FIELD MEMORANDUM

Well File 2408-08 (Insp. 5-13-98) Maile # 1
Well 2408-09 (Insp. 23-34-97) Maile # 2
Two of the wells drilled for the Proposed Lualualei Golf Course
(See also 2408-10, 2508-10 to 12)

PRESENT: 12/23/97 Mr. Harvey Hida of Hida, Okamoto & Associates
Susan Swanson, CWRM, Surveying crew
5/13/98 Tracy Runnels, Rosco Moss & Susan Swanson, CWRM

GENERAL LOCATION: Proposed golf course, just outside Lualualei Military Reservation
on the east side of the Lualualei Naval Road

SOURCE TMK: 8-7-09:2

I met Mr. Hida and his survey crew on Lualualei Naval Road at 9:30, 12/23/97. The road leads to a
military installation in the back of the valley. The 200+ acre parcel is located on the east side of the
Naval road, southeast of the military entrance gate. The property is enclosed by a chain link fence and
is bordered by a row of tall trees along the east side of the road.

Well 2408-09 is located at a cul-de-sac at the end of an overgrown driller's road, approx. 17' from a cliff
face. See attached photos. Tracy Runnels, of Rosco Moss drilled this well. It is called the "quarry well"
because the cliff face was quarried for building materials in the plantation days. There is an 8” casing
with a plate welded on top with a screw plug for access. This is reported to be a good brackish well. It
is also the nearest well to the BWS shaft (inactive 10+ years.)

I returned to the property with Tracy Runnels on 5-13-98 to visit 2408-08. Three dry stream beds cross
through the property. I used those as reference points. The wells are now marked with flagging on the
adjacent chain link fence. The Nanakuli brush fires burnt some of the brush in the south part of the
parcel, but at the time of inspection the fires were mostly burning a mile or so makai. The fire
department was limiting access in the active fire area. While we were there, an area above us that had
already been burned, crackled and burst into flames, but we were pretty far from the actual fire.

This well casing has been broken off, so essentially it is an open hole. A pebble dropped into it, could
be heard hitting something solid 50’ or more down the casing. Tracy Runnels said he was writing up a
cost estimate to Harvey Hida to seal three of the wells drilled on this property (2408-08, 2508-10,
2508-11).
Wells Located on Proposed golf course site in Lualualei. Harvey Hida is the agent for the owner.

Well 2508-11
This well is located along the chain link fence marking the northern property boundary of the military reservation. The casing has been smashed at ground level. A tape was extended down 51.3' of open hole before hitting a solid object. This well is near a dry stream bed. The surveyors left flagging in the nearby tree to mark the site. This well may have to be sealed.

Well 2508-10
at northwest corner of parcel - within 100' of the military gate guard station. Water visible at depth - reported to have had a low yield. The well is secured only by piece of metal covering the 14" metal casing. The well may need to be sealed.

Well 2508-12
This well is located about 30' from the chain link fence along the Lualualei Naval Road. Reported to be a good well, this is located a short distance makai of the long trailer and double chain link fence gate. Banana trees, bougainvillea, palm trees, etc. with the irrigation lines are planted near this well. Water source for the irrigation? 8" PVC casing with wooden plate bolted on.

Well 2508-13
This well was not located. It was supposed to be located on the west side of the Lualualei Naval Road on Plat 6-7-10. The test bore may have been so unpromising that the well was never cased. P R Drilling's map shows that it was drilled to 105'.

Well 2508-08
Tracey Runnels of Rosco Moss showed me this well up on the hillside approx. at 200' elevation. The brush is burnt off from recent fires. Tracy said he drilled this well. He was looking at the wells that may need to be sealed to put in a proposal. He said the hole had collapsed, the casing is broken - now just an open hole. A pebble dropped down the casing falls some distance before it hits solid rock. This well may have to be properly sealed. Tracy said that the yield was too salty for its proposed use of golf course irrigation water.

Well 2408-09
called the "Quarry Well" - said to be named because it is near the rock face which supplied the building stones for flumes, etc. in plantation days - 8" casing with welded plate and smaller screw cap on top. This is the closest well to the BVVS shaft which hasn't been used in many years - now brackish.

Well 2508-10
(trace) 3" (?) PVC pipe
Newly designated 2408-10
8" PVC 12" diameter Conductor pipe
Cement pad
Electrical connection to submersible pump
4" PVC casing
open hole
Test bore??

Well 2408-10 (Needs after the fact permits)
SKETCH SHOWING WELLS DRILLED FOR PROPOSED GOLF COURSE

1. Documented wells marked in red.

2. Well shown in blue was to be drilled on a parcel some distance NE of other wells. It was drilled to 105' according to the PR Drilling map - we didn't find it.

3. Wells with yellow highlighting may need to be sealed, i.e. broken casings, low yield.

- The diagram shows several dry tributaries of Ulehawa Stream.

- The green line shows the row of tall trees with irrigation lines running down their length.

- Bananas, bougainvillea & palms are also being grown. There are irrigation lines to these plants.

- We located an unpermitted well in the field that has since been numbered 2408-10. There is a submersible pump in the well and pvc pipe from the well, but the power is disconnected to the well.
<table>
<thead>
<tr>
<th>well #</th>
<th>description</th>
<th>coordinates</th>
</tr>
</thead>
<tbody>
<tr>
<td>2508-10</td>
<td>metal casing, with metal plate sitting on the casing within 40' of military gate at NW corner of parcel - low yield well – discussion regarding plan to seal this well</td>
<td>21-25-16, 158-08-22</td>
</tr>
<tr>
<td>2508-11</td>
<td>half way up the eastern military boundary fence near a dry stream – broken metal casing 51' deep of open hole – potentially open to contamination</td>
<td>21-25-08, 158-08-15</td>
</tr>
<tr>
<td>2508-12</td>
<td>8&quot; grey pvc casing – said to be a good well</td>
<td>21-25-03, 158-08-25</td>
</tr>
<tr>
<td></td>
<td>“unstable well” water too salty</td>
<td>21-24-48, 158-08-27</td>
</tr>
<tr>
<td>2408-06</td>
<td>casing damaged by bulldozer – potential for contamination</td>
<td>21-24-59, 158-08-09</td>
</tr>
<tr>
<td>2408-09</td>
<td>&quot;Quarry well&quot; metal casing with screw cap welded on - near the cliff face and nearest to the BWS shaft - quarry well is said to be good well</td>
<td>21-24-56, 158-08-31</td>
</tr>
<tr>
<td></td>
<td>newly found and numbered well</td>
<td></td>
</tr>
<tr>
<td>2408-10</td>
<td>8&quot; pvc with 12&quot; conductor pipe - it appears that there isn't a const permit or pump inst permit</td>
<td></td>
</tr>
</tbody>
</table>
A survey crew documented well locations for wells 2508-10, 11 & 12 on December 23, 1997, during my initial inspection. Mr. Hida showed me well 2408-09 and mentioned 2408-08 which were also drilled for this proposed golf course. We were unable to locate well 2508-13 which was supposedly drilled to a depth of 105' on TMK 8-7-10 on the other side of Lualualei Naval Road.

Feb. 11, 1998 meeting with Harvey Hida, Tracey Runnels from Rosco Moss Drilling, Mitch Ohye, Lenore Nakama, Susan Swanson. On 5-13-98 Mr. Runnels showed me well 2408-08 and an undocumented well with a pump in it. I showed him where 2508-11 was located. Additional photos were taken of the undocumented well on 5/20/98. After the fact permits should be required for the undocumented well & pump now designated as 2408-10. Irrigation lines run the length of the property. The electricity is currently shut off to the submersible pump.

<table>
<thead>
<tr>
<th>Locations of wells</th>
<th>Well Number</th>
<th>Casing Diameter/ type of material</th>
<th>How is Casing Secured Inside Fenced parcel??</th>
<th>GPS Coordinates</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>@ northwest corner of TMK 8-7-9.2, 35'E &amp; 42'S from chain link fence</td>
<td>2508-10</td>
<td>14&quot; casing metal casing</td>
<td>inspected 12-23-97 16&quot; metal plate resting over casing – This well was reported to have a low yield and may be sealed in the future.</td>
<td>21-25-16 158-08-22</td>
<td>Water visible at depth – surveyors were going to measure depth to water.</td>
</tr>
<tr>
<td>along military fence line, west of dry stream bed</td>
<td>2508-11</td>
<td>diameter ? casing smashed</td>
<td>inspected 12-23-97 No cover – Broken Casing at ground level the tape was lowered 51.3' before hitting a solid object – open hole – I took Tracey Runnels to this well. This is a candidate for sealing.</td>
<td>21-25-08 158-08-15</td>
<td>Surveyors dropped a tape down to the bottom of the open hole to a depth of 51.3 feet. No water encountered.</td>
</tr>
<tr>
<td>reported to be a good well</td>
<td>2508-12</td>
<td>8&quot; grey pvc casing</td>
<td>inspected 12-23-97 &amp; 5-20-98 Wooden board screwed over grey 8&quot; pvc casing</td>
<td>21-25-03 158-08-25</td>
<td>29' E of chain link fence along Lualualei Naval Rd.</td>
</tr>
<tr>
<td>In well folder with 2808-08 located approx at the 200' elev on the hillside</td>
<td>2408-08</td>
<td>casing broken off by bulldozer – open hole</td>
<td>inspected 5-13-98 As per Runnels, Roscoe Moss drilled this 220' deep well – unstable, partially collapsed, water too salty. This is a candidate for sealing.</td>
<td>inspected on 5/13/98</td>
<td>Inspected 21-24-48 158-08-27</td>
</tr>
<tr>
<td>Inspection report in separate well folder – 2408-09 – Rosco Moss drilled this well for the same golf course</td>
<td>2408-09</td>
<td>8&quot;</td>
<td>Inspected 12-23-97 -Maile Irrig. Well This well is referred to in the well file as the &quot;Quarry Well&quot; because the sugar company previously quarried rock from this site. The well has an 8&quot; casing, covered by a welded metal plate w/ small diameter screw cap – reported to be usable brackish water source. This well is closest to the BWS shaft.</td>
<td>21-24-59 158-08-09</td>
<td></td>
</tr>
<tr>
<td>Tracy Runnels said he found this well with a pump in it — the electricity is currently disconnected. There are irrigation feeder lines from an unidentified source scattered around to trees, bananas, bougainvillea &amp; palms. Were these irrigated from this well? This is the only well found with a pump in it.</td>
<td>recently given a number - 2408-10</td>
<td>8&quot; casing with 12&quot; conductor pipe on cement pad</td>
<td>Inspected 5-13-98 &amp; 5-20-98 NEEDS AFTER THE FACT PERMIT APPLICATIONS there is also a 4&quot; test bore 2-3' away</td>
<td>21-24-56 158-08-31</td>
<td>information unknown regarding this well.</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>well not found — PR drilling map lists it at 105' on TMK 8-7-10 — On the other side of Lualualei Naval Road accessed by the private road .1 mi from the Lualualei Military Gate.</td>
<td>2508-13 (?)</td>
<td>no casing found</td>
<td>We looked for this well 12-23-97 but did not find anything. Mr. Hida reported that the water was too salty — that the test bore was not cased</td>
<td>not located</td>
<td></td>
</tr>
</tbody>
</table>
Please respond w/ letter noting the well seems to be abandoned according to code criteria and ask for well abandonment permit application.
May 26, 2010

Mr. Glenn T. Kimura
Kimura International Inc.
1600 Kapiolani Blvd., Suite 1610
Honolulu, HI 96814

Dear Mr. Kimura:

Sealing Abandoned Wells
TMK: (1) 8-7-009:002

Thank you for your response dated April 26, 2010, providing text from the Final Environmental Impact Statement (FEIS) addressing our comments on the Nanakuli Community Baseyard project.

We reiterate our recommendation for these wells to be sealed. You have stated that “There are no plans to use the existing on-site wells, which are capped”, and “ground water will not be used for the proposed light industrial park and the existing wells will remain capped”. Please note that the Water Code defines “abandoned well” as “any well that has been permanently discontinued” (HRS §174C-81). The purpose of sealing a well is to prevent it from being a conduit for accidental or inadvertent contamination or waste of underlying ground water, a situation of greater sensitivity under the circumstances of your proposed land uses at this site.

Please complete and file the attached forms for abandonment and sealing the wells on this property (2408-08, -09, & -10).

If you have any questions, please contact Charley Ice of our staff at [redacted]

Sincerely,

KEN C. KAWAHARA, P.E.
Deputy Director

Attachment
April 26, 2010

Mr. Ken C. Kawahara  
Deputy Director  
Commission on Water Resource Management  
P.O. Box 621  
Honolulu, HI 96809

Dear Mr. Kawahara:

Comments on the Draft Environmental Impact Statement  
Nanakuli Community Baseyard, Oahu, Hawaii  
Portion of TMK: (1) 8-7-009: 002

Thank you for your comments on the Draft Environmental Impact Statement submitted by memorandum dated December 30, 2009. As planning consultant to the project owner, Tropic Land LLC, we have been asked to respond to questions and, where appropriate, summarize and clarify the comments made.

Comments are numbered according to checked items from your list.

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: The civil engineer for this project has consulted with the Honolulu Board of Water Supply and will continue to coordinate with the agency through final design and the acquisition of applicable permits.

Text from the FEIS (p. 5-62): By letter dated July 2, 2009, BWS indicated that installation of a new 16-inch water main will provide adequate fire flow to the proposed industrial development. Design and construction of the drinking water distribution system will be in accordance with BWS Standards.
4. We recommend that water efficient fixtures be installed and water efficient practices implemented throughout the development to reduce the increased demand on the area's freshwater resources. Reducing the water usage of a home or building may earn credit toward Leadership in Energy and Environmental Design (LEED) certification.

Response: As master developer, Tropic Land will incorporate water-saving technologies to the facilities it is directly responsible for, such as the wastewater treatment facility and irrigation system.

Text from the FEIS (p. 5-62): To reduce the demand for drinking water, non-drinking water—treated wastewater effluent—will be used for irrigation. Another water-saving measure is the requirement that industrial park businesses that wash fleet vehicles on-site install systems that recycle wash water. This requirement would also be administered through the CC&Rs.

5. We recommend the use of best management practices (BMP) for stormwater management to minimize the impact of the project to the existing area's hydrology while maintaining on-site infiltration and preventing polluted runoff from storm events. Stormwater management BMPs may earn credit toward LEED certification.

Response: BMPs for stormwater management will be studied in detail during the design phase of the project. Appropriate measures will be incorporated into the construction plans.

Text from the FEIS (p. 5-14): During the detailed design of infrastructure, the consulting engineer will work with the City to confirm necessary water quality standards and develop an effective set of Best Management Practices (BMPs) for the project. The objective of the water quality BMPs is to mitigate the impact of pollutants (sediment, grit, oil, heavy metals) that could potentially enter the drainage system from frequent, smaller rainfalls. Plants and landscaping will be incorporated into the design to absorb particles and filter heavy metals. Additional water quality BMPs include the construction of infiltration swales along the roadway. These swales collect runoff, filter particles, and provide infiltration to recharge the groundwater.

6. We recommend the use of alternative water sources, wherever practicable.

Response: Preliminary engineering plans provide for the use of properly treated recycled water for irrigation purposes.

Text from the FEIS (p. 5-62): To reduce the demand for drinking water, non-drinking water—treated wastewater effluent—will be used for irrigation.
7. There may be the potential for ground or surface water degradation/contamination and recommend that approvals for this project be conditioned upon a review by the State Department of Health and the developer’s acceptance of any resulting requirements related to water quality.

**Response:** Construction and operation of the on-site wastewater treatment facility will be conducted with approval from and in accordance to the standards of the Hawaii State Department of Health. Tropic Land will comply with all requirements related to water quality.

**Text from the FEIS (p. 5-63):** The proposed on-site wastewater collection system is illustrated in Figure 5 (Chapter 3). Gravity sewers will be located within sewer easements. Preliminary pipe line sizes range from 8 to 10 inches in diameter. Design and construction of the system will be in accordance with standards established by the City and County and State Department of Health.

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

**Response:** There are no plans to use the existing on-site wells, which are capped.

**Text from the FEIS (p. 5-7):** The previous owner, Oban, had drilled two wells with the expectation of tapping groundwater as a source of irrigation water for the proposed golf course and nursery. Groundwater will not be used for the proposed light industrial park and the existing wells will remain capped.

We appreciate your participation in the environmental review process.

Sincerely,

KIMURA INTERNATIONAL, INC.

Glenn T. Kimura
President

Cc: Arick Yanagihara, Tropic Land LLC
Dan Davidson, Land Use Commission
FIELD MEMORANDUM

INSPECTION DATE: May 20, 1998 - Located unregistered well, now designated as “2408-10”

PRESENT: 5/20/98 Tracy Runnels of Rosco Moss
           Susan Swanson, DWRM

GENERAL LOCATION: Lualualei, on a 200+ acre parcel makai of Lualualei Military Installation that has been proposed for golf course construction

SOURCE TMK’s: 8-07-09:2 In addition to the newly discovered well, this property contains 5 other wells (reported in two other files). Sealing some of the wells has been under discussion.

12/23/97 Inspection:

I contacted Harvey Hida to arrange access to the property. A site inspection was conducted on 12/23/97 to determine how many wells had been drilled, the locations and conditions of each well. Some of the wells were reported to be unsuccessful; some have broken casings. As I recall Mr. Hida asked me which wells I wanted to inspect. At the time, we didn’t know how many wells had actually been drilled. He did not mention the existence of the unregistered well, 2408-10.

The wells on this property have been drilled, cased and tested by a number of different drillers and contractors. The situation was complicated by the various parties using multiple numbers and names, such as Lualualei Golf Course, Maili Irrig. well, Maile Irrig wells, Well # 5, etc., so it wasn’t clear which well was which, where they were and that all these wells were related to the same proposed use. It was difficult to verify whether the information was correct. It has been reported that some of the parties were still waiting for payment. Someone else said that one of the drillers is no longer a part of that company. Well completion forms were turned with the locations and but not all the data was consistent (i.e. elevations, rock types, depths to water, dates, names etc.)

December 13, 1997, I met Mr. Hida and his survey crew at the property. The wells were inspected in the following order: 2508-12, 10, 11, 2408-09. The property lies just outside on the southeast side of the Lualualei’s military gate guard post. The 200+ acre privately owned parcel is bordered by a chain link fence. An irrigated border of trees had been planted along the fence, down the length of the parcel on the east side of the road. Three dry tributaries cross through the property. The main entrance to the property is at a locked gate near a house trailer approx. .2 miles south of military gate at Lualualei Naval Reserve.

Mr. Hida and I located the fourth well, 2408-09, (later identified as the "Quarry Well", mauka near an escarpment. We were unable to locate the fifth well, Well 2508-13, which was reported to have been drilled on the other side of Lualualei Naval Road on another parcel, quite a distance away from the other wells. The location of this well was shown on PR Drilling’s map, with the notation "105 ft."). However, we were unable to locate it. Mr. Hida said that well was too salty, perhaps it was never cased. Access to 2508-13 is from private roads and driveways on the west side of Lualualei Naval road, approx. .1 mile from the military gate. See sketches and photos.

After my first site visit to this property in December 13, 1997, Lenore Nakama, Mitch Ohye, Harvey Hida (Hida, Okamoto & Assoc.), Tracy Runnels (Rosco Moss) & I met to sort out some of the data. Mr. Runnels had been involved in drilling some of the wells. He said he was submitting a proposal to Harvey Hida to properly seal some of the wells, particularly the ones with broken casings or poor water.

On 5-20-98 Tracy showed me the location of 2408-08, an unstable, collapsed, broken casing which produced water too salty for use. Of the five wells already documented, two had broken casings (2408-08 & 2508-11) with the potential for being a conduit for contamination. Another well (2508-10) was said to have a very low yield.
Description of Unregistered Well now numbered 2408-10

The unregistered well lies along the road, obscured by the chainlink fence and the border of trees. I returned on May 21 to take more photographs.

This well appears to be fairly new, on a cement platform with a pump in it adjacent to a cement pad with the electrical connections. It is located inside the chain link fence, approx. 30' from the road, behind a border of trees, after you pass the new rock walls and wrought iron gate.

This 8" pvc cased well, encased in 12" metal conductor pipe and a cement pad was discovered with a submersible pump in it on TMK 8-7-09:2. That well has been given the number 2408-10. Wiring from the pump and an airline are hanging loose, so it was not being used at the time of the inspection. There is another cement pad with the electrical box, etc. The 8" casing is reduced to approx. 4" where it is connected to white pvc pipes. On the day of inspection 5/13 & 20/98, the power was disconnected from the pump.

Irrigation lines run along long distances behind the chain link fence to irrigate the line of trees that border the property. Containers of nursery stock for landscaping such as bougainvillea, and palm trees are being grown north of the trailer. A large stand of banana trees was growing near 2508-12. What was the source of irrigation water? When was it disconnected? The pump in Well 2408-10 as well as the pvc pipe still connected to the well suggest that the well has been used. When was it disconnected? This is in a dry area; the brown and sparse vegetation across the street is not irrigated. See photos of landscape plants on the proposed golf course property.

Approximately 3' from the cement pad of the newly discovered well, under an 8" plastic cap, is a vertical 4" pvc pipe in the ground. I wasn't able to tell how deep it is, or what depth is cased. A pebble dropped into it hits something solid after dropping for 3 or 4 seconds. Was this a test bore?

On the 5/13/97 inspection, the brush and trees in the area between 2508-12 and 2408-10 (the newly discovered well) had recently burned. Much of the eastern valley nearer the ocean had been burning several days before. Fire crews were finishing their work a mile or two away. Well 2508-12 is located several hundred feet south of the trailer, approximately 30' east from the chain link fence.

Our records do not have any information on the drilling, pump installation and use of that well. Appropriate after the fact permits need to be required.
Well 2408-10 (a recently discovered well that has a submersible pump installed in it.) The well is being identified as 2408-10. As this well is undocumented, not much information is available as to who drilled it and when, the well construction and permitting, pump tests, what size pump is installed, metering, etc.

Chain Link Fence bordering Lualualei Naval Road - parallel to fence is a row of tall trees that border most of the property. Drip irrigation lines run to the trees, bananas, bougainvillea & palms. If these irrigated plants were irrigated with water from this well, it is not currently being used. The electrical line to the pump is disconnected. The white pvc line running from the well is not connected to the distribution system. A large stack of white pvc pipes is stored near well 2508-12. It appears that well 2408-10 has been in use. It is the only well that has a pump in it. Is there any other source of irrigation water??

3"(?) pvc pipe

approx 2' 9"

12" diameter Conductor pipe

8" PVC

cement pad

Electrical connection to submersible pump

Power box

4" pvc casing open hole Test bore??
SKETCH SHOWING WELLS DRILLED FOR PROPOSED GOLF COURSE

- Documented wells marked in red.
- Well shown in blue was to be drilled on a parcel some distance NE of other wells. It was drilled to 105' according to the PR Drilling map – we didn’t find it.
- Wells with yellow highlighting may need to be sealed, i.e. broken casings, low yield.
- The diagram shows several dry tributaries of Ulehawa Stream.
- The green line shows the row of tall trees with irrigation lines running down their length.
- Bananas, bougainvillea & palms are also being grown. There are irrigation lines to these plants.
- We located an unpermitted well in the field that has since been numbered 2408-10. There is a submersible pump in the well and pvc pipe from the well, but the power is disconnected to the well.
<table>
<thead>
<tr>
<th>well #</th>
<th>description</th>
<th>coordinates</th>
</tr>
</thead>
<tbody>
<tr>
<td>2508-10</td>
<td>a 14&quot; metal casing, with metal plate sitting on the casing within 40' of military gate at NW corner of parcel — low yield well — discussion regarding plan to seal this well</td>
<td>21-25-16</td>
</tr>
<tr>
<td></td>
<td></td>
<td>158-08-22</td>
</tr>
<tr>
<td>2508-11</td>
<td>half way up the eastern military boundary fence near a dry stream – broken metal casing 51' deep of open hole — potentially open to contamination</td>
<td>21-25-08</td>
</tr>
<tr>
<td></td>
<td></td>
<td>158-08-15</td>
</tr>
<tr>
<td>2508-12</td>
<td>8&quot; grey pvc casing — said to be a good well</td>
<td>21-25-03</td>
</tr>
<tr>
<td></td>
<td></td>
<td>158-08-25</td>
</tr>
<tr>
<td>“unstable well”</td>
<td></td>
<td>21-24-48</td>
</tr>
<tr>
<td></td>
<td>water too salty</td>
<td>158-08-27</td>
</tr>
<tr>
<td>2408-08</td>
<td>- casing damaged by bulldozer — potential for contamination</td>
<td>21-24-59</td>
</tr>
<tr>
<td></td>
<td></td>
<td>158-08-09</td>
</tr>
<tr>
<td>2408-09</td>
<td>&quot;Quarry well&quot; metal casing with screw cap welded on - near the cliff face and nearest to the BWS shaft – quarry well is said to be good well</td>
<td>21-24-56</td>
</tr>
<tr>
<td></td>
<td></td>
<td>158-08-31</td>
</tr>
<tr>
<td>newly found and numbered well</td>
<td></td>
<td>21-24-56</td>
</tr>
<tr>
<td>2408-10</td>
<td>8&quot; pvc with 12&quot; conductor pipe — it appears that there isn't a const permit or pump inst permit</td>
<td>158-08-31</td>
</tr>
<tr>
<td></td>
<td></td>
<td>158-08-31</td>
</tr>
<tr>
<td>Tracy Runnels said he found this well with a pump in it — the electricity is currently disconnected. There are irrigation feeder lines from an unidentified source scattered around to trees, bananas, bougainvillia &amp; palms. Were these irrigated from this well? This is the only well found with a pump in it.</td>
<td>recently given a number - 2408-10</td>
<td>8&quot; casing with 12&quot; conductor pipe on cement pad</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>well not found — PR drilling map lists it at 105' on TMK 8-7-10 — On the other side of Lualualei Naval Road accessed by the private road .1 mi from the Lualualei Military Gate.</td>
<td>2508-13 (?)</td>
<td>no casing found</td>
</tr>
</tbody>
</table>
A survey crew documented well locations for wells 2508-10, 11 & 12 on December 23, 1997, during my initial inspection. Mr. Hida showed me well 2408-09 and mentioned 2408-08 which were also drilled for this proposed golf course. We were unable to locate well 2508-13 which was supposedly drilled to a depth of 105' on TMK 8-7-10 on the other side of Lualualei Naval Road. Feb. 11, 1998 meeting with Harvey Hida, Tracey Runnels from Rosco Moss Drilling, Mitch Ohye, Lenore Nakama, Susan Swanson. On 5-13-98 Mr. Runnels showed me well 2408-08 and an undocumented well with a pump in it. I showed him where 2508-11 was located. Additional photos were taken of the undocumented well on 5/20/98. After the fact permits should be required for the undocumented well & pump now designated as 2408-10. Irrigation lines run the length of the property. The electricity is currently shut off to the submersible pump.

Locations of wells
Some well info was obtained from the PR Drilling map in the file
All wells, except 2508-13, are located in TMK 8-7-9:02

<table>
<thead>
<tr>
<th>Locations of wells</th>
<th>Well Number</th>
<th>Casing Diameter/ type of material</th>
<th>How is Casing Secured Inside Fenced parcel??</th>
<th>GPS Coordinates</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>@ northwest corner of TMK 8-7-9.2, 35'E &amp; 42'S from chain link fence</td>
<td>2508-10</td>
<td>14&quot; casing metal casing</td>
<td>inspected 12-23-97 16&quot; metal plate resting over casing – This well was reported to have a low yield and may be sealed in the future.</td>
<td>21-25-16 158-08-22</td>
<td>Water visible at depth – surveyors were going to measure depth to water.</td>
</tr>
<tr>
<td>along military fence line, west of dry stream bed</td>
<td>2508-11</td>
<td>diameter ? casing smashed</td>
<td>inspected 12-23-97 No cover – Broken Casing at ground level the tape was lowered 51.3' before hitting a solid object – open hole – I took Tracy Runnels to this well. This is a candidate for sealing.</td>
<td>21-25-08 158-08-15</td>
<td>Surveyors dropped a tape down to the bottom of the open hole to a depth of 51.3 feet. No water encountered.</td>
</tr>
<tr>
<td>reported to be a good well</td>
<td>2508-12</td>
<td>8&quot; grey pvc casing</td>
<td>Inspected 12-23-97 &amp; 5-20-98 Wooden board screwed over grey 8&quot; pvc casing</td>
<td>21-25-03 158-08-25</td>
<td>29' E of chain link fence along Lualualei Naval Rd.</td>
</tr>
<tr>
<td>In well folder with 2808-08 located approx at the 200' elev on the hillside</td>
<td>2408-08</td>
<td>casing broken off by bulldozer ? open hole</td>
<td>Inspected 5-13-98 As per Runnels, Roscoe Moss drilled this 220' deep well – unstable, partially collapsed, water too salty. This is a candidate for sealing.</td>
<td>inspected on 5/13/98 21-24-48 158-06-27</td>
<td></td>
</tr>
<tr>
<td>Inspection report in separate well folder – 2408-09 – Rosco Moss drilled this well for the same golf course</td>
<td>2408-09</td>
<td>6&quot;</td>
<td>Inspected 12-23-97 -Maile Irrig. Well This well is referred to in the well file as the &quot;Quarry Well&quot; because the sugar company previously quarried rock from this site. The well has an 8&quot; casing, covered by a welded metal plate w/ small diameter screw cap – reported to be usable brackish water source. This well is closest to the BWS shaft.</td>
<td>21-24-59 158-06-09</td>
<td></td>
</tr>
</tbody>
</table>
In accordance with Department of Land and Natural Resources, Commission on Water Resource Management's Administrative Rules, Section 13-168, entitled "Water Use, Wells, and Stream Diversion Works", this document permits the construction and testing of Lualualei Golf Course Well 2 (Well No. 2408-10) at Maili, Waianae, Oahu, TMK 8-7-08:2, subject to the Hawaii Well Construction & Pump Installation Standards (1/23/97) which include but are not limited to the following conditions:

1. The Chairperson of the Commission on Water Resource Management (Commission), P.O. Box 621, Honolulu, HI 96809, shall be notified in writing, at least two (2) weeks before any work authorized by this permit commences and staff shall be allowed to inspect installation activities in accordance with §13-168-15, Hawaii Administrative Rules.
2. The well construction permit shall be for construction and testing of the well only. A minimum one-inch diameter monitor tube shall be permanently installed, in a manner acceptable to the Chairperson, to accurately record water levels. The permittee shall coordinate with the Chairperson and conduct a pumping test in accordance with the Standards (a pump testing worksheet is attached). The permittee shall submit to the Chairperson the test results as a basis for supporting an application to install a permanent pump and withdraw water for use. No permanent pump may be installed until a pump installation permit is approved and issued by the Chairperson.
3. In basal ground water, the depth of the well may not exceed one-fourth (1/4) of the theoretical thickness (41 times initial head) of the basal ground water unless otherwise authorized by the Chairperson.
4. The permittee shall incorporate mitigation measures to prevent construction debris from entering the aquatic environment, to schedule work to avoid periods of high rainfall, and to revegetate any cleared areas as soon as possible.
5. In the event that subsurface cultural remains such as artifacts, burials or concentrations of shells or charcoal are encountered during construction, the permittee shall stop work and contact the Department's Historic Preservation Division immediately.
6. The proposed well construction shall not adversely affect existing or future legal uses of water in the area, including any surface water or established instream flow standards. This permit or the authorization to construct the well shall not constitute a determination of correlative water rights.
7. The following shall be submitted to the Chairperson within sixty (60) days after completion of work:
   b. Elevation (referred to mean sea level, msl) survey by a Hawaii-licensed surveyor.
   c. As-built sectional drawing of the well.
   d. Plot plan and map showing the exact location of the well.
   e. Complete pumping test records, including time, pumping rate, drawdown, chloride content, and other data.
8. The permittee shall comply with all applicable laws, rules, and ordinances; non-compliance may be grounds for revocation of this permit.
9. The well construction permit application is incorporated into this permit by reference and is subject to the Hawaii Well Construction & Pump Installation Standards (January 23, 1997; HWCPIS). If the HWCPIS are not followed and as a consequence water is wasted or contaminated, a lien on the property may result.
10. The permit may be revoked by the Commission if work is not started within six (6) months after the date of approval or if work is suspended or abandoned for six (6) months, unless otherwise specified. The work proposed in the well construction permit application shall be completed within two (2) years from the date of permit approval, unless otherwise specified. The permit may be extended by the Chairperson upon a showing of good cause and good-faith performance. A request to extend the permit shall be submitted to the Chairperson no later than three (3) months prior to the date the permit expires. If the commencement date is not met, the Commission may revoke the permit after giving the permittee notice of the proposed action and an opportunity to be heard.
11. If the well is not to be used it must be properly capped. If the well is to be abandoned then the permittee must apply for a well abandonment permit in accordance with §13-168-12(f) prior to any well sealing or plugging work.
12. The permittee, its successors, and assigns shall indemnify, defend, and hold the State of Hawaii harmless from and against any loss, liability, claim, or demand for property damage, personal injury, or death arising out of any act or omission of the applicant, assigns, officers, employees, contractors, and agents under this permit or relating to or connected with the granting of this permit.
13. Special conditions in the attached cover transmittal letter are incorporated herein by reference.

Date of Approval: March 31, 1999
Expiration Date: March 31, 2001

I have read the conditions and terms of this permit and understand them. I accept and agree to meet these conditions as a prerequisite and underlying condition of my ability to proceed and understand that I do not hold a valid permit until I and the driller have signed, dated, and returned the permit to the Commission. I also understand that non-compliance with any permit condition may be grounds for revocation and fines of up to $1000 per day starting from the permit date of approval.

Permittee's Signature: Sanjiro Nakade
Printed Name: Sanjiro Nakade
Firm or Title: Kabushiki Kaisha Oban

Driller's Signature: Ken Tower
Printed Name: Ken Tower
Firm or Title: PR Drilling Company

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

Attachment:
USGS Department of Health/ Safe Drinking Water, Wastewater, and Clean Water Branches Honolulu Board of Water Supply
Harvey Hida called, he can't get any driller to sign off on the permit, which is OK, since we already accepted the WCR1 w/out driller's signature. (This is the unpermitted, recently-discovered well that we believe was drilled by PR Drilling under prior ownership; the new owner has no record, so doesn't want to sign off, which is OK) So we can accept the WCP as fully validated w/just the permittee's signature. Thanks
TO: State of Hawaii
Commission on Water Resource Management
Department of Land and Natural Resources
P.O. Box 621
Honolulu, Hawaii 96809

WE ARE SENDING YOU:
- Messenger
- Specifications
- Attached
- Shop Drawings
- Original Tracings
- Diskette
- Mail
- Copy of Letter
- Prints

<table>
<thead>
<tr>
<th>COPIES</th>
<th>DATE</th>
<th>NO.</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3/30/99</td>
<td>1</td>
<td>Elevation Data for Wells No. 2408-9 &amp; 2408-10</td>
</tr>
</tbody>
</table>

REMARKS:
- FOR REVIEW AND COMMENT
- FOR YOUR USE

SIGNED: Harvey K. Hida, PE

COPY TO

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

TO:   MR. HARVEY HIDA
COMPANY:   HIDA, OKAMOTO AND ASSOCIATES
FROM:   ED YEH
PROJECT:   LUALUALEI WELLS

DATE:   3/30/99

SUBJECT:   WELL ELEVATION AND LOCATION

NOTES:
Bench mark referred to Mon. #6 Elev. = 129.43 (Information obtained from US Naval Ammunition Depot, Lualualei Branch - Permanent Markers for Horizontal & Vertical Control Drawing No. 841754)
WELL ABANDONMENT REPORT

Instructions: Please print or type and submit completed report within 30 days after sealing completion to the Commission on Water Resource Management, P.O. Box 921, Honolulu, Hawaii 96803. An as-built drawing of the well and chemical analysis should also be submitted. For assistance call the Commission Regulation Branch at 587-0245.

1. STATE WELL NO. 2408-08 WELL NAME Maili Irrigation Well #2 ISLAND Oahu
2. LOCATION: Address Maili, Waianae Oahu Tax Map Key 8-7-09-02
3. DRILLING OR PUMP INSTALLATION CONTRACTOR Roscoe Moss Hawaii Inc.
4. CONTRACTORS C-57 LICENSE NUMBER AC 16437
5. NAME OF DRILLER WHO PERFORMED WORK Harold Fenton
6. TYPE OF RIG/CONSTRUCTION NA
7. DATE OF WELL SEALING COMPLETION 3-25-99

(Note: Report must be submitted within 30 days after this date)

Access was graded and concrete dumped into well through funnel & 4" tremie pipe. (If more space is needed, continue on back.)

Contractor (print) Roscoe Moss Hawaii Inc.
Signature Tracey Munroe

Date 3-30-99
Mr. Harvey K. Hida
Hida, Okamoto & Associates
1440 Kapiolani Blvd., Ste. 915
Honolulu, Hawaii 96814

Dear Mr. Hida:

After-the-Fact Well Construction Permit
Lualualei Golf Course Well 2 (Well No. 2408-10)

Enclosed are two (2) copies of your approved Well Construction Permit for the captioned well(s) that authorize well construction activities but excludes installation work for your permanent pump. As part of the Chairperson's approval, the following special conditions were added and are part of your permit under Permit Condition 13:

Special Conditions

1. Attached for your information is a copy of the Department of Health's (DOH) review comments. Please note DOH's requirements related to discharge of effluent from well drilling and testing activities.

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

We understand that the unpermitted pump has been removed from Well No. 2408-10. Please submit a new application for a pump installation permit prior to any future pump installation work.

Thank you for your timely submittal of the elevation surveys for Well Nos. 2408-09 & 10, which we received on March 30, 1999. We have accepted the Well Completion Reports Part I for Well Nos. 2408-09 & 10. Therefore, the requirements under Standard Condition 7 of this permit have been satisfied. However, please validate your permit by signing and having the contractor sign both permit originals and return one for our files.

Thank you also for your timely submittal of the Well Abandonment Reports for Well Nos. 2408-08, 2508-10 & 11, which we received on March 30, 1999. We have accepted the Well Abandonment Reports. Lastly, this letter also transmits the Department of Health's written review comments on the abandonment permit for your record.

If you have any questions, please call the Commission staff at

Aloha,

for: TIMOTHY E. JOHNS
Chairperson

Enclosures
AFTE-FACT WELL CONSTRUCTION Permit

Lualualei Golf Course Well 2, Well No. 2408-10

In accordance with Department of Land and Natural Resources, Commission on Water Resource Management’s Administrative Rules, Section 13-168, entitled “Water Use, Wells, and Stream Diversion Works”, this document permits the construction and testing of Lualualei Golf Course Well 2 (Well No. 2408-10) at Maili, Wai`anae, Oahu, TMK 8-7-09:2, subject to the Hawaii Well Construction & Pump Installation Standards (1/23/97) which include but are not limited to the following conditions:

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

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

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

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

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

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

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

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

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

10. The permit may be revoked by the Commission if work is not started within six (6) months after the date of approval or if work is suspended or abandoned for six (6) months, unless otherwise specified. The work proposed in the well construction permit application shall be completed within two (2) years from the date of permit approval, unless otherwise specified. The permit may be extended by the Chairperson upon a showing of good cause and good-faith performance. A request to extend the permit shall be submitted to the Chairperson no later than three (3) months prior to the date the permit expires. If the commencement date is not met, the Commission may revoke the permit after giving the permittee notice of the proposed action and an opportunity to be heard.

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

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

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

Date of Approval: March 31, 1999
Expiration Date: March 31, 2001

I have read the conditions and terms of this permit and understand them. I accept and agree to meet these conditions as a prerequisite and underlying condition of my ability to proceed and understand that I do not hold a valid permit until I and the driller have signed, dated, and returned the permit to the Commission. I also understand that non-compliance with any permit condition may be grounds for revocation and fines of up to $1000 per day starting from the permit date of approval.

Permittee’s Signature: ___________________________ Date: ___________________________

Printed Name: ___________________________ Firm or Title: ___________________________

Driller’s Signature: ___________________________ C-57 License #: ___________________________ Date: ___________________________

Printed Name: ___________________________ Firm or Title: ___________________________

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

Attachment:

C: USGS
Department of Health/ Safe Drinking Water, Wastewater, and Clean Water Branches
Honolulu Board of Water Supply

For: TIMOTHY E. JOHNS, Chairperson
Commission on Water Resource Management
WELL ABANDONMENT REPORT

Instructions: Please print or type and submit completed report within 30 days after sealing completion to the Commission on Water Resource Management, P.O. Box 831, Honolulu, Hawai‘i 96806. An as-built drawing of the well and chemical analysis should also be submitted. For assistance call the Commission Regulation Branch at 808-587-0326.

1. STATE WELL NO. 2408-08 WELL NAME Maili Irrigation Well #2 ISLAND Oahu
2. LOCATION: Address Maili, Waianae Oahu Tax Map Key 3-7-09-02
3. DRILLING OR PUMP INSTALLATION CONTRACTOR Roscoe Moss Hawaii Inc
4. CONTRACTOR'S C-57 LICENSE NUMBER AC 16437
5. NAME OF DRILLER WHO PERFORMED WORK Harold Fenton
6. TYPE OF RIG/CONSTRUCTION NA
7. DATE OF WELL SEALING COMPLETION 3-25-99

(NOTE: Report must be submitted within 30 days after this date)

<table>
<thead>
<tr>
<th>Depth Measurement</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Measured Depth</td>
<td>45 ft.</td>
</tr>
<tr>
<td>Measured Depth Blank Casing</td>
<td>NA ft.</td>
</tr>
<tr>
<td>Measured Depth Perforated Casing</td>
<td>NA ft.</td>
</tr>
<tr>
<td>Measured Depth to Bottom of Grout</td>
<td>45 ft.</td>
</tr>
<tr>
<td>Measured Depth of Sand Fill</td>
<td>NA ft.</td>
</tr>
</tbody>
</table>

Remarks: Access was graded and concrete dumped into well through funnel & 4" tremie pipe. (If more space is needed, continue on back.)

Contractor (print) Roscoe Moss Hawaii Inc.
Signature Tracy Runcells
Date 3-30-99

For Driller's Use:
Job Name
Job No.

For Official Use:
Well No. 2408-08
Latitude
Longitude

624/02 WAB Form
WELL ABANDONMENT REPORT

1. STATE WELL NO. 2408-08    WELL NAME: Maili Irrigation Well #2  ISLAND: Oahu
2. LOCATION: Address: Maili, Wai'anae, Oahu  Tax Map Key: 3-7-09-02
3. DRILLING OR PUMP INSTALLATION CONTRACTOR: Roscoe Moss Hawaii Inc.
4. CONTRACTOR'S C-67 LICENSE NUMBER: AC 16437
5. NAME OF DRILLER WHO PERFORMED WORK: Harold Fenton
6. TYPE OF RIG/CONSTRUCTION: NA
7. DATE OF WELL SEALING COMPLETION: 3-25-99

(Note: Report must be submitted within 30 days after use ends)

Finished Grade Elevation: 130 ft.
Casing Diameter: NA in.
Check Material Used
Grout Seal: ☐ Cement ☐ Sand/Cement
#2500 concrete ☐ Sand/Cement Ratio: ___
Total Measured Depth: 45 ft.
Measured Depth Blank Casing: NA ft.
Measured Depth Perfomed Casing: NA ft.
Measured Depth to Bottom of Grout: 45 ft.
Measured Depth of Sand Fill: _____ ft.

Remarks: Access was graded and concrete dumped into well through funnel & 4" treppa pipe.
(If more space is needed, continue on back.)

Contractor (print): Roscoe Moss Hawaii Inc.
Signature: ________________________________
Date: 3-30-99

For Driller's Use:
Job Name: ___________________________ Job No.: ___________________________

For Official Use:
Well No.: 2408-08
Latitude: ___________________________ Longitude: ___________________________
WELL CONSTRUCTION PERMIT TO ABANDON/SEAL

Maili Irrigation Well 2 and Lualualei Golf Course Wells 1 & 3, Well Nos. 2408-08, 2508-10 & 11

In accordance with Department of Land and Natural Resources, Commission on Water Resource Management's Administrative Rules, Section 13-168, entitled "Water Use, Wells, and Stream Diversion Works", this document permits the abandonment/sealing of Maili Irrigation Well 2 and Lualualei Golf Course Wells 1 & 3 (Well Nos. 2408-08, 2508-10 & 11) at Maili, Waianae, Oahu, TMK 8-7-09:02, subject to the Hawaii Well Construction & Pump Installation Standards (1/23/97) which include but are not limited to the following conditions:

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

2. The permit may be revoked by the Commission if work is not started within six (6) months after the date of approval or if work is suspended or abandoned for six (6) months, unless otherwise specified.

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

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

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

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

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

Date of Approval: March 16, 1999
Expiration Date: When well is sealed in a manner acceptable to the Commission

I have read the conditions and terms of this permit and understand them. I accept and agree to meet these conditions as a prerequisite and underlying condition of my ability to proceed. I also understand that non-compliance with any permit condition may be grounds for revocation and fines of up to $1000 per day.

Permittee's Signature: Sanjiro Nakade
Printed Name: Sanjiro Nakade
Firm or Title: Kabushiki Kaisha Oban
License #: AC16437
Date: 3/22/99

Contractor's Signature: Tracy Funnells
Printed Name: Tracy Funnells
Firm or Title: Roscoe Moss Hawaii, Inc.
Date: 3/25/99

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

Attachment:
USGS
Department of Health/ Safe Drinking Water, Wastewater, and Clean Water Branches
Honolulu Board of Water Supply
Kabushiki Kaisha Oban, c/o Harvey Hida

SUM: 29
All: 18
TO:  Honorable Bruce S. Anderson, Director  
Department of Health  
Attention: Dennis Tulang, Wastewater Branch  
William Wong, Safe Drinking Water Branch

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

SUBJECT: After-the-Fact Well Construction Permit Application  
Lualualei Golf Course Well 2 (Well No. 2408-10)

Transmitted for your review and comment is a copy of the captioned well application.

We would appreciate your comments on the captioned application for any conflicts or inconsistencies with the programs, plans, and objectives specific to your department. The Commission has established a March 30, 1999 deadline for this well permit violation. We request your help in meeting this deadline by returning this cover memo form by March 25, 1999 or as soon as possible.

Please find a map, attached, to locate the proposed well. If you have any questions about this permit application, request additional information, or request additional review time, please contact Lenore Nakama of the Commission staff at "[phone number]"

LN:ss
Attachment(s)

RESPONSE:

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

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

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

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

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

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

No comments/objections

Contact Person: Lori N. Kajiwara  
Phone: "[phone number]"

Signed: Chmd. Kajiwara  
Date: 3-23-99
TO: Honorable Bruce S. Anderson, Director  
Department of Health  
Attention:  Dennis Tulang, Wastewater Branch  
William Wong, Safe Drinking Water Branch

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

SUBJECT:  After-the-Fact Well Construction Permit Application  
Lualualei Golf Course Well 2 (Well No. 2408-10)

Transmitted for your review and comment is a copy of the captioned well application.

We would appreciate your comments on the captioned application for any conflicts or inconsistencies with the programs, plans, and objectives specific to your department. The Commission has established a March 30, 1999 deadline for this well permit violation. **We request your help in meeting this deadline by returning this cover memo form by March 25, 1999 or as soon as possible.**

Please find a map, attached, to locate the proposed well. If you have any questions about this permit application, request additional information, or request additional review time, please contact Lenore Nakama of the Commission staff at [contact information].

**RESPONSE:**

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

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

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

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

5) For the applicant's information, a source of possible wastewater contamination [information attached].

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

No comments/objections

Contact Person: William Wong  
Phone: [redacted]

Signed: William Wong  
Date: 3/23/99
The Department of Health, Clean Water Branch has the following comments:

1. For Well-Drilling Activities

   Any discharge to State waters of treated process wastewater effluent associated with well drilling activities is regulated by Hawaii Administrative Rules, Chapter 11-55, Appendix I, effective September 22, 1997. Treated process wastewater effluent covered by this general permit includes well drilling slurries, lubricating fluids wastewaters, and well purge wastewaters. This general permit does not cover well pump testing. The applicable Notice of Intent Forms and filing fee shall be submitted at least thirty (30) days before the start of discharge to the Department of Health, Clean Water Branch at 919 Ala Moana Boulevard, Room 301, Honolulu, Hawaii 96814-4920 or P.O. Box 3378, Honolulu, Hawaii 96801-3378. Inquiries may be directed to the Clean Water Branch at [redacted] or by fax at [redacted].

2. For Well Pump Testing

   The discharger shall take all measures necessary to prevent the discharge of pollutants from entering state waters. Such measures shall include, if necessary, containment of the initial discharge until the discharge is essentially free of pollutants. If the discharge is entering a stream or river bed, best management practices shall be implemented to prevent the discharge from disturbing the clarity of the receiving water. If the discharge is entering a storm drain, the discharger must obtain written permission from the owner of that storm drain prior to discharge. Furthermore, best management practices shall be implemented to prevent the discharge from collecting sediments and other pollutants prior to entering the storm drain.

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

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

SUBJECT: Well Construction Permit Application to Abandon/Seal
   Maili Irrigation Well 2 and Lualualei Golf Course Wells 1 & 3
   (Well Nos. 2408-08, 2508-10 & 11)

Transmitted for your review and comment is a copy of the captioned well application.

We would appreciate your comments on the captioned application for any conflicts or inconsistencies with the programs, plans, and objectives specific to your department. The Commission has established a March 30, 1999 deadline for these well abandonments. **We request your help in meeting this deadline by returning this cover memo form by March 25, 1999 or as soon as possible.**

Please find a map, attached, to locate the proposed well. If you have any questions about this permit application, request additional information, or request additional review time, please contact Lenore Nakama of the Commission staff at 0000

**RESPONSE:**

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

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

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

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

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

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

- No comments/objections

Contact Person: Lori N. Kajimura    Phone: 0000
Signed: Lori N. Kajimura    Date: 3-23-99
TO: Honorable Bruce S. Anderson, Director
Department of Health
Attention: Dennis Tulang, Wastewater Branch
William Wong, Safe Drinking Water Branch

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

SUBJECT: Well Construction Permit Application to Abandon/Seal
Maili Irrigation Well 2 and Lualualei Golf Course Wells 1 & 3
(Well Nos. 2408-08, 2508-10 & 11)

Transmitted for your review and comment is a copy of the captioned well application.

We would appreciate your comments on the captioned application for any conflicts or inconsistencies with the programs, plans, and objectives specific to your department. The Commission has established a March 30, 1999 deadline for these well abandonments. **We request your help in meeting this deadline by returning this cover memo form by March 25, 1999 or as soon as possible.**

Please find a map, attached, to locate the proposed well. If you have any questions about this permit application, request additional information, or request additional review time, please contact Lenore Nakama of the Commission staff at [phone number].

**Response:**

1. This well qualifies as a source which will serve as a source of potable water to a public water system (serving 25 or more people at least 60 days per year or having 15 or more service connections) and must receive Director of Health approval prior to its use to comply with Hawaii Administrative Rules (HAR), Title 11, Chapter 20, Rules Relating to Potable Water Systems, §11-20-12.

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

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

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

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

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

7. No comments/objections

**Contact Person:** William Wong  
**Phone:** [redacted]  
**Date:** 3/23/99
TO: State of Hawaii-CWRM
DATE: March 30, 1999
HO&A JOB NO. 1285

ATTENTION: Ms. Lenore Nakama
SUBJECT: Elevation Survey for Well Nos. 2408-09 & 10

FAX NO.: 587-0219
FROM: Harvey K. Hida

NUMBER OF PAGES, INCLUDING HEADER: 2
ORIGINALS OR COPIES TO FOLLOW VIA MAIL: YES ☑ NO ☐

REMARKS:
Lenore, attached is an elevation data for the subject wells.
Hard copy with register surveyor's stamp will be transmitted to you under separate cover.
Thanks.

IF YOU HAVE NOT RECEIVED ALL PAGES, PLEASE CALL 943-4644 AS SOON AS POSSIBLE.
MEMORANDUM

TO: MR. HARRY HIDA

DATE: 3/30/99

COMPANY: HIDA, OKAMOTO & ASSOCIATES

FROM: ED YEH

SUBJECT: WELL ELEVATION AND LOCATION

TOP OF COUPLING ELEV. = 167.70

TOP OF CASING ELEV. = 167.68

GROUND

TOP OF PVC PIPE ELEV. = 75.55

TOP OF 4" PVC PIPE ELEV. = 75.39

DIRT MOUND

WELL # 2408-9

WELL # 2408-10

BENCH MARK REFERRED TO ACN #8 ELEV. = 126.42 ( INFORMATION OBTAINED FROM US NAVAL AMMUNITION DEPOT LUALUAI BRANCH - PERMANENT MARKERS FOR HORIZONTAL & VERTICAL CONTROL DRAWING NO. 941764 )

LICENSED PROFESSIONAL LAND SURVEYOR

HANY, U.S.C.

NOTE:
<table>
<thead>
<tr>
<th>FACSIMILE TRANSMITTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>DATE: 3/23/99</td>
</tr>
<tr>
<td>TO:</td>
</tr>
<tr>
<td>FROM: Tracy Runnels</td>
</tr>
<tr>
<td>REF: Well Abandonment</td>
</tr>
</tbody>
</table>

Lenore,

We will proceed with well abandonments at 12:00 Noon 3/23/99. Wells are to be abandoned per my recommendations and letter dated 3/7/98.

Sincerely,

[Signature]

[Address]

[Phone]

[Fax]

[Company]

[City, State, Zip]
Mr. Harvey K. Hida  
Hida, Okamoto & Associates  
The Commerce Tower  
1440 Kapiolani Blvd., Ste. 915  
Honolulu, Hawaii 96814

Dear Mr. Hida:

Well Construction Permit to Abandon/Seal  
Mali Irrigation Well 2 and Luahalei Golf Course Wells 1 & 3  
(Well Nos. 2408-08, 2408-10 & 11)

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

Special Conditions

1. Department of Health has given verbal approval for the sealing. A copy of the Department of Health’s written review comments will be sent to you as soon as we receive them.

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

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

If you have any questions, please call the Commission staff at

Aloha,

[Signature]

Timothy E. Johns  
Chairperson

Enclosures
WELL CONSTRUCTION PERMIT TO ABANDON/SEAL

Maui Irrigation Well 2 and Lualualei Golf Course Wells 1 & 3, Well Nos. 2408-08, 2508-10 & 11

In accordance with Department of Land and Natural Resources, Commission on Water Resource Management’s Administrative Rules, Section 13-168, entitled “Water Use, Wells, and Stream Diversion Works”, this document permits the abandonment/sealing of Maui Irrigation Well 2 and Lualualei Golf Course Wells 1 & 3 (Well Nos. 2408-08, 2508-10 & 11) at Maui, Wailuku, Eau, TMK 5-7-00d02, subject to the Hawaii Well Construction & Pump Installation Standards (1/29/97) which include but are not limited to the following conditions:

1. The Chairperson of the Commission on Water Resource Management, P.O. Box 621, Honolulu, Hawaii 96802, shall be notified in writing before any work covered by this permit commences.

2. The permit may be revoked by the Commission if work is not started within six (6) months after the date of approval or if work is suspended or abandoned for six (6) months, unless otherwise specified.

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

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

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

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

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

Date of Approval: March 16, 1999
Expiration Date: When well is sealed in a manner acceptable to the Commission

I have read the conditions and terms of this permit and understand them. I accept and agree to meet these conditions as a prerequisite and underlying condition of my ability to proceed. I also understand that non-compliance with any permit condition may be grounds for revocation and fines of up to $1000 per day.

Permittee’s Signature: _______________________________ Date: __________

Printed Name: _______________________________ Firm or Title: _______________________________

Contractor’s Signature: _______________________________ License #: AC-16137 Date: 3/23/99

Printed Name: _______________________________ Firm or Title: Roscoe Moss Hawaii, Inc.

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

Attachment:

C: USGS Department of Health, Safe Drinking Water, Wastewater, and Clean Water Branches
Honolulu Board of Water Supply
Kubushiki Kaisha Oban, c/o Harvey Pika.
Mr. Harvey K. Hida  
Hida, Okamoto & Associates  
The Commerce Tower  
1440 Kapiolani Blvd., Ste. 915  
Honolulu, Hawaii 96814  

Dear Mr. Hida:

Well Construction Permit to Abandon/Seal  
Maili Irrigation Well 2 and Lualualei Golf Course Wells 1 & 3  
(Well Nos. 2408-08, 2508-10 & 11)

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

Special Conditions

1. Department of Health has given verbal approval for the sealing. A copy of the Department of Health’s written review comments will be sent to you as soon as we receive them.

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

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

If you have any questions, please call the Commission staff at [Redacted]

Aloha,

Enclosures

For: TIMOTHY E. JOHNS  
Chairperson
WELL CONSTRUCTION PERMIT TO ABANDON/SEAL

Maili Irrigation Well 2 and Lualualei Golf Course Wells 1 & 3, Well Nos. 2408-08, 2508-10 & 11

In accordance with Department of Land and Natural Resources, Commission on Water Resource Management's Administrative Rules, Section 13-168, entitled "Water Use, Wells, and Stream Diversion Works", this document permits the abandonment/sealing of Maili Irrigation Well 2 and Lualualei Golf Course Wells 1 & 3 (Well Nos. 2408-08, 2508-10 & 11) at Maili, Waianae, Oahu, TMK 8-7-09:02, subject to the Hawaii Well Construction & Pump Installation Standards (January 23, 1997; HWCPIS) which include but are not limited to the following conditions:

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

2. The permit may be revoked by the Commission if work is not started within six (6) months after the date of approval or if work is suspended or abandoned for six (6) months, unless otherwise specified.

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

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

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

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

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

Date of Approval: March 16, 1999
Expiration Date: When well is sealed in a manner acceptable to the Commission

I have read the conditions and terms of this permit and understand them. I accept and agree to meet these conditions as a prerequisite and underlying condition of my ability to proceed. I also understand that non-compliance with any permit condition may be grounds for revocation and fines of up to $1000 per day.

Permittee's Signature: ___________________________ Date: _____________
Printed Name: _________________________________ Firm or Title: _________________________________

Contractor's Signature: __________________________ License #: _____________ Date: _____________
Printed Name: _________________________________ Firm or Title: _________________________________

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

Attachment:
USGS Department of Health/ Safe Drinking Water, Wastewater, and Clean Water Branches
Honolulu Board of Water Supply
Kabushiki Kaisha Oban, c/o Harvey Hida
Mr. Harvey K. Hida  
Hida, Okamoto & Associates, Inc.  
The Commerce Tower  
1440 Kapiolani Blvd., Ste. 915  
Honolulu, HI 96814  

Dear Mr. Hida:  

After-the-Fact Application for Well Construction for Well No. 2408-10  
Well Construction Permit Applications to Abandon/Seal Well Nos. 2408-08, 2508-10 & 11  

We acknowledge receipt, on March 12, 1999, of your completed well construction permit applications for the subject wells. Because the Commission on Water Resource Management has established a deadline to resolve these well violations, we have requested expedited review by the Department of Health. The permits will be transmitted to you as soon we receive approval from the Department of Health.  

We will look forward to receiving the elevation surveys for Well Nos. 2408-09 & 10 and the well completion reports for Well Nos. 2408-08, 2508-10 & 11 by the March 31, 1999 deadline.  

We understand that the pump has been removed from Well No. 2408-10 and there are no immediate plans to install a permanent pump. Please be aware that an application for pump installation permit must be made and approved prior to pump installation.  

If you have any questions about your permit application, please contact Lenore Nakama of the Commission staff at [contact information].  

Sincerely,  

Edwin T. Sakoda  
Acting Deputy Director  

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

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

SUBJECT: Well Construction Permit Application to Abandon/Seal
   Maili Irrigation Well 2 and Lualualei Golf Course Wells 1 & 3
   (Well Nos. 2408-08, 2508-10 & 11)

Transmitted for your review and comment is a copy of the captioned well application.

We would appreciate your comments on the captioned application for any conflicts or inconsistencies with the programs, plans, and objectives specific to your department. The Commission has established a March 30, 1999 deadline for these well abandonments. We request your help in meeting this deadline by returning this cover memo form by March 25, 1999 or as soon as possible.

Please find a map, attached, to locate the proposed well. If you have any questions about this permit application, request additional information, or request additional review time, please contact Lenore Nakama of the Commission staff.

LN:ss
Attachment(s)

RESPONSE:

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

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

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

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

[1] For the applicant’s information, a source of possible wastewater contamination [ ] is located near the proposed well site (information attached).

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

[1] No comments/objections

Contact Person: ___________________________ Phone: ___________________________

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

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

SUBJECT: After-the-Fact Well Construction Permit Application
Lualualei Golf Course Well 2 (Well No. 2408-10)

Transmitted for your review and comment is a copy of the captioned well application.

We would appreciate your comments on the captioned application for any conflicts or inconsistencies with the programs, plans, and objectives specific to your department. The Commission has established a March 30, 1999 deadline for this well permit violation. We request your help in meeting this deadline by returning this cover memo form by March 25, 1999 or as soon as possible.

Please find a map, attached, to locate the proposed well. If you have any questions about this permit application, request additional information, or request additional review time, please contact Lenore Nakama of the Commission staff at [Contact Information]

Attachment(s)

RESPONSE:

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

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

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

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

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

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

[ ] No comments/objections

Contact Person: __________________ Phone: __________________
Signed: __________________ Date: __________________
<table>
<thead>
<tr>
<th>F YR APP D</th>
<th>SRC OBJ</th>
<th>COSTCTR</th>
<th>PROJECT</th>
<th>PH ACT</th>
<th>AMOUNT</th>
<th>NAME/DESCRIPTION (WANG INPUT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>G - 00 QQQ C</td>
<td>1026 Q752</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>(1) 100.00</td>
<td>Hida, Okamoto &amp; Assoc.</td>
</tr>
<tr>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>(2)</td>
<td></td>
</tr>
<tr>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>(3)</td>
<td></td>
</tr>
<tr>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>(4)</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>TOTAL 100.00</td>
<td></td>
</tr>
</tbody>
</table>

REMARKS:
LINE (1) Well No. 2408-08, 2508-10 & 11
LINE (2)
LINE (3)
LINE (4)

---

Hida, Okamoto & Associates, Inc.
1440 Kapiolani Boulevard, Ste. 915
Honolulu, Hawaii 96814

CITY BANK
McCully Branch
2002 S. King St
Honolulu, Hawaii 96826

PAY TO THE ORDER OF Department of Land and Natural Resources

$ **100.00**

One Hundred and 00/100

Department of Land and Natural Resources

AUTHORIZED SIGNATURE

---

Hida, Okamoto & Associates, Inc.

Department of Land and Natural Resources

7010 - Direct Engineering
Lualualei, Waianae - HO&A Job No. 97-1285.1

---

City Bank

100.00
Mr. Timothy E. Johns, Chairperson  
State of Hawaii  
Department of Land and Natural Resources  
Commission on Water Resource Management  
Post Office Box 621  
Honolulu, Hawaii 96809  

Attention: Ms. Lenore Nakama,

SUBJECT: Well Nos 2508-10 & 11, 2408-8 & 10  
Lualualei, Waianae, Oahu  
HO&A Job No. 97-1285.1

Pursuant to your February 8, 1999 letter, on behalf of Kabushiki Kaisha Oban, we are transmitting the following items for the subject wells:

• Well Construction Permit Application to Abandon/Seal for Well Nos. 2408-08, 2508-10 and 2508-11.
• After-the-Fact Application and Well Completion Report for Well Construction, Well No. 2408-10.
• $25.00 \times 4 = \$100.00$ Filing Fee payable to Department of Land Natural Resources.

We will complete the construction and submit the Well Abandonment Report for Well Nos. 2408-08, 2508-10 & 2508-11 together with the elevation survey of Well Nos. 2408-09 & 2408-10 by March 31, 1999.

If you have any questions or require additional informations, please feel free to call me at [redacted].

Very truly yours,

HIDA, OKAMOTO & ASSOCIATES, INC.

[Signature]
Harvey K. Hida, P.E.
President

Enclosures
APPLICATION FOR PERMIT

1. APPLICANT: (circle primary contact a, b, or c) Primary Fax: (808) ______
   (a) WELL OWNER
   Firm/Name: Kabushiki Kaisha Oban
   Contact Person: Harvey K. Hida
   Address: 1440 Kapiolani Boulevard Suite 915 Honolulu, Hawaii 96814
   (b) LANDOWNER
   Firm/Name: Kabushiki Kaisha Oban
   Contact Person: Harvey K. Hida
   Address: 1440 Kapiolani Boulevard, Suite 915 Honolulu, Hawaii 96814
   (c) CONTRACTOR
   Firm/Name: Roscoe Moss Hawaii, Inc.
   Contact Person: Tracy Runnells
   Address: 91-259A Olai Street, Kapolei, Hawaii 96707

2. WELL LOCATION/NAME: Maili Irrigation Well No. 2 (2408-8) Island: Oahu
   Address: Maili, Wai‘anae, Oahu
   Tax Map Key: 8-7-09:02

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

4. PROPOSED PUMP INFORMATION: Rated Pump Capacity: N/A gallons per minute
   Pump Type: [ ] Deep Well Turbine [ ] Rotary [ ] Propeller
   [ ] Submersible [ ] Rotary-Displacement [ ] Reciprocating
   [ ] Centrifugal [ ] Rotary-Gear [ ] Impulse
   If Pump Replacement, Existing Pump Capacity: _______ gallons per minute
   Motor: [ ] Diesel [ ] Gas [ ] Electric, rated horsepower: _______ horsepower

5. PROPOSED USE: [ ] Municipal (including hotels, stores, etc.) [ ] Industrial
   [ ] Domestic (individual, noncommercial water sys.) # Dwelling Units _______
   [ ] Irrigation (crop) Golf Course _______ # Acres _______
   [ ] Military _______ Other: _______

6. (a) PROPOSED AMOUNT OF WITHDRAWAL: _______ gallons per day
   (b) METHOD OF FLOW MEASUREMENT: [ ] Flow-meter [ ] Open-pipe [ ] Orifice Plate
   [ ] Weir

7. PENDING ACTIONS: [ ] CDUA [ ] SMA [ ] EIS [ ] EA [ ] NONE [ ] Other(explain)
   Completion Date: _______

8. REMARKS, EXPLANATIONS: This well was drilled by Roscoe Moss Co., in 1989, with
   12"diameter hole to a depth of 220'. Erosion and silting from rain have collapsed
   and filled the well to about 50' from ground. We propose to fill the well by pumping
   (if more space is needed, continue on back)

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

Well Owner: Sanjirou Nakade
Landowner: Sanjirou Nakade
Contractor: Roscoe Moss Hawaii, Inc.

Signature: _______ Date: _______ Signature: _______ Date: 3-9-99 Signature: _______ Date: _______

For Official Use Only:
Date Received _______ Date Accepted _______ Field Checked By _______
Latitude _______ Aquifer System Name _______
Longitude _______ State Well No. __________

10/13/97 WCFI Form
8. Remarks, Explanations (cont'd): 2,500 psi concrete until it reaches ground level.

9. PROPOSED WELL SECTION

<table>
<thead>
<tr>
<th>Component</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elevation at top of casing</td>
<td>ft., msl. (surveyed to nearest 0.01 ft)</td>
</tr>
<tr>
<td>Cement Grout</td>
<td>ft. (70% distance surface to water)</td>
</tr>
<tr>
<td>Rock Packing</td>
<td>ft.</td>
</tr>
<tr>
<td>Hole Diameter</td>
<td>12 in. (allow 3&quot; annular space)</td>
</tr>
<tr>
<td>Total Depth</td>
<td>220 ft. (≤10 x head)</td>
</tr>
<tr>
<td>Ground Elevation</td>
<td>145 ft., msl</td>
</tr>
<tr>
<td>Solid Casing</td>
<td>Material, Length ft. (90% distance surface to water), Diameter in., Wall thickness in.</td>
</tr>
<tr>
<td>Casing</td>
<td>□ Perforated □ Screen (see well standards) Material, Length ft., Diameter in., Wall thickness in., Openings sq. in./A.F.</td>
</tr>
<tr>
<td>Open Hole</td>
<td>Length ft., Diameter in.</td>
</tr>
</tbody>
</table>

*Approximate elevation at time of filing application. Ground elevation above mean sea level (msl) by a surveyor licensed by the State must be submitted at start of construction. Final elevations of well components shall be submitted in the well completion/well abandonment reports.
APPLICATION FOR PERMIT - AFTER-THE-FACT

1. APPLICANT: (circle primary contact a, b, or c)
   (a) WELL OWNER
       Firm/Name: Kabushiki Kaisha Oban
       Contact Person: Harvey K. Hida
       Address: 1440 Kapiolani Boulevard Suite 915
       Honolulu, Hawaii 96814
   (b) LANDOWNER
       Firm/Name: Kabushiki Kaisha Oban
       Contact Person: Harvey K. Hida
       Address: 1440 Kapiolani Boulevard Suite 915
       Honolulu, Hawaii 96814
   (c) CONTRACTOR
       Firm/Name: PR Drilling Company
       Contact Person: Ken Tower
       Address: 235 Kellog St. Wahiawa, Hawaii 96786

2. WELL LOCATION/NAME: Lualualei Golf Course Well #2 (2408-10) Island Oahu
   Address: Off Lualualei Navy Access Road, Waianae
   Tax Map Key: S-7-09:02
   Attach the relevant portion of (a) a 7.5-Minute Series USGS topographic map (scale 1"=24,000"), and (b) a property tax map, showing well location referenced to established property boundaries.

3. (a) PROPOSED WORK:
   Drill New Well
   Modify Existing Well
   Redrill
   Abandon/Seal *
   Install New Pump
   Modify Pump
   Replace Pump
   * Be sure to complete and submit well abandonment report upon completion of work.

4. PROPOSED PUMP INFORMATION: Rated Pump Capacity: N/A gallons per minute
   Pump Type:
   Deep Well Turbine
   Rotary
   Submersible
   Propeller
   Rotary-Displacement
   Reciprocating
   Centrifugal
   Rotary-Gear
   Impulse
   If Pump Replacement, Existing Pump Capacity: ________________
   Motor:
   Diesel
   Gas
   Electric, rated horsepower: ________________

5. PROPOSED USE:
   Municipal (including hotels, stores, etc.)
   Domestic (individual, non-commercial water sys.)
   Irrigation (crop)
   Military
   Other: ________________
   Dwelling Units ________________
   Acres ________________
   Open-pipe
   Orifice Plate
   Weir

6. (a) PROPOSED AMOUNT OF WITHDRAWAL:
   93,600 gallons per day
   (b) METHOD OF FLOW MEASUREMENT:
   Flow-meter
   Water year
   Completion Date: 6-18-96

7. PENDING ACTIONS:
   CDUA
   SMA
   EIS
   EA
   NONE
   Other(explain)
   Date: 8-9-99

8. REMARKS, EXPLANATIONS:
   Well Completion Report was submitted. Pump had been capped.

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

Well Owner: Sanjiro Nakade
Signature: Sanjiro Nakade
Date: 3-9-99

Landowner: Sanjiro Nakade
Signature: Sanjiro Nakade
Date: 3-9-99

Contractor: PR Drilling Company
Signature: Sanjiro Nakade
Date: 3-9-99

For Official Use Only:
Date Recieved
Date Accepted
Field Checked By
Date
Longitude
Aquifer System Name
Latitude
State Well No.

10/10/97 WCP Form
8. Remarks, Explanations (cont'd): 

9. PROPOSED WELL SECTION

- Elevation at top of casing: __ ft., msl. (surveyed to nearest 0.01 ft)
- Cement Grout: 14 ft. (70% distance surface to water)
- Rock Packing: 85 ft.
- Hole Diameter: 12 in. (allow 3" annular space)
- Total Depth: 100 ft. (≤10 x head)

Ground Elevation: 93.72 ft., msl

- Solid Casing:
  - Material: PVC
  - Length: 79 ft. (90% distance surface to water)
  - Diameter: 8 in.
  - Wall thickness: 0.250 in.

- Casing: Select Perforated or Screen
  - Material: PVC
  - Length: 99 ft.
  - Diameter: 8 in.
  - Wall thickness: 0.250 in.
  - Openings: 0.000 sq. in./ft.

- Open Hole:
  - Length: 1 ft.
  - Diameter: 12 in.

*Approximate elevation at time of filing application. Ground elevation above mean sea level (msl) by a surveyor licensed by the State must be submitted at start of construction. Final elevations of well components shall be submitted in the well completion/well abandonment reports.
**WELL COMPLETION REPORT**

1. **State Well No.:** 2408-10  
   **Well Name:** Lualualei Golf Course Well-2  
   **Island:** Oahu

2. **Location/Address:** Lualualei, Waianae  
   **Tax Map Key:** 8-7-9

### PART I. WELL CONSTRUCTION REPORT

3. **Drilling Company:** PR Drilling Company
4. **Name of driller who performed work:** Ken Towar
5. **Type of rig/constructor:** Top Drive Rotary B-80 & TH-10
6. **Date(s) Well Construction and pump tests (if any) completed:** 6-18-96
7. **GROUND ELEVATION** (referenced to mean sea level, msl): 93.72 ft.
   - **Well Bench Mark (description/location):** Mon. #6  
     - **Elevation (msl):** 129.43 ft.
8. **DRILLER'S LOG:** Please attach geologic log (if available or if required by permit)  
   - **Depths (ft.) Rock Description, Water Level, Dates, etc.**
   - **(If more space is needed, continue on back.)**

9. **Total depth of well below ground:** 100 ft.
10. **Hole size:** 12 inch dia. from ft. to ft. below ground  
     12 inch dia. from ft. to ft. below ground  
     12 inch dia. from ft. to ft. below ground
11. **Casing installed:** 8 in. I.D. x 0.25 in. wall solid section to 79 ft. below ground  
     8 in. I.D. x 0.25 in. wall perforated section to 99 ft. below ground  
     **Casing Material/Slot Size:** PVC/0.020 sq. in/ft slot
12. **Annulus:** Grouted from 0 ft. below ground to 85 ft. below ground  
     Gravel packed from 85 ft. below ground to 99 ft. below ground
13. **Initial water level:** 70 ft. below ground.  
    **Date and time of measurement:** 02-12-96
14. **Initial chloride:** ppm  
    **Date and time of sampling:**
15. **Initial temperature:** °F  
    **Date and time of measurement:**
16. **PUMPING TESTS:** Reference Point (R.P.) used: Ground, which elevation is 94 ft.
    - **(1) Step-Drawdown Test Date 02-15-96**  
      - **Start water level:** 70 ft. below R.P.  
      - **End water level:** 70 ft. below R.P.
    - **(2) Long-term Aquifer Test Date**  
      - **Start water level:** ft. below R.P.  
      - **End water level:** ft. below R.P.
17. **Aquifer Pump Test Procedures data & graphs (1/8/96 LTAT Form) attached?** Yes No
18. **As-built drawings attached?** Yes No
19. **Other remarks/comments:** (On back of this form)

---

**Applicant (print):** Sanjiro Nakade  
**Signature:** Date

---

**Well Drilling Contractor (print):** PR Drilling Company  
**C-57 Lic. No.:** C-9627

---

**Surveyor (print):** Controlpoint Surveying, Inc  
**Lic. No.:** 6605-LS

---

**Applicant (print):** Sanjiro Nakade  
**Signature:** Date

---

**Applicant (print):** Date 1/10/98
PART II. (PERMANENT) PUMP INSTALLATION REPORT

20. Pump Installation Company: ____________________________
21. Name of person performing work: ________________________
22. Date Pump Installation Completed: ________________________
23. PUMP INSTALLATION:
   Pump Type, Make, Serial No.: ____________________________
   Capacity: ________ gpm
   Motor type, H.P., Voltage, rpm: __________________________
   Depth of Pump Intake Setting __________________ ft. below ________, which elevation is ________ ft.
   Depth to bottom of airline __________________ ft. below ________, which elevation is ________ ft.
   Pumping Head is __________ ft. Type of flow meter: ________, which measures in ________
24. As-built drawings attached? ___ Yes ___ No
25. Other remarks/comments: (See below)

Pump Installation Contractor (print) ____________________________ C-57 Lic. No.________________________

Signature: ____________________________ Date: ____________________________

Applicant (print) ____________________________

Signature: ____________________________ Date: ____________________________

8.(cont'd) DRILLER'S LOG (cont'd):

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

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

19. & 25. Remarks:
___________________________________________________________________________________________
**WELL COMPLETION REPORT**

State of Hawaii

COMMISSION ON WATER RESOURCE MANAGEMENT

Department of Land and Natural Resources

---

**WELL COMPLETION REPORT**

**STATE WELL NO.**

**WELL NAME** LUALUA'I GARDEN

**ISLAND** OAHU

**LOCATION:** Address, END OF LUALUA'I ACCESS ROAD & Tax Map Key B-7-9S POR.

**DRILLING OR PUMP INSTALLATION CONTRACTOR** PR DRILLING COMPANY

**CONTRACTOR'S C-57 LICENSE NUMBER** C-9627

**NAME OF DRILLER WHO PERFORMED WORK** KEV TOWER

**TYPE OF RIG/CONSTRUCTION** TOP DRIVE ROTARY B-80-7H-10

**DATE OF WELL DRILLING COMPLETION** 1-12-96

**NOTE:** Report must be submitted within 30 days after the well is completed.

---

**GROUND ELEVATION (msl):**

Top of Drilling Platform (msl) __________ ft.

Height of Drilling Platform above Ground surface: __________ ft.

Bench Mark and Method Used to Determine Ground Elevation: **GROUND DIFF.** REF: __________ ft.

---

**DRILLER’S LOG:**

<table>
<thead>
<tr>
<th>Depth (ft.)</th>
<th>Rock Description, Remarks, Dates</th>
<th>Water Level (ft.)</th>
<th>Rock Description, Remarks, Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 5</td>
<td>CLAY OVERBURDEN</td>
<td>to</td>
<td>to</td>
</tr>
<tr>
<td>5 to 50</td>
<td>MUDDY CORAL</td>
<td>to</td>
<td>to</td>
</tr>
<tr>
<td>50 to 51</td>
<td>BROWN SOIL (less silt)</td>
<td>to</td>
<td>to</td>
</tr>
<tr>
<td>51 and up</td>
<td>EMBR CORAL MATERIAL</td>
<td>to</td>
<td>to</td>
</tr>
</tbody>
</table>

**TOTAL DEPTH OF WELL BELOW GROUND:** 100 ft.

**HOLE SIZE:** 12 in. diameter from 0 ft. to 100 ft. below ground.

---

**CASING INSTALLED:**

- 8 in. I.D. x 250 ft. in. well solid section to 79 ft. below ground.
- 8 in. I.D. x 250 ft. in. well perforated section to 99 ft. below ground.

**Type of Perforation:** 5/16TH, 0.230".

**ANNULUS:**

- Grouted from 65 ft. below ground to 0 ft. below ground.
- Gravel packed from 100 ft. below ground to 65 ft. below ground.

**INITIAL WATER LEVEL:** 70.0 ft. below ground. Date and time of measurement: 2-12-96

**INITIAL CHLORIDE:** NOT TESTED BY PPD

**INITIAL TEMPERATURE:** NOT TESTED BY PPD.

**DATE OF PUMP INSTALLATION:** NOT WRITTEN BY PPD

**PUMP INSTALLATION:**

- Pump Type, Make, Serial No. __________ Capacity __________ hp
- Motor type, H.P., Voltage, rpm __________
- Depth of Pump Intake Setting __________ ft. below ground, which elevation is __________ ft.
- Depth of bottom of airplane __________ ft. below ground, which elevation is __________ ft.
- Pumping Head is __________ ft.

**PUMPING TESTS:**

<table>
<thead>
<tr>
<th>Date 2-15-96</th>
<th>Start water level 70 ft. below R.P.</th>
<th>Start water level 70 ft. below R.P.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date</td>
<td>End water level 70 ft. below R.P.</td>
<td>End water level 70 ft. below R.P.</td>
</tr>
<tr>
<td>Depth of well</td>
<td>100 ft. below R.P.</td>
<td>Depth of well 100 ft. below R.P.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Expended Time (hours) Drawn (gpm)</th>
<th>Drawn (gpm)</th>
<th>O</th>
<th>Temp. °F</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.50</td>
<td>65</td>
<td>0</td>
<td>70</td>
</tr>
<tr>
<td></td>
<td>65</td>
<td>0</td>
<td>70</td>
</tr>
<tr>
<td></td>
<td>65</td>
<td>0</td>
<td>70</td>
</tr>
<tr>
<td></td>
<td>65</td>
<td>0</td>
<td>70</td>
</tr>
</tbody>
</table>

**Remarks:**

**ANNULUS:** GREAT DATA INCLUDES BENDITE SEAL.

---

**Contractor:** PR DRILLING COMPANY

**Signature:** __________

---

**For Driller's Use:**

*Job Name:* Makade

*Job No.:* 2591

---

**For Official Use:**

*Well No.:* C08-10

*For Official Use:*

*Latitude:* __________

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

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

**PUMPING TESTS (cont'd):**

<table>
<thead>
<tr>
<th>Elapsed Time (hours)</th>
<th>Rate (gpm)</th>
<th>Draw-down (ft.)</th>
<th>Temp. °F</th>
<th>Elapsed Time (hours)</th>
<th>Rate (gpm)</th>
<th>Draw-down (ft.)</th>
<th>Cl- (ppm)</th>
<th>Temp. °F</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Remarks (cont'd):**

A pumping test was performed with a 65 gpm test pump with a generator. After 4 hours of testing, no drawdown was obtained. Therefore, testing operations were terminated.
Elevation at top of casing: ___ ft., ma.s.

Ground Elevation: ___ ft., ma.s.

Cement Grout to Surface.

Rock Packing: 65 ft.

Solid Casing: PVC

Material: ___

Length: 79 ft.

Diameter: 8 in.

Wall thickness: 2.50 in.

Hole Diameter: 12 in.

Total Depth: 100 ft.

Casing: □ Perforated □ Screen

Material: PVC

Length: 99 ft.

Diameter: 8 in.

Wall thickness: 2.50 in.

Openings: 0.020 sq. in./L.F., SLOT

Open Hole:

Length: ___ ft.

Diameter: 12 in.

Last page, no map.
MINUTES
FOR THE MEETING OF THE
COMMISSION ON WATER RESOURCE MANAGEMENT

Chairperson Timothy E. Johns called the meeting of the Commission on Water Resource Management to order at 9:05 a.m.

The following were in attendance:

MEMBERS:  Mr. Timothy E. Johns
            Mr. Richard Cox
            Mr. David Nobriga
            Mr. Herbert Richards, Jr.
            Dr. Bruce Anderson
            Mr. Robert Girald

STAFF:  Mr. Edwin Sakoda
         Mr. Roy Hardy
         Ms. Lenore Nakama
         Mr. David Higa
         Mr. Charley Ice
         Mr. Eric Hirano
         Mr. Dean Nakano
         Ms. Faith Ching

COUNSEL:  Ms. Linnel Nishioka

OTHERS:

Benjamin Kudo    Kapua Sproat    George Hudes    Mike Miyahira
Manabu Tagomori  Charles Reppun   Felix Limitisco

All written testimonies submitted at the meeting are filed in the Commission office and are available for review by interested parties. The items were not taken in the order posted on the agenda.

1. Minutes of the November 6 and 18, 1998.

Typographical corrections to the November 6, 1998 minutes were on page 4, first paragraph of the testimonies to correct the word “comission” to “commission”; on page 5, the last line, delete the words “which was”; and on page 6 under Colette Machado’s testimony, second to the last sentence, take off the word “the” between words “that” and “she”.

MOTION: (RICHARDS/COX)
To approve the November 6 minutes as corrected.
February. The 18 to 24-months time frame will complete the Oahu Water Management Plan.

George Hudes stated that they tried to estimate the cost of the Waiahole Ditch Contested Case. He said that this was difficult because they were not able to get information from all parties. Based on cost for Earthjustice, an estimate for spending was a minimum of $10 million and probably close to $20 million. That does not include any of the State’s time.

EXECUTIVE SESSION:

Chairperson Johns called an Executive Session at 10:31 am to confer with counsel on matters relating to public hearings and issues of recusal.

Following the executive session, the Chairperson asked counsel to make a statement regarding the issue of recusal.

Deputy Attorney General Linnel Nishioka stated, for the record, the issue that was discussed. The question was whether any Commissioner has, given the parties involved, a conflict for which they must be recused either under the Water Code or the Ethics Code. She stated that she has advised all Commissioners, without disclosing attorney-client communications, that at this time none of the Commissioners are legally required to recuse themselves.

MOTION: (ANDERSON/NOBRIGA)
To approve all the recommendations as amended by staff.

Dr. Anderson moved that a public hearing be held on the application that was recommended by the staff and that the Chair be authorized to request for additional information from the applicant prior to the hearing. He further moved that the hearing be held with the understanding that it may be continued if necessary.

Deputy Attorney General Nishioka stated that there is an additional staff recommendation about whether the Waiahole-Waikane Community Association has standing and wasn’t sure if that was to be included in the motion.

Motion was to include both staff recommendations.

UNANIMOUSLY APPROVED STAFF RECOMMENDATIONS WITH AMENDMENTS.

8. Kabushiki Kaisha Oban, IMPROPERLY ABANDONED WELLS, Lualualei Well 1 (Well No. 2408-08), Lualualei Golf Course Well 1 (Well No. 2508-10), Lualualei Golf Course Well 2 (Well No. 2508-11)

VIOLATION OF WELL CONSTRUCTION PERMIT, Lualualei Well 2 (Well No. 2408-09)
UNPERMITTED WELL CONSTRUCTION/PUMP INSTALLATION, Lualualei Well 3 (Well No. 2408-10), TMK 8-7-9:2, Lualualei Aquifer System, Oahu

PRESENTATION OF SUBMITTAL: Ms. Lenore Nakama

STAFF RECOMMENDATION:

1. Find Kabushiki Kaisha Oban in violation of Section 3.1 of HWCPIS for improper abandonment of Well Nos. 2408-08, 2508-10, and 2508-11.

2. Find that the violations in Recommendation 1 are willful violations.

3. Refer the violations in Recommendation 1 to the Department of the Attorney General for possible legal action and remedy to prevent hazard to public health and safety and to protect the water resource from possible contamination.

4. Find Kabushiki Kaisha Oban in violation of Well Construction Permit Standard Condition 3.b. and Section 2.10(a)(4) of HWCPIS for failing to comply with the elevation survey requirement for Well No. 2408-09.

5. Find that the violation in Recommendation 4 is a willful violation.

6. Fine the landowner $500 per day for the violation in Recommendation 4, beginning on February 17, 1998, the date on which the first correct certified notice of the violation was sent to the permittee, to this submittal's date (337 days), for a total amount of $168,500 (one hundred sixty-eight thousand five hundred dollars), and continue to fine the landowner $500 per day starting January 21, 1999 until the violation is corrected.


8. Find that the violation in Recommendation 7 is a willful violation.

9. Fine the landowner $500 per day for the violation in Recommendation 7, beginning on July 31, 1998, the date on which the first written notice of the violation was sent to the permittee, to this submittal's date (138 days), for a total amount of $69,000 (sixty-nine thousand dollars), and continue to fine the landowner $500 per day starting January 21, 1999 until the violation is corrected.

10. In the alternative to the fines in Recommendations 6 and 9, within sixty (60) days, the landowner may:

   a. apply for permits to abandon/seal Well Nos. 2408-08, 2508-10, and 2508-11 and complete the abandonment and sealing of Well Nos. 2408-08, 2508-10, and 2508-11 in accordance with the Hawaii Well Construction and Pump Installation Standards (January, 1997); and

   b. submit an elevation survey by a Hawaii-licensed surveyor for Well No. 2408-09; and
c. submit an after-the-fact application for a well construction/pump installation permit for Well No. 2408-10 and submit completed Well Completion Reports Parts I and II.

TESTIMONY BY APPLICANT: None

TESTIMONIES: None

Amendments to the staff recommendations were as follows:

1. Item 6 – change 337 days to 345 days; total amount of $168,500 to $172,500 and January 21 to January 29.

2. Item 9 – change 138 days to 146 days; total amount of $69,000 to $73,000 and January 21 to January 29.

Ms. Nakama stated that the consultant called yesterday and they were able to speak to the landowner. The landowner is willing to comply and plans to be in full compliance within 30 days, although the submittal gives him 60 days. They will be working together and they seem to have every intent now to do the work.

After discussions on the fines, Chairperson Johns stated that we should make things clear as to when the fines start accruing. It could be in the last paragraph. That way the applicant will be aware of when the fine will start.

Deputy Attorney General Nishioka pointed out that the Commission is legally able to assess the fine from the first day the notice goes out. It may be a good suggestion to inform the applicants because they may think they have a grace period. Fines can be charged from the day the first notice has gone out.

Commissioner Anderson stated that the problem with waiting until the 90-day period is up is that there is no incentive to comply. The applicant will probably wait until notice is received. Having the clock start immediately would encourage work to be done on time.

Commissioner Richards stated that the letters clearly inform the applicant about the fine and when it starts.

MOTION: (NOBRIGA/ANDERSON)
To approve the recommendation as amended.

UNANIMOUSLY APPROVED AS AMENDED.

9. Other Business

Ed Sakoda started that the schedule for the year needs to be prepared.
<table>
<thead>
<tr>
<th>Service</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Postage</td>
<td>$ .33</td>
</tr>
<tr>
<td>Certified Fee</td>
<td>$ 1.35</td>
</tr>
<tr>
<td>Special Delivery Fee</td>
<td></td>
</tr>
<tr>
<td>Restricted Delivery Fee</td>
<td></td>
</tr>
<tr>
<td>Return Receipt Showing to Whom &amp; Date Delivered</td>
<td>$ 1.10</td>
</tr>
<tr>
<td>Return Receipt Showing to Whom, Date, and Addressee's Address</td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL Postage & Fees:** $ 2.78

Postmark or Date: FEB - 8 1999
STICK POSTAGE STAMPS TO ARTICLE TO COVER FIRST CLASS POSTAGE, CERTIFIED MAIL FEE, AND CHARGES FOR ANY SELECTED OPTIONAL SERVICES (see first):

1. If you want this receipt postmarked, stick the gummed stub to the right of the return address leaving the receipt attached and present the article at a post office service window or hand it to your rural carrier (no extra charge).

2. If you do not want this receipt postmarked, stick the gummed stub to the right of the return address of the article, date, detach and retain the receipt, and mail the article.

3. If you want a return receipt, write the certified mail number and your name and address on a return receipt card, Form 3811, and attach it to the front of the article by means of the gummed end flaps. Otherwise, affix to back of article. Endorse front of article RETURN RECEIPT REQUESTED adjacent to the number.

4. If you want delivery restricted to the addressee, or to an authorized agent of the addressee, endorse RESTRICTED DELIVERY on the front of the article.

5. Enter fees for the services requested in the appropriate spaces on the front of this receipt. If return receipt is requested, check the applicable blocks in item 1 of Form 3811.

6. Save this receipt and present it if you make inquiry.
<table>
<thead>
<tr>
<th>SENDER:</th>
<th>4a. Article Number</th>
<th>4b. Service Type</th>
<th>7. Date of Delivery</th>
<th>8. Addressee's Address (Only if requested and fee is paid)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Complete items 1 and/or 2 for additional services.</td>
<td>Z 066 768 200</td>
<td>□ Registered</td>
<td>2/14/92</td>
<td></td>
</tr>
<tr>
<td>• Complete items 3, and 4a &amp; b.</td>
<td></td>
<td>□ Insured</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Print your name and address on the reverse of this form so that we can</td>
<td></td>
<td>XX Certified</td>
<td></td>
<td></td>
</tr>
<tr>
<td>return this card to you.</td>
<td></td>
<td>□ COD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Attach this form to the front of the mailpiece, or on the back if space</td>
<td></td>
<td>□ Express Mail</td>
<td></td>
<td></td>
</tr>
<tr>
<td>does not permit.</td>
<td></td>
<td>XX Return Receipt for Merchandise</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Write “Return Receipt Requested” on the mailpiece below the article number.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• The Return Receipt will show to whom the article was delivered and the date delivered.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I also wish to receive the following services (for an extra fee):</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. □ Addressee’s Address</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. □ Restricted Delivery</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consult postmaster for fee.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Article Addressed to:</td>
<td>Z 066 768 200</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr. Harvey K. Hida</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kabushi Kaisha Oban</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1440 Kapiolani Bldv., Ste. 915</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Honolulu, HI 96814</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Well No. 2408-08, 2508-10 &amp; 11)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4a. Article Number</td>
<td>Z 066 768 200</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4b. Service Type</td>
<td>□ Registered</td>
<td>XX Certified</td>
<td>2/14/92</td>
<td></td>
</tr>
<tr>
<td></td>
<td>□ Insured</td>
<td>□ COD</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>XX Certified</td>
<td>□ Express Mail</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>□ Return Receipt for Merchandise</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Signature (Addressee)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>[Signature]</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Signature (Agent)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>[Signature]</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PS Form 3811, December 1991</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>©U.S. GPO: 1993–352-714 DOMESTIC RETURN RECEIPT</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Print your name, address and ZIP Code here

COMMISSION ON WATER RESOURCE MANAGEMENT
P. O. Box 621
Hilo, Hawaii 96720

Attn: Lenore
CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Harvey K. Hida
Kabushiki Kaisha Oban
1440 Kapiolani Blvd., Suite 915
Honolulu, HI 96814

Dear Mr. Hida:

NOTICE OF ACTION

IMPROPERLY ABANDONED WELLS
Lualualei Well 1 (Well No. 2408-08)
Lualualei Golf Course Well 1 (Well No. 2508-10)
Lualualei Golf Course Well 2 (Well No. 2508-11)

VIOLATION OF WELL CONSTRUCTION PERMIT
Lualualei Well 2 (Well No. 2408-09)

UNPERMITTED WELL CONSTRUCTION/PUMP INSTALLATION
Lualualei Well 3 (Well No. 2408-10)
TMK 8-7-9:2
Lualualei Aquifer System, Oahu

This letter serves as your official notice of action by the Commission on Water Resource Management (Commission) on the subject well construction and pump installation violations.

By a unanimous vote of the Commission at their meeting of January 29, 1999, the Commission:

1. Found Kabushiki Kaisha Oban in violation of Section 3.1 of HWCPIS for improper abandonment of Well Nos. 2408-08, 2508-10, and 2508-11.
2. Found that the violations in Action 1 are willful violations.
3. Referred the violations in Action 1 to the Department of the Attorney General for possible legal action and remedy to prevent hazard to public health and safety and to protect the water resource from possible contamination.
4. Found Kabushiki Kaisha Oban in violation of Well Construction Permit Standard Condition 3.b. and Section 2.10(a)(4) of HWCPIS for failing to comply with the elevation survey requirement for Well No. 2408-09.
5. Found that the violation in Action 4 is a willful violation.
6. Fined the landowner $500 per day for the violation in Action 4, beginning on February 17, 1998, the date on which the first correct certified notice of the violation was sent to the permittee, to this submittal’s date (345 days), for a total amount of $172,500 (one hundred seventy-two thousand five hundred dollars), and continue to fine the landowner $500 per day starting January 29, 1999 until the violation is corrected.


8. Found that the violation in Action 7 is a willful violation.

9. Fined the landowner $500 per day for the violation in Action 7, beginning on July 31, 1998, the date on which the first written notice of the violation was sent to the permittee, to this submittal’s date (146 days), for a total amount of $73,000 (seventy-three thousand dollars), and continue to fine the landowner $500 per day starting January 29, 1999 until the violation is corrected.

10. In the alternative to the fines in Actions 6 and 9, within sixty (60) days, the landowner may:

   a. apply for permits to abandon/seal Well Nos. 2408-08, 2508-10, and 2508-11 and complete the abandonment and sealing of Well Nos. 2408-08, 2508-10, and 2508-11 in accordance with the Hawaii Well Construction and Pump Installation Standards (January, 1997); and

   b. submit an elevation survey by a Hawaii-licensed surveyor for Well No. 2408-09; and

   c. submit an after-the-fact application for a well construction/pump installation permit for Well No. 2408-10 and submit completed Well Completion Reports Parts I and II.

If the above violations are not fully corrected by March 30, 1999, these matters will be referred to the Department of the Attorney General for follow-up enforcement action and fine collection.

If you have any questions, please contact Lenore Nakama at [contact information]

Sincerely,

[Signature]
EDWIN T. SAKODA
Acting Deputy Director

LN:ss

c: Linnel Nishioka, Department of Attorney General
STAFF SUBMITTAL

for the meeting of the
COMMISSION ON WATER RESOURCE MANAGEMENT

January 29, 1999
Honolulu, Oahu

Kabushiki Kaisha Oban

IMPROPERLY ABANDONED WELLS
Lualualei Well 1 (Well No. 2408-08)
Lualualei Golf Course Well 1 (Well No. 2508-10)
Lualualei Golf Course Well 2 (Well No. 2508-11)

VIOLATION OF WELL CONSTRUCTION PERMIT
Lualualei Well 2 (Well No. 2408-09)

UNPERMITTED WELL CONSTRUCTION/PUMP INSTALLATION
Lualualei Well 3 (Well No. 2408-10)
TMK 8-7-9:2
Lualualei Aquifer System, Oahu

Permittee: Kabushiki Kaisha Oban
1440 Kapiolani Blvd., Ste. 915
Honolulu, HI 96814

LOCATION MAP: See Exhibit 1

BACKGROUND:

December 15, 1988 Applications to drill two (2) new wells, Well Nos. 2408-08 & 09 were received from Kabushiki Kaisha Oban, c/o Wilson Okamoto & Associates.

February 22, 1989 Well construction permits to construct and test Well Nos. 2408-08 & 09 were issued.

October 23, 1989 A well completion report for Well No. 2408-09 was received.

February 22, 1991 The well construction permits for Well Nos. 2408-08 & 09 expire.

July 19, 1993 Applications to drill four (4) new wells, Well Nos. 2508-10 to 13 were received from Kabushiki Kaisha Oban, c/o Hida Okamoto and Associates (Permittee).

October 6, 1993 A preliminary engineering report for Well Nos. 2408-08 & 09 was received.
A single well construction permit to construct and test Well Nos. 2508-10 to 13 was issued.

An incomplete well completion report was filed by Roscoe Moss Hawaii, Inc. for Well No. 2508-12.

Issues regarding potential well interference based on pump test data were explored.

The well construction permit for Well Nos. 2508-10 to 13 expires.

An incomplete well completion report was filed by PR Drilling Company for Well No. 2508-11.

Commission staff requested that PR Drilling submit additional required information (pursuant to Standard Condition 5) for Well No. 2508-11. Commission staff also requested information regarding the other three (3) permitted well constructions.

PR Drilling Company responds that it is unable to obtain any further information from the permittee.

Commission staff requested the permittee to submit all information for Well Nos. 2508-10 to 13 required under Standard Condition 5. Written response requested by September 15, 1996.

Commission staff sends Notice of Violation to the permittee via certified mail. Written response requested by November 17, 1997.

Commission staff resends Notice of Violation to the permittee via certified mail (to correct a typographical error in the title of the Notice). Written response requested by December 25, 1997.

Staff conducts a field investigation.

Permittee submits:
   a. Well Completion Report (Well Nos. 2508-10 to 13)
   b. Elevation surveys (Well Nos. 2508-10, 11, & 12)
   c. As-built sectional drawings (Well Nos. 2508-10 & 12)
   d. Plot plan (Well Nos. 2508-10, 11, & 12)
   e. Pumping test record (Well Nos. 2508-10 & 12)

Staff review indicates numerous inconsistencies and discrepancies between the information submitted by the permittee on January 22, 1998 and field investigations and previously submitted construction information.

Commission staff meets with the permittee and driller, Tracey Runnels of Roscoe Moss Hawaii, Inc., to resolve uncertainties regarding the well drilling activities.

(Fifth Notice) See Exhibit 2.
Staff Submittal

May 13, 1998

Staff conducts another field investigation and discovers a new well with permanent pump installed of which we were previously unaware (now designated Well No. 2408-10).

July 31, 1998

(Sixth Notice) See Exhibit 3.

September 3, 1998

The consultant for the landowner, Harvey K. Hida, meets with the staff to discuss possible regulatory actions that may result from the permittee’s noncompliance.

ANALYSIS/ISSUES:

There are basically two issues: 1) noncompliance with the statutes, rules, and permit conditions; and 2) possible endangerment to human health and safety and the water resource. These are detailed in the following sections on improperly abandoned wells, well construction permit violation, and unpermitted well construction/pump installation.

I. IMPROPERLY ABANDONED WELLS

Three of the wells (Well Nos. 2408-08, 2508-10 & 11) have been improperly abandoned:

1. Well No. 2408-08 was drilled to a depth of 220 ft. in 1989. The original static water level was 133 ft., and the water was too salty for use. This well has collapsed, and the top of the casing has been damaged. Collapse of a portion of the well and siltation from rain have filled the well to about 50 ft. below ground surface. In its present state, there is a potential for contamination of the ground water from the surface. Although the property is fenced, there are large gaps between the fence and the ground surface through which an adult or child may enter and may fall into or be injured by this open hole. Thus, public health and safety are also at risk.

2. Well No. 2508-10 was drilled to a depth of 102 ft. in 1994. The well was capped and not used due to poor water yield. Water is visible from the surface looking down into the hole. The well is secured only by a piece of metal covering the 14-inch metal casing, which is inadequate according to Section 2.10 of the Hawaii Well Construction and Pump Installation Standards (January, 1997; HWCPIS). This well is also a potential conduit for contamination and a health hazard.

3. Well No. 2508-11 was probably drilled to a depth of about 100 ft. in 1996. It appears that an 8-inch casing was installed in a 12-inch hole. Because a completion report was not timely filed, and the driller has gone out of business, construction details are uncertain. The casing has been smashed at ground level. There is about 51 ft. of open hole. This also poses a threat to ground water quality and human health and safety.

Section 174C-81 Haw. Rev. Stat. defines an abandoned well as:

"... any well that has been permanently discontinued. Any well shall be deemed abandoned which is in such a state of disrepair that continued use for the purpose of obtaining ground water is impractical."

Section 3.1 of the HWCPIS states:

"All wells and test borings as defined in these Standards must be properly abandoned and permanently sealed to protect the ground-water resources of the State of Hawaii from contamination and waste and to protect public health and safety, whenever:
Staff Submittal

January 29, 1999

1. Their purpose has been served, or
2. Their use has been permanently discontinued, and
3. Their physical condition is causing or threatening contamination, deterioration in quality, or waste of ground-water resources, or
4. Their state of disrepair makes their continued use impractical or creates a hazard to public health or safety.

Section 2.10 of the HWCPIS states:

"Wells must be adequately protected at all times during and after construction to prevent the entrance of surface water runoff, pollutants, and contaminants; unauthorized access; and damage to the well. All non-producing wells, including water wells which are commonly not put into production until several years after construction, must be completed with the casing extended a minimum of two (2) feet above the ground surface and capped in a manner that will prevent unauthorized entry or any pollutants from entering the well. Such wells shall conform to the following:

(1) Lockable Cover. The top of the well casing shall be cut smooth and straight with a lockable cover to prevent unauthorized access and prevent a safety hazard to humans and animals. The cover shall be weather and vermin proof.

(2) Casing Cap. Alternatively, the top of the well casing may be capped with a welded steel plate or solvent-welded plastic cap (for plastic casings) fitted with a 1 1/2-inch minimum diameter threaded cap or plug which cannot be easily opened with small or light tools. Openings or passages for probing, venting, cables, or discharge tubing shall be protected against entry of surface water, pollutants, contaminants, and vermin.

(3) Flooding. The top of the well casing should terminate above ground surface and known levels of flooding, except where site conditions, such as vehicular traffic, will not allow.

The staff finds Well Nos. 2408-08, 2508-10, and 2508-11 meet the definition for an abandoned well since at least one of the above conditions for abandonment in Section 3.1 of the HWCPIS have been met. Further, in their present state, these wells do not meet the requirements of Section 2.10 of the HWCPIS.

II. WELL CONSTRUCTION PERMIT VIOLATION

Well No. 2408-09 has an 8-inch casing covered by a welded metal plate. This well successfully develops brackish irrigation water. However, the benchmarks on the casing and ground surface (which were used to reference to test data) have been destroyed. In letters dated August 27, 1996, February 17, 1998, and July 31, 1998, the staff requested that the permittee submit a new elevation survey (see Exhibit 4). To date, we have not received a response. We have withheld issuance of a pump installation permit pending the submittal of an elevation survey.

Standard Condition 3.b. of the well construction permit for Well No. 2408-09 requires an elevation (referenced to mean sea level) survey by a Hawaii-licensed surveyor to be submitted within sixty (60) days after completion of the well.

Further, section 2.10(a)(4) of the HWCPIS states:

"An accurate elevation benchmark shall be clearly established on the concrete base."
Although a benchmark had been established at one point, the staff finds that the subsequent destruction of the benchmark and the permittee’s lack of compliance in re-establishing a benchmark means the permittee does not meet Well Construction Permit Standard Condition 3.b. and HWCPIS Section 2.10(a)(4).

III. UNPERMITTED WELL CONSTRUCTION/PUMP INSTALLATION

An unregistered, unpermitted well was discovered at TMK 8-7-09:2 during a May 20, 1998 field investigation. The well appears to be fairly new, on a cement platform with a pump in it adjacent to a cement pad with electrical connections. This 8-inch pvc-cased well, encased in a 12-inch metal conductor pipe has been assigned Well No. 2408-10. In a letter dated July 31, 1998, the staff requested that the permittee submit the appropriate after-the-fact permits. However, to date, we have not received a response. We do not know who drilled the well nor does the present company representative claim to know.

Section 174C-84(a) Haw. Rev. Stat. states:

"[n]o well construction and no installation of pumps and pumping equipment shall commence without appropriate permit from the commission."

The requirement for permits prior to well construction and pump installation is also stated in Sections 1.7 and 1.9 of HWCPIS.

IV. POSSIBLE LEGAL ACTIONS

Exhibit 4 summarizes the timeline of notices of violations and possible sanctions. The Commission can:

1. Impose fines of up to $1,000 per day for each source for the period of the violations (since the first written notice of violation was sent to the permittee).

2. Do the necessary work to prevent potential contamination and eliminate human health hazards, and refer the matter to the Department of the Attorney General for possible legal action, including placing a lien on the property, and initiating foreclosure suit to collect.

3. Refer these matters to the Department of the Attorney General for possible legal action, including filing suit for injunctive relief and damages.

The consultant for the permittee has contacted Roscoe Moss Hawaii, Ltd. for a cost estimate to seal improperly abandoned wells. The projected cost is $10,416.00.

The staff is working on a schedule for fines and a database to track violations and sanctions.

RECOMMENDATION:

That the Commission:

1. Find Kabushiki Kaisha Oban in violation of Section 3.1 of HWCPIS for improper abandonment of Well Nos. 2408-08, 2508-10, and 2508-11.

2. Find that the violations in Recommendation 1 are willful violations.
3. Refer the violations in Recommendation 1 to the Department of the Attorney General for possible legal action and remedy to prevent hazard to public health and safety and to protect the water resource from possible contamination.

4. Find Kabushiki Kaisha Oban in violation of Well Construction Permit Standard Condition 3.b. and Section 2.10(a)(4) of HWCPIS for failing to comply with the elevation survey requirement for Well No. 2408-09.

5. Find that the violation in Recommendation 4 is a willful violation.

6. Fine the landowner $500 per day for the violation in Recommendation 4, beginning on February 17, 1998, the date on which the first correct certified notice of the violation was sent to the permittee, to this submittal's date (337 days), for a total amount of $168,500 (one hundred sixty-eight thousand five hundred dollars), and continue to fine the landowner $500 per day starting January 21, 1999 until the violation is corrected.


8. Find that the violation in Recommendation 7 is a willful violation.

Fine the landowner $500 per day for the violation in Recommendation 7, beginning on July 31, 1998, the date on which the first written notice of the violation was sent to the permittee, to this submittal's date (338 days), for a total amount of $69,000 (sixty-nine thousand dollars), and continue to fine the landowner $500 per day starting January 21, 1999 until the violation is corrected.

9. In the alternative to the fines in Recommendations 6 and 9, within sixty (60) days, the landowner may:

a. apply for permits to abandon/seal Well Nos. 2408-08, 2508-10, and 2508-11 and complete the abandonment and sealing of Well Nos. 2408-08, 2508-10, and 2508-11 in accordance with the Hawaii Well Construction and Pump Installation Standards (January, 1997); and

b. submit an elevation survey by a Hawaii-licensed surveyor for Well No. 2408-09; and

c. submit an after-the-fact application for a well construction/pump installation permit for Well No. 2408-10 and submit completed Well Completion Reports Parts I and II.

Respectfully submitted,

EDWIN T. SAKODA
Acting Deputy Director

Exhibit(s):
1 (Location Map)
2 (February 17, 1998 Letter from Edwin T. Sakoda to Harvey K. Hida)
3 (July 31, 1998 Certified Notice of Violation from Timothy E. Johns to Harvey K. Hida)
4 (Summary of Notices of Noncompliance)
Mr. Harvey K. Hida  
Kabushiki Kaisha Oban  
1440 Kapiolani Blvd., Suite 915  
Honolulu, HI 96814

Dear Mr. Hida:

Thank you for attending a meeting on February 11, 1998 with Susan Swanson, Mitchell Ohye, and Lenore Nakama of my staff and Tracy Runnels of Roscoe Moss Hawaii, Inc. to resolve discrepancies between the field investigation and well completion information for Well Nos. 2408-08 & 09 and Well Nos. 2508-10 to 13:

- **Well No. 2408-08**  
  We received a Preliminary Engineering Report on Well No. 2408-08 on October 23, 1989 and will accept this as fulfillment of Condition 3 of your well construction permit. We understand this well was unsuccessful and has been abandoned. Please complete and return the attached well construction permit application to abandon/seal this well within ninety (90) days.

- **Well No. 2408-09**  
  We received a well completion report on October 7, 1989. However, because the benchmarks on the casing and ground surface (which were used to reference the pump test data) have been destroyed, we are requiring another elevation survey (referenced to mean sea level) by a licensed surveyor; please submit an elevation survey within sixty (60) days. We understand this well was successful and is properly capped. If you wish to use this well in the future, please complete and return the attached application for a pump installation permit.

- **Well Nos. 2508-10 & 11**  
  We will accept the Well Completion Reports - Part I for these wells, as amended based on our meeting discussion (attached). We understand these well were unsuccessful and have been abandoned. Please complete and return the attached well construction permit applications to abandon/seal these wells within ninety (90) days.
Well No. 2508-12
We will accept the Well Completion Report - Part I for this well, as amended based on our meeting discussion (attached). We understand this well was successful and is properly capped. If you wish to use this well in the future, please complete and return the attached application for a pump installation permit.

Well No. 2508-13
We understand this well was never drilled under the well construction permit which has expired. A new permit is necessary to drill this well.

We have also attached a location map showing the correct location of the wells.

Please be advised that failure to comply with the terms of your permit or any provision of the State Water Code (including the provisions for well abandonment/sealing) may be subject to fines of up to $1000 per day.

If you have any questions, please contact Lenore Nakama at [redacted]

Sincerely,

[Signature]
EDWIN T. SAKODA
Acting Deputy Director

LN:ss
Enclosures
Mr. Harvey K. Hida  
Kabushiki Kaisha Oban  
1440 Kapiolani Blvd., Suite 915  
Honolulu, HI 96814

Dear Mr. Hida:

SIXTH NOTICE OF VIOLATION  
Lualualei Golf Course Wells 1 to 4 (Well Nos. 10 to 13)  
Maili Irrigation Wells 1 & 2 (Well Nos. 2408-08 & 09)

This follows our letter of February 17, 1998 (Exhibit 1), to which we have not yet received a response, requesting that you submit necessary and required information regarding the construction of successful wells and permit applications to seal abandoned, unsuccessful wells.

Our records show that this is the sixth notice from our office, regarding non-compliance with the permit conditions and/or provisions of the State Water Code. A summary of previous correspondence regarding the well permits and pertinent background information follows:

December 15, 1988  Applications to drill two (2) new wells, Well Nos. 2408-08 & 09 were received from Kabushiki Kaisha Oban, c/o Wilson Okamoto & Associates.

February 22, 1989  Well construction permits to construct and test Well Nos. 2408-08 & 09 were issued.

October 23, 1989  A well completion report for Well No. 2408-09 was received.

February 22, 1991  The well construction permits for Well Nos. 2408-08 & 09 expire.

July 19, 1993  Applications to drill four (4) new wells, Well Nos. 2508-10 to 13 were received from Kabushiki Kaisha Oban, c/o Hida Okamoto and Associates (Permittee).

October 6, 1993  A preliminary engineering report for Well Nos. 2408-08 & 09 was received.

October 25, 1993  A well construction permit to construct and test Well Nos. 2508-10 to 13 was issued.

March 18, 1994  An incomplete well completion report was filed by Roscoe Moss Hawaii, Inc. for Well No. 2508-12.

EXHIBIT 3
December, 1994 to August 1996

Issues regarding potential well interference based on pump test data were explored.

October 25, 1995

The well construction permit for Well Nos. 2508-10 to 13 expires.

July 9, 1996

An incomplete well completion report was filed by PR Drilling Company for Well No. 2508-11.

July 17, 1996

(First Notice) Commission staff requested that PR Drilling submit additional required information (pursuant to Standard Condition 5) for Well No. 2508-11. Commission staff also requested information regarding the other three (3) permitted well constructions.

August 12, 1996

PR Drilling Company responds that it is unable to obtain any further information from the permittee.

August 27, 1996

(Second Notice) Commission staff requested Permittee to submit all information for Well Nos. 2508-10 to 13 required under Standard Condition 5. Written response requested by September 15, 1996.

October 17, 1997

(Third Notice) Commission staff sends Notice of Violation to Permittee via certified mail. Written response requested by November 17, 1997.

November 25, 1997

(Fourth Notice) Commission staff resends Notice of Violation to Permittee via certified mail (to correct a typographical error in the title of the Notice). Written response requested by December 25, 1997.

December 23, 1997

Staff conducts a field investigation.

January 22, 1998

Permittee submits:

a. Well Completion Report (Well Nos. 2508-10 to 13)
b. Elevation surveys (Well Nos. 2508-10, 11, & 12)
c. As-built sectional drawings (Well Nos. 2508-10 & 12)
d. Plot plan (Well Nos. 2508-10, 11, & 12)
e. Pumping test record (Well Nos. 2508-10 & 12)

Staff review indicates numerous inconsistencies and discrepancies between the information submitted by Permittee on January 22, 1998 and field investigations and previously submitted construction information (Exhibit 2).

February 11, 1998

Commission staff meets with Permittee and Tracey Runnels of Roscoe Moss Hawaii, Inc. to resolve uncertainties regarding the well drilling activities.

February 17, 1998

(Fifth Notice) See attached (Exhibit 1).

May 13, 1998

Staff conducts another field investigation and discovers a new well with permanent pump installed of which we were previously unaware (now designated Well No. 2408-10).

We are reiterating the following requests made in our previous letter to you:

EXHIBIT 3
We received a Preliminary Engineering Report on Well No. 2408-08 on October 23, 1993 and will accept this as fulfillment of Condition 3 of your well construction permit. We understand this well was unsuccessful and has been abandoned. Please complete and return the attached well construction permit application to abandon/seal this well within thirty (30) days.

Well No. 2408-09
We received a well completion report on October 7, 1989. However, because the benchmarks on the casing and ground surface (which were used to reference the pump test data) have been destroyed, we are requiring another elevation survey (referenced to mean sea level) by a licensed surveyor; please submit an elevation survey within thirty (30) days. We understand this well was successful and is properly capped. If you wish to use this well in the future, please complete and return the attached application for a pump installation permit.

Well Nos. 2508-10 & 11
We will accept the Well Completion Reports - Part I for these wells, as amended based on our meeting discussion. We understand these wells were unsuccessful and have been abandoned. Please complete and return the attached well construction permit applications to abandon/seal these wells within thirty (30) days.

Well No. 2508-12
We will accept the Well Completion Report - Part I for this well, as amended based on our meeting discussion. We understand this well was successful and is properly capped. If you wish to use this well in the future, please complete and return the attached application for a pump installation permit.

Well No. 2508-13
We understand this well was never drilled under the well construction permit which has expired. A new permit is necessary to drill this well.

In addition, please submit an after-the-fact application for well construction and pump installation for Well No. 2408-10 by August 31, 1998. This unpermitted well was discovered during a field investigation on May 13, 1998.

Please be advised that failure to comply with the terms of your permit or any provision of the State Water Code (including the provisions for well abandonment/sealing) may be subject to fines of up to $1000 per day. We will submit the violations for Commission action with a recommendation for fines if the above matters are not addressed by the deadlines specified in this certified letter.

If you have any questions, please contact Lenore Nakama.

Sincerely,

TIMOTHY E. JOHN
Deputy Director

LN:ss
Attachments
## Summary of Notices of Noncompliance

<table>
<thead>
<tr>
<th>Notice</th>
<th>2408-08</th>
<th>2408-09</th>
<th>2408-10</th>
<th>2508-10</th>
<th>2508-11</th>
<th>2508-12</th>
<th>2508-13</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>7/17/96</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2nd</td>
<td>8/27/96</td>
<td>Well completion report</td>
<td>Elevation survey</td>
<td>As-built drawing</td>
<td>Plot plan &amp; map</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3rd</td>
<td>10/17/97</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4th</td>
<td>11/25/97</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5th</td>
<td>2/17/98</td>
<td>Improper abandonment</td>
<td>Elevation survey</td>
<td>Improper abandonment</td>
<td>Improper abandonment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6th</td>
<td>7/31/98</td>
<td>Improper abandonment</td>
<td>Elevation survey</td>
<td>Unpermitted Well Construction/ Pump Installation</td>
<td>Improper abandonment</td>
<td>Improper abandonment</td>
<td></td>
</tr>
<tr>
<td>ACTION</td>
<td>AG Referral</td>
<td>Fine $168,500 and counting at $500/day from 1/27/99 until corrected</td>
<td>AG Referral</td>
<td>AG Referral</td>
<td>(OK)</td>
<td>(Never drilled)</td>
<td></td>
</tr>
</tbody>
</table>
September 18, 1998

Mr. Harvey K. Hida
1440 Kapio1ani Blvd., STE 915
Honolulu, HI 96814

RE: STATE WELLS #2408-08, 2508-10, & 2508-11

Dear Harvey,

Please accept the following cost proposal for the abandonment of the above referenced wells.

Wells will be abandoned per my letter dated March 7, 1998 and Edwin Sakoda's response on March 16, 1998. I have enclosed copies of these letters.

PROPOSAL

Supply labor, materials and equipment to access and abandon State Wells #2408-08, 2508-10 & 2508-11 complete.

LUMP SUM

$10,416.00

Respectfully submitted,

Tracy Kinnells
Drilling Operations

Accepted By:

Title
MEMORANDUM FOR THE RECORD

SUBJECT: Well Construction Violations for Well Nos. 2408-08 to 10 and 2508-10 to 13

FROM: Lenore Nakama

Harvey Hida came in on 9/3/98 to talk with Tim Johns, Roy Hardy, and myself to discuss possible regulatory actions that may result because the landowner in Japan refuses to respond to CWRM’s notice of violations.

There are basically two issues:

1. Noncompliance with the statutes, rules, and permit conditions
2. Possible endangerment of human health and the water resource

Tim explained that the next step would be to submit the violations to the Commission for action. Possible legal actions include:

1. $1,000/day fine for the period of the violation (since the first written notice was sent to permittee on 8/27/96) ~ $730,000
2. CWRM can do the necessary work (to prevent contamination and waste), place a lien on the property, and initiate foreclosure suit to collect.
3. CWRM can file suit for injunctive relief and damages (court enforcement).

Tim feels that Harvey is not liable since he is no longer the consultant and he claims that the owner still owes him money.

Harvey will submit the cost estimates to bring the project into compliance.

CWRM reviewed a Special Use Permit application for the golf course development in 10/97. Lenore will check to see who the current consultant for the project is because we may be able to work with the new consultant to get a response from the owner.

(NOTE: called DLU 9/3/98. The applicant for the Special Use Permit was Robert Kava - Century Construction Company. However, the application was withdrawn -- reason unknown)

(NOTE: WCA approved for 2408-08 3/09 only. The mystery well w/pump has been assigned 2408-10; waiting for A-1 F WCA/P10A.)
SIXTH NOTICE OF VIOLATION

Lualualei Golf Course Wells 1 to 4 (Well Nos. 10 to 13)
Maili Irrigation Wells 1 & 2 (Well Nos. 2408-08 & 09)

This follows our letter of February 17, 1998 (Exhibit 1), to which we have not yet received a response, requesting that you submit necessary and required information regarding the construction of successful wells and permit applications to seal abandoned, unsuccessful wells.

Our records show that this is the sixth notice from our office, regarding non-compliance with the permit conditions and/or provisions of the State Water Code. A summary of previous correspondence regarding the well permits and pertinent background information follows:

December 15, 1988    Applications to drill two (2) new wells, Well Nos. 2408-08 & 09 were received from Kabushiki Kaisha Oban, c/o Wilson Okamoto & Associates.

February 22, 1989    Well construction permits to construct and test Well Nos. 2408-08 & 09 were issued.

October 23, 1989     A well completion report for Well No. 2408-09 was received.

February 22, 1991    The well construction permits for Well Nos. 2408-08 & 09 expire.

July 19, 1993        Applications to drill four (4) new wells, Well Nos. 2508-10 to 13 were received from Kabushiki Kaisha Oban, c/o Hida Okamoto and Associates (Permittee).

October 6, 1993      A preliminary engineering report for Well Nos. 2408-08 & 09 was received.

October 25, 1993     A well construction permit to construct and test Well Nos. 2508-10 to 13 was issued.

March 18, 1994       An incomplete well completion report was filed by Roscoe Moss Hawaii, Inc. for Well No. 2508-12.
Issues regarding potential well interference based on pump test data were explored.

The well construction permit for Well Nos. 2508-10 to 13 expires.

An incomplete well completion report was filed by PR Drilling Company for Well No. 2508-11.

Commission staff requested that PR Drilling submit additional required information (pursuant to Standard Condition S) for Well No. 2508-11. Commission staff also requested information regarding the other three (3) permitted well constructions.

PR Drilling Company responds that it is unable to obtain any further information from the permittee.

Commission staff requested Permittee to submit all information for Well Nos. 2508-10 to 13 required under Standard Condition 5. Written response requested by September 15, 1996.

Commission staff sends Notice of Violation to Permittee via certified mail. Written response requested by November 17, 1997.

Commission staff resends Notice of Violation to Permittee via certified mail (to correct a typographical error in the title of the Notice). Written response requested by December 15, 1997.

Staff conducts a field investigation.

Permittee submits:

a. Well Completion Report (Well Nos. 2508-10 to 13)
b. Elevation surveys (Well Nos. 2508-10, 11, & 12)
c. As-built sectional drawings (Well Nos. 2508-10 & 12)
d. Plot plan (Well Nos. 2508-10, 11, & 12)
e. Pumping test record (Well Nos. 2508-10 & 12)

Staff review indicates numerous inconsistencies and discrepancies between the information submitted by Permittee on January 22, 1998 and field investigations and previously submitted construction information (Exhibit 2).

Commission staff meets with Permittee and Tracey Runnels of Roscoe Moss Hawaii, Inc. to resolve uncertainties regarding the well drilling activities.

(Fifth Notice) See attached (Exhibit 1).

Staff conducts another field investigation and discovers a new well with permanent pump installed of which we were previously unaware (now designated Well No. 2408-10).

We are reiterating the following requests made in our previous letter to you:
Well No. 2408-08
We received a Preliminary Engineering Report on Well No. 2408-08 on October 23, 1993 and will accept this as fulfillment of Condition 3 of your well construction permit. We understand this well was unsuccessful and has been abandoned. Please complete and return the attached well construction permit application to abandon/seal this well within thirty (30) days.

Well No. 2408-09
We received a well completion report on October 7, 1989. However, because the benchmarks on the casing and ground surface (which were used to reference the pump test data) have been destroyed, we are requiring another elevation survey (referenced to mean sea level) by a licensed surveyor; please submit an elevation survey within thirty (30) days. We understand this well was successful and is properly capped. If you wish to use this well in the future, please complete and return the attached application for a pump installation permit.

Well Nos. 2508-10 & 11
We will accept the Well Completion Reports - Part I for these wells, as amended based on our meeting discussion. We understand these wells were unsuccessful and have been abandoned. Please complete and return the attached well construction permit applications to abandon/seal these wells within thirty (30) days.

Well No. 2508-12
We will accept the Well Completion Report - Part I for this well, as amended based on our meeting discussion. We understand this well was successful and is properly capped. If you wish to use this well in the future, please complete and return the attached application for a pump installation permit.

Well No. 2508-13
We understand this well was never drilled under the well construction permit which has expired. A new permit is necessary to drill this well.

In addition, please submit an after-the-fact application for well construction and pump installation for Well No. 2408-10 by August 31, 1998. This unpermitted well was discovered during a field investigation on May 13, 1998.

Please be advised that failure to comply with the terms of your permit or any provision of the State Water Code (including the provisions for well abandonment/sealing) may be subject to fines of up to $1000 per day. We will submit the violations for Commission action with a recommendation for fines if the above matters are not addressed by the deadlines specified in this certified letter.

If you have any questions, please contact Lenore Nakama at [redacted].

Sincerely,

TIMOTHY E. JOHNS
Deputy Director

LN:ss
Attachments
Mr. Tracy Runnels  
Roscoe Moss Hawaii, Inc.  
91-259A Olai Street  
Kapolei, HI 96707

Dear Mr. Runnels:

Well Abandonment/Sealing  
Well Nos. 2408-08 & 2508-10 & 11

This is in response to your letter of March 7, 1998, outlining your field observations and proposing methods for sealing the subject wells.

Based on the field conditions and hydrology at these well sites, your proposed methods for sealing are approved. Please complete and return the attached applications for abandonment/sealing.

We sincerely appreciate your continued cooperation and assistance in these matters and your attention to the provisions of the Hawaii Well Construction and Pump Installation Standards (January 1997).

If you have any questions, please contact Lenore Nakama at

Sincerely,

EDWIN T. SAKODA  
Acting Deputy Director

LN:ss  
Attachment
March 7, 1998

State of Hawaii
DLNR
Commission on Water Resource Management
P.O. Box 621
Honolulu, HI 96809

ATTN: LENORE NAKAMA

RE: State wells # 2408-08 & 2508-10 & 11 abandonment

Dear Lenore,

Thank you for your fax of March 5, 1998 regarding the Kabushiki Kaisha Oban wells located outside Lualualei. I have been asked to abandon or seal wells 2408-08 & 2508-10 & 11 by Mr. Harvey K. Hida who represents the well's owner.

In an effort to bid on these abandonments, I hiked to and located well #2408-08 & 2508-10 and observed the following:

Well # 2408-08: This well was drilled by Roscoe Moss Co. Harold Fenton under my supervision in 1989 drilled this 12" diameter hole to a depth of 220 ft. Static water level was 133 ft. below ground and grab samples showed the water too salty for the client's needs (1600 ppm chlorides). A 12" diameter conductor pipe was capped and left in the well when we demobilized.

Last week I observed the well collapsed with 12 inch conductor pipe once in well laying beside a rocky sink hole where the well once was. It appears to be the result of a bulldozer building an emergency fire road, uprooting the 12" pipe. Collapse and silting from rain have filled the well to about 50 ft. from ground.

I would propose bulldozing an access for vehicular access, then pumping 2500 psi concrete into the well
until it reaches ground level. Boulders block the well from any verification of it's depth. (I could drop a rock down the well and hear it hit ground with no splash.) Water quality was poor, access will be costly and cementing would assure an unsafe collapse potential.

**Well # 2508-10:** This well was observed to be intact at ground level and water could be seen in the well. When Roscoe Moss drilled the well in 1994 to 102', the well was capped and left due to poor yield in the muddy layers of the hole (no coral).

Access needs bulldozing and pumping 2500 psi concrete down the well until it reaches ground level would be costly, but sufficient to seal this well. Water level and depths can be verified in this well and represents no true water source.

**Well # 2508-11:** This well was not drilled by Roscoe Moss Co., and hasn't been observed by myself. Access needs bulldozing and as with the previous subject wells in this letter, I would recommend grading access, documenting wells, backing a concrete truck up to them and dumping 2500 psi cement until filled to ground level.

Please consider accessing these wells and filling them with a concrete truck. I can see no ground water impact in these poor yielding wells if they are filled this way. My foregoing abandonment outlines being of considerable expense to the owner already.

As always, I appreciate your time and help.

Sincerely,

[Signature]

Tracy Runnels
Drilling Operations

TR/sr
Mr. Harvey K. Hida  
Kabushiki Kaisha Oban  
1440 Kapiolani Blvd., Suite 915  
Honolulu, HI 96814

Dear Mr. Hida:

Thank you for attending a meeting on February 11, 1998 with Susan Swanson, Mitchell Ohye, and Lenore Nakama of my staff and Tracy Runnels of Roscoe Moss Hawaii, Inc. to resolve discrepancies between the field investigation and well completion information for Well Nos. 2408-08 & 09 and Well Nos. 2508-10 to 13:

- **Well No. 2408-08**
  - We received a Preliminary Engineering Report on Well No. 2408-08 on October 7, 1993 and will accept this as fulfillment of Condition 3 of your well construction permit. We understand this well was unsuccessful and has been abandoned. Please complete and return the attached well construction permit application to abandon/seal this well within ninety (90) days.

- **Well No. 2408-09**
  - We received a well completion report on October 23, 1989. However, because the benchmarks on the casing and ground surface (which were used to reference the pump test data) have been destroyed, we are requiring another elevation survey (referenced to mean sea level) by a licensed surveyor; please submit an elevation survey within sixty (60) days. We understand this well was successful and is properly capped. If you wish to use this well in the future, please complete and return the attached application for a pump installation permit.

- **Well Nos. 2508-10 & 11**
  - We will accept the Well Completion Reports - Part I for these wells, as amended based on our meeting discussion (attached). We understand these well were unsuccessful and have been abandoned. Please complete and return the attached well construction permit applications to abandon/seal these wells within ninety (90) days.
Well No. 2508-12
We will accept the Well Completion Report - Part I for this well, as amended based on our meeting discussion (attached). We understand this well was successful and is properly capped. If you wish to use this well in the future, please complete and return the attached application for a pump installation permit.

Well No. 2508-13
We understand this well was never drilled under the well construction permit which has expired. A new permit is necessary to drill this well.

We have also attached a location map showing the correct location of the wells.

Please be advised that failure to comply with the terms of your permit or any provision of the State Water Code (including the provisions for well abandonment/sealing) may be subject to fines of up to $1000 per day.

If you have any questions, please contact Lenore Nakama at

Sincerely,

EDWIN T. SAKODA
Acting Deputy Director
Mr. Harvey K. Hida, President  
Hida, Okamoto, & Associates  
1440 Kapi'olani Blvd., Suite 915  
Honolulu, Hawaii 96814

Dear Mr. Hida:

Lualualei Golf Wells  
(Well Nos. 2408-08 & 2508-10)

Thank you for your letter of February 9, 1995, indicating your discussions with a number of well owners at Lualualei. We appreciate your effort to identify the potential for use of wells near your proposed production wells.

Staff has been examining the results of the well completion reports and pump test data for these two wells, in the interest of providing advice concerning the acceptability of withdrawing 0.5 mgd total from these two wells.

It is apparent that the pumpage you request would affect the salinity of nearby wells, but it is not certain how substantial that effect would be. It is also apparent that those wells may not be used in the foreseeable future. Under these circumstances, we would be inclined to recommend approval of the proposed pump capacity, upon meeting the following condition:

As part of a completed application for a pump installation permit, you will notify the well owners on the attached list (with a copy to the Commission) that the pumpage rates in the Lualualei Golf Course Wells will likely raise the salinity in their wells, although it is not certain how substantial that effect will be. Please have the well owners notify us, at the following address, of any objections they might have:

Commission on Water Resource Management  
P.O. Box 621  
Honolulu, HI 96809
For your information, two standard conditions of pump installation permits read as follows:

1. The proposed use shall not adversely affect existing or future legal uses of water in the area, including any surface water or established instream flow standards. This permit or the authorization to pump water from a well shall not constitute a determination of correlative water rights. The permittee is notified and by this provision understands that the quantity of water taken from the well could be reduced by the Commission in the future. This permit is not a commitment that the pump capacity permitted here or even some lesser amount is guaranteed in the future.

2. Approved flowmeters 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, to conform with the Commission’s September 16, 1992 direction on reporting requirements.

If you have any questions, please call Charley Ice at [redacted]. Thank you very much for your attentiveness in this situation.

Sincerely,

RAE M. LOUI
Deputy Director

CI:ss
Lualualei Wells Affected
by Well Nos. 2408-08 and 2508-10

<table>
<thead>
<tr>
<th>Well No.</th>
<th>Owner</th>
<th>TMK</th>
</tr>
</thead>
<tbody>
<tr>
<td>2408-01</td>
<td>S. Kakazu</td>
<td>8-7-21:7</td>
</tr>
<tr>
<td>2408-02</td>
<td>K. Oshiro</td>
<td>8-7-19:75</td>
</tr>
<tr>
<td>2408-03</td>
<td>H. Shigeta</td>
<td>8-7-21:3</td>
</tr>
<tr>
<td>2408-04</td>
<td>K. Oshiro</td>
<td>8-7-19:9</td>
</tr>
<tr>
<td>2408-05</td>
<td>E. Nakata</td>
<td>8-7-19:8</td>
</tr>
<tr>
<td>2408-06</td>
<td>Hawaiian Cement</td>
<td>8-7-21:35</td>
</tr>
<tr>
<td>2408-07</td>
<td>Hawaiian Cement</td>
<td>8-7-21:35</td>
</tr>
<tr>
<td>2409-09</td>
<td>E. Yamaguchi</td>
<td>8-7-19:39</td>
</tr>
<tr>
<td>2409-15</td>
<td>T. Aquillio</td>
<td>8-7-21:8</td>
</tr>
<tr>
<td>2409-17</td>
<td>I. Tsuzuki</td>
<td>8-7-21:6</td>
</tr>
<tr>
<td>2409-19</td>
<td>L. Oshiro</td>
<td>8-7-19:48</td>
</tr>
<tr>
<td>2409-20</td>
<td>S. Toguchi</td>
<td>8-7-19:33</td>
</tr>
<tr>
<td>2508-01</td>
<td>Honolulu BWS</td>
<td>8-8-1:10</td>
</tr>
<tr>
<td>2508-02</td>
<td>Honolulu BWS</td>
<td>8-8-1:10</td>
</tr>
<tr>
<td>2508-03</td>
<td>H. Wong</td>
<td>8-7-19:23</td>
</tr>
<tr>
<td>2508-04</td>
<td>T. Dumaran</td>
<td>8-7-19:64</td>
</tr>
<tr>
<td>2508-05</td>
<td>K.Y. Chee</td>
<td>8-7-19:55</td>
</tr>
<tr>
<td>2508-06</td>
<td>J. Fernandez</td>
<td>8-7-19:25</td>
</tr>
<tr>
<td>2508-07</td>
<td>H. Wong</td>
<td>8-7-19:22</td>
</tr>
<tr>
<td>2508-08</td>
<td>T. Kaneshiro</td>
<td>8-7-19:21</td>
</tr>
<tr>
<td>2508-09</td>
<td>M.K. Britos</td>
<td>8-7-19:23</td>
</tr>
</tbody>
</table>
Mr. Edwin T. Sakoda  
Hydrologic Program Manager  
Commission on Water Resource Management  
Department of Land and Natural Resources  
State of Hawaii  
P.O. Box 621  
Honolulu, Hawaii 96809  

Dear Mr. Sakoda,

SUBJECT: IRRIGATION WELLS  
Lualualei Golf Course  
HO&A Job No. 223CZ94

We have visited the site and interviewed with old-time residents to determine the existing condition of the following wells, which are located near the subject wells (2408-08 and 2408-10). It has been determined that all of those wells are not in use or abandoned due to high salinity, discontinuation of agricultural activities. Therefore, we would like to request your reconsideration of your concern in regard to the nearby wells due to the anticipated pumping levels of the subject wells.

<table>
<thead>
<tr>
<th>Well No.</th>
<th>Owner</th>
<th>Tax Map Key</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>2508-01</td>
<td>Board of Water Supply</td>
<td>8-8-1</td>
<td>Abandoned</td>
</tr>
<tr>
<td>2508-02</td>
<td>Board of Water Supply</td>
<td>8-8-1</td>
<td>Abandoned</td>
</tr>
<tr>
<td>2508-03</td>
<td>H. Wong</td>
<td>8-7-19:23</td>
<td>Abandoned</td>
</tr>
<tr>
<td>2508-04</td>
<td>Teodulo Dumaran</td>
<td>8-7-19:64</td>
<td>Abandoned</td>
</tr>
<tr>
<td>2508-05</td>
<td>K.Y. Chee</td>
<td>8-7-19:55</td>
<td>Abandoned</td>
</tr>
<tr>
<td>2508-06</td>
<td>J. Fernandez</td>
<td>8-7-19:25</td>
<td>Abandoned</td>
</tr>
<tr>
<td>2508-07</td>
<td>Henry Wong</td>
<td>8-7-19:22</td>
<td>Abandoned</td>
</tr>
<tr>
<td>2508-08</td>
<td>T. Kaneshiro</td>
<td>8-7-19:21</td>
<td>Abandoned</td>
</tr>
<tr>
<td>2508-09</td>
<td>M.K. Britos</td>
<td>8-7-19:23</td>
<td>Abandoned</td>
</tr>
<tr>
<td>2408-01</td>
<td>Sam Kakazu</td>
<td>8-7-21:07</td>
<td>Abandoned</td>
</tr>
<tr>
<td>2408-02</td>
<td>Kwanko Oshiro</td>
<td>8-7-19:75</td>
<td>Abandoned</td>
</tr>
<tr>
<td>2408-03</td>
<td>Harry Shigeta</td>
<td>8-7-21:03</td>
<td>Abandoned</td>
</tr>
<tr>
<td>2408-04</td>
<td>Kwanko Oshiro</td>
<td>8-7-19:09</td>
<td>Abandoned</td>
</tr>
<tr>
<td>2408-05</td>
<td>Everett Nakata</td>
<td>8-7-19:08</td>
<td>Abandoned</td>
</tr>
<tr>
<td>2408-06</td>
<td>Hawaiian Cement</td>
<td>8-7-21:35</td>
<td>Not In Use</td>
</tr>
<tr>
<td>2408-07</td>
<td>Hawaiian Cement</td>
<td>8-7-21:35</td>
<td>Not In Use</td>
</tr>
</tbody>
</table>
Mr. Edwin T. Sakoda  
Hydrologic Program Manager  
Commission on Water Resource Management  
Department of Land Natural Resources  
State of Hawaii  
February 9, 1995  
Page 2

<table>
<thead>
<tr>
<th>Well No.</th>
<th>Owner</th>
<th>Tax Map Key</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>2409-09</td>
<td>Yamaguchi Farm, Ltd.</td>
<td>8-7-19:39</td>
<td>Abandoned</td>
</tr>
<tr>
<td>2409-15</td>
<td>Vacant Lot T. Ashii</td>
<td>8-7-21:8</td>
<td>Abandoned</td>
</tr>
<tr>
<td>2409-17</td>
<td>Isamu Tsuzuki</td>
<td>8-7-21:6</td>
<td>Not In Use</td>
</tr>
<tr>
<td>2409-19</td>
<td>Leonard Oshiro</td>
<td>8-7-19:48</td>
<td>Abandoned</td>
</tr>
<tr>
<td>2409-20</td>
<td>Sokichi Toguchi</td>
<td>8-7-19:33</td>
<td>Not In Use</td>
</tr>
</tbody>
</table>

If you have any questions, please feel free to contact me at [Contact Information]

Very truly yours,

HIDA, OKAMOTO & ASSOCIATES, INC.

[Signature]

Harvey K. Hida, P. E.  
President

HKH/djb 223CZ94.dlnr
Mr. Harvey K. Hida, President
Hida, Okamoto, & Associates
1440 Kapiolani Blvd., Suite 915
Honolulu, Hawaii 96814

Dear Mr. Hida:

Lualualei Golf Wells
2408-08 & 2508-10
( Hanalei #1)

Thank you for submitting well completion reports and pump test data for these two wells.

The driller has indicated the possibility of withdrawing 0.5 mgd total from these two wells, with a similar amount available if additional wells could be drilled.

We note, however, that each of these wells is sensitive to increased salinity at the anticipated pumping levels. In addition, we note that there are some twenty other wells very near these two, half of which are now in use. As each new well was drilled, successively higher salinity levels was noted, and most of them register far higher levels than the results shown in your tests.

Many of those in use are for irrigation, and others may be used because of their salinity. It could be expected that the anticipated pumping levels of your wells could increase the effective salinity in these other wells.

We recommend that your desired withdrawals be spread over a larger number of wells, and that great caution be observed concerning the amounts withdrawn. The Commission would need to monitor the results of the use of these wells very carefully.

Sincerely,

Edwin T. Sakoda
for: RAE M. LOUI
Deputy Director

Cl:ss
Mr. Keith W. Ahue, Chairperson  
Commission on Water Resources Management  
Department of Land and Natural Resources  
P.O. Box 621  
Honolulu, Hawaii 96809  
Attention: Mr. Ed Sakoda  

Gentlemen:  

SUBJECT: Wells 2408-08 and 2508-10  
Proposed Lualualei Golf Course  
Maili, Waianae, Oahu  
HQ&A Job No. 223CZ94  

We have submitted the following well reports and well pumping test data of the subject wells (State well No. 2408-08 and No. 2508-10) to the City Department of Land Utilization (DLU) as part of the rezoning application. DLU is inquiring about the accuracy of the data and report, and the acceptability of projected pumpage yield capacity.  

We would appreciate it if you could review and comment on the attached data and report. Both wells are constructed and tested by Roscoe Moss Hawaii, Inc. Should you have any questions, please feel free to contact us at [redacted].  

Very truly yours,  

HIDA, OKAMOTO & ASSOCIATES, INC.  

[Signature]  

Harvey K. Hida, P.E.  

President  

HKH/djb 223CZ94.WRM  

Enclosures
November 7, 1994

KABUSHIKI KAISHA OBAN
C/O HARVEY K. HIDA
1440 KAPIOLANI BLVD. SUITE 915
HONOLULU, HI 96814

SUBJECT: MAILE IRRIGATION WELLS

Gentlemen,

After the drilling and testing of two (2) wells located at tax map key 8-7-9:Por.2, we have observed the following:

- WELL #1 "QUARRY WELL" WHICH WAS LONG TERM TESTED IN OCTOBER 1989 AND AGAIN LONG TERM TESTED IN FEBRUARY OF 1994, HAS DEMONSTRATED A YIELD CAPACITY OF 100 GPM OF GOOD QUALITY IRRIGATION WATER.
- WELL "A" 2508-10 WHICH LONG TERM TESTED IN NOVEMBER OF 1994 HAS DEMONSTRATED A YIELD CAPACITY OF 250 GPM OF GOOD QUALITY IRRIGATION WATER.

In conclusion, these two wells are easily capable of sustaining .5 MGD of irrigation water for the proposed golf course. Permits to drill additional wells could easily put water projections up to one (1) MGD if drilled and tested in the future.

Sincerely,

TRACY RUNNELLS
ROSCOE MOSS HAWAII, INC.
FIELD SUPERINTENDENT
## PUMPING TEST RECORD

### for

**Maile Re-test**

Wells **Maika, Quarry**

Oahu Island, Maile 3-94R, Project or Job No. 2-23 1994

### Description of Well—

1. Elevation: ground surface 155.7 ft., top of casing __ ft., rotary table __ ft., referenced to __ becmark.
2. Total depth of well __ ft.; or __ ft. elevation, msl
3. __ in. solid casing to __ ft. depth, perforated to __ ft. depth
4. Static water level on 2-23-94 1994: __ ft. below ground surface, top of casing; or __ ft. elevation msl

### Description of Pump & Pump Setting—

5. __ turbine type pump with __ stage bowl assembly
6. Gasoline diesel, electric, power with __ horsepower
7. Shaft speed: __ rpm at __ gpm flow
8. Depth of pump intake: __ ft. below base; or __ ft. elev. msl
9. Depth of airline bottom: __ ft. below base; or __ ft. elev. msl
10. Center of gage: __ ft. elev., msl. Flow measured __

### Test conducted by __

---

### Data

<table>
<thead>
<tr>
<th>Date &amp; Time</th>
<th>Sample No.</th>
<th>Pumping Rate (gpm)</th>
<th>Airline PSI (feet)</th>
<th>Drawdown (feet)</th>
<th>Chlorides (ppm)</th>
<th>Temp. (°C)</th>
<th>Cond. (mmhos 25°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-23-94</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:00 AM</td>
<td>#1</td>
<td>50</td>
<td>21.15</td>
<td>0.57</td>
<td>400 PPM</td>
<td>27°</td>
<td>14</td>
</tr>
<tr>
<td>10:30</td>
<td></td>
<td>50</td>
<td>21.15</td>
<td>0.57</td>
<td>400 PPM</td>
<td>27°</td>
<td>15</td>
</tr>
<tr>
<td>10:30</td>
<td></td>
<td>100</td>
<td>21.25</td>
<td>1.73</td>
<td>400 PPM</td>
<td>27°</td>
<td>15</td>
</tr>
<tr>
<td>11:00</td>
<td></td>
<td>100</td>
<td>21.25</td>
<td>1.73</td>
<td>400 PPM</td>
<td>27°</td>
<td>15</td>
</tr>
<tr>
<td>11:00</td>
<td></td>
<td>150</td>
<td>20.75</td>
<td>2.88</td>
<td>450 PPM</td>
<td>27°</td>
<td>15</td>
</tr>
<tr>
<td>11:30</td>
<td></td>
<td>150</td>
<td>20.75</td>
<td>2.88</td>
<td>450 PPM</td>
<td>27°</td>
<td>15</td>
</tr>
<tr>
<td>11:30</td>
<td></td>
<td>200</td>
<td>20.10</td>
<td>4.38</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12:00 Noon</td>
<td>#2</td>
<td>200</td>
<td>20.0</td>
<td>4.62</td>
<td>450 PPM</td>
<td>27°</td>
<td>20</td>
</tr>
<tr>
<td>2:00 PM</td>
<td></td>
<td>200</td>
<td>19.7</td>
<td>5.31</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4:00</td>
<td>#3</td>
<td>200</td>
<td>19.4</td>
<td>6.006</td>
<td>550 PPM</td>
<td>27°</td>
<td>20</td>
</tr>
<tr>
<td>6:00</td>
<td></td>
<td>200</td>
<td>18.95</td>
<td>7.04</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8:00</td>
<td>#4</td>
<td>200</td>
<td>18.50</td>
<td>8.08</td>
<td>550 PPM</td>
<td>27°</td>
<td>20</td>
</tr>
<tr>
<td>10:00</td>
<td></td>
<td>200</td>
<td>18.45</td>
<td>8.20</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12:00 N.</td>
<td>#5</td>
<td>200</td>
<td>18.25</td>
<td>8.66</td>
<td>550 PPM</td>
<td>27°</td>
<td>20</td>
</tr>
<tr>
<td>2:00 AM</td>
<td></td>
<td>200</td>
<td>18.10</td>
<td>9.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4:00</td>
<td>#6</td>
<td>200</td>
<td>18.80</td>
<td>9.24</td>
<td>550 PPM</td>
<td>26°</td>
<td>20</td>
</tr>
<tr>
<td>6:00</td>
<td></td>
<td>200</td>
<td>17.75</td>
<td>9.81</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8:00</td>
<td>#7</td>
<td>200</td>
<td>17.50</td>
<td>10.39</td>
<td>600 PPM</td>
<td>26°</td>
<td>20</td>
</tr>
<tr>
<td>10:00</td>
<td></td>
<td>200</td>
<td>17.50</td>
<td>10.39</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12:00 Noon</td>
<td>#8</td>
<td>200</td>
<td>17.50</td>
<td>10.39</td>
<td>550 PPM</td>
<td>26°</td>
<td>20</td>
</tr>
</tbody>
</table>

---

**N.J. Herbert 7/17/94**

Sheet No. 1 of 3
# PUMPING TEST RECORD

**Maile Re тест**

**Dahu Island Maile Re тест Project or Job No. 19**

<table>
<thead>
<tr>
<th>Date &amp; Time</th>
<th>Sample No.</th>
<th>Pumping rate (qpm)</th>
<th>Airline PSI (feet)</th>
<th>Drawdown (feet)</th>
<th>Chlorides (ppm)</th>
<th>Temp. (°C)</th>
<th>Cond. (mmhos 25°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-24-94</td>
<td>Static</td>
<td>200</td>
<td>17.20</td>
<td>11.08</td>
<td>550</td>
<td>27°</td>
<td>Conductivity 20</td>
</tr>
<tr>
<td>4:00 PM</td>
<td>9</td>
<td>200</td>
<td>17.20</td>
<td>11.08</td>
<td>550</td>
<td>26.5°</td>
<td>21</td>
</tr>
<tr>
<td>6:00</td>
<td>10</td>
<td>200</td>
<td>17.10</td>
<td>11.31</td>
<td>550</td>
<td>26.5°</td>
<td>21</td>
</tr>
<tr>
<td>8:00</td>
<td>10</td>
<td>200</td>
<td>16.90</td>
<td>11.78</td>
<td>550</td>
<td>26.5°</td>
<td>21</td>
</tr>
<tr>
<td>10:00</td>
<td>11</td>
<td>200</td>
<td>16.80</td>
<td>12.01</td>
<td>550</td>
<td>26.5°</td>
<td>21</td>
</tr>
<tr>
<td>12:00 M.M.</td>
<td>12</td>
<td>200</td>
<td>16.60</td>
<td>12.47</td>
<td>550</td>
<td>26.5°</td>
<td>21</td>
</tr>
<tr>
<td>2:00 A.M.</td>
<td>12</td>
<td>200</td>
<td>16.60</td>
<td>12.47</td>
<td>550</td>
<td>26.5°</td>
<td>21</td>
</tr>
<tr>
<td>4:00 PM</td>
<td>13</td>
<td>200</td>
<td>16.50</td>
<td>12.70</td>
<td>600</td>
<td>26.5°</td>
<td>20</td>
</tr>
<tr>
<td>6:00</td>
<td>13</td>
<td>200</td>
<td>16.40</td>
<td>12.93</td>
<td>600</td>
<td>27°</td>
<td>20</td>
</tr>
<tr>
<td>8:00</td>
<td>14</td>
<td>200</td>
<td>16.35</td>
<td>13.05</td>
<td>600</td>
<td>27°</td>
<td>20</td>
</tr>
<tr>
<td>10:00</td>
<td>14</td>
<td>200</td>
<td>16.35</td>
<td>13.05</td>
<td>600</td>
<td>27°</td>
<td>20</td>
</tr>
<tr>
<td>12:00 Noon</td>
<td>14</td>
<td>200</td>
<td>16.35</td>
<td>13.05</td>
<td>600</td>
<td>27°</td>
<td>20</td>
</tr>
</tbody>
</table>

End test - Start Recovery
<table>
<thead>
<tr>
<th>Date &amp; Time</th>
<th>Sample Rate</th>
<th>Pumping Airline Drawdown</th>
<th>Chlorides</th>
<th>Temp.</th>
<th>Cond.</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-25-84</td>
<td>5-10 gpm</td>
<td>15 min</td>
<td>9 ppm</td>
<td>18°C</td>
<td>0 mhos</td>
</tr>
<tr>
<td>2 min</td>
<td>2-2 gpm</td>
<td>10 min</td>
<td>18 ppm</td>
<td>20°C</td>
<td>2 mhos</td>
</tr>
<tr>
<td>3 min</td>
<td>3-4 gpm</td>
<td>9 min</td>
<td>18.4 ppm</td>
<td>30°C</td>
<td>3 mhos</td>
</tr>
<tr>
<td>7 min</td>
<td>6-8 gpm</td>
<td>8 min</td>
<td>18.3 ppm</td>
<td>40°C</td>
<td>4 mhos</td>
</tr>
<tr>
<td>9 min</td>
<td>9-12 gpm</td>
<td>7 min</td>
<td>18 ppm</td>
<td>45°C</td>
<td>5 mhos</td>
</tr>
<tr>
<td>10 min</td>
<td>12-15 gpm</td>
<td>6 min</td>
<td>18 ppm</td>
<td>50°C</td>
<td>6 mhos</td>
</tr>
<tr>
<td>15 min</td>
<td>15-20 gpm</td>
<td>5 min</td>
<td>18 ppm</td>
<td>55°C</td>
<td>7 mhos</td>
</tr>
<tr>
<td>20 min</td>
<td>20-30 gpm</td>
<td>4 min</td>
<td>18 ppm</td>
<td>55°C</td>
<td>8 mhos</td>
</tr>
<tr>
<td>25 min</td>
<td>30-40 gpm</td>
<td>3 min</td>
<td>18 ppm</td>
<td>55°C</td>
<td>9 mhos</td>
</tr>
<tr>
<td>30 min</td>
<td>40-60 gpm</td>
<td>2 min</td>
<td>18 ppm</td>
<td>55°C</td>
<td>10 mhos</td>
</tr>
<tr>
<td>1 HR 15 min</td>
<td>60-90 gpm</td>
<td>1 min</td>
<td>18 ppm</td>
<td>55°C</td>
<td>12 mhos</td>
</tr>
<tr>
<td>1 HR 30 min</td>
<td>90-150 gpm</td>
<td>1 HR 45 min</td>
<td>18 ppm</td>
<td>55°C</td>
<td>15 mhos</td>
</tr>
<tr>
<td>1 HR 40 min</td>
<td>150-200 gpm</td>
<td>2 HRS</td>
<td>18 ppm</td>
<td>55°C</td>
<td>18 mhos</td>
</tr>
<tr>
<td>1 HR 60 min</td>
<td>200-300 gpm</td>
<td>3 HRS</td>
<td>18 ppm</td>
<td>55°C</td>
<td>20 mhos</td>
</tr>
<tr>
<td>2 HRS</td>
<td>300-450 gpm</td>
<td>3 HRS</td>
<td>18 ppm</td>
<td>55°C</td>
<td>25 mhos</td>
</tr>
</tbody>
</table>

Notes:
- Recovery
- Island Lake - Male Project or Job No. 3-94R
- 1984
**DEPARTMENT OF LAND & NATURAL RESOURCES**  
**DIVISION OF WATER AND LAND DEVELOPMENT**  
**DRILLER'S REPORT**

### DESCRIPTION

**Date of report:** October 20, 1989  
**Person filing report:** I.H. Runnels

#### A. OWNER  
Kabushiki Kaisha

#### B. GENERAL LOCATION  
Maile Well

#### C. DRILLING COMPANY  
Roscro Moss Company

#### D. TYPE OF RIG  
28Z

#### E. ELEVATION, msl: Top of drilling platform  
114 ft. Below drilling platform

#### F. HOLE SIZE:  
14 inch dia. to 220 ft. Below drilling platform

#### G. CASING INSTALLED:  
8 in. I.D. x 2.50 ft. Wall solid section to 160 ft. Below drilling platform.  
8 in. I.D. x 2.20 ft. Wall perforated section to 220 ft. Below drilling platform.

#### H. ANNUAL:  
Grouted to 50 ft. Below drilling platform.  
Gravel packed 50 ft. to 220 ft. Below drilling platform.

### HYDROLOGY

#### J. INITIAL WATER LEVEL  
146 ft. Below drilling platform, Date of measurement: 10/06/89

#### K. INITIAL CHLORIDE:  
ppm, total depth of well ft. Below drilling platform

#### L. PUMPING TESTS:

<table>
<thead>
<tr>
<th>Start water level</th>
<th>Depth of well</th>
<th>Reference point (R.P.) used:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date</td>
<td>Date</td>
<td>which elevation is ft.</td>
</tr>
<tr>
<td>09/11/89</td>
<td>10/06/89</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Time (hours)</th>
<th>Rate (gpm)</th>
<th>Draw down (ft.)</th>
<th>Temp. (F)</th>
<th>Elapsed Time (hours)</th>
<th>Rate (gpm)</th>
<th>Draw down (ft.)</th>
<th>Temp. (F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00 to 11:00</td>
<td>120</td>
<td>9.24</td>
<td></td>
<td>8:00 to 9:00</td>
<td>300</td>
<td>4.62</td>
<td></td>
</tr>
<tr>
<td>11:00 to 1:00</td>
<td>150</td>
<td>15.00</td>
<td></td>
<td>9:00 to 11:00</td>
<td>13.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1:00 to 4:00</td>
<td>150</td>
<td>22.00</td>
<td></td>
<td>13.60</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>14.78</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### SUBSURFACE FORMATION

#### M. DRILLER'S LOG:

<table>
<thead>
<tr>
<th>Water Level</th>
<th>Rock Description &amp; Remarks</th>
<th>Water Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>ft.</td>
<td>to</td>
<td>ft.</td>
</tr>
<tr>
<td>0 to 220</td>
<td>Film rock hard</td>
<td>to</td>
</tr>
<tr>
<td>220 to 253</td>
<td>Blue rock</td>
<td>to</td>
</tr>
<tr>
<td>253 to 270</td>
<td>Mud hard rock</td>
<td>to</td>
</tr>
<tr>
<td>to</td>
<td>Hard and soft layers</td>
<td>to</td>
</tr>
<tr>
<td>to</td>
<td></td>
<td>to</td>
</tr>
<tr>
<td>to</td>
<td></td>
<td>to</td>
</tr>
<tr>
<td>to</td>
<td></td>
<td>to</td>
</tr>
<tr>
<td>to</td>
<td></td>
<td>to</td>
</tr>
</tbody>
</table>

#### N. FIELD NOTES:  
Test pump well 9/16/89 to 9/19/89. 91 hours.
TO: DLNR-Commission on Water Resource Mgmt.

ATTENTION: Mr. Ed Sakoda

FAX NO.: [Redacted]

FROM: Harvey K. Hida

SUBJECT: Lualualei Golf Course
Waianae, Oahu

NUMBER OF PAGES, INCLUDING HEADER: Nine (9)

ORIGINAL OR COPY TO FOLLOW VIA MAIL: YES [X]  NO 

IF YOU DO NOT RECEIVE ALL PAGES, PLEASE CALL JEAN AT [Redacted] AS SOON AS POSSIBLE

NOTES:
MAILE IRRIGATION WELLS

MAILE, WAIANAEL

Tax Map Key: 8-7-09: 02

Recommendations for Additional Wells

Mink and Yuen, Inc.

June 16, 1993

Two wells into the basalt aquifer have already been drilled in the Maile property. Well 1 was tested at up to 250 gpm and yielded water having about 600 mg/l chloride. Well 2 was drilled but not tested. Grab samples of groundwater tested at 1600 mg/l chloride. Grab samples are not representative of pumpage.

According to the driller, Wall 1 was not completed with casing except for 40 to 50 feet of temporary conductor casing at the top of the hole. A decent pump test must be run in order to determine capacity and quality of water. The driller is willing to carry out a pump test in the open hole to make certain the water is usable before deciding to complete the well with casing and grouting.

A separate limestone aquifer occurs in the property near Ulehawa Stream. It should be tested to determine whether a usable supply of water is present. The aquifer is smaller than the basalt aquifer and will have to be exploited with smaller pumps.

We recommend the following:

1. A pump test be conducted in Well 2 in the open hole. A two day test will suffice. The sequence of the test should be: 50 gpm, 4 hrs.; 100 gpm, 4 hrs.; 150 gpm, 4 hrs.; 200 gpm, 24 hrs.; 150 gpm, 4 hrs.; 100 gpm, 4 hrs.; and 50 gpm, 4 hrs.

   The salinity should fall below 1000 mg/l.

2. A well in the limestone aquifer should be drilled at the vertex where the boundary intersects Lualualei Road in the north portion of the property (see map). The well will
start at about elevation 85 feet and be drilled to -15 feet, total depth of about 100 feet. Casing diameter will be 6 inches; expected pump capacity, 50 gpm; and expected chloride content 500 to 1000 mg/l.

3. Another limestone well should be drilled at about elevation 80 feet midway along the Lualualei Road boundary of the property. Total depth also about 100 feet; casing 6 inch diameter; pump capacity 50 gpm; and expected chloride 750 to 1000 mg/l.

4. The two existing wells plus the limestone wells will provide a total installed capacity of approximately 500 gpm (.72 gpm). Well 1 at 200 gpm; Well 2 at 200 gpm; Limestone Well 1 at 50 gpm; and Limestone Well 2 at 50 gpm.

If pumping is restricted to 12 hours per day, maximum output will be .36 mgd.

5. depending on the results of the testing and new drilling, drill a third basalt aquifer well as standby.

We suggest you apply for permits for two limestone wells and the third basalt well. Cost of drilling, testing, casing and grouting the limestone wells should not exceed $25,000 each.
PRELIMINARY REPORT
ON
MAILI IRRIGATION WELL, NO. 2
AT
MAILI, WAIANAEE, OAHU
Tax Map Key: 8-7-09: 02

FOR
MR. SANJIRO NAKADE
C/o Mr. Yoshi Maeda
KG Hawaii Construction
1585 Kapiolani Blvd., Suite 1404
Honolulu, Hawaii 96814

BY
Hida, Okamoto & Associates, Inc.
Consulting Engineers
Honolulu, Hawaii

February 1990
PRELIMINARY REPORT
MAILI IRRIGATION WELL, NO. 2 (2438.08)

The well no. 2 intended in part of the irrigation system for the proposed Maili Golf Course. This report documents the results of construction data. The construction data includes a hydrology and subsurface formation information.

WELL DESCRIPTION

A. Owner: Mr. Sanjiro Nakado
B. Well Name: Maili Irrigation Well, No. 2
C. Location: Maili, Waianae, Oahu (See Exhibit A)
D. Tax Map Key: 8-7-091: 02
E. Drilling Company: Roscoe Moss Company
F. Drilling Completed: December, 1989
G. Elevation, msl, drilling platform: 145' (See Exhibit B)
H. Hole Size: 12" dia. to 220' below drilling platform (Elev. 145' to (-) 75')
I. Casing Installed: 12" I.D. X 0.25" wall solid section to 90' below drilling platform (Elev. 145' to 55')
J. Annules not installed.

HYDROLOGY

A. Initial Water Level: 133' below drilling platform (Elev. 5.0')
   Date of Measurement: December 19, 1989
B. Initial Chloride Tests: (December 19, 1989)
   1. Sample at Elevation (-) 15, Chloride concentration: 1,570 ppm
   2. Sample at Elevation (-) 75, Chloride concentration: 1,638 ppm
SUBSURFACE FORMATION

<table>
<thead>
<tr>
<th>Depth (Ft.)</th>
<th>Description</th>
<th>Elevation (Ft.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 67</td>
<td>Mud and Builders (Brown color)</td>
<td>145 to 78</td>
</tr>
<tr>
<td>67 to 88</td>
<td>Hard Rock</td>
<td>78 to 57</td>
</tr>
<tr>
<td>88 to 114</td>
<td>Weather Rock</td>
<td>57 to 31</td>
</tr>
<tr>
<td>114 to 140</td>
<td>Easy Drilling A.A. Rock</td>
<td>35 to 5</td>
</tr>
<tr>
<td>140 to 150</td>
<td>Firm Rock</td>
<td>5 to (-)5</td>
</tr>
<tr>
<td>150 to 220</td>
<td>Weather A.A. Rock</td>
<td>(-)5 to (-)75</td>
</tr>
</tbody>
</table>

IMPACT OF PROPOSED IRRIGATION WELL

Based on the completed pumping test and chloride sample tests, the irrigation well would have the chloride concentration of over 1,500 ppm. Sea water contains over 30,000 ppm chloride as NaCl. The recommended upper limit for chloride in drinking water is 250 ppm. Water with chloride concentration of 1,000 to 4,000 and up to 15,000 ppm is usually considered mildly to moderately brackish water. The use of moderately brackish water for irrigation purposes is not recommended (maximum recommended chloride concentration for golf course irrigation is 500 ppm).
TO: Commission on Water Resource Management  
Department of Land and Natural Resources  
State of Hawaii  
P.O. Box 621  
Honolulu, Hawaii 96809

WE ARE SENDING YOU □ Attached □ Under separate cover via □ mail 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>6-16-93</td>
<td>2-90</td>
<td>Maili Irrigation Wells—Mink and Yuen, Inc. Preliminary Report on Maili Irrigation Wells, No. 2</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 _______________ 19  ☐ PRINTS RETURNED AFTER LOAN TO US

REMARKS

SIGNATURE

Harvey K. Hida, P.E.
MAILE IRRIGATION WELLS
MAILE, WAIANAE
Tax Map Key: 8-7-09: 02

Recommendations for Additional Wells

Mink and Yuen, Inc.

June 16, 1993

Two wells into the basalt aquifer have already been drilled in the Maile property. Well 1 was tested at up to 250 gpm and yielded water having about 600 mg/l chloride. Well 2 was drilled but not tested. Grab samples of groundwater tested at 1600 mg/l chloride. Grab samples are not representative of pumpage.

According to the driller, Well 2 was not completed with casing except for 40 to 50 feet of temporary conductor casing at the top of the hole. A decent pump test must be run in order to determine capacity and quality of water. The driller is willing to carry out a pump test in the open hole to make certain the water is useable before deciding to complete the well with casing and grouting.

A separate limestone aquifer occurs in the property near Ulehawa Stream. It should be tested to determine whether a useable supply of water is present. The aquifer is smaller than the basalt aquifer and will have to be exploited with smaller pumps.

We recommend the following:

1. A pump test be conducted in Well 2 in the open hole. A two day test will suffice. The sequence of the test should be: 50 gpm, 4 hrs.; 100 gpm, 4 hrs.; 150 gpm, 4 hrs.; 200 gpm, 24 hrs.; 150 gpm, 4 hrs.; 100 gpm, 4 hrs.; and 50 gpm, 4 hrs.

   The salinity should fall below 1000 mg/l.

2. A well in the limestone aquifer should be drilled at the vertex where the boundary intersects Lualualei Road in the north portion of the property (see map). The well will
start at about elevation 85 feet and be drilled to -15 feet, total depth of about 100 feet. Casing diameter will be 6 inches; expected pump capacity, 50 gpm; and expected chloride content 500 to 1000 mg/l.

3. Another limestone well should be drilled at about elevation 80 feet midway along the Lualualei Road boundary of the property. Total depth also about 100 feet; casing 6 inch diameter; pump capacity 50 gpm; and expected chloride 750 to 1000 mg/l.

4. The two existing wells plus the limestone wells will provide a total installed capacity of approximately 500 gpm (.72 gpm). Well 1 at 200 gpm; Well 2 at 200 gpm; Limestone Well 1 at 50 gpm; and Limestone Well 2 at 50 gpm.

If pumping is restricted to 12 hours per day, maximum output will be .36 mgd.

5. depending on the results of the testing and new drilling, drill a third basalt aquifer well as standby.

We suggest you apply for permits for two limestone wells and the third basalt well. Cost of drilling, testing, casing and grouting the limestone wells should not exceed $25,000 each.
PRELIMINARY REPORT
ON
MAILI IRRIGATION WELL, No. 2
AT
MAILI, WAIANAE, OAHU
Tax Map Key: 8-7-09: 02

FOR
MR. SANJIRO NAKADE
c/o Mr. Yoshi Maeda
KG Hawaii Construction
1585 Kapiolani Blvd., Suite 1404
Honolulu, Hawaii 96814

BY
Hida, Okamoto & Associates, Inc.
Consulting Engineers
Honolulu, Hawaii

February 1990
The well no. intended in part of the irrigation system for the proposed Maili Golf Course. This report documents the results of construction data. The construction data includes a hydrology and subsurface formation information.

WELL DESCRIPTION

A. Owner: Mr. Sanjiro Nakade
B. Well Name: Maili Irrigation Well, No. 1
C. Location: Maili, Waianae, Oahu (See Exhibit A)
D. Tax Map Key: 8-7-09: 02
E. Drilling Company: Roscoe Moss Company
F. Drilling Completed: December, 1989
G. Elevation, msl, drilling platform: 145' (See Exhibit B)
H. Hole Size: 12" dia. to 220' below drilling platform (Elev. 145' to (-) 75')
I. Casing Installed: 12" I.D. x 0.25" wall solid section to 90' below drilling platform (Elev. 145' to 55')
J. Annules not installed.

HYDROLOGY

A. Initial Water Level: 133' below drilling platform (Elev. 5.0')
   Date of Measurement: December 19, 1989
B. Initial Chloride Tests: (December 19, 1989)
   1. Sample at Elevation (-) 15, Chloride concentration: 1,570 ppm
   2. Sample at Elevation (-) 75, Chloride concentration: 1,630 ppm
**SUBSURFACE FORMATION**

<table>
<thead>
<tr>
<th>Depth (Ft.)</th>
<th>Description</th>
<th>Elevation (Ft.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 67</td>
<td>Mud and Builders (Brown color)</td>
<td>145 to 78</td>
</tr>
<tr>
<td>67 to 88</td>
<td>Hard Rock</td>
<td>78 to 57</td>
</tr>
<tr>
<td>88 to 114</td>
<td>Weather Rock</td>
<td>57 to 31</td>
</tr>
<tr>
<td>114 to 140</td>
<td>Easy Drilling A.A. Rock</td>
<td>35 to 5</td>
</tr>
<tr>
<td>140 to 150</td>
<td>Firm Rock</td>
<td>5 to (-)5</td>
</tr>
<tr>
<td>150 to 220</td>
<td>Weather A.A. Rock</td>
<td>(-)5 to (-)75</td>
</tr>
</tbody>
</table>

**IMPACT OF PROPOSED IRRIGATION WELL**

Based on the completed pumping test and chloride sample tests, the irrigation well would have the chloride concentration of over 1,500 ppm. Sea water contains over 30,000 ppm chloride as NaCl. The recommended upper limit for chloride in drinking water is 250 ppm. Water with chloride concentration of 1,000 to 4,000 and up to 15,000 ppm is usually considered mildly to moderately brackish water. The use of moderately brackish water for irrigation purposes is not recommended (maximum recommended chloride concentration for golf course irrigation is 500 ppm).
FACSIMILE TRANSMITTAL PAGE

Please deliver the following pages to:

Name: Matt Higashide
Company:
From: Ed Sakoda
Date: 5-6-92 Time: 3:17 pm
Message: Info on Lahainaluna Well (2408-92)

Total number of pages (including Transmittal Page): 4

If you do not receive all of the pages legibly, please call back: (808) 587-9225

Sending Facsimile Number: (808) 523-4950
Receiving Facsimile Number: ( ) 523-1450

TRANSMISSION REPORT

THIS DOCUMENT (REDUCED SAMPLE ABOVE) WAS SENT

** COUNT **
# 4

*** SEND ***

<table>
<thead>
<tr>
<th>NO</th>
<th>REMOTE STATION I.D.</th>
<th>START TIME</th>
<th>DURATION</th>
<th>#PAGES</th>
<th>COMMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5234950</td>
<td>5-6-92 3:15PM</td>
<td>3'02&quot;</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>TOTAL 0:03'02&quot;</td>
<td></td>
<td>4</td>
<td>XEROX TELECOPIER 7020</td>
</tr>
<tr>
<td>Time</td>
<td>RPM</td>
<td>PSI</td>
<td>L/H</td>
<td>Notes</td>
<td></td>
</tr>
<tr>
<td>-------</td>
<td>------</td>
<td>-----</td>
<td>-----</td>
<td>-------</td>
<td></td>
</tr>
<tr>
<td>10:30</td>
<td>720</td>
<td>250</td>
<td>21.7</td>
<td>145, 3</td>
<td></td>
</tr>
<tr>
<td>11:00</td>
<td>780</td>
<td>21.7</td>
<td>145, 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11:30</td>
<td>840</td>
<td>21.7</td>
<td>145, 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12:00</td>
<td>900</td>
<td>21.7</td>
<td>145, 3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Water level 4'6", Hale Golf Course, Well 2, 2015, Airline 200*
<table>
<thead>
<tr>
<th>Time</th>
<th>GPM</th>
<th>PSI</th>
<th>W.L.</th>
<th>Drops chl.</th>
<th>RPM</th>
<th>Temp</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9:00 AM</td>
<td>250</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:00 AM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11:00 AM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12:00 PM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1:00 PM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2:00 PM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3:00 PM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4:00 PM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5:00 PM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6:00 PM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Started Test Oct 16, 1989
Completed Test Oct 19, 1989

Total Runs
This Test 91 Runs
**DRILLER'S REPORT**

**DESCRIPTION**

Date of report: **October 20, 1989**. Person filing report: **L.H. RUNNELLS**

- **A. OWNER**:
  - Oban Kaikan

- **B. GENERAL LOCATION**:
  - Maile

- **C. DRILLING COMPANY**:
  - Roscoe Moss Company

- **D. TYPE OF RIG**:
  - 28L

- **DRILLING COMPLETED**:
  - 10. 89

- **DRILLER**:
  - H. Fenton

**E. ELEVATION, msl**:

- Top of drilling platform: 253 ft.
- Bench mark and method used to determine elevation: 220 ft.

**F. HOLE SIZE**:

- 16 in. dia. to 120 ft. below drilling platform.
- 14 in. dia. to 220 ft. below drilling platform.
- 12 in. dia. to 225 ft. below drilling platform.

**G. CASING INSTALLED**:

- 8 in. I.D. x 250 ft. wall solid section to 120 ft. below drilling platform.
- 8 in. I.D. x 250 in. wall perforated section to 220 ft. below drilling platform.

**H. ANNULUS**:

- Grouted 0 ft. to 50 ft. below drilling platform.
- Gravel packed 50 ft. to 220 ft. below drilling platform.

**I. PERMANENT PUMP INSTALLATION**:

- Pump type, make, serial no.: LV116
- Capacity: 2 g.p.m.
- Motor type, H.P., voltage, r.p.m.: LV116
- Start depth of pump intake setting: 253 ft. below drilling platform.
- End depth of pump intake setting: 220 ft. below drilling platform.
- DRILLER'S REPORT:
  - 8-105

**HYDROLOGY**

**J. INITIAL WATER LEVEL**:

- Date of measurement: 10/06/89

**K. INITIAL CHLORIDE**:

- ppm, total depth of well: 220 ft. below drilling platform

**L. PUMPING TESTS**:

- Reference point (R.P.) used: 210 ft. below R.P.
- Sampling Date: 10/06/89

<table>
<thead>
<tr>
<th>Date</th>
<th>Start water level</th>
<th>End water level</th>
<th>Depth of well</th>
<th>Elapsed Time (hours)</th>
<th>Rate (gpm)</th>
<th>Draw-down (ft.)</th>
<th>Cl- (ppm)</th>
<th>Temp. (°F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>09/11/89</td>
<td>146 ft. below R.P.</td>
<td>146 ft. below R.P.</td>
<td>220 ft. below R.P.</td>
<td>9:00 to 9:00</td>
<td>9.24</td>
<td></td>
<td>4.62</td>
<td></td>
</tr>
<tr>
<td>10/06/89</td>
<td>146 ft. below R.P.</td>
<td>146 ft. below R.P.</td>
<td>220 ft. below R.P.</td>
<td>9:00 to 9:00</td>
<td>15.00</td>
<td></td>
<td>13.00</td>
<td></td>
</tr>
</tbody>
</table>

**SUBSURFACE FORMATION**

**M. DRILLER'S LOG**:

<table>
<thead>
<tr>
<th>Depth, ft.</th>
<th>Rock Description &amp; Remarks</th>
<th>Water Level, ft.</th>
<th>Depth, ft.</th>
<th>Rock Description &amp; Remarks</th>
<th>Water Level, ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 220</td>
<td>Firm rock hard</td>
<td>to</td>
<td>to</td>
<td>to</td>
<td>to</td>
</tr>
<tr>
<td>220 to 253</td>
<td>Blue rock</td>
<td>to</td>
<td>to</td>
<td>to</td>
<td>to</td>
</tr>
<tr>
<td>253 to 270</td>
<td>Med. hard rock</td>
<td>to</td>
<td>to</td>
<td>to</td>
<td>to</td>
</tr>
</tbody>
</table>

**N. REMARKS**:

- Test pump well 9/16/89 to 9/19/89, 91 hours.
<table>
<thead>
<tr>
<th>Park</th>
<th>370' Water Level</th>
<th>ML</th>
<th>Elevation</th>
<th>185' Water Level</th>
<th>570' Water Level</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>250</td>
<td>155.0</td>
<td>158.2</td>
<td>153.5</td>
<td>155.5</td>
<td>145.3</td>
</tr>
<tr>
<td>H2</td>
<td>250</td>
<td>155.0</td>
<td>158.2</td>
<td>153.5</td>
<td>155.5</td>
<td>145.3</td>
</tr>
<tr>
<td>H3</td>
<td>250</td>
<td>155.0</td>
<td>158.2</td>
<td>153.5</td>
<td>155.5</td>
<td>145.3</td>
</tr>
<tr>
<td>H4</td>
<td>250</td>
<td>155.0</td>
<td>158.2</td>
<td>153.5</td>
<td>155.5</td>
<td>145.3</td>
</tr>
</tbody>
</table>

**Volume:**
- H1: 125.0
- H2: 125.0
- H3: 125.0
- H4: 125.0

**Depth:**
- H1: 125.0
- H2: 125.0
- H3: 125.0
- H4: 125.0

**Engine 1:**
- 375 HP @ 2,700 RPM

**Engine 2:**
- 375 HP @ 2,700 RPM

**Engine 3:**
- 375 HP @ 2,700 RPM

**Engine 4:**
- 375 HP @ 2,700 RPM
TO: Sherri

DATE: __________
TIME: 1:30

WHILE YOU WERE OUT

M: Joyce Battle
of: Div. St. Parker/Reston Site
Phone: 670-68

<table>
<thead>
<tr>
<th>TELEPHONED</th>
<th>PLEASE CALL</th>
</tr>
</thead>
<tbody>
<tr>
<td>CALLED TO SEE YOU</td>
<td>WILL CALL AGAIN</td>
</tr>
<tr>
<td>WANTS TO SEE YOU</td>
<td>URGENT</td>
</tr>
</tbody>
</table>

RETURNED YOUR CALL:

Message: Sajjro Nakoda purchased Central Water (Toll: 5-7-09:2) England, and is building golf course. Is drilling a well do they have a well permit? Operator Sherrill
February 17, 1989

Kabushiki Kaisha Oban
c/o Wilson Okamoto & Associates
1150 S. King St., Ste. 800
Honolulu, Hawaii 96814

Gentlemen:

I am pleased to inform you that the Commission on Water Resource Management approved your application for well construction permits at its meeting on February 15, 1989. Enclosed are your well construction permits for Lualualei Exploratory Wells 1 and 2 (State Well Nos. 2408-08, 09), Lualualei, Oahu. Also enclosed for your information is a copy of the approved Commission submittal.

Following construction and pump testing of the wells and prior to your plans to install a permanent pump, an application for a pump installation permit is required in accordance with the Administrative Rules of the State Water Code. Such an application form is enclosed.

Monthly reports of pumpage would be required should the wells be put into production.

If you have any questions, please contact Mr. Dan Lum at .

Sincerely,

MANABU TAGOMORI
Deputy Director

Enc.

ES:dh
WELL CONSTRUCTION PERMIT

for

Lualualei Exploratory Well No. 1
State Well No. 2408-08
Lualualei, Oahu

TO: Kabushiki Kaisha Oban
c/o Wilson Okamoto & Assocites
1150 S. King St., Ste. 800
Honolulu, Hawaii 96814

In accordance with the Department of Land and Natural Resources Administrative Rules, Section 13-168, entitled "Water Use, Wells, and Stream Diversion Works", your application to construct and test State Well No. 2408-08 for irrigation use within Tax Map Key: 8-7-09:2 is approved subject to the following conditions:

1. The Division of Water and Land Development (DOWALD), Geology-Hydrology Section, shall be notified at before any work covered by this permit commences.

2. The permit shall be for construction and testing only. No permanent pump may be installed and no water used from the well without the necessary pump installation permit (form enclosed) from the Commission.

3. The following shall be submitted to DOWALD, P.O. Box 373, Honolulu, Hawaii 96809 within 60 days after completion of the well:


   b. Elevation (referenced to mean sea level) survey by a Hawaii-licensed surveyor.
WELL CONSTRUCTION PERMIT
State Well No. 2408-08

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

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

FEB 22 1989
WILLIAM W. PATY

Date of Issuance

Enclosures:
Well Completion Report form
Application for Pump Installation Permit

cc: USGS
Department of Health,
Drinking Water Program
Ground Water Protection Program
Honolulu Board of Water Supply
WELL CONSTRUCTION PERMIT

for

Lualualei Exploratory Well No. 2
State Well No. 2408-09
Lualualei, Oahu

TO: Kabushiki Kaisha Oban
c/o Wilson Okamoto & Associates
1150 S. King St., Ste. 800
Honolulu, Hawaii 96814

In accordance with the Department of Land and Natural Resources Administrative Rules, Section 13-168, entitled "Water Use, Wells, and Stream Diversion Works", your application to construct and test State Well No. 2408-09 for irrigation use within Tax Map Key: 8-7-09:2 is approved subject to the following conditions:

1. The Division of Water and Land Development (DOWALD), Geology-Hydrology Section, shall be notified at [insert address] before any work covered by this permit commences.

2. The permit shall be for construction and testing only. No permanent pump may be installed and no water used from the well without the necessary pump installation permit (form enclosed) from the Commission.

3. The following shall be submitted to DOWALD, P.O. Box 373, Honolulu, Hawaii 96809 within 60 days after completion of the well:
   b. Elevation (referenced to mean sea level) survey by a Hawaii-licensed surveyor.
WELL CONSTRUCTION PERMIT
State Well No. 2408-09

f. As-built sectional drawing of the well.

 climbers. Plot plan and map showing the exact location of the well.

e. Pumping test record, including time, pumping rate, drawdown, chloride content, and water quality.

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

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

FEB 22 1989
WILLIAM W. PATY
Date of Issuance

Enclosures:
Driller’s Report form
Application for Pump Installation Permit

cc: USGS
Department of Health,
Drinking Water Program
Ground Water Protection Program
Honolulu Board of Water Supply
Chairperson and Members  
Commission on Water Resource Management  
State of Hawaii  
Honolulu, Hawaii  

Gentlemen:

Kabushiki Kaisha Oban  
Application for Well Construction Permits  
Lualualei Golf Course Wells 1 and 2, Lualualei, Oahu

Applicant: Kabushiki Kaisha Oban  
c/o Wilson Okamoto & Associates  
1150 S. King St., Ste. 800, Honolulu, HI 96814

Action Requested: Permission to construct and test two 8-inch diameter, 220 to 300 ft. deep exploratory wells (State Well Nos. 2408-08, 09) for irrigation.

Well Location: The proposed well sites are in Lualualei Valley, Oahu at Tax Map Key: 8-7-09:02 (see attached map).

Proposed Use of Wells: The original proposal was to explore and test for sources of water for a proposed golf course. As of February 8, 1989, however, the applicant has indicated that the golf course may not be feasible and has requested the proposed use be changed to general agriculture.

Well Description:  

<table>
<thead>
<tr>
<th></th>
<th>Well 1</th>
<th>Well 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ground elevation:</td>
<td>240± ft.</td>
<td>160± ft.</td>
</tr>
<tr>
<td>Casing diameter:</td>
<td>8-inch I.D.</td>
<td>8-inch I.D.</td>
</tr>
<tr>
<td>Solid casing depth:</td>
<td>240± ft.</td>
<td>160± ft.</td>
</tr>
<tr>
<td>Screen casing depth:</td>
<td>50-100 ft.</td>
<td>30-100 ft.</td>
</tr>
<tr>
<td>Open hole:</td>
<td>25-50 ft.</td>
<td>25-50 ft.</td>
</tr>
<tr>
<td>Open hole diameter:</td>
<td>6 inches</td>
<td>6 inches</td>
</tr>
<tr>
<td>Grouted annulus:</td>
<td>0-215 ft.</td>
<td>0-135 ft.</td>
</tr>
</tbody>
</table>

Agency Review: The application has been sent to the State Department of Health (DOH) and the Honolulu Board of Water Supply (BWS) for review. BWS had no objections. DOH had comments pertaining to golf course use, but the comments no longer are applicable.

Analysis: Wells 1 and 2 will probably encounter basal water in Waianae basalts. They are not likely to adversely affect downgradient wells which are shallow caprock wells. Well No. 2 is located approximately 400 feet from Lualualei Shaft (State Well No. 2508-02) which is presently unused, which the 1988 State Legislature has expressed interest in having farmers use for agricultural purposes. House Concurrent Resolution No. 169, H.D. 1 requested the Department of Land and Natural Resources to conduct a feasibility study which recommended that other possibly more suitably located sources of water
be explored or considered before development of the Lualualei shaft due to the low sustainable yield of the shaft.

RECOMMENDATION:

That the Commission approve the issuance of a well construction permit for construction and testing of Lualualei Exploratory Wells 1 and 2, subject to the following conditions:

(1) The Division of Water and Land Development (DOWALD) shall be notified before work commences.

(2) The permit shall be for construction and testing only. No permanent pumps may be installed and no water used from the wells without the necessary pump installation permits.

(3) The following shall be submitted to DOWALD within 30 days after completion of the wells:
   b. Elevation (referenced to mean sea level) survey by a Hawaii-licensed surveyor.
   c. As-built sectional drawings of the wells.
   d. Plot plans and map showing the exact locations of the wells.
   e. Complete pumping test record; including time, pumping rate, drawdown, chloride content, and water quality data.

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

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

Respectfully submitted,

MANABU TAGOMORI
Deputy Director

Attch.

APPROVED FOR SUBMITTAL

WILLIAM W. PATY, Chairperson
—LUALUALEI GOLF COURSE WELL NO. 1

luaualei #1
renamed
to maili irig 1

Mapped, edited, and published by the Geological Survey
A Report to the 1989 Legislature

A FEASIBILITY STUDY
ON THE
USE OF LUALUALEI WATER SHAFT
FOR AGRICULTURE

ISLAND OF OAHU

Prepared by the
Department of Land and Natural Resources
Division of Water and Land Development
State of Hawaii

in response to
House Concurrent Resolution No. 169, H.D.1
Fourteenth Legislature, 1988

Honolulu, Hawaii
November 1988
# CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>BACKGROUND</td>
<td>3</td>
</tr>
<tr>
<td>AGRICULTURAL WATER REQUIREMENTS</td>
<td>6</td>
</tr>
<tr>
<td>DISCUSSION</td>
<td>6</td>
</tr>
<tr>
<td>FINDINGS</td>
<td>6</td>
</tr>
<tr>
<td>RECOMMENDATION</td>
<td>7</td>
</tr>
<tr>
<td>HOUSE CONCURRENT RESOLUTION NO. 169, H.D.1</td>
<td>8</td>
</tr>
</tbody>
</table>
INTRODUCTION

In January 1936, the construction of the Lualualei Shaft (No. 2), located in Lualualei Valley on the west side of Oahu (See Figure 1), was started by the City and County of Honolulu. After its completion in 1939, the water from the shaft was used for domestic and agricultural purposes. In 1959, the use of the shaft was discontinued due to the increasing chloride content of the water. The water shaft is currently unused and owned by the Board of Water Supply. However, the land surrounding the shaft is owned by the U.S. Navy.

The Lualualei Valley provides prime agricultural lands for diversified farming for a majority of the approximately 540 farmers on Oahu. Problems faced by the Lualualei Valley farmers are adequate water supplies and financial hardship due to increasing agricultural water rates.

Recognizing the problems in the valley, the 1988 State Legislature requested that the Department of Land and Natural Resources prepare a feasibility study of using the water in the Lualualei Shaft for agricultural purposes and to assess the impacts of its use on the Waianae farmers. The Legislature resolved in part:

"... that the Department of Land and Natural Resources conduct a feasibility study to determine whether water resources from the Lualualei Shaft could be developed by the state government and made available for use by farmers in the area ..."

--House Concurrent Resolution No. 169, H.D.1

"... that the study include an evaluation of the potential impact of the development of water resources from the Lualualei Shaft area on all agricultural water users in the Waianae area ..."

--House Concurrent Resolution No. 169, H.D.1

-1-
ISLAND OF OAHU
LOCATION MAP

FIGURE 1
The Department has studied the situation and submits its general findings and recommendations in this report.

BACKGROUND

There are approximately 230-259 diversified agricultural farmers in the Lualualei Valley out of an approximate total of 540 farmers on the island of Oahu. Therefore, over half of the farmers on Oahu are located in the Lualualei Valley.

Lualualei Shaft (No. 2) is located on the south side of Lualualei Valley and is a 30-degree inclined shaft (See Figures 2 and 3) respectively. The shaft was abandoned as a source of domestic water supply because of its increasing chloride content. The following is a tabulation of a series of data which was gathered previously:

<table>
<thead>
<tr>
<th>Year</th>
<th>Chloride (ppm)</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1936</td>
<td>374</td>
<td>Average over 5 mos.</td>
</tr>
<tr>
<td>1939</td>
<td>390</td>
<td></td>
</tr>
<tr>
<td>1939</td>
<td>235</td>
<td>At top of sump</td>
</tr>
<tr>
<td>1939</td>
<td>520</td>
<td>At bottom of sump</td>
</tr>
<tr>
<td>1962</td>
<td>360</td>
<td></td>
</tr>
<tr>
<td>1970</td>
<td>295</td>
<td>At top of sump</td>
</tr>
<tr>
<td>1970</td>
<td>500</td>
<td>At bottom of sump</td>
</tr>
</tbody>
</table>

While in service, the water was lifted 165 feet with two 10-stage deep-well turbines and two 20-horsepower electric motors. The shaft has 15' of concrete lining and a concrete pump chamber with a boulder covered concrete floor. An automatic water-stage recorder was used to measure the fluctuations of the water level. From a 1970 field report by the Board of Water Supply, the following observations were made:

"The interior of the control room was badly vandalized. We discovered the skip jammed sideways across the shaft. The pipes for air and water appeared to be in generally good shape although no attempt to make a detailed inspection was made. The pump bases were rusted as about one-inch of water covered the floor. The pump
SCHEMATIC OF WATER SHAFT (N.T.S.)

FIGURE 3
room equipment seemed to be in good condition. Other ancillary equipment for pump operation appeared in reasonable shape and had not been vandalized noticeably..."

The Board of Water Supply believes that a complete overhaul and reconstruction of the system would be necessary to reactivate the shaft.

AGRICULTURAL WATER REQUIREMENTS

The Board of Water Supply records show that in November, 1987, 3.4 mgd of agricultural water was provided to the farmers in the Waianae area. Approximately 90% of this amount or 3.06 mgd was provided to the farmers in the Lualualei Valley. For the purpose of this study, 3 mgd will be assumed to be the total agricultural water demand by the valley farmers.

Historical data indicate that diversified agriculture tolerance of brackish (greater than 500 ppm chloride content) water varies from crop to crop. Water with chloride content of less than 250 ppm is considered drinkable by the Department of Health Standards. For the purpose of this study, 500 ppm chloride content will be used as the tolerance level of the majority of the diversified agricultural activities.

DISCUSSION

Historical data and records indicated that the chloride content of the water to be between 300 ppm to 500 ppm and that the shaft is pump sensitive. Therefore, continuous pumping will result in increased chloride content. In 1936, the increasing chlorides indicated that the capacity of the shaft was exceeded with a draft of 0.34 mgd. Historical data also indicated that even while the shaft was in use, not all the valley farmers could be serviced by the shaft.

FINDINGS

Based on the data collected and above discussions, we conclude the following:
The chloride content of the shaft is determined to be upwards of 500 ppm. Although the chloride content for domestic use is exceeded, the water may be used for a majority of diversified agricultural activities.

The sustainable yield of the shaft is estimated to be 0.30 mgd, which is about 10% of the total Lualualei Valley agricultural needs.

RECOMMENDATION

Due to the low sustainable yield of the shaft, the department feels that other sources of water be considered before taking further action on the development of the Lualualei water shaft. However, should an individual or group of farmers desires to use the water of this shaft, it is recommended that the matter be discussed with the Board of Water Supply.
REQUESTING A FEASIBILITY STUDY ON THE DEVELOPMENT OF LUALUALEI TUNNEL WATER FOR USE BY WAIANAE FARMERS.

WHEREAS, the Hawaii State Plan calls for the encouragement and promotion of diversified farming activities to benefit Hawaii's people; and

WHEREAS, responsibilities of the Department of Agriculture include the responsibility to promote diversified agriculture, increase agricultural self-sufficiency, and ensure the availability of agriculturally suitable lands; and

WHEREAS, farmers of diversified crops in the Waianae Coast area of Oahu are facing increasing problems with adequate water supplies for use in farming activities; and

WHEREAS, the farmers face serious financial hardship when water rates are increased, as these increased costs cannot be passed on to consumers; and

WHEREAS, an unused water supply presently exists in the Lualualei Shaft which may be made available for agriculture use; and

WHEREAS, there are no plans at present for use of that water source by the Board of Water Supply of the City and County of Honolulu; and

WHEREAS, the State of Hawaii may consider development of that water resource solely for use by diversified agriculture in the Waianae Coast area; and

WHEREAS, development of water sources solely for diversified farming would be consistent with the goals and objectives of the Hawaii State Plan; now, therefore,

BE IT RESOLVED by the House of Representatives of the Fourteenth Legislature of the State of Hawaii, Regular Session of 1988, the Senate concurring, that the Department of Land and Natural Resources conduct a feasibility study to determine whether water resources from the Lualualei Shaft could be developed by the state government and made available for use by farmers in the area; and
BE IT FURTHER RESOLVED that the study include an evaluation of the potential impact of the development of water resources from the Lualualei Shaft area on all agricultural water users in the Waianae area; and

BE IT FURTHER RESOLVED that the Department of Land and Natural Resources submit findings and recommendations to the Legislature twenty days prior to the convening of the Regular Session of 1989; and

BE IT FURTHER RESOLVED that a certified copy of this Concurrent Resolution be transmitted to the Chairperson of the Board of Land and Natural Resources.

H.C.R. NO. 169 H.D. 1

HCR169 HD1
MEMORANDUM

November 10, 1970

To: Mr. Richard Lum
From: Chester Lao and Stanley Maekawa
Subject: C&C Water Shaft No. 2 at Lualualei

This installation was visited early last week by Stanley Maekawa and myself for the purpose of collecting a water sample. The shaft has not been operative since 1959 because of the presence of excessive chlorides. The last sample in 1962 contained 360 ppm chloride and was 15 ppm greater than the value in 1961. The objective of the new sample was to determine whether the chlorides had improved and how much.

Mr. Yamada of the Engineering Division came to the gate to get us on post and to direct us to the site. He also requested that BWS board up the broken windows to keep out unauthorized persons.

The door was jammed or frozen shut. After climbing onto the roof, we discovered the skylights had been all broken. A wooden ladder was in place in one of the skylights. We descended onto the boulder covered concrete floor. The interior of the control room was badly vandalized.

About half way down the steps, we discovered the skip jammed sideways across the shaft. The pipes for air and water appeared to be in generally good shape although no attempt to make a detailed inspection was made. The pump bases were rusted as about one inch of water covered the floor. The pump room equipment seemed to be in good condition. A Stevens Model A-30 water level recorder had been left and should be salvaged for PR&R use. A bubbler gauge was also left with a chart dated November, 1959. Other ancillary equipment for pump operation appeared in reasonable shape.
and had not been vandalized noticeably although the presence of a flashcube floating in the water indicated someone had been down here in the last 7 or 8 years.

The water sample was analyzed by the lab and was found to contain 295 ppm chlorides. This was a decrease of 65 ppm from the last sample in 1962. The original water level in the tunnel was 10.3 feet and the chloride concentration of the water was 187 ppm in May, 1936. By October, 1939, chlorides had risen to 390 and the water level fell to 8.6 feet.

A salinity gradient existed in the sump as shown by analyses of samples taken on October 30, 1939 which showed a chloride content of 235 ppm at sump surface and 520 ppm at the bottom of the sump. The salinity of the water appears to be very sensitive to draft despite the operational constraint that the pump automatically shut off if the drawdown exceeded 11 inches.

The bicarbonate-chloride ratio of 1.5 of the original water indicate dike water. However, by 1939 salt water encroachment was clearly evident and the $\text{HCO}_3^- - \text{Cl}$ ratio had dropped to 0.55. The present high chlorides may be the result of "dead" water despite the estimated 13 feet head. Because the shaft had not been pumped for a long time, they could improve temporarily with pumping before the previously high chlorides are probably repeated. The draft rate of 0.34 mgd was too high in retrospect and a lower rate should have been attempted. However, for a future source of brackish water for dimineralizing the rate can be raised to 1 mgd but would require an extra stage in the process over what is needed for the present salinity.
An additional and/or additional source of brackish water in Lualualei is in the caprock where a large number of wells once existed. The quality of the water ranged from less than 100 ppm to over 1000 ppm chloride. A large number of the wells were less than 100 feet depth and could deliver up to 0.25 mgd. In this respect, it could be more economical to develop a series of shallow wells than to rehabilitate the shaft. But the shaft water does not require chlorination. USGS studies indicate a large supply of water in the caprock.

It is recommended that BWS comply with the U. S. Navy request to secure the building to prevent mishaps. The ladder was shoved by us onto the floor to prevent access by this means.

Chester Lao

Stanley Maekawa
DATE 1/30  TIME 9:20

WHILE YOU WERE OUT

M. Scott

of 521-5261

Phone

<table>
<thead>
<tr>
<th>TELEPHONED</th>
<th>PLEASE CALL</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CALLED TO SEE YOU</td>
<td>WILL CALL AGAIN</td>
<td></td>
</tr>
<tr>
<td>WANTS TO SEE YOU</td>
<td>URGENT</td>
<td></td>
</tr>
</tbody>
</table>

RETURNED YOUR CALL

Message 2000-7000.04

Operator
The Honorable William W. Paty, Chairperson
Commission on Water Resource Management
Department of Land and Natural Resources
State of Hawaii
P.O. Box 621
Honolulu, Hawaii 96809

Dear Mr. Paty:

SUBJECT: WELL CONSTRUCTION PERMIT APPLICATION
LUALUALEI GOLF COURSE WELL NOS. 1 AND 2
STATE WELL NOS. 2408-08 AND -09
LUALUALEI, OAHU

Thank you for the opportunity to review the subject document. We have reviewed the application and have the following comments to offer:

1. The Department's Administrative Rules, Title 11, Chapter 20, "Potable Water Systems," are not applicable because the proposed wells are intended to be used only for irrigation.

2. The project site lies above the Underground Injection Control (UIC) line. Land areas above the UIC line are considered to contain underground sources of drinking water. Various activities associated with golf courses should not be allowed to contaminate groundwater. Activities of concern include:
   a. Application of biocides and fertilizers
   b. Storage of fuel for golf carts
   c. Maintenance facilities
   d. Wastewater disposal

3. Since the proposed well is located above the UIC line, it is essential that it be designed and constructed to prevent the possibility of groundwater contamination. For example, the well should have a concrete well pad to prevent seepage or floodwaters from migrating down the well shaft.
4. Wastewater disposal activities must comply with all applicable rules and regulations in the event that the project does not connect to an existing, approved wastewater treatment works.

If you should have any questions, please contact the Drinking Water Program at [blank].

Very truly yours,

[Signature]

John C. Lewin, M.D.
Director of Health
Mr. Manabu Tagomori  
Deputy Director  
Commission on Water Resource Management  
Department of Land and Natural Resources  
P. O. Box 621  
Honolulu, Hawaii 96809

Dear Mr. Tagomori:

Subject: Your Letter Dated December 20, 1988 on Well Permits for State Well Numbers 2408-08, 09, 2951-03, 2303-05, 1751-01M, 02M, and 1752-01M, 02M

We have no objections to the issuance of the well permits.

Very truly yours,

KAZU HAYASHIDA  
Manager and Chief Engineer

Pure Water... man's greatest need – use it wisely
December 27, 1988

Kabushiki Kaisha Oban
c/o Wilson Okamoto & Associates
1150 S. King Street, Ste. 800
Honolulu, Hawaii 96814

Gentlemen:

This is to acknowledge receipt of your applications for well construction permits and accompanying $25.00 filing fees for two wells at Lualualei, Oahu.

My staff is reviewing your applications and will call you should there be any questions.

Sincerely,

MANABU TAGOMORI
Deputy Director
APPLICATION FOR  
X 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 96809. Application must be accompanied by a non-refundable filing fee of $25.00 payable to the Department of Land and Natural Resources. (Filing fee waived for government agencies.) If necessary, phone 568-7542, Hydrology/Geology Section for assistance.

1. WELL LOCATION

Island Oahu  
Tax Map Key 8-7-09:02  
Address ________________________

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

2. WELL OWNER

Firm Name Kabushiki Kaisha Oban  
Contact Person Mr. Sanjiro Nakade  
Address c/o Wilson Okamoto & Assoc.  
1150 S. King St., Ste 800 Hon. 96814  
Phone ________________________

LANDOWNER

Firm Name Kabushiki Kaisha Oban  
Contact Person Mr. Sanjiro Nakade  
Address c/o Wilson Okamoto & Assoc.  
1150 S. King St., Ste 800 Hon. 96814  
Phone ________________________

3. PROPOSED CONTRACTOR FOR: ☐ Well Drilling ☐ Pump Installation  
Name To be named later  
Address ________________________  
Phone ________________________  
Contractor's License No. ________________________

4. PROPOSED WORK

☐ Drill New Well ☐ Deepen ☐ Redrill  
☐ Alter ☐ Seal ☐ Abandon  
☐ Install New Pump ☐ Replace Pump ☐ 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) For Proposed Golf Course ☐ Other (specify) ________________________

6. PROPOSED AMOUNT OF WITHDRAWAL 288,000 gallons per day

7. PROPOSED PUMP INFORMATION

Pump Type: ☐ Vertical Turbine ☐ Submersible ☐ Centrifugal  
Motor: ☐ Diesel ☐ Gas ☐ Electric: ________________________ Rated Horsepower

Rated Pump Capacity 200 gallons per minute (gpm)

Well Owner (print) Sanjiro Nakade  
Signature ________________________  
Date ________________________  
Landowner (print) Sanjiro Nakade  
Signature ________________________  
Date ________________________

For Official Use Only:
Field Checked By ________________________  
Latitude ________________________ Hydrologic Unit ________________________
Date ________________________ Longitude ________________________ State Well No. ________________________
Briefly describe the proposed work:

Drilling of an exploratory irrigation well.

PROPOSED SECTION OF WELL

Elevation at top of casing 171 ft., msl.

Ground Elev. 170 ft., msl*

Cement Grout 50 ft.

Solid Casing:
Material steel
Length 170 ft.
Diameter 8 in.
Wall thickness 0.25 in.

Hole Dia. 10 in.

Casing: / /Perforated /X/Screen
Material
Length min. 50, max. 100 ft.
Diameter 8 in.
Wall thickness 0.25 in.
Openings 10% sq. in./L.F.

Total min. 220
Depth max. 300 ft.

Rock Packing 120 ft.

Open Hole:
Length approx. 25' to 50'
Diameter 6 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.
Mapped, edited, and published by the Geological Survey
Revised in cooperation with Hawaii Dept. of Transportation
Control by USGS and NOS/NOAA
Topography by photogrammetric methods from aerial photographs
taken 1952. Field checked 1953. Revised from aeral photographs
Selected hydrographic data compiled from NOS/NOAA chart 4110 (1960)
and hydrographic surveys (1924)
This information is not intended for navigational purposes
Projection and 10,000-foot grid ticks: Hawaii coordinate system,
zone 3 (transverse Mercator) Clarke spheroid 1866. Old Hawaiian Datum
1000-meter Universal Transverse Mercator grid ticks, zone 4, shown
in blue. International spheroid. To place on the predicted North
American Datum 1983 move the projection axes 354 meters north and
284 meters west as shown by dashed corner ticks
Red tint indicates areas in which only landmark buildings are shown
There may be private holdings within the boundaries of
the National or State reservations shown on this map
State of Hawaii
COMMISSION ON WATER RESOURCE MANAGEMENT
Department of Land and Natural Resources
Division of Water Resource Management

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 96809. Application must be accompanied by a non-refundable filing fee of $25.00 payable to the Department of Land and Natural Resources. (Filing fee waived for government agencies.) If necessary, phone 548-1745, Hydrology/Geology Section for assistance.

1. WELL LOCATION
Island Oahu
Tax Map Key 8-7-09:02
Address
(Attach a USGS map (scale 1"=2000') and property tax map showing well location referenced to established property boundaries.)

2. WELL OWNER
Firm Name Kabushiki Kaisha Oban
Contact Person Mr. Sanjiro Nakade
Address c/o Wilson Okamoto & Assoc.
1150 S. King St., Ste 800 Hon. 96814
Phone

LANDOWNER
Firm Name Kabushiki Kaisha Oban
Contact Person Mr. Sanjiro Nakade
Address c/o Wilson Okamoto & Assoc.
1150 S. King St., Ste 800 Hon. 96814
Phone

3. PROPOSED CONTRACTOR FOR: ☑ Well Drilling ☐ Pump Installation
Name To be named later
Address
Contractor's License No.

4. PROPOSED WORK
☑ Drill New Well ☐ Deepen ☐ Redrill
☐ Alter ☐ Install New Pump ☐ Seal ☐ Abandon
☐ Replace Pump ☐ Modify Pump
☐ Replace 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) For Proposed Golf Course ☐ Other (specify)

6. PROPOSED AMOUNT OF WITHDRAWAL 288,000 gallons per day

7. PROPOSED PUMP INFORMATION
Pump Type: ☑ Vertical Turbine ☐ Submersible ☐ Centrifugal
Motor: ☑ Diesel ☐ Gas ☐ Electric:
Rated Pump Capacity 200 gallons per minute (gpm)

Well Owner (print) Sanjiro Nakade
Landowner (print) Sanjiro Nakade
Signature ___________________________ Signature ___________________________
Date _______________________________ Date _______________________________

For Official Use Only:
Field Checked By ___________________________ Latitude ___________________________
Date _______________________________ Hydrologic Unit ___________________________
Longitude ___________________________ State Well No. ___________________________
Briefly describe the proposed work:
Drilling of an exploratory irrigation well. Well is located near an abandoned city and county shaft (2508-02) in Maile.

PROPOSED SECTION OF WELL

Elevation at top of casing 171 ft., msl.

Ground Elev. 170 ft., msl

Cement Grout 50 ft.

Solid Casing:
Material: steel
Length: 170 ft.
Diameter: 8 in.
Wall thickness: 0.25 in.

Hole Dia. 10 in.

Casing: / /Perforated /X/Screen
Material
Length: min. 50, max. 100 ft.
Diameter: 8 in.
Wall thickness: 0.25 in.
Openings: 10% sq. in./L.F.

Rock Packing 120 ft.

Total min. 220, max. 300 ft.

Depth

Open Hole:
Length: approx. 25' to 50'
Diameter: 6 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.
Mapped, edited, and published by the Geological Survey
Revised in cooperation with Hawaii Dept. of Transportation
Control by USGS and NOS/NOAA
Selected hydrographic data compiled from NOS/NOAA chart 4110 (1960) and hydrographic surveys (1924)
This information is not intended for navigational purposes
Projection and 10,000-foot grid ticks: Hawaii coordinate system, zone 3 (transverse Mercator) Clarke spheroid 1866, Old Hawaiian Datum 1000-meter Universal Transverse Mercator grid ticks, zone 4, shown in blue, International spheroid. To place on the predicted North American Datum 1983 move the projection alines 354 meters north and 284 meters west as shown by dashed corner ticks
Red tint indicates areas in which only landmark buildings are shown. There may be private holdings within the boundaries of the National or State reservations shown on this map.
Honorable John C. Lewin
Director of Health
Department of Health
Honolulu, Hawaii

Dear Dr. Lewin:

Well Construction Permit Applications

In accordance with the Department of Land and Natural Resources Administrative Rules, Section 13-168-12(c), enclosed are the following well construction permit applications with maps for your review and comments:

(1) Lualualei Golf Course Well No. 1, State Well No. 2408-08
(2) Lualualei Golf Course Well No. 2, State Well No. 2408-09
(3) Kewalo Landfill Monitor Test Holes, State Well Nos. 1751-01M, 02M and 1752-01M, 02M
(4) Kohala Ranch Well No. 3, State Well No. 6549-04, North Kohala
(5) Waikane Golf course Well No. 3, State Well No. 2951-03
(6) Honouliuli Gulch Exploratory Well, State Well No. 2303-05

Please submit any comments to us, orally or in writing, within three weeks from the date of this letter. If you have any questions, please contact Manabu Tagomori at 

Very truly yours,

WILLIAM W. PATY

Enc.
Honorable John C. Lewin  
Director of Health  
Department of Health  
Honolulu, Hawaii  

Dear Dr. Lewin:

Well Construction Permit Applications

In accordance with the Department of Land and Natural Resources Administrative Rules, Section 13-168-12(c), enclosed are the following well construction permit applications with maps for your review and comments:

(1) Lualualei Golf Course Well No. 1, State Well No. 2408-08  
(2) Lualualei Golf Course Well No. 2, State Well No. 2408-09  
(3) Kewalo Landfill Monitor Test Holes, State Well Nos. 1751-01M, 02M and 1752-01M, 02M  
(4) Kohala Ranch Well No. 3, State Well No. 6549-04, North Kohala  
(5) Waikane Golf course Well No. 3, State Well No. 2951-03  
(6) Honouliuli Gulch Exploratory Well, State Well No. 2303-05  

Please submit any comments to us, orally or in writing, within three weeks from the date of this letter. If you have any questions, please contact Manabu Tagomori at _______.

Very truly yours,

WILLIAM W. PATY

Enc.
December 20, 1988

Mr. Kazu Hayashida  
Manager & Chief Engineer  
Board of Water Supply  
City & County of Honolulu  
630 S. Beretania Street  
Honolulu, Hawaii 96843

Dear Mr. Hayashida:

Well Construction Permit Applications

Enclosed are the following well construction permit applications with maps for your review and comments:

(1) Lualualei Golf Course Well No. 1, State Well No. 2408-08, Applicant: Kabushiki Kaisha Oban

(2) Lualualei Golf Course Well No. 2, State Well No. 2408-09, Applicant: Kabushiki Kaisha Oban

(3) Waikane Golf Course Well No. 3, State Well No. 2951-03, Applicant: Waikane Development Company

(4) Honouliuli Gulch Exploratory Well, State Well No. 2303-05, Applicant: Ewa Plain Water Development Corp.

(5) Kewalo Landfill Monitor Test Holes, State Well Nos. 1751-01M, 02M and 1752-01M, 02M; Applicant: Woodward-Clyde Consultants for the Office of State Planning

Please submit any comments to us, orally or in writing within three weeks from the date of this letter. If you have any questions, please contact Dan Lum at [REDACTED]

Sincerely,

[Signature]

MANABU TAGOMORI  
Deputy Director
December 20, 1988

Mr. Kazu Hayashida
Manager & Chief Engineer
Board of Water Supply
City & County of Honolulu
630 S. Beretania Street
Honolulu, Hawaii 96843

Dear Mr. Hayashida:

Well Construction Permit Applications

Enclosed are the following well construction permit applications with maps for your review and comments:

(1) Lualualei Golf Course Well No. 1, State Well No. 2408-08,
    Applicant: Kabushiki Kaisha Oban

(2) Lualualei Golf Course Well No. 2, State Well No. 2408-09,
    Applicant: Kabushiki Kaisha Oban

(3) Waikane Golf Course Well No. 3, State Well No. 2951-03,
    Applicant: Waikane Development Company

(4) Honouliuli Gulch Exploratory Well, State Well No. 2303-05,
    Applicant: Ewa Plain Water Development Corp.

(5) Kewalo Landfill Monitor Test Holes, State Well Nos. 1751-01M, 02M and 1752-01M, 02M; Applicant: Woodward-Clyde Consultants for the Office of State Planning

Please submit any comments to us, orally or in writing within three weeks from the date of this letter. If you have any questions, please contact Dan Lum at [Inserted Phone Number].

Sincerely,

MANABU TAGOMORI
Deputy Director
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 96849. Application must be accompanied by a non-refundable filing fee of $15.00 payable to the Department of Land and Natural Resources. (Filing fee waived for government agencies.) If necessary, phone Hydrology/Geology Section for assistance.

1. WELL LOCATION

Island: Oahu  
Tax Map Key: 8-7-09:02

Address: ________________

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

2. WELL OWNER

Firm Name: Kabushiki Kaisha Oban

Contact Person: Mr. Sanjiro Nakade

Address: c/o Wilson Okamoto & Assoc.

1150 S. King St., Ste 800 Hon. 96814

Phone: ____________________

LANDOWNER

Firm Name: Kabushiki Kaisha Oban

Contact Person: Mr. Sanjiro Nakade

Address: c/o Wilson Okamoto & Assoc.

1150 S. King St., Ste 800 Hon. 96814

Phone: ____________________

3. PROPOSED CONTRACTOR FOR:  

☐ Well Drilling  ☐ Pump Installation

Name: To be named later

Address: ____________________

Contractor's License No. ____________________

4. PROPOSED WORK

☐ Drill New Well  ☐ Alter  ☐ Install New Pump

☐ Deepen  ☐ Seal  ☐ 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) For Proposed Golf Course  ☐ Other (specify) ________________

6. PROPOSED AMOUNT OF WITHDRAWAL 288,000 gallons per day

7. PROPOSED PUMP INFORMATION

Pump Type:  ☐ Vertical Turbine  ☐ Submersible  ☐ Centrifugal

Motor:  ☐ Diesel  ☐ Gas  ☐ Electric: ____________________

Rated Pump Capacity: 200 gallons per minute (gpm)

Well Owner (print) Sanjiro Nakade

Signature: ________________  Date: ________________

Landowner (print) Sanjiro Nakade

Signature: ________________  Date: ________________

For Official Use Only:

Field Checked By: ____________________  Latitude: ____________________

Date: ________________  Longitude: ____________________

Hydrologic Unit: ____________________  State Well No.: 2408-09

Hydrologic Unit: ____________________  State Well No.: 2408-09
Briefly describe the proposed work:

Drilling of an exploratory irrigation well. Well is located near an abandoned city and county shaft (2508-02) in Maile.

PROPOSED SECTION OF WELL

Elevation at top of casing 171 ft., msl.

Cement Grout 50 ft.

Hole Dia. 10 in.

Total min. 220
Depth max. 300 ft.

Rock Packing 120 ft.

Ground Elev. 170 ft., msl*

Solid Casing:
Material steel
Length 170 ft.
Diameter 8 in.
Wall thickness 0.25 in.

Casing: / /Perforated /X/Screen
Material
Length min. 50, max. 100 ft.
Diameter 8 in.
Wall thickness 0.25 in.
Openings 10% sq. in./L.F.

Open Hole:
Length approx. 25' to 50'
Diameter 6 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.
Mapped, edited, and published by the Geological Survey
Revised in cooperation with Hawaii Dept. of Transportation
Control by USGS and NOS/NOAA
Topography by photogrammetric methods from aerial photographs
taken 1952. Field checked 1953. Revised from aerial photographs
Selected hydrographic data compiled from NOS/NOAA chart 4110 (1960)
and hydrographic surveys (1924)
This information is not intended for navigational purposes
Projection and 10,000-foot grid ticks: Hawaii coordinate system,
zone 3 (transverse Mercator) Clarke spheroid 1866. Old Hawaiian Datum
1000-meter Universal Transverse Mercator grid ticks. zone 4. shown
in blue. International spheroid. To place on the predicted North
American Datum 1983 move the projection aines 354 meters north and
284 meters west as shown by dashed corner ticks
Red tint indicates areas in which only landmark buildings are shown.
There may be private inholdings within the boundaries of
the National or State reservations shown on this map.
State of Hawaii
COMMISSION ON WATER RESOURCE MANAGEMENT
Department of Land and Natural Resources
Division of Water Resource Management

APPLICATION FOR

X 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 313, 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 Hydrology/Geology Section for assistance.

1. WELL LOCATION
Island Oahu Tax Map Key 8-7-09:02
Address __________________________________________

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

2. WELL OWNER
Firm Name Kabushiki Kaisha Oban
Contact Person Mr. Sanjiro Nakade
Address c/o Wilson Okamoto & Assoc.
1150 S. King St., Ste 800 Hon. 96814
Phone __________________________

LANDOWNER
Firm Name Kabushiki Kaisha Oban
Contact Person Mr. Sanjiro Nakade
Address c/o Wilson Okamoto & Assoc.
1150 S. King St., Ste 800 Hon. 96814
Phone __________________________

3. PROPOSED CONTRACTOR FOR: □ Well Drilling □ Pump Installation
Name To be named later Phone __________________________
Address __________________________________________

Contractor's License No. __________________________

4. PROPOSED WORK
□ Drill New Well □ Deepen □ Redrill
□ Alter □ Seal □ Abandon
□ Install New Pump □ Replace Pump □ Modify Pump
□ Install New Pump □ Replace Pump □ 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) for Proposed Golf Course □ Other (specify) __________________________

6. PROPOSED AMOUNT OF WITHDRAWAL 288,000 gallons per day

7. PROPOSED PUMP INFORMATION
Pump Type: □ Vertical Turbine □ Submersible □ Centrifugal
Motor: □ Diesel □ Gas □ Electric: __________________________
Rated Pump Capacity 200 gallons per minute (gpm)

Well Owner (print) Sanjiro Nakade
Signature __________________________
Date __________________________

Landowner (print) Sanjiro Nakade
Signature __________________________
Date __________________________

For Official Use Only:
Field Checked By __________________________ Latitude __________________________
State Well No. 2403-08

#25 CHECK 12/15/90 © 12/16/90
Briefly describe the proposed work:

Drilling of an exploratory irrigation well.

PROPOSED SECTION OF WELL

Elevation at top of casing 171 ft., msl.

Ground Elev. 170 ft., msl*

Cement Grout 50 ft.

Solid casing:
Material: steel
Length 170 ft.
Diameter 8 in.
Wall thickness 0.25 in.

Hole Dia. 10 in.

Casing: / Perforated /X/Screen
Material
Length min. 50, max. 100 ft.
Diameter 8 in.
Wall thickness 0.25 in.
Openings 10% sq. in./L.F.

Total min. 220 max. 300 ft.

Rock Packing 120 ft.

Depth

Open Hole:
Length approx. 25' to 50'
Diameter 6 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.
Mapped, edited, and published by the Geological Survey
Revised in cooperation with Hawaii Dept. of Transportation
Control by USGS and NOS/NOAA
Topography by photogrammetric methods from aerial photographs
taken 1952. Field checked 1953. Revised from aerial photographs
Selected hydrographic data compiled from NOS/NOAA chart 4110 (1960)
and hydrographic surveys (1924)
This information is not intended for navigational purposes
Projection and 10,000-foot grid ticks: Hawaii coordinate system,
zone 3 (Transverse Mercator) Clarke spheroid 1866. Old Hawaiian Datum
1000-meter Universal Transverse Mercator grid ticks, zone 4, shown
in blue, International spheroid. To place on the predicted North
American Datum 1983 move the projection alongs 354 meters north and
284 meters west as shown by dashed corner ticks
Red tint indicates areas in which only landmark buildings are shown.
There may be private holdings within the boundaries of the National or State
reservations shown on this map.
State of Hawaii
ON WATER RESOURCE MANAGEMENT
Office of Land and Natural Resources
Office of Water Resource Management

APPLICATION FOR

I completed application with attachments to the Division of Water and Land Resources. Application must be accompanied by a non-refundable filing fee of $15.00. (Filing fee waived for government agencies) if necessary, phone (808) 586-5566 and property tax map showing well location and boundaries.

Key 8-7-09:92

1. LANDOWNER

Firm Name Kabushiki Kaisha Oban
Contact Person Mr. Sanjiro Nakade
Address c/o Wilson Okamoto & Assoc.
1150 S. King St., Ste 800 Hon. 96814
Phone (808) 948-0920

2. Firm Name Kabushiki Kaisha Oban
Contact Person Mr. Sanjiro Nakade
Address c/o Wilson Okamoto & Assoc.
1150 S. King St., Ste 800 Hon. 96814
Phone (808) 948-0920

3. PROPOSED CONTRACTOR FOR: [ ] Well Drilling [ ] Pump Installation
Name ___________________________ Phone ___________________________
Address ___________________________ Home Address ___________________________
Contractor's License No. ___________________________

4. PROPOSED WORK
[ ] Drill New Well [ ] Deepen [ ] Redrill
[ ] Alter [ ] Seal [ ] Abandon
[ ] Install New Pump [ ] Replace Pump [ ] 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) For Proposed Golf Course [ ] Other (specify) ___________________________

6. PROPOSED AMOUNT OF WITHDRAWAL 288,000 gallons per day

7. PROPOSED PUMP INFORMATION
Pump Type: [ ] Vertical [ ] Submersible [ ] Centrifugal
[ ] Turbine [ ] Gas [ ] Electric: ___________________________
[ ] Diesel [ ] Rated Horsepower ___________________________

Rated Pump Capacity 200 gallons per minute (gpm)

Well Owner (print) Sanjiro Nakade
Signature ___________________________ Date ___________________________

Landowner (print) Sanjiro Nakade
Signature ___________________________ Date ___________________________

For Official Use Only:
Field Checked By ___________________________ Latitude ___________________________
Date ___________________________ Hydrologic Unit ___________________________

State Well No. 2408-08
Briefly describe the proposed work:
Drilling of an exploratory irrigation well.

PROPOSED SECTION OF WELL

Elevation at top of casing 171 ft., msl.
Cement Grout 50 ft.
Hole Dia. 10 in.
Total min. 220 Depth max. 304 ft.
Rock Packing 120 ft.

Ground Elev. 170 ft., msl

Solid Casing:
Material steel
Length 170 ft.
Diameter 8 in.
Wall thickness 0.25 in.

Casing: //Perforated //Screen
Material
Length min. 50, max. 100 ft.
Diameter 8 in.
Wall thickness 0.25 in.
Openings 10% sq. in./L.F.

Open Hole:
Length approx. 25' to 50'
Diameter 6 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.
Mapped, edited, and published by the Geological Survey
Revised in cooperation with Hawaii Dept. of Transportation

Control by USGS and NOS/NOAA

Topography by photogrammetric methods from aerial photographs
taken 1952. Field checked 1953. Revised from aerial photographs

Selected hydrographic data compiled from NOS/NOAA chart 4110 (1960)
and hydrographic surveys (1924)

This information is not intended for navigational purposes

Projection and 10,000-foot grid ticks: Hawaii coordinate system,
zone 3 (transverse Mercator) Clarke spheroid 1866. Old Hawaiian Datum
1000-meter Universal Transverse Mercator grid ticks, zone 4, shown
in blue. International spheroid. To place on the predicted North
State of Hawaii
COMMISSION ON WATER RESOURCE MANAGEMENT
Department of Land and Natural Resources
Division of Water Resource Management

APPLICATION FOR

X 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 96809. Application must be accompanied by a non-refundable filing fee of $25.00 payable to the Department of Land and Natural Resources. (Filing fee waived for government agencies.) If necessary, phone 548-7342. Hydrology/Geology Section for assistance.

1. WELL LOCATION

Island Oahu

Tax Map Key 8-7-09:02

Address 

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

2. WELL OWNER

Firm Name Kabushiki Kaisha Oban

Contact Person Mr. Sanjiro Nakade

Address c/o Wilson Okamoto & Assoc.

1150 S. King St., Ste 800 Hon. 96814

Phone \_

3. PROPOSED CONTRACTOR FOR: X Well Drilling ___ Pump Installation

Name To be named later

Address 

Contractor's License No. 

4. PROPOSED WORK

X Drill New Well ___ Deepen ___ Redrill

X Alter ___ Seal ___ Abandon

X Install New Pump ___ Replace Pump ___ Modify Pump

(Briefly describe the proposed work and fill in the diagram on the back of this form.)

5. PROPOSED USE

X Municipal (including hotels, stores, etc.) ___ Military

X Domestic (individual, noncommercial water systems) ___ Industrial

X Irrigation (specify) For Proposed Golf Course ___ Other (specify) ___

6. PROPOSED AMOUNT OF WITHDRAWAL 288,000 gallons per day

7. PROPOSED PUMP INFORMATION

Pump Type: ___ Vertical Turbine ___ Submersible ___ Centrifugal

Motor: ___ Diesel ___ Gas ___ Electric: ___ Rated Horsepower

Rated Pump Capacity 200 gallons per minute (gpm)

Well Owner (print) Sanjiro Nakade

Signature ___________________

Date ______________________

For Official Use Only:

Field Checked By ___________________ Latitude 24°08'09"

Date ___________________ Hydrologic Unit

Landowner (print) Sanjiro Nakade

Signature ___________________

Date ______________________
Briefly describe the proposed work:

Drilling of an exploratory irrigation well. Well is located near an abandoned city and county shaft (2508-02) in Maile.

PROPOSED SECTION OF WELL

Elevation at top of casing 171 ft., msl.

Cement Grout 50 ft.

Hole Dia. 10 in.

Total min. 220

Depth max. 30 ft.

Rock Packing 120 ft.

Ground Elev. 170 ft., msl*

Solid Casing:

Material: steel
Length 170 ft.
Diameter 8 in.
Wall thickness 0.25 in.

Casing: / /Perforated /X/Screen

Material

Length min. 50, max. 100 ft.
Diameter 8 in.
Wall thickness 0.25 in.
Openings 10% sq. in./L.F.

Open Hole:

Length approx. 25' to 50'
Diameter 6 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.
Waianae digs in to battle new golf course

By Lucy Young
Star-Bulletin

Waianae residents are up in arms over a proposed 27-hole golf complex, saying they were unaware of the project and calling it the latest in a string of planned courses that threatens the area's rural lifestyle.

"We want to know what's happening," said Olive Kepa, president of the Waianae Valley Homestead Community Association. "We want to hear about this one. They didn't let us know they wanted to put a golf course up here."

Although the 292 homes represented by the association are right across Waianae Valley Road from the proposed course, the group wasn't notified about the plans, Kepa said.

Kepa said the association learned of the project when one of its homesteaders happened to attend an October Waianae Coast Neighborhood Board meeting where the issue was being voted on. The board failed to take a position on the controversy because the 12 board members who voted to deny the golf course application were not enough to pass the motion. Three members wanted to grant the application, Kepa said.

The Waianae Neighborhood Board meeting at 7 tonight at Waianae Satellite City Hall promises to draw debate, as have previous meetings on the golf course issue. Also, the Committee to Stop Waianae Valley Golf Courses has been drumming up awareness by circulating fliers throughout the community.

The proposed Waianae Kai Golf Course is a joint project of local developer Herbert Horita and Shinwa Corp., a Japanese firm. They want to build the proposed course on 250 acres of Waianae Valley currently used by several farmers and Mountain View Dairy.

The city Department of Land Utilization sent the golf-course application back to the developer on Sept. 13, asking for more information on the project's impact on drinking water wells.

The state Health Department said ground water on the site could be a potential source of drinking water, which runs counter to the developer's claim that "none of the wells is suitable for domestic use."

"We will have to conclude that the ground water will likely be contaminated should the construction of the golf course be approved," the Health Department said.

Further comments from the department are expected, as well as from the neighborhood board, said Calvin Ching, DLU zoning branch chief.

The Board of Water Supply also said the golf course could have an unknown adverse effect on existing wells.

"If the golf course wells adversely affect our wells and or private wells in the area, the golf course would have to cut back on pumpage," wrote Kazu Hayashida, board manager and chief engineer.

The state Agriculture Department commented that the Mountain View Dairy operation and herd must be relocated as a condition if the DLU approves the conditional use permit.

Under a controversial 1965 state law, golf courses proposed for marginal farm lands may be approved by the city DLU without a public hearing.

Local farmers and residents have denounced the law and opposed golf courses, particularly those by Japanese investors.

In addition to Waianae Kai, the Waianae Coast is being considered for several other courses:

- The 18-hole Maile Kai Golf Course to be built on 415 acres. But the request was withdrawn on July 27 by developer Kaiser Cement for additional water studies and amid community opposition.
- West Beach by Kumagai Gum and Herbert Horita. This resort town is already zoned for one golf course, with talk of a possible second course which may call for DLU rezoning.
- Lualualei course by Sanjirou Nakade, which would displace farmers Ryoei and Nancy Higa. Although Nakade has yet to apply for a DLU permit, he said community opposition and unfavorable media attention over the Higas' eviction has forced him to delay the project. The plan called for an 18-hole course on Nakade's 236-acre parcel.
- Alpha Kai's proposed 18-hole private course on 130 acres between Makaha and Makua valleys.