University of Hawai‘i, with the cooperation of Department of Meteorology, University of Hawai‘i. Division of Water and Land Management, Hawai‘i State Department of Land and Natural Resources, Honolulu.
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Hommon, Robert J.

Kamakau, Samuel S.

Landrum, James III, and Allen J. Schilz

Macdonald, Gordon A., Agatin T. Abbott, and Frank L. Peterson

McDermott, Matt, David Shideler, John Winieski, and Hallett H. Hammatt

Miller, Lynne

O’Hare, Constance, Thomas R. Wolforth, and Paul H. Rosendahl

Schilz, Allen J., and James Landrum III
SHPD


Sinoto, Akihiko


Szabo, B. J., K. R. Ludwig, D. R. Muhs, and K. R. Simmons


Tuggle, H. David


Tuggle, H. David, and M. J. Tomonari-Tuggle

1997  *A Cultural Resource Inventory of Naval Air Station, Barbers Point, O‘ahu, Hawai‘i: Part I: Phase I Survey and Inventory Summary Archaeological Research Services for the Proposed Cleanup, Disposal and Reuse of Naval Air Station, Barbers Point O‘ahu, Hawai‘i (Task 2b).* Prepared for Belt Collins Hawaii, Honolulu. International Archaeological Research Institute, Inc., Honolulu.

Welch, David J.


Wickler, Stephen K., and H. David Tuggle

1997  *A Cultural Resource Inventory of Naval Air Station, Barbers Point, O‘ahu, Hawai‘i; Part II: Phase II Inventory of Selected Sites Archaeological research Services for the Proposed Cleanup, Disposal and Reuse of Naval Air Station, Barbers Point O‘ahu, Hawai‘i (Task 2b).* Prepared for Belt Collins Hawaii, Honolulu. International Archaeological Research Institute, Inc., Honolulu.
Wulzen, Warren, and Paul H. Rosendahl

Yolklavich, Anne K., Robert Drolet, and P. Drolet
APPENDIX A.

SHPD COMMENTS
Dear Mr. Isler

SUBJECT: Chapter 6E-8 Historic Preservation Review –
Draft Environmental Impact Statement-HECO, Campbell Industrial Park
Generating Station & Transmission Additions
Hono‘uli‘uli Ahupua‘a’s, ‘Ewa District, Island of O‘ahu
TMK: (1) 9-1-various plats & parcels, 9-2-various plats & parcels

Thank you for the opportunity to review the aforementioned project, which we received on February 3, 2006. You provided this office with a brief cover letter and a Draft Environmental Impact Statement (DEIS). The proposed undertaking involves the construction of a new fossil-fueled electrical generating station, a new 138kV overhead transmission line, and associated improvements in and around Campbell Industrial Park.

As summarized in the DEIS, the proposed undertaking has been evaluated for its potential for adverse effects on archaeological, historic, and cultural resources. An archaeological assessment of the project area was conducted by International Archaeological Research Institute (IARI), Inc. (Carson 2005), including a field inspection. This study did not reveal any surface archaeological material, and documented little or no soil deposit within which historically-significant subsurface deposits might exist. Commercial sugarcane operations have disturbed nearly the entire project area.

In general, the project area is dominated by exposed coral; and, the probability of encountering subsurface sites, including burials, is relatively low. However, one portion of the project area, near Kahe Point, has a higher probability of preserving subsurface sites where sand and/or alluvial layers occur under fill deposits. One subsurface burial has previously been documented in this general area, although not within the proposed project area. In order to mitigate against adverse effects to historically-significant resources that may be present in this area, the DEIS calls for the implementation of an archaeological monitoring program, in accordance with Hawaii Administrative Rules (HAR) Chapter 13-279.

Two individuals with specific knowledge of the project area (Mr. Shad Kane and Ms. Nettie Tiffany) were also interviewed in order to assess possible adverse cultural effects associated with the proposed undertaking. Based on these interviews, and on other oral-historical sources, the DEIS concludes that the proposed undertaking will have minimal or no impact on Hawaiian culture, its practices and/or traditions.
We concur with the findings of the archaeological assessment by IARII, and with the mitigation recommendations. We look forward to reviewing an archaeological monitoring plan, and continuing to consult on this project.

Please call Dr. Chris Monahan at [redacted] if you have any questions regarding this letter.

Aloha,

Melanie Chihen, Administrator
State Historic Preservation Division

CM

Cc: Mr. Matthew Higashida, Department of Planning and Permitting, City & County of Honolulu
    Ms. Genevieve Salmonson, Office of Environmental Quality Control
Assessed Values reflect tax year 2008.

Search criteria: TMK Taxkey 1-9-1-14-14

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This information has been supplied by third parties and has not been independently verified by Hawaii Information Service and is, therefore, not guaranteed.

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# Well Check Program

4/1/04 - Revised for update to Well Standards (February 2004)

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## Results

### Well Depth

- Theoretical Thickness of Aquifer: 20.5
- 1/4 Aquifer Thickness: 5.125
- Depth of Well below Sea Level: 109 (too deep)

### Well casing

- Minimum Wall Thickness Material: pvc plastic
- Minimum Thickness per standards: no requirement
- Wall Thickness Provided: 0.85 no standard
- Minimum Length of Solid Casing 90% of ground to top of aquifer: 10.35
- Length of solid casing Provided: 40 okay
- Casing Material Schedule 80: in compliance
- (for pvc only - check for 200' limit): okay

### Annular Space

- Depth of Grouting Calculated Depth of Grouting: 8.06
- Depth of Grouting provided: 38 okay
- Minimum Annular Space required: 1.5
- Thickness of Annular Space: 4 okay
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**TOTAL** $75.00

**REMARKS:**
- LINE (1): Lucus Well
- LINE (2): MW II-7 Well
- LINE (3): Supply Well No. 1
- LINE (4): 5/26/07
Mr. Ken Kawahara  
Deputy Director  
Commission on Water Resource Management  
Department of Land and Natural Resources  
State of Hawaii  

Dear Mr. Kawahara:

Well Construction/Pump Installation Permit Application  
for the CIP Generating Station Supply Well No. 1

Attached is a Well Construction/Pump Installation Permit application, $25 filing fee, and other attachments for Hawaiian Electric’s Campbell Industrial Park Generating Station Supply Well No. 1. Since the drilling contractor has not been selected yet, we understand that a Letter of Assurance would be issued pending the contractor’s selection. The intent is to add this well under HECO’s Water Use Permit No. 176.

If you need additional information, feel free to call me or Bob Isler at Hawaiian Electric Company at [redacted]. Thank you for your attention to this matter.

Sincerely,

Tom Nance

cc: Bob Isler - Hawaiian Electric Co.

Attachments
WELL LOCATION INFORMATION

1. STATE WELL NO. (if already assigned) 
2. WELL NAME CIP Generating Station Supply Well No. 1
3. ISLAND Oahu
4. TMK 9 1 14 14

The following must be attached before this application is accepted as complete:
- Portion of 7.5-Minute Series USGS topographic map (scale 1:24000) 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

5. WELL OPERATOR'S NAME/COMPANY Hawaiian Electric Company, Inc. 

7. Proposed Work
- Construct New Well
- Modify Existing Well
- Abandon/Seal Well
- Construction Type
- Drilled
- Dog
- Shaft
- Tunnel

8. Construction Type

9. Is this well part of a battery of wells? ☐ Yes ☐ No

10. Proposed Work
- Install New Pump
- Replace Pump

11. Proposed Pumping Rate, gpm
- 850
- 12. Proposed Amount of Withdrawal, gpd (gallons per day)
- 1,224,000

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

PROPOSED WELL 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) Hawaii Engineering Group - License No. 9488

PROPOSED USE

☐ 15. Municipal (water systems serving greater than 25 individuals or 15 service connections)
☐ 16. Domestic

☐ 17. Industrial (describe) Combustion turbine water injection for air emissions control.

☐ 18. Irrigation (describe crop and no. of acres)

☐ 19. Military (describe)

☐ 20. Other (describe)

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
- Not Required (attach documentation from OCCL)
- I have not checked with OCCL about whether or not a CDUP is required. I understand that checking with OCCL prior to making this application may expedite my review. I further understand that issues raised by this agency may delay or result in denial of the permit issuance, or revocation of the permit after it is issued.

22. Special Management Area Permit (SMAP)
- Required, SMA # date approved
- Not Required (attach documentation from applicable County agency) (See Attached)
- I have not checked with the county about whether or not an SMA Permit is required. I understand that checking with the County prior to making this application may expedite my review. I further understand that issues raised by this agency may delay or result in denial of the permit issuance, or revocation of the permit after it is issued.

23. State Historic Preservation Division (SHPD) of the Department of Land and Natural Resources
- I have consulted with the HPD regarding potential impacts of well construction activities on historic sites. I have attached applicable documentation from the HPD.
- I have not consulted with the HPD regarding potential impacts of well construction activities on historic sites. I understand that checking with the HPD prior to making this application may expedite my review. I further understand that issues raised by this agency may delay or result in denial of the permit issuance, or revocation of the permit after it is issued. Additionally, the history of past land use is attached.

Additional remarks, explanations, etc. (attach additional sheet if more space is needed)

NOTE: Signing below indicates that the signatories understand and swear that the information provided is accurate and true to the best of their knowledge. Further, the signatories understand that upon permit approval: 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) 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 $5000/day.

24. WELL DRILLER (Must be filed out if application is for Well Construction)

REID DRILLING & PUMP SERVICE 219B
Licenses and/or permits C-57 License No.
Signature 12-3-08

25. PUMP INSTALLER (Must be filed out if application is for Pump Installation)

REID DRILLING & PUMP SERVICE 219B
Licenses and/or permits C-57C-57a/A License No.
Signature 12-3-08

For Official Use Only:
RECEIVED 08 JUL 31 8:43

For further information and updates to this application form, visit http://www.hawaii.gov/dlnr/wrm.

State of Hawaii
Department of Land and Natural Resources
Commission on Water Resource Management

Application for a Well Construction / Pump Installation Permit

Page 1

WCPI Application Form 02/26/2007
**PROPOSED WELL SECTION**  
*(Please attach schematic if different from diagram provided below)*

**Solid Casing:** (check one):  
- 28 ft. 
- PVC 
- Stainless Steel:  
- 0.85 ft. 
- PVC 
- Thermoset Plastic:  
- * 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/Wells 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 - 0.25 x Water Level Elevation) / 4**

**Solid Casing Material:**  
Carbon Steel: compliant with (check one or more):  
- ANSI/AWWA C200  
- A606 (production wells)  
- Type E  
- Other  
- Grade B  
And compliant with (check one or more):  
- 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 D3296

**Open Casing:**  
- Perforated  
- Screen  
- 0.85 ft.  
- PVC  
- Other  
- Grade B  
- Other

**Open Hole:**  
- Length:  
- Diameter:  
- Bottom Elevation:  

- Neither bentonite nor mud should be used in saturated zone during drilling

*CIP Generating Station Supply Well No. 1*
LOCATION OF THE PROPOSED SUPPLY WELL

SUBJECT TO CHANGE
April 19, 2006

Mr. Dean A. Nakano, Acting Deputy Director
Commission on Water Resource Management
Department of Land & Natural Resources
State of Hawai‘i

Subject: Draft Environmental Impact Statement: Campbell Industrial Park Generating Station and Transmission Additions Project, ‘Ewa, O‘ahu, Hawai‘i

Dear Mr. Nakano:

Thank you for your March 1, 2006 letter (your reference 1806-15 to 18.let) concerning the Hawaiian Electric Company, Inc.’s (HECO) proposed Campbell Industrial Park Generating Station and Transmission Additions Project. We appreciate the time you and your staff spent reviewing the Draft Environmental Impact Statement and providing written comments.

Thank you for notifying us that the Well Construction Permits for Well Nos. 1806-16 to 18 have expired. We understand that further well development would require new permits from the Commission.

Item-by-item responses to your additional comments are provided below. To simplify your examination, we have reproduced the text of your comments in italicics before each response.

Comment 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.

Response: Thank you for your recommendation. HECO is working with the City and County of Honolulu Board of Water Supply to coordinate the potable and non-potable water supply for the proposed facilities.

Comment 2:

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

Response: HECO will obtain a Water Use Permit for the use of groundwater at the proposed generating facility.
Comment 3:

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

Response: Thank you for confirming that Well Construction Permits are required for the proposed wells. HECO will seek these before beginning work on this aspect of the proposed project.

Comment 4:

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

Response: We appreciate your confirming that Pump Installation Permits are required before ground water is developed as a source of supply for the project. HECO will seek these before beginning work on this aspect of the proposed project.

Comment 5:

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.

Response: HECO will abandon the existing well as part of this project. It expects to submit an application for a well abandonment permit shortly.

Comment 6:

In 1992, Hawaiian Electric Company, Inc. obtained well construction and water use permits for four caprock wells at the Tank Farm site (assigned Well Nos. 1806-15 to 18). The water use permit authorized up to 14.4 million gallons per day of salt water to be used for industrial cooling. Based on the information provided in this report, only one well (Well No. 1806-15) was constructed.

Our records show that there is no pump in Well No. 1806-15. If Well No. 1806-15 is to be developed for industrial cooling use, a pump installation permit would be required. Thereafter, regular monthly reports of water use should be made (visit our website at www.hawaii.gov/dlnr/cwrm/forms.htm to download the water use reporting form.) If additional production wells are desired, well construction permits would also be required in addition to pump installation and water use permits. Use of any existing or proposed wells for any purpose other than industrial cooling would require a new water use permit from the Commission.

Response: HECO will seek Pump Installation Permits for all wells which it intends to construct for the proposed project. We further understand that any well used for a purpose other than industrial cooling would require a new Water Use Permit.

Comment 7:

The report mentions that the technical feasibility of relying on caprock wells must be confirmed through test borings and pump testing. Please be advised that any test borings, constructed for the purposes of determining potential well yield or other hydrologic
conditions, cannot be converted to exploratory, production, or permanent monitor wells. Test borings must be sealed in accordance with the sealing standards in the HWCPIS immediately after their purpose has been served. If it is desired or contemplated to convert the test borings, if successful, to exploratory, production, or permanent monitor wells, then the test borings should be drilled as exploratory wells, with the proper permits from the Commission. Additionally, if the quality of water pumped is less than 17,000 mg/l chlorides then it will not qualify as a saltwater well and may need to be modified by the Commission.

Response: Thank you for your advice concerning the wells. HECO will seek the permits needed to drill the wells as exploratory wells so that they can be converted to production wells if they prove successful.

Thank you again for your comments. If you have any further questions, please call me at [redacted] or Mr. Perry White of Planning Solutions, Inc., our environmental consultant, at [redacted]

Sincerely,

Robert Isler
Project Manager

cc: Mr. Matthew Higashida, DPP
Office of Environmental Quality Control
Mr. Perry White, Planning Solutions, Inc.
March 1, 2006

Mr. Robert Isler
Hawaiian Electric Co., Inc.

Dear Mr. Isler:

We recently reviewed a Draft Environmental Impact Statement (DEIS) for the Hawaiian Electric Co., Inc.'s (HECO) proposed generating station and transmission additions at Campbell Industrial Park. The DEIS indicated that only one caprock well, Well No. 1806-15, was drilled at the Tank Farm site. We have confirmed this with Mr. Ken Fong, our previous contact person for HECO well permits. Mr. Fong has informed us that you are the new project manager.

This is to notify you that we have canceled the Well Construction Permits for Well Nos. 1806-16 to 18, which have expired. If you decide to proceed with additional well development in the future, new permits from the Commission would be required.

Our comments on the draft Environmental Impact Statement outline additional permit information and requirements (attached).

Sincerely,

DEAN A. NAKANO
Acting Deputy Director

LYN:ss
Attachment
TO: Russell Tsuji, Administrator
Land Division

FROM: Dean A. Nakano, Acting Deputy Director
Commission on Water Resource Management

SUBJECT: Draft Environmental Impact Statement
Hawaiian Electric Company, Inc., Campbell Industrial Park Generating Station and Transmission Additions Project, Ewa District, Oahu

FILE NO.: HECOCIPARK-DEIS.CMT

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. 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/cwrm/forms.htm.

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

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

☐ 6. A Pump Installation Permit(s) is (are) required before ground water is developed as a source of supply for the project.
7. 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.

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

9. 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.

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

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

12. 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.

13. We recommend that the report identify feasible alternative non-potable water resources, including reclaimed wastewater.

OTHER:

In 1992, Hawaiian Electric Company, Inc. obtained well construction and water use permits for four caprock wells at the Tank Farm site (assigned Well Nos. 1806-15 to 18). The water use permit authorized up to 14.4 million gallons per day of salt water to be used for industrial cooling. Based on the information provided in this report, only one well (Well No. 1806-15) was constructed.

Our records show that there is no pump in Well No. 1806-15. If Well No. 1806-15 is to be developed for industrial cooling use, a pump installation permit would be required. Thereafter, regular monthly reports of water use should be made (visit our website at www.hawaii.gov/dlnr/cwrm/forms.htm to download the water use reporting form.) If additional production wells are desired, well construction permits would also be required in addition to pump installation and water use permits. Use of any existing or proposed wells for any purpose other than industrial cooling would require a new water use permit from the Commission.

The report mentions that the technical feasibility of relying on caprock wells must be confirmed through test borings and pump testing. Please be advised that any test borings, constructed for the purposes of determining potential well yield or other hydrologic conditions, cannot be converted to exploratory, production, or permanent monitor wells. Test borings must be sealed in accordance with the sealing standards in the HWCPIS immediately after their purpose has been served. If it is desired or contemplated to convert the test borings, if successful, to exploratory, production, or permanent monitor wells, then the test borings should be drilled as exploratory wells, with the proper permits from the Commission. Additionally, if the quality of water pumped is less than 17,000 mg/l chlorides then it will not qualify as a saltwater well and may need to be modified by the Commission.

If there are any questions, please contact Lenore Nakama at .

DRF-IA 04/15/2005
ITEM 1  MINUTES OF THE JULY 15, 1992 MEETING

Mr. Cox asked that "Mr. Horita" (on page 2, fourth paragraph from the bottom) be changed to Mr. Chee.

Unanimously approved as amended (Cox/Fujimura).

Mr. Martin of Native Hawaiian Advisory Council (NHAC) asked that their comments be reflected in the minutes on page 6, Item 10 (see attached). Mr. Cox stated that Dr. Chun's statement was reflected in the second to the last paragraph on page 6. Mr. Martin felt that Dr. Chun's position regarding the Molokai Golf application was not reflected accurately.

ITEM 2  HAWAIIAN ELECTRIC COMPANY, APPLICATION FOR A WATER USE PERMIT, HECO COOLING WELLS, CAMPBELL INDUSTRIAL PARK, OAHU

Mr. Nakata inquired how the water was disposed. Mr. Sakoda believed it does not go into the same aquifer but to a deeper aquifer for disposal. Mr. Damon Runyon, consultant for the applicant, added that the disposed
Chairperson and Members
Commission on Water Resource Management August 19, 1992

cooling water would be going into injection wells which would have to be permitted according to DOH regulations. The supply of water is coming from approximately 100 feet and would be returned to 400 feet.

Unanimously approved (Chun/Cox).

ITEM 3

MAKAKILO GOLF CORP., APPLICATION FOR A TEMPORARY WATER USE PERMIT, FORT BARETTE WELL MAKAKILO GOLF COURSE, OAHU

Mr. Fujimura asked for clarification regarding the condition that the water applied to the golf course be 200 mg/l or less.

Mr. Sakoda stated that was the condition on the caprock well after it is desalted. Mr. Tom Nance, representing the applicant, added that the other source being used is water purchased from Waiahole Ditch. The mix of the waters is well under the 200 mg/l.

Chairperson Paty asked what phase the Course was in. Mr. Bob Imose replied that they were ready to plant. Planting had been delayed for about six months due to a lack of water. Trees have been planted and are being watered by hand. NHAC submitted written testimony. Mr. Martin also asked for clarification on the process of approval or written permission given for test pumping or water use because he was unaware of such specific procedures. He felt the applicant also requires a temporary pump installation permit to proceed with the project and he did not notice any such reference in the submittal.

Mr. Sakoda said that the request for a temporary water use permit assumes that a pump will be installed. Mr. Martin stated they were concerned with the staff giving approval for pumping without Commission approval. Mr. Nance added that the well had been abandoned and filled in with mud well above the water table. The well was cleaned out in the process of adding the well as part of a golf course monitoring requirement.

Mr. Martin understood about perhaps overlooking the pump installation permit but it still did not address his concern about staff giving permission to do the test pumping as it occurred in Items 3 and 4. He felt the Commission should address applying appropriate procedural control over the process.

Mr. Fujimura commented that Mr. Martin's point is well taken but if Mr. Martin went further down the chronology he would notice that at the point of extension corrective measures were taken.
Chairperson and Members
Commission on Water Resource Management    August 19, 1992
State of Hawaii
COMMISSION ON WATER RESOURCE MANAGEMENT
Department of Land and Natural Resources
Honolulu, Hawaii

August 19, 1992

Chairperson and Members
Commission on Water Resource Management
State of Hawaii
Honolulu, Hawaii

Gentlemen:

Hawaiian Electric Company
Application for a Water Use, Well Construction, and Pump Installation Permit
Hawaiian Electric Company Cooling Wells, Campbell industrial Park, Oahu

Applicant: Hawaiian Electric Company
Landowner: Same

Action Requested: Approval of a water use, well construction, and pump installation permit
to drill and test, install pumps, and to use 14,400,000 gallons per day from four Hawaiian
Electric Company Cooling Wells (Well Nos. 1806-15 to 18) for industrial cooling.

Source of Water Supply: Seawater Aquifer, Caprock Subarea, Pearl Harbor Ground Water
Management Area.

Project Location/Tax Map Key: The proposed wells are located at Campbell industrial
Park, at
Tax Map Key: 9-1-14:14, Oahu.

Well Description (typical):

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ground elevation</td>
<td>16 ft.</td>
</tr>
<tr>
<td>Casing diameter</td>
<td>16 inches</td>
</tr>
<tr>
<td>Solid casing depth</td>
<td>50 ft.</td>
</tr>
<tr>
<td>Screen casing depth</td>
<td>120 ft.</td>
</tr>
<tr>
<td>Open hole</td>
<td>none</td>
</tr>
<tr>
<td>Total depth</td>
<td>120 ft.</td>
</tr>
<tr>
<td>Grouted annulus</td>
<td>0 to 45 ft.</td>
</tr>
</tbody>
</table>

Impact on Surrounding Wells: No adverse impacts are expected.
Chairperson and Members
Commission on Water Resource Management August 19, 1992

Water Availability: The wells will be located in the seawater aquifer, Caprock Subarea. Sustainable yield of the seawater aquifer has not been determined. Water use permits for 11.784 mgd from the aquifer have been issued to date, mainly for industrial cooling and firefighting.

Public Notice: In accordance with DLNR Administrative Rules, a public notice was published in the Star Bulletin on July 3 and 10, 1992. In addition, copies of the public notice were sent to the Mayor's office, the County Council, the Department of Health, the Department of Hawaiian Home Lands, the Office of Hawaiian Affairs, the State Historic Preservation Division, the Honolulu Board of Water Supply, and to other interested parties. Written comments to the proposed permit were to be submitted to the Commission by July 22, 1992. There were no objections to the application.

RECOMMENDATION:

That the Commission approve the issuance of a water use permit to Hawaiian Electric Company to use 14,400,000 gallons per day of seawater for industrial cooling, subject to the following conditions:

1. The water use authorized by the permit must be for the reasonable-beneficial use described in the permit.

2. The proposed use shall not adversely affect existing or future legal uses of water in the area, including any surface water or established instream flow standards.

3. Modification of any permit condition shall be approved by the Commission.

4. The applicant shall comply with all applicable laws, rules, and ordinances.

5. The applicant shall provide and maintain an approved meter or other appropriate device or means for measuring and reporting total water usage. Water usage shall be measured on a monthly basis and reported to the Commission.

6. The permit may be revoked if work is not started within six months of the date of issuance or if work is suspended or abandoned for six months. The work proposed in the permit application shall be completed within two years from the date of permit issuance.
Chairperson and Members
Commission on Water Resource Management    August 19, 1992

7. The permit shall be subject to review by the Attorney General.

Respectfully submitted,

RAE M. LOUI
Deputy Director

Attach.

APPROVED FOR SUBMITTAL:

WILLIAM W. PATY, Chairperson
Roscoe Moss Hawaii, Inc.  Making Water Work For Hawaii Since 1965

<table>
<thead>
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<tr>
<td>TO: DELRK</td>
</tr>
<tr>
<td>ATTN: Mitch</td>
</tr>
<tr>
<td>FROM: Tracy Renaults</td>
</tr>
<tr>
<td>REF: Here's your Permit.</td>
</tr>
<tr>
<td>This is only map I can find.</td>
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</table>
Chairperson and Members
Commission on Water Resource Management

August 19, 1992

RECOMMENDATION:

That the Commission approve the issuance of a water use permit to Hawaiian Electric Company to use 14,400,000 gallons per day of seawater for industrial cooling, subject to the following conditions:

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2. The proposed use shall not adversely affect existing or future legal uses of water in the area, including any surface water or established instream flow standards.
3. Modification of any permit condition shall be approved by the Commission.
4. The applicant shall comply with all applicable laws, rules, and ordinances.
5. The applicant shall provide and maintain an approved meter or other appropriate device or means for measuring and reporting total water usage. Water usage shall be measured on a monthly basis and reported to the Commission.
6. The permit may be revoked if work is not started within six months of the date of issuance or if work is suspended or abandoned for six months. The work proposed in the permit application shall be completed within two years from the date of permit issuance.
7. The permit shall be subject to review by the Attorney General.

Respectfully submitted,

RAE M. LOUI
Deputy Director

APPROVED FOR SUBMITTAL:

WILLIAM W. PATY, Chairperson
**WELL COMPLETION REPORT**

**INSTRUCTIONS**: Please print or type and submit completed report within 30 days of well completion to the Hawaii State Water Resource Management Commission. P.O. Box 937, Honolulu, Hawaii 96809. An as-built drawing of the well and chemical analysis, if available, should also be included. If necessary, phone 548-7543. Geology, Geosy for Assistance.

<table>
<thead>
<tr>
<th>A. STATE WELL NO.</th>
<th>B. WELL NAME</th>
<th>C. LOCATION</th>
<th>D. CONTRACTOR</th>
<th>E. TYPE OF JOB</th>
<th>F. DATE OF WELL COMPLETION</th>
<th>G. DATE OF PUMP INSTALLATION</th>
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</thead>
<tbody>
<tr>
<td>1806-15</td>
<td>HECO Tank Farm</td>
<td>Chevron Tank Farm - Barbers Point</td>
<td>ROSCOE MOSS HAWAII, INC.</td>
<td>28L</td>
<td>APRIL 1993</td>
<td></td>
</tr>
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**H. TOTAL DEPTH OF WELL BELOW GROUND**: 110 ft.

**J. CASING INSTALLED**: 24 in. I.D. x 80 ft. wellbore section to 40 ft. below ground

**K. ANNULUS**: Grouted from 0 ft. to 43 ft. below ground

**L. PERMANENT PUMP INSTALLATION**: Pump type, make, serial No. Capacity gpm

**M. PROPOSED USE**: \[\text{Capacity} \text{ gpm}\]

**N. INITIAL WATER LEVEL**: Date and time of measurement March 30, 1993

**O. INITIAL CHLORIDE**: Date and time of sampling

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

**Q. DRILLER'S LOG**: Depth, ft. | Rock Description & Remarks | Water Level ft. | Depth, ft. | Rock Description & Remarks | Water Level ft. \\
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<td>Loose Coral</td>
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<td>to</td>
<td>to</td>
<td>to</td>
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<tr>
<td>47 to 51</td>
<td>Hard Coral</td>
<td>to</td>
<td>to</td>
<td>to</td>
<td>to</td>
</tr>
<tr>
<td>51 to 115</td>
<td>Coral Medium Hard</td>
<td>to</td>
<td>to</td>
<td>to</td>
<td>to</td>
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<tr>
<td>115 to 118</td>
<td>Pink Oolitic Coral</td>
<td>to</td>
<td>to</td>
<td>to</td>
<td>to</td>
</tr>
<tr>
<td>118 to 121</td>
<td>Tan Sand</td>
<td>to</td>
<td>to</td>
<td>to</td>
<td>to</td>
</tr>
</tbody>
</table>

**REMARKS**: 

Submitted by (print) LORRAH H. RUSSELLS

Title: PRESIDENT

Date: April 13, 1993

FOR OFFICIAL USE

Latitude 21° 18' 35"

Longitude 158° 06' 29"

Well No. 1806-15
PUMPING TEST RECORD

for

Heco Tank Farm WELL Well I 1806-15
(Name)  (No.)

Dahoe Island Hauing Leezen Project or Job No. 3-93R 1993

Description of Well--
1. Elevation: ground surface ft., top of casing ft., rotary table ft., referenced to bechmark.
2. Total depth of well 110 ft.; or ft. elevation, msl
3. in. solid casing to 40 ft. depth, perforated to 10 ft. depth
4. Static water level on 3-30 1993, 13.07 ft. below ground surface, top of casing; or ft. elevation msl measured method

Description of Pump and Pump Setting--
5. Turbine type pump with stage bowl assembly
6. Gasoline (diesel) electric, power with 150 horsepower
7. Shaft speed: 1750 rpm at gpm flow
8. Depth of pump intake: 40 ft. below; or ft. elev. msl
9. Depth of airline bottom: 37 ft. below; or ft. elev. msl
10. Center of gage: ft. elev., msl. Flow measured with METER

<table>
<thead>
<tr>
<th>Date &amp; Time</th>
<th>Sample No.</th>
<th>Pumping rate (gpm)</th>
<th>Airline (feet)</th>
<th>Drawdown (feet)</th>
<th>Chlorides (ppm)</th>
<th>Temp. (°F)</th>
<th>Cond. (mmhos 25°C)</th>
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Pump was run 4-1-93 for 4 1/2 hours so could get water samples for well usage.
WELL # 1806-15

- PVC CASING: 24"
- CEMENT SEAL
- CEMENT SEAL #2500
- CEMENT SEAL BETWEEN 24" + 18" CASING
- BENTONITE SEAL, 3/8" PELOTS
- STAINLESS STEEL: 19"
- CEMENT CASING: 3/4" WASHED GRAVEL
- BACK FILLED WITH 3/4 TO 3/8 WASHED GRAVEL

Hero - Campbell Industrial Park 3-93R
Completed 3-22-93
HECO Cooling Wells
(Well Nos. 1806–15 to 18)
To Department of Land & Natural Resources
Division of Water and Land Development
Honolulu, HI

WE ARE SENDING YOU ☑ Attached ☐ Under separate cover via the following items:
☐ Shop drawings ☐ Prints ☐ Plans ☐ Samples ☐ Specifications
☐ Copy of letter ☐ Change order ☑ Application filing fee

<table>
<thead>
<tr>
<th>COPIES</th>
<th>DATE</th>
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<th>DESCRIPTION</th>
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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 ___________________ 19 ☐ PRINTS RETURNED AFTER LOAN TO US

REMARKS The filing fee is for the well construction and water use permit applications for four supply wells at Lot No. 2997 Hanua Street, Ewa Beach. The applications were submitted under a separate cover dated May 29, 1992. If you have any questions, please call.

COPY TO ________________________________________ SIGNED: Lene Masatsugu

If enclosures are not as noted, kindly notify us at once.
June 3, 1992  Dept. of Land and Natural Resources  Well Construction & Water Use Permit  $ 50.00

****Fifty and no/100****

PAY TO THE ORDER OF: Dept. of Land and Natural Resources

WATER USE & WELL CONSTRUCTION PERMITS
HECO COOLING WELLS (1806-15 to 18)

George T. How
May 29, 1992

17152,054.06
2370MI

Department of Land & Natural Resources
Division of Water and Land Development

Attention: Mr. Ed Sakoda

Well Construction Water Use
Permit Application
Hawaiian Electric Company
Ewa Beach, Oahu, Hawaii

Enclosed are well construction and water use permit applications, supporting
documentation and a filing fee for four supply wells at Lot No. 2997, Hanua Street, Ewa
Beach.

If you have any questions or require additional information, please feel free to call.

Sincerely yours,

HARDING LAWSON ASSOCIATES

Ronald L. Soroos
Principal Geologist

RLS/dbc

Enclosures

6-3-92 Telen - filing fee is in the mail, Ed
APPLICATION FOR

WELL CONSTRUCTION PERMIT
PUMP INSTALLATION PERMIT

INSTRUCTIONS: Please print or type and send completed application with attachments to the Division of Water and Land Development, P.O. Box 373, Honolulu, Hawaii 96816. Application must be accompanied by a non-refundable filing fee of $13.00 payable to the Department of Land and Natural Resources. (Filing fee waived for government agencies.) If necessary, phone 548-1543, Hydrology/Geology Section for assistance.

1. WELL LOCATION

Island: Oahu  Tax Map Key: 9-1-14:14
Address: Lot #2997 Hanua Street, Ewa Beach

(Attach a USGS map (scale 1"=2000') and property tax map showing well location referenced to established property boundaries.)

2. WELL OWNER

Firm Name: Hawaiian Electric Company
Contact Person: Mr. Ken Fong
Address: [Redacted]

LANDOWNER

Firm Name: Hawaiian Electric Company
Contact Person: Mr. Ken Fong
Address: [Redacted]

3. PROPOSED CONTRACTOR FOR:

[ ] Well Drilling  [ ] Pump Installation
Name: Roscoe Moss Hawaii, Inc.
Address: [Redacted]

Contractor’s License No.: C-2101

4. PROPOSED WORK

[ ] Drill New Well  [ ] Deepen
[ ] Alter  [ ] Seal
[ ] Install New Pump  [ ] Replace Pump
[ ] Redrill  [ ] Abandon
[ ] Modify Pump

(Briefly describe the proposed work and fill in the diagram on the back of this form.)

5. PROPOSED USE

[ ] Municipal (including hotels, stores, etc.)  [ ] Military
[ ] Domestic (individual, noncommercial water systems)  [ ] Industrial
[ ] Irrigation (specify)  [ ] Other (specify)

6. PROPOSED AMOUNT OF WITHDRAWAL

14,400,000 gallons per day

7. PROPOSED PUMP INFORMATION

Pump Type: [ ] Vertical Turbine  [ ] Submersible  [ ] Centrifugal
Motor: [ ] Diesel  [ ] Gas  [ ] Electric
Rated Pump Capacity: [ ] gallons per minute (gpm)

Well Owner (print): Hawaiian Electric Co.
Signature: [Redacted]
Date: 5/22/92

Landowner (print): Hawaiian Electric Co.
Signature: [Redacted]
Date: 5/22/92

For Official Use Only:
Field Checked By: [Redacted]
Latitude: [Redacted]
Hydrologic Unit: [Redacted]
Date: [Redacted]
Longitude: [Redacted]
State Well No.: 1806-15-16B

HECO COOKING WALLS
Briefly describe the proposed work:

Install four production wells

PROPOSED SECTION OF WELL

- Elevation at top of casing: 18 ft., msl.
- Ground Elev.: 16 ft., msl*
- Cement Grout: 45 ft.
- Hole Dia.: 24 in.
- Total Depth: 120 ft.
- Rock Packing: 75 ft.
- Solid Casing: Material: PVC Sch 80
  - Length: 50 ft.
  - Diameter: 16 in.
  - Wall thickness: 0.843 in.
- Casing: / Perforated K/ Screen
  - Material: Stainless Steel
  - Length: 70 ft.
  - Diameter: 12 in.
  - Wall thickness: 0.5 in.
  - Openings: 123 sq. in./L.F.
- Open Hole:
  - Length: 0
  - Diameter: ___________ in.

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