3-5-97

I spoke to Dave Nakama
from Koolau G.C. I asked
him if he could send us
monthly payage from
4/96 - 12/96. He said he
would.

I also asked him to return
(WSJ) signed permit and water
shortage plan. He said
he would check on status of
permit signing. He stated
that he sent water shortage
plan in, but will send a copy
with next water use report.
He also said Well #1 broken.

Huh?

2AF 8843
Mr. Sean A. Hoolehan
Koolau Management, Inc.
45-550 Kionaole Rd.
Kaneohe, HI 96744

Dear Mr. Hoolehan:

Approval of Water Use Permit for Well Nos. 2347-02 & 03
Koolaupoko Ground Water Management Area, Oahu

This letter transmits your water use permit for Minami 1 & 2 Wells (Well Nos. 2347-02 & 03) for use of 0.150 million gallons per day (mgd) of water on a 12-month moving average basis that was approved by the Commission on Water Resource Management (Commission) on March 17, 1993. We apologize for this late transmittal of the permit.

As part of the Commission’s approval, the following special condition was added and is part of your permit under Standard Permit Condition 20:

Special Condition

1. The applicant shall contact the Environmental Management Division, State Department of Health, at 586-4304, concerning “GUIDELINES APPLICABLE TO GOLF COURSES IN HAWAII” dated August, 1994 (version 5). The applicant shall obtain a written statement from the Department of Health indicating that their concerns have been addressed, and a copy of that statement shall be sent to the Commission.

Enclosed with this letter of approval are the following:

1. Your water use permit
2. Your official monthly water use report form

Please be sure to read the conditions of your approved permit. If you accept these terms, please sign and return one copy of this permit to the Commission and retain a copy for your record.

We draw your attention to two key conditions of your permit that require your response. First, you are required to keep a record of your monthly total pumpage, water level, salinity, and water temperature. This information must be submitted to the Commission on a regular monthly basis using the enclosed water use report form. You should make copies of the enclosed report form as needed.

Second, you are required to submit a water shortage plan to the Commission within thirty (30) days of the issuance date of this permit. Your water shortage plan simply identifies what you are willing to do should the Commission declare a water shortage situation in the Koolaupoko Ground Water Management Area and can be as short as a one page letter. In a water shortage situation, the Commission may require temporary reductions in pumpage from all sources. The Commission is required, by law, to formulate a plan to implement such area-wide reductions, which should accommodate, include, and be consistent with your plans. Therefore, your help, by submitting your water shortage plan, is greatly needed in formulating the Commission’s overall Water Shortage Plan.

If you have any questions, please call Rae M. Loui, Deputy Director, at 587-0214.

Aloha,

for: MICHAEL D. WILSON
Chairperson

Attachments
GROUND WATER USE PERMIT
WUP NO. 190

PERMITTEE

Applicant/Water User          Landowner of Source
Address KOOLOAU MANAGEMENT, INC.    Address KOOLOAU MANAGEMENT, INC.
                              45-550 KIONAOLE RD.
                              KANEOHE, HI 96744

PERMITTED SOURCE INFORMATION

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<th>OAHU</th>
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<td>KOOLAUPOKO</td>
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<tr>
<td>Aquifer Sector</td>
<td>WINDWARD</td>
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<tr>
<td>Aquifer System</td>
<td>KOOLAUPOKO</td>
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<tr>
<td>System Sustainable Yield</td>
<td>43 mgd</td>
</tr>
<tr>
<td>Well Name</td>
<td>MINAMI 1 &amp; 2</td>
</tr>
<tr>
<td>State Well No.</td>
<td>2347-02 &amp; 03</td>
</tr>
</tbody>
</table>

PERMITTED USE INFORMATION

| Reasonable beneficial use        | GOLF COURSE IRRIGATION       |
| Withdrawal (12 month moving ave.) | 0.150 mgd                   |
| Location of water use            | 4-5-42:1                     |
| TMK #                           | 45-550 KIONAOLE RD., KANEOHE, OAHU |
| Address                         | CONSERVATION                 |
| State land use classification   | P-1                          |

Pursuant to Hawaii's State Constitution, Article XI, Section 7, Hawaii Revised Statutes, Chapter 174C, Hawaii Administrative Rules, Chapters 13-167 through 13-171; and Hawaii decisional law and custom, the applicant is hereby authorized to use ground water from the sources and in the amount and from and upon the locations described above; subject however, to the requirements of law including but not limited to the following conditions:
11. Within 30 days of issuance of the permit the applicant shall submit a water shortage plan that identifies what the applicant is willing to do should the Commission declare a water shortage in the KOOLAUPOKO Ground Water Management Area.

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

13. The water use permit shall be issued only after AG review.

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

Applicant's Signature: ____________________________ Date: ________________

Printed Name: ____________________________ Firm or Title: ____________________________

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

Attachment
1. The ground water described in the water use permit may only be taken from the location described, used for the reasonable beneficial use described, and at the location described above and in the attachments. Reasonable-beneficial use means "the use of water in such a quantity as is necessary for economic and efficient utilization, for a purpose, and in a manner which is not wasteful and is both reasonable and consistent with the state and county land use plans and the public interest." (HAR §13-171-2).

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

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

4. The water use permit is subject to the requirements of the Hawaiian Homes Commission Act, as amended, if applicable.

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

6. The water use permit application and submittal, as amended, approved by the Commission at its March 17, 1993 meeting are incorporated into this permit by reference.

7. This permit may be modified by the Commission and the amount of water initially granted to the permittee may be reduced if the Commission determines it is necessary to:
   a. protect the water sources (quantity or quality);
   b. meet other legal obligations including other correlative rights;
   c. insure adequate conservation measures;
   d. require efficiency of water uses;
   e. reserve water for future uses, provided that all legal existing uses of water as of June, 1987 shall be protected;
   f. meet legal obligations to the Department of Hawaiian Home Lands, if applicable; or
   g. carry out such other necessary and proper exercise of the State's and the Commission's police powers under law as may be required.

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

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

9. The water use permit shall be subject to the Commission's periodic review of the applicable aquifer's sustainable yield. The amount of ground water use authorized by the permit may be reduced by the Commission if the sustainable yield of the Koolaupoko Aquifer System is reduced.

10. The water use permit may not be transferred or the use rights granted by this permit sold or in any other way alienated. Pursuant to HRS 174C-59 an the requirements of chapter 174C, the Commission has the authority to allow the transfer of the permit and the use rights granted by the permit in a manner consistent with HRS 174C-59. Any such transfer shall only occur with the Commission's prior express written approval. Any sale, assignment, lease, alienation, or other transfer of any interest in this permit shall be void.
TESTIMONY TO THE STATE OF HAWAII COMMISSION ON WATER RESOURCE MANAGEMENT

Item 2. Maui DWS Wells

Well Locations and Descriptions:

1. When were original pumps installed?
2. How long have they been operating?
3. How do existing uses over these periods of operation compare with proposed uses (mgd)?
4. How do static heads and chlorides over these periods of operation compare with initial heads and chlorides?

Analysis:

1. What hydrologic units are the wells located in?
2. What are the sustainable yields and existing, planned, and proposed/projected uses in these units?

Item 3. Maka Ridge and Haena Wells

Well Locations and Descriptions:

1. When were original pumps installed?
2. How long have they been operating?
3. How do existing uses over these periods of operation compare with proposed uses (mgd)? Neither are tabulated in the submitted descriptions.
4. How do static heads and chlorides over these periods of operation compare with initial heads and chlorides?

Analysis:

1. What hydrologic units are the wells located in?
2. What are the sustainable yields and existing, planned, and proposed/projected uses in these units?

Item 4. Stanhope Farms Well

Background

Did the applicant file a declaration of water use and registration of water source as required in 1988-1989? If so, what water use
(gpd) was declared at that time, and what was water level and chloride concentration?

Analysis & Issues

What has been the "impact on existing wells over the past 24 years"? Is this indicative of the "intermediate to long-range impacts to wells downgradient" that "may" occur? Concern over the approval of new water use permits in newly designated water management areas when existing uses have not yet applied is not precisely the issue of concern. (The concern is that all currently unpermitted uses, both existing and proposed, in all water management areas be evaluated equally and concurrently with regard to their "reasonable and beneficial use," competition with existing and future legal uses, and other relevant criteria). In this particular case, the concern is that the allocation of available water in Mokuleia be comprehensively evaluated against permit applications on a regular schedule, not on a first-come, first-serve basis, and that reservations to Hawaiian Home Lands and allocations to the County be settled before any other evaluations commence.

WATER USE PERMIT DETAILED INFORMATION

Source Information

Additional lines in this table should show:

AQUIFER:
1. Reservations to Hawaiian Home Lands NA
2. Allocation to County Zero
3. Scheduled of permit application windows and evaluation periods

WELL:
1. Changes in extraction rates, water levels, and chlorides over periods of operation. To comprehensive to be meaningful - all wells

Nearby Surrounding Wells and Other Registered Ground Water Use

Field verification of 14 out of 152 declared uses does not seem to be sufficient for estimating existing ground water use, and reveals nothing about surface water uses that might also be affected. What do required monthly water use reports reveal about existing use? How many of the 152 declared groundwater uses submit monthly water use reports as required? When will field verification be completed? What information base was used to derive Oahu Water Management Plan estimates? The "Current 12-Month Moving Average withdrawal?" How can the reduction in estimated existing use between 1990 (Oahu Water Management Plan) and 1993 ("Current Average Withdrawal") be explained? Rainfall?

Public Notice:
Was direct notice of the application mailed to all declared water users in the hydrologic unit (all categories)? If not, why not?

Objections:
Without serving direct notice to potential objectors (such as all declared water users), and without field verification of declared uses, "the best of staff's knowledge" about objectors is almost no knowledge at all. Furthermore, potential objectors are not afforded required due process and opportunity to file their objections.

Field Investigation
If the water source and existing use was investigated on November 12, 1991, why is "Reported Water Usage" (Use Information) listed as "NA"? - Reported usage just that estimated is by kind, line meter

Analysis & Issues
The fact that BWS turned over their wells to the cemetery does not indicate "that the aquifer in this area is actually a non-potable source." It only means that BWS has chosen not to operate it as municipal source because of the possibility that it may become non-potable due to overlying land uses. Water quality data is needed to conclusively indicate that the aquifer is a non-potable source. The actions of BWS unfortunately point out the persistent difficulties in effectively coordinating land and water use planning.

What has been the "Impact to other wells ... over the past four (4) years"?

The past three years have been dry. The recommended 150,000 gpd for 100 acres works out to 1500 gallons per acre per day (gad), which is equal to or greater than the diversified agriculture irrigation requirement in similar areas. The recommended allocation may be excessive and deserves closer scrutiny.

WATER USE PERMIT DETAILED INFORMATION

Source Information
Additional lines in this table should show:

AQUIFER:
1. Reservations to Hawaiian Home Lands
2. Allocation to County
3. Scheduled of permit application windows and evaluation periods

WELL:
1. Changes in extraction rates, water levels, and chlorides over
periods of operation

**Nearby Surrounding Wells and Other Registered Ground Water Use**

Field verification of 7 out of 43 declared uses does not seem to be sufficient for estimating existing ground water use, and reveals nothing about surface water uses that might also be affected. What do required monthly water use reports reveal about existing use? How many of the 43 declared groundwater uses submit monthly water use reports as required? When will field verification be completed? What information base was used to derive Oahu Water Management Plan estimates? What is the "Current 12-Month Moving Average Withdrawal" from the wells and the aquifer?

**Public Notice:**

Was direct notice of the application mailed to all declared water users in the hydrologic unit (all categories)? If not, why not?

**Objections:**

Without serving direct notice to potential objectors (such as all declared water users), and without field verification of declared uses, potential objectors are not afforded required due process and opportunity to file their objections.

**Field Investigation**

If the water source and existing use was investigated on July 20, 1990 and November 12, 1992, why isn't water usage, water levels, and chlorides from those dates reported in the "Detailed Information"?

NHAC remains concerned that all currently unpermitted uses, both existing and proposed, in all water management areas be evaluated equally and concurrently with regard to their "reasonable and beneficial use," competition with existing and future legal uses, and other relevant criteria. In this particular case, the concern is that the allocation of available water be comprehensively evaluated against permit applications on a regular schedule, not on a first-come, first-serve basis, and that reservations to Hawaiian Home Lands and allocations to the County be settled before any other evaluations commence.

**Item 6. Ewa Caprock**

1905-09, 2002-02, 2002-05, 2000-02, 2002-01, 2001-03, 2001-02, 2002-12

**Analysis and Issues**

2. We should not assume that sugarcane production overlying the aquifer will only be replaced by urban development. There is great potential and opportunity for replacing sugarcane production with other agricultural practices that provide higher quality return water than that currently provided by sugarcane production.
We should also recognize that more brackish caprock water may be desirable for certain replacement agricultural uses and other alternative lands uses, such as aquaculture, wetland farming, and wetland bioremediation/waste treatment.

3. The future of OSCo. is not the sole criteria for the vitality of importing recharge and leakage to the caprock aquifer. Other vehicles for importing recharge and leakage exist and must be brought into the discussion.

Why is 1995 chosen as the potential date for OSCo. closing?

4. What is the Commission's current position with regard to its regulatory power over activities which "cut into the caprock?" We believe such activity should be considered groundwater extraction requiring well construction and water use permits. This is supported by the Water Code definition of "well."

5. These hydrologic studies estimate yield in the absence of recharge and leakage now provided by OSCo. operations, not in the absence of OSCo. itself.

6. NHAC would like to join the effort to develop and finalize firm alternative water source and recharge solutions. We also feel that, because of changing land use conditions in Ewa and the potential for return of federal lands as reparations to Native Hawaiians, the Ewa Caprock Regional Plan should continue to be revised with greater participation by the Hawaiian Homes Commission, Office of Hawaiian Affairs, and Hawaiian community concerns.

Item 7. Makalii Wells

RECOMMENDATION

NHAC concurs with the staff recommendation.

It is distressing that the submittal fails to report the litigation initiated by Koolau Ag' against the Commission. NHAC has on several occasions asked the deputy to publish this information in the monthly bulletin, along with announcement of any other litigation or contested case requests. It is imperative that the public be made aware of all legal actions impacting its Water Commission, so that these public judicial proceedings can be tracked and evaluated by concerned water users and public interests. While the Commission need not reveal the particulars of the case, it should regularly publicize docket numbers and schedules for upcoming judicial proceedings in local and national arenas.

Mahalo

David L. Martin, Vice-President
Chairperson and Members
Commission on Water Resource Management
State of Hawaii
Honolulu, Hawaii

Gentlemen:

RESUBMITTAL
Minami Group (USA), Inc.
Application for a Water Use Permit
Minami 1 & 2 Wells (Well Nos. 2347-02 & 03)
Koolaypoko Ground Water Management Area, Kaneohe, Oahu

Applicant:
Minami Group (USA), Inc.
45-610 A Kionaole Rd.
Kaneohe, HI 96744

Landowner:
Minami Investment, Inc.
4-3-5 Sotokanda Chiyoda-ku.
Chiyoda-ku, TKY, 101

Background
The applicant above submitted a completed water use permit application to the Commission on September 14, 1992. Specific information regarding the source, use, notification, objections, and field investigation are described in Attachment A. The Commission deferred action on this application on December 16, 1992 (lack of quorum) and on January 13, 1993 (for Honolulu BWS and State DHHL comments).

Analysis & Issues
This existing source uses fresh water from the Koolaupoko Aquifer System to irrigate the Minami golf course (100 acres). Although the water is technically potable, the Honolulu Board of water supply is not planning to develop the ground water in this area. There are two reasons for BWS’s position; 1) the water table in the immediate area is quite close to the ground surface (approximately 34 ft below the surface) posing a potential problem of contamination from any surface activities and 2) the U.S. Department of Defense Veterans Memorial Cemetery is located in the vicinity. In fact, BWS has recently turned over their wells to the cemetery since they do not plan to incorporate these wells into the BWS municipal system. This indicates that the aquifer in this area is actually a non-potable source.

The Commission requested comments from the State Department of Hawaiian Home Lands. Previously, DHHL had not sent in any written objections to the application but had verbally told staff that it had no objections to this application. As a matter of practice, DHHL may not file a written response to an application if they have no objections to an application. Staff is presently working on forms which will make it easier for DHHL, and others, to respond more easily and expeditiously to requests for comments.

Immediate adverse impacts on other local wells, streams, and the Koolaupoko Aquifer System are not anticipated. Impact to other wells should not be any different than has been over the past four (4) years. No specific objections to this application have been submitted to the Commission.
Actual reported historical pumpage from these wells has been less than the requested amount by an average of 44,000 gpd over the past three (3) years. The Pali golf course is a similar nearby use which uses even less water than the Minami golf course. However, the applicant feels they have yet to face drought conditions where their water use will undoubtedly increase.

RECOMMENDATION

That the Commission approve the issuance of an interim water use permit to the Minami Group (USA), Inc. to use 150,000 gallons per day for 100 acres of golf course irrigation from the Minami 1 & 2 Wells (Well Nos. 2347-02 & 03), subject to the standard water use permit conditions listed in Attachment B.

Respectfully submitted,

RAE M. LOUI
Deputy Director

APPROVED FOR SUBMITTAL:

JOHN P. KEPPELERII, Acting Director
WATER USE PERMIT DETAILED INFORMATION

Source Information

Aquifer: Koolaupoko System, Windward Sector, Oahu
Sustainable Yield: 43 mgd
Developable Yield: 13.7 mgd
Existing Water Use Permits: 0 mgd
Available Allocation: at least 13.7 mgd
Total of other pending allocations: 0 mgd

Well: Minami 1 Well (Well No. 2347-02)
Location: 45-550 Kionaole Rd., Oahu, TMK:4-5-42:10
Year Drilled: 1988
Casing Diameter: 8 in.

Elevations (msl)

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Well: Minami 2 Well (Well No. 2347-03)
Location: 45-550 Kionaole Rd., Oahu, TMK:4-5-42:1
Year Drilled: 1988
Casing Diameter: 8 in.

Elevations (msl)

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<td>Grouted Annulus Depth</td>
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ATTACHMENT A
Use Information
Quantity Requested: 150,000 gallons per day.
Existing Type Use: Golf course and landscape irrigation over 100 acres with fire protection of a clubhouse.
Place of Water Use: 45-550 Kionaole Rd. at TMK: 4-5-42:1
Reported Water Usage: 106,000 gpd (average over 3-years).
Nearby similar water usage: Pali Golf Course 71,800 mgd (average over same period.)

Nearby Surrounding Wells and Other Registered Ground Water Use
There are eight (8) other wells within a mile of the well. (see Exhibit 1.) Six (6) of these wells are currently in use by the U.S. Department of Defense for the Veterans Memorial Cemetery. Information from the registration program indicates there are possibly 43 existing wells in the Koolaupoko Aquifer System. Only seven (7) of these wells have been initially field checked and usage from these wells was 0 mgd. Many of the declarants, including the larger users, have not been completely field verified. Several are not in use or are rights claims. BWS operates wells in the area. However, the May 1992 draft of the Oahu Water Use and Development Plan estimated a current ground water use at 13.7 mgd as of 1990, which should include Minami usage, and the projected municipal demand for the year 2000 ranges from 18.0 to 18.9 mgd.

Public Notice
In accordance with HAR s13-171-17, a public notice was published in the Star Bulletin on October 12 & 19, 1992 and copies of the notice were sent to the Mayor’s office and the Board of Water Supply. Additional notice copies were sent to the County Council and Department of Water Supply. Copies of the completed application were sent to the Department of Health, Department of Hawaiian Home Lands, Office of Hawaiian Affairs, Aquatic Resources & Historic Preservation Divisions of the Department of Land and Natural Resources, and other interested parties for comments. Written comments and objections to the proposed permit were to be submitted to the Commission by November 2, 1992.

ATTACHMENT A
Objections

There were no objections filed by any person who has property interest in any land within the hydrologic unit of the source of water supply or any person who will be directly and immediately affected by the proposed water use. Other objections to the application were submitted by:

**Objector** | **Objection**
--- | ---
NHAC | General process of water use permit application. No specific objections to this application.
Honolulu BWS | Alluvial aquifer is thin and may not sustain pumpage. Also, Department of Defense wells for irrigation of Veterans Memorial Cemetery are in the vicinity.

Field Investigation

The water source and existing use was investigated on July 20, 1990 under the registration program and again on November 12, 1992. The primary well is 2347-02 while 2347-03 is a backup well.
STANDARD WATER USE PERMIT CONDITIONS

1. The ground water described in the water use permit may only be taken from the location described, used for the reasonable-beneficial use described, and at the location described above and in the attachments.

2. The water use must at all times meet the requirements set forth in HRS 174C-49 (1992), which means that it:
   a. Can be accommodated with the available water source;
   b. Is a reasonable-beneficial use as defined in section 174C-3;
   c. Will not interfere with any existing legal use of water;
   d. Is consistent with the public interest;
   e. Is consistent with state and county general plans and land use designations;
   f. Is consistent with county land use plans and policies; and
   g. Will not interfere with the rights of the Department of Hawaiian Home Lands as provided in section 221 of the Hawaiian Homes Commission Act.

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

4. The water use permit is subject to the requirements of the Hawaiian Homes Commission Act, as amended, if applicable.

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

6. The water use permit application and staff submittal approved by the Commission at its March 17, 1993 meeting are incorporated into the permit by reference.

7. The water use permit may be modified by the Commission and the amount of water initially granted to the permittee may be reduced if the Commission determines it is necessary to:
   a. Protect water sources in quantity, quality, or both;
   b. Meet other legal obligations including other correlative rights;
   c. Insure adequate conservation measures;
   d. Require efficiency of water uses;
   e. Meet reserved water requirements for future uses, provided that all legal existing uses of water as of June 1987, shall be protected;
   f. Meet legal obligations to the Department of Hawaiian Homes, if applicable; or
   g. Carry out such other necessary and proper exercise of the State’s and the Commission’s police powers under law as may be required.

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

8. An approved flowmeter(s) must be installed to measure withdrawals and a monthly record of withdrawals, water-levels, salinity, and temperature must be kept and reported to the Commission on a monthly basis;

ATTACHMENT B
9. The water use permit shall be subject to the Commission's periodic review of the applicable aquifer's sustainable yield. The amount of ground water use authorized by the permit may be reduced by the Commission if the sustainable yield of the Koolaupoko Aquifer System is reduced;

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

11. Within 30 days of issuance of the permit the applicant shall submit a water shortage plan that identifies what the applicant is willing to do should the Commission declare a water shortage in the Koolaupoko Ground Water Management Area.

12. The permittee shall request modification of the permit when necessary to comply with all applicable laws, rules, and ordinances which will affect the permittee's water use.

13. The water use permit shall be issued only after AG review.
Dr. Lewin stated that although Mr. Martin's comments are well taken, he assumed staff recommendation was made because the use is relatively small compared to the relatively large amount of water available for use. Mr. Hardy agreed with Dr. Lewin. He stated that this area is an existing water management area as opposed to a new water management area.

Unanimously approved as submitted (Lewin/Nakata).

In regards to Mr. Martin's comments on reasonable beneficial use, Mr. Ing mentioned that under existing uses in Rule 13-171-14, there is a section that states:

"whether the existing use is a reasonable beneficial use and is allowable under common law shall be determined by the Commission after a hearing"

He asked if this was something that needed to be determined by the Commission in connection with this application. If so, he recommended that the language be added to the recommendation. Discussion followed on the amount of water being requested and its uses. It was decided that staff would consult with Mr. Tam on the question of whether or not Rule 13-171-14(b) should be added to the recommendation in regards to reasonable beneficial use

Approved subject to review by the Attorney General's office regarding review Rule 13-171-14(b) on reasonable and beneficial use and how it applies to this application (Nakata/Ing).

ITEM 5

RESUBMITTAL, MINAMI GROUP (USA), INC. APPLICATION FOR A WATER USE PERMIT, MINAMI 1 & 2 WELLS (WELL NOS. 2347-02 & 03), KOOLAUPOKO GROUND WATER MANAGEMENT AREA, KANEHO, OAHU

Mr. Nakata excused himself from action on this application since he sits on the Board of the Minami Foundation. Dr. Lewin stated he had to give testimony at the Legislature and since Mr. Fujimura had not arrived yet, suggested a recess be called. It was decided that discussion would be held on this application until a quorum was present for action.

Mr. Hardy reviewed updated information for this application. Mr. Hardy mentioned that representatives from DHHL and BWS were available to answer questions from the Commission.

Charley Ice from DHHL agreed that they did not have specific objections to the project and that they provided comments to the effect that many of the applications that are circulated for review do not include pertinent facts that might help them evaluate the application. In this case, it was not clear if the application was for a present use or a proposed new use. Although reluctant to suggest proper procedure because they are a sister agency, DHHL favored the idea of looking at all of the competing uses within a designated area.

Mr. Ing recalled that from information at the last meeting that the applicant was actually using the water from the well prior to the designation. Therefore, while it is a very recent use, the claim is very likely to be that it was an existing use.

Mr. Ice stated that their staff has been working with Commission staff to recommend mechanisms by which the Commission could reserve water for Hawaiian Home lands.

Mr. Hardy added that staff has been trying to develop an easier process by which other agencies and interested parties could respond more quickly.
Mr. Alwyn Morisako representing BWS stated that they are not looking at this area for any source development, therefore they did not have any objections to the permit request.

Acting Chairperson Cox asked if BWS was not interested because it is a high-level aquifer in the alluvium. Mr. Morisako said that was correct, also it was a small source of perched water which they felt they could not develop.

A recess was called at 10:12 a.m. and reconvened at 10:40 a.m.

Mr. Sean Hoolihan, golf course superintendent, reviewed the project.

Dr. Lewin requested that the DOH golf course conditions be added to the permit. Mr. Sakoda explained that those conditions are added for all wells for proposed new golf courses but since this was an existing golf course it was not added. Mr. Cox stated that it could be added.

Unanimously approved with the added DOH conditions for golf courses (Lewin/Fujimura).

ITEM 6
APPLICATIONS FOR WATER USE PERMITS, EWA CAPROCK GROUND WATER MANAGEMENT AREA, EWA, OAHU

A. STAFF UPDATE

Ms. Loui stated that the documentation of the caprock model developed by Tom Nance and Tony McNulty for a group of developers (Haseko, Campbell Estate, Gentry, and HFDC) was given to staff for review. The model was reviewed by staff, USGS, Dan Lum of Water Resource Associates, and Chester Lao of BWS. Mr. Ed Bolke of USGS, a retired USGS ground water modeling expert, is with the Commission staff on an inter-agency loan program with USGS.

Mr. Bolke gave an overview of what he thought of the model and what the Commission needs to do to use a model for decision-making in the caprock area. His written comments are attached. Further discussion followed regarding the model.

Ms. Loui explained that staff's intent was to have Mr. Bolke develop a new model or to assist with the Ewa Marina's proposal to develop models of the caprock. In discussions with the Ewa Marina group it was brought up that there would be difficulty in ascertaining the local effect without developing a model of the region. Mr. Glenn Bauer reviewed staff's opinion of the proposed marina's effects on the aquifer.

Messrs. Nelson Lee introduced Alan Suwa (also from Haseko) and Dr. Brendan Harley of Camp Dresser McKee (CDM) from Boston. Mr. Lee explained that Haseko's efforts to build the marina in that area have encouraged them to extensively examine the caprock. As a result, there is better understanding today than there was several years ago. Dr. Harley has met with the Commission staff to examine what Haseko could do to go forward and the mitigation necessary should the marina impact surrounding land uses and the future of the caprock as a resource. They are aware that there are concerns and initiated efforts first with the Nance model to examine what is going on. External reviews have shown that there are a number of shortcomings and realize that more extensive efforts will be necessary to quantify what is going on. Mr. Lee proposed the new model be done with agency input so when the process is completed they would have something that would address everyone's concerns as well as accomplishing Haseko's objective to obtain a permit.
Mr. Sean A. Hoolehan  
Minami Group (USA), Inc.  
45-610 A Kionaole Road  
Kaneohe, Hawaii 96744

Dear Mr. Hoolehan:

Commission Submittal for your Water Use Permit  
Koolaupoko Ground Water Management Area, Oahu

The Commission on Water Resource Management will be acting on your second resubmittal for the water use permit application for your Minami 1 & 2 Wells (Well Nos. 2347-02 & 03) at its March 17, 1993 meeting at 9:00 a.m. at the Department of Land and Natural Resources Board Room.

A copy of the resubmittal for action on your water use application is enclosed for your information and review. You should attend the meeting to answer any questions the Commissioners may have regarding your application.

If you have any questions, please contact Mr. Roy Hardy at 587-0274.

Sincerely,

RAE M. LOUI  
Deputy Director

RH:fc

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

January 13, 1993

Gentlemen:

RESUBMITTAL
Minami Group (USA), Inc.
Application for a Water Use Permit
Minami 1 & 2 Wells (Well Nos. 2347-02 & 03)
Koolauopoko Ground Water Management Area, Kaneohe, Oahu

Applicant:
Minami Group (USA), Inc.
45-610 A Kionaole Rd.
Kaneohe, HI 96744

Landowner:
Minami Investment, Inc.
4-3-3 Sotokanda Chiyoda-k
Chiyoda-ku, TKY, HI 101

Background

The applicant above submitted a completed water use permit application to the Commission on September 14, 1992. Specific information regarding the source, use, notification, objections, and field investigation are described in Attachment A.

Analysis & Issues

This existing source uses potable water from the Koolauopoko Aquifer System for irrigation of Minami golf course (100 acres). Immediate adverse impacts on other local wells, streams, and the Koolauopoko Aquifer System are not anticipated. Impact to other wells should not be any different than has been over the past four (4) years. No specific objections to this application have been submitted to the Commission.

RECOMMENDATION

That the Commission approve the issuance of a water use permit to the Minami Group (USA), Inc. to use 150,000 gallons per day of potable water for use from the Minami 1 & 2 Wells (Well Nos. 2347-02 & 03), subject to the standard water use permit conditions listed in Attachment B.

Respectfully submitted,

RAE M. LOUI
Deputy Director

Attach.

APPROVED FOR SUBMITTAL:

WILLIAM W. PATY, Chairperson
WATER USE PERMIT DETAILED INFORMATION

Source Information

Aquifer: Koolaupoko System, Windward Sector, Oahu
Sustainable Yield: 43 mgd
Existing Water Use Permits: (1996 - 1997) 0 mgd
Available Allocation: 43 mgd
Total of other pending allocations: 0 mgd

Well: Minami 1 Well (Well No. 2347-02)
Location: 45-550 Kionaole Rd., Oahu, TMK:4-5-42:10
Year Drilled: 1988
Casing Diameter: 8 in.
Elevations (msl)

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Well: Minami 2 Well (Well No. 2347-03)
Location: 45-550 Kionaole Rd., Oahu, TMK:4-5-42:1
Year Drilled: 1988
Casing Diameter: 8 in.
Elevations (msl)

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ATTACHMENT A
Use Information

Quantity Requested: 150,000 gallons per day.
Existing Type Use: Golf course and landscape irrigation over 100 acres with fire protection of a clubhouse.
Place of Water Use: 45-550 Kionaole Rd. at TMK: 4-5-42: 1

Reported Water Usage: 106,000 mgd (average over 3-years).
Nearby similar water usage: Pali Golf Course 71,800 mgd (average over same period.)

Nearby Surrounding Wells and Other Registered Ground Water Use

There are eight (8) other wells within a mile of the well. (see Exhibit 1.) Six (6) of these wells are currently in use by the U.S. Department of Defense for the Veterans Memorial Cemetery. Information from the registration program indicates there are possibly 43 existing wells in the Koolaupoko Aquifer System. Seven (7) of these wells have been initially field checked but many of the declarants, including the larger users, have not been completely field verified. Several are not in use or are rights claims. From the limited field verification, 1987 estimated existing ground water use from the Koolaupoko Aquifer System is approximately 0 mgd. Of course, there is use from BWS and other obvious users but their use has not been verified at this time. However, the May 1992 draft of the Oahu Water Use and Development Plan estimated a current ground water use of 13.7 mgd as of 1990.

Public Notice

In accordance with HAR §13-171-17, a public notice was published in the Star Bulletin on October 12 & 19, 1992 and copies of the notice were sent to the Mayor’s office and the Board of Water Supply. Additional notice copies were sent to the County Council and Department of Water Supply. Copies of the completed application were sent to the Department of Health, Department of Hawaiian Home Lands, Office of Hawaiian Affairs, Aquatic Resources & Historic Preservation Divisions of the Department of Land and Natural Resources, and other interested parties for comments. Written comments and objections to the proposed permit were to be submitted to the Commission by November 2, 1992.

Objections

There were no objections filed by any person who has property interest in any land within the hydrologic unit of the source of water supply or any person who will be directly and immediately affected by the proposed water use. Other objections to the application were submitted by:

ATTACHMENT A
Chairperson and Members  
Commission on Water Resource Management  

Objector  

NHAC  

Honolulu BWS  

Objection  

General process of water use permit application. No specific objections to this application.

Alluvial aquifer is thin and may not sustain pumpage. Also, Department of Defense wells for irrigation of Veterans Memorial Cemetery are in the vicinity.

Field Investigation  

The water source and existing use was investigated on July 20, 1990 under the registration program and again on November 12, 1992. The primary well is 2347-02 while 2347-03 is a backup well.
STANDARD WATER USE PERMIT CONDITIONS

1. The ground water described in the water use permit may only be taken from the location described, used for the reasonable-beneficial use described, and at the location described above and in the attachments.

2. The water use must at all times meet the requirements set forth in HRS 174C-49 (1992), which means that it:
   a. Can be accommodated with the available water source;
   b. Is a reasonable-beneficial use as defined in section 174C-3;
   c. Will not interfere with any existing legal use of water;
   d. Is consistent with the public interest;
   e. Is consistent with state and county general plans and land use designations;
   f. Is consistent with county land use plans and policies; and
   g. Will not interfere with the rights of the Department of Hawaiian Home Lands as provided in section 221 of the Hawaiian Homes Commission Act.

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

4. The water use permit is subject to the requirements of the Hawaiian Homes Commission Act, as amended, if applicable.

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

6. The water use permit may be modified by the Commission and the amount of water initially granted to the permittee may be reduced if the Commission determines it is necessary to:
   a. Protect water sources in quantity, quality, or both;
   b. Meet other legal obligations including other correlative rights;
   c. Insure adequate conservation measures;
   d. Require efficiency of water uses;
   e. Meet reserved water requirements for future uses, provided that all legal existing uses of water as of June 1987, shall be protected;
   f. Meet legal obligations to the Department of Hawaiian Homes, if applicable; or
   g. Carry out such other necessary and proper exercise of the State's and the Commission's police powers under law as may be required.

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

7. The development of the ground water source shall be completed within twenty-four (24) months from the date the water use permit is approved.

8. An approved flowmeter(s) must be installed to measure withdrawals and a monthly record of withdrawals, water-levels, salinity, and temperature must be kept and reported to the Commission on a monthly basis;

ATTACHMENT B
9. The water use permit shall be subject to the Commission's periodic review of the applicable aquifer's sustainable yield. The amount of ground water use authorized by the permit may be reduced by the Commission if the sustainable yield of the KOOLAUPOKOAquifer System is reduced;

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

11. Within 30 days of issuance of the permit the applicant shall submit a water shortage plan that identifies what the applicant is willing to do should the Commission declare a water shortage in the KOOLAUPOKOGround Water Management Area.

12. The permittee shall request modification of the permit when necessary to comply with all applicable laws, rules, and ordinances which will affect the permittee's water use.

13. The water use permit granted shall be an interim water use permit, as allowed under HAR a13-171-21. The final determination of the water use quantity shall be made within five years of the filing of the application to continue the existing use.

14. The water use permit shall be issued only after AG review.
1993 January 13

TESTIMONY TO THE STATE OF HAWAII COMMISSION ON WATER RESOURCE MANAGEMENT

Item 2 Minami 1 & 2 Wells

Analysis & Issues

Statement that "Immediate adverse impacts on other local wells, streams, and the Koolaupoko Aquifer system are not anticipated" could imply that some future adverse impacts may be anticipated. If so, what are they? If not, perhaps clarifying language, "Neither immediate nor long term adverse impacts..." could be inserted.

Statement that "Impact to other wells should not be any different than has been over the past four years" could imply that such impacts have occurred. What has the impact been over the past 4 years?

While "No specific objections to this application have been submitted to the Commission", this portion of the record should reflect that NHAC submitted general objections to this application and to COWRM's overall processing of water use permit applications. We feel that this is an important issue that should be mentioned here as well as in the detailed information.

WATER USE PERMIT DETAILED INFORMATION

Source Information

Total of other pending allocations:

Prior to further processing of water use permit applications for this aquifer, three accountings should be completed:

1. Yield reserved to Hawaiian Home Lands and its hydrologic, hydraulic, and temporal characteristics.
2. Yield reserved to Board of Water supply and its hydrologic, hydraulic, and temporal characteristics.
3. Total of all other applications received within one year from the effective date of designation, and their individual hydrologic, hydraulic, and temporal characteristics.

Subsequent analysis, assessment, and evaluation of these accountings could be enhanced by COWRM-directed development of an
optimized groundwater development scheme for the aquifer (well location, construction, and extraction details). Each application could then be assessed for its "goodness-of-fit" with the optimization.

Detailed information should include dates of well construction and pump installation permit issuance.

Use Information

Reported Water Usage: 106,000 mgd (average over three years).

Minutes of the 12/16/92 COWRM meeting state that applicant's water numbers were taken from 1992. If applicant is indeed now providing a three-year average, why is the quantity requested almost 50% more than the previous average use?

Field Investigation

What were the results of these investigations?

STANDARD WATER USE PERMIT CONDITIONS

6.e. This condition seems to elevate existing uses as of June 1987 to a higher priority and legal standing than reserved water rights. What is the rationale for such a condition? Such a condition seems to contradict other conditions such as 6.f., 4., and 1.g.

11. NHAC would like to see more specific COWRM guidelines for water shortage planning.

Item 3 Ouli Wells

Analysis:

Please list the current parties to the MOU. NHAC is concerned that the MOU may only be limited to existing users and that Hawaiian concerns are under- and mis-represented.

Are the wells to be dedicated to the County or will they be part of a private system? If it is to be a private system, please provide the name and PUC registration number of the licensed water supply company.

Item 4 Kealakehe-DWS Well

Water Availability:

What is existing use and estimated 2010 needs from the Keauhou System?

If the developing pattern of revising County Water Use and Development Plans after wells are successfully drilled continues,
the Plans become meaningless.

Item 5  Hualalai Exploratory Well

Landowner:  What is the land title status of the State lands involved?

Action Requested:  What is the proposed type of use if water source development proves feasible?

Water Availability:  What is existing use and estimated 2010 needs from the Keauhou System?

If the developing pattern of revising County Water Use and Development Plans after wells are successfully drilled continues, the Plans become meaningless. In this case, because of the serious land use concerns in the area, it seems that the County Water Use and Development Plan as it now exists and other indicators of County land use plans for the area should be carefully examined in conjunction with the proposed water source development.

Item 6  Kealia-O'Shea Well

Analysis:  In cases such as this where proposed well sites are close to the shoreline, it seems that COWRM should be concerned with possible interference with coastal springs and submarine discharges, as well as with domestic wastewater and irrigation return flows.

Item 7  Kohanaiki-Nansay Well 2

Water Availability:  What is existing use and estimated 2010 needs from the Keauhou System?

Item 8  Honokohau-DWS Exploratory Well

Water Availability:  What is existing use and estimated 2010 needs from the Keauhou System?

Item 9  Kalaoa Well A

Water Availability:  What is existing use and estimated 2010 needs from the Keauhou System?

Item 10  Utility Bridge at Makawao Stream

ANALYSIS

Violation of Chapter 13-169-50, HAR. Staff interpretation is that the regulatory stream channel is the natural or artificial watercourse with definite bed and banks that does not necessarily include the floodplain.

The new wording of this interpretation ("that does not necessarily
include the floodplain." implies that there may be circumstances where the regulatory stream channel does include the floodplain. What are these circumstances?

NHAC would like to once again point out that the wording of the statute implies that the watercourse can exist both within and outside of the confines of the bed and banks - while bed and banks are necessary components of the watercourse, they do not necessarily define it.

Item 12 KAIPAPAU Well

WATER USE PERMIT DETAILED INFORMATION

Source Information

Total of other pending allocations:

Prior to further processing of water use permit applications for this aquifer, three accountings should be completed:

1. Yield reserved to Hawaiian Home Lands and its hydrologic, hydraulic, and temporal characteristics.
2. Yield reserved to Board of Water supply and its hydrologic, hydraulic, and temporal characteristics.
3. Total of all other applications received within one year from the effective date of designation, and their individual hydrologic, hydraulic, and temporal characteristics.

Subsequent analysis, assessment, and evaluation of these accountings could be enhanced by COWRM-directed development of an optimized groundwater development scheme for the aquifer (well location, construction, and extraction details). Each application could then be assessed for its "goodness-of-fit" with the optimization.

STANDARD WATER USE PERMIT CONDITIONS

6.e. This condition seems to elevate existing uses as of June 1987 to a higher priority and legal standing than reserved water rights. What is the rationale for such a condition? Such a condition seems to contradict other conditions such as 6.f., 4., and 1.g.

11. NHAC would like to see more specific COWRM guidelines for water shortage planning.
Mr. Sean A. Hoolehan
Minami Group (USA), Inc.
45-610 A Kionaole Rd.
Kaneohe, HI 96744

Commission Submittal for your Water Use Permit
Koolaupoko Ground Water Management Area, Oahu

Dear Mr. Hoolehan:

The Commission on Water Resource Management will be acting on your water use permit application for your MINAMI 1 & 2 Wells (Well Nos. 2347-02) at its January 13, 1993 meeting at 9:00 a.m. at the Department of Land and Natural Resources Board Room.

A copy of the submittal for action on your water use application is enclosed for your information and review. You may wish to attend the meeting in case the Commissioners have questions regarding your application. Otherwise, we will notify you of the Commission's decision soon thereafter.

If you have any questions, please contact Roy Hardy at 587-0225.

Sincerely,

RAE M. LOUI
Deputy Director
Mr. Sean A. Hoolihan
Minami Group (USA), Inc.
45-610 A Kionaoile Rd.
Kaneohe, HI 96744

Commission Submittal for your Water Use Permit
Koolaulupoko Ground Water Management Area, Oahu

Dear Mr. Hoolihan:

The Commission on Water Resource Management will be acting on your water use
permit application for your MINAMI 1 & 2 Wells (Well Nos. 2347-02) at its January 13, 1993
meeting at 9:00 a.m. at the Department of Land and Natural Resources Board Room.

A copy of the submittal for action on your water use application is enclosed for your
information and review. You may wish to attend the meeting in case the Commissioners have
questions regarding your application. Otherwise, we will notify you of the Commission's
decision soon thereafter.

If you have any questions, please contact Roy Hardy at 587-0225.

Sincerely,

RAI M. LOUI, P.E.
Deputy Director

RH:ky

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TRANSMISSION REPORT

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

January 13, 1993

Gentlemen:

RESUBMITTAL
Minami Group (USA), Inc.
Application for a Water Use Permit
Minami 1 & 2 Wells (Well Nos. 2347-02 & 03)
Koolaupoko Ground Water Management Area, Kaneohe, Oahu

Applicant:
Minami Group (USA), Inc.
45-610 A Kionaole Rd.
Kaneohe, HI 96744

Landowner:
Minami Investment, Inc.
4-3-3 Sotokanda Chiyoda-ku
Chiyoda-ku, TKY, HI 101

Background

The applicant above submitted a completed water use permit application to the Commission on September 14, 1992. Specific information regarding the source, use, notification, objections, and field investigation are described in Attachment A.

Analysis & Issues

This existing source uses potable water from the Koolaupoko Aquifer System for irrigation of Minami golf course (10 acres). Immediate adverse impacts on other local wells, streams, and the Koolaupoko Aquifer System are not anticipated. Impact to other wells should not be any different than has been over the past four (4) years. No specific objections to this application have been submitted to the Commission.

RECOMMENDATION

That the Commission approve the issuance of a water use permit to the Minami Group (USA), Inc. to use 150,000 gallons per day of potable water for use from the Minami 1 & 2 Wells (Well Nos. 2347-02 & 03), subject to the standard water use permit conditions listed in Attachment B.

Respectfully submitted,

RAE M. LOUI
Deputy Director

APPROVED FOR SUBMITTAL:

TRANSMISSION REPORT

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43 wells
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Company: "Minami G.C."  
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Company:   MINAM G.C.

From:      Roy HARDY

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          FOR ANY CHANGES. RESUBMITTAL OF YOUR

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Minami Golf Course Actual Use

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</thead>
<tbody>
<tr>
<td>Rainfall (in)</td>
<td>89</td>
<td>60</td>
<td>88</td>
<td></td>
</tr>
<tr>
<td>Minami 1 &amp; 2 (ann. ave. gpd)</td>
<td>86,000</td>
<td>135,000</td>
<td>96,000</td>
<td>106,000</td>
</tr>
<tr>
<td>Pali GC (ann. ave. gpd)</td>
<td>50,400</td>
<td>50,000</td>
<td>115,000</td>
<td>71,800</td>
</tr>
</tbody>
</table>

Notes:
* '92 includes 1/92 through 09/92
+ 18-yr average annual rainfall is approximately 80 in.
Mr. Tam brought to the Commission's attention that the submittal suggests the unofficial sustainable yield for the area is between 10 and 15 mgd and Mr. Fujimura's revised number for approval is 16 mgd. He inquired of the staff on the sustainable yield level because technically the Commission would be approving a use in excess of the yield.

Mr. Hardy explained that staff is working with a range. Ms. Loui added that the lines of the sectors are artificial. The Puuloa System exists and is separate from the next. When the public hearings are held in January, staff will be recommending the adoption of the larger sector but not necessarily the "hard numbers" for the systems.

Mr. Tam had no problem with the explanation if the Commission was satisfied but wanted to assure that the records reflect that the separation of the districts are geographically artificial and that the real consideration is that the larger area still comes within the overall sustainable yield.

Ms. Joyce Brown of NHAC asked if by using the five-year average would it encourage the user to waste water to show they are using a higher amount of water. Mr. Fujimura said if it was anyone other than OSc., they may question it but in previous discussions information supplied was reviewed in detail. They are not water wasters and the whole system was water conservation oriented. He therefore had a very high confidence level where OSc. was concerned. Mr. Cox agreed with Mr. Fujimura and added that the numbers were based upon the needs of the plant.

Unanimously approved as amended (Fujimura/Cox).

**ITEM 6**

**MINAMI GROUP (USA), INC., APPLICATION FOR A WATER USE PERMIT, MINAMI 1 WELL, Koolaupoko Ground Water Management Area, Kaneohe, Oahu**

Mr. Nakata stated he was in conflict on this item because he sits on the Board of the Minami Foundation.

Mr. Sean Houlihan, Golf Course Superintendent, stated that he was notified several hours before the meeting that staff was not in agreement with the quantity requested by Minami Group. He explained that their water numbers were taken from 1992. January through July 1992 had been their driest period in the 3 1/2 years they had been working on the project. They had a significantly wet fall and their numbers were very low since September and have not irrigated the course since September. He stated they were comfortable with 150,000 gallons per day as an average number and would need to use conservation methods at certain times of the year to stay with that amount.

Deferred due to lack of quorum.

**ITEM 7**

**REVISION - HONOLULU BOARD OF WATER SUPPLY APPLICATION FOR A WATER USE PERMIT, HAWAIIAN ELECTRIC COMPANY WAIAU TUNNEL, WAIAU, OAHU**

Amendments made to submittal by staff:

Under Action Requested:

Hawaiian Electric Company 1 mgd for industrial use through BWS
Honolulu BWS [3 to 5 mgd] 1 mgd for municipal use

Under Recommendation:

...a water use permit to use [five to seven mgd] three mgd from the tunnel...
Chairperson and Members
Commission on Water Resource Management
State of Hawaii
Honolulu, Hawaii

December 16, 1992

Minami Group (USA), Inc.
Application for a Water Use Permit
Minami 1 Well, Well No. 2347-02
Koolaupoko Ground Water Management Area, Kaneohe, Oahu

Applicant:
Minami Group (USA), Inc.
45-610 A Kionaole Rd.
Kaneohe, HI 96744

Landowner:
Minami Investment, Inc.
4-3-3, Sotokanda Chiyoda-Ku
Chiyoda-Ku, TKY 101

Background

A completed application was submitted to the Commission on September 14, 1992. The application is for two (2) existing wells with the following hydrologic information:

Source Information

Aquifer:
Koolaupoko System, Windward Sector, Oahu

Sustainable Yield:
43 mgd

Existing Water Use Permits:
0 mgd

Available Allocation:
43 mgd

Total of other pending allocations:
0 mgd

Well:
Minami 1 Well, Well No. 2347-02

Location:
45-550 Kionaole Rd., Oahu, TMK:4-5-42:10

Year Drilled:
1988

Casing Diameter:
8 in.

Water Level:

Ground:
200.5 ft.

234 ft.

196 ft.

106 ft.

104 ft.

130 ft.

20 ft.

Total Depth:

Grouted Annulus Depth:

ITEM 6
Minami 2 Well, Well No. 2347-02
45-550 Kionaole Rd., Oahu, TMK:4-5-42:1
1988
8 in. Elevations (msl)

Well: 219 ft.
Location: 246 ft.
Year Drilled: 206 ft.
Casing Diameter: 126 ft.
Water Level: 116 ft.
Ground: 130 ft.
Bottom of Solid Casing: 70 ft.
Bottom of Perforated: Total Depth: 126 ft.
Bottom of Open Hole: 116 ft.
Grouted Annulus Depth: 130 ft.

Use Information

Total Quantity Requested: 150,000 gallons per day.
Existing Water Use: Golf course and landscape irrigation covering 100 acres with fire
protection of a clubhouse.
Place of Water Use: 45-550 Kionaole Rd. at TMK: 4-5-42:1

Nearby Surrounding Wells

There are 8 other wells within a mile of the well. (see Exhibit 1.) 6 of these wells are
currently in use by the U.S. Department of Defense for the Veterans Memorial Cemetery.

Public Notice

In accordance with HAR §13-171-17, a public notice was published in the Star
Bulletin on October 12 & 19, 1992 and copies of the notice were sent to the Mayor’s office
and the Board of Water Supply. Additional notice copies were sent to the County Council
and Department of Water Supply. Copies of the completed application were sent to the
Department of Health, Department of Hawaiian Home Lands, Office of Hawaiian Affairs,
Aquatic Resources & Historic Preservation Divisions of the Department of Land and Natural

2
Objections

There were no objections filed by any person who has property interest in any land within the hydrologic unit of the source of water supply or any person who will be directly and immediately affected by the proposed water use. Other comments to the application were submitted by:

<table>
<thead>
<tr>
<th>Objector</th>
<th>Objection</th>
</tr>
</thead>
<tbody>
<tr>
<td>NHAC</td>
<td>General process of water use permit application. No specific objections to this application.</td>
</tr>
<tr>
<td>Honolulu BWS</td>
<td>Alluvial-aquifer is thin and may not sustain pumpage. Also, Department of Defense wells for irrigation of Veterans Memorial Cemetery are in the vicinity.</td>
</tr>
</tbody>
</table>

Field Investigation

The water sources and existing use were investigated on July 20, 1990 under the registration program and again on November 12, 1992. The primary well is 2347-02 while 2347-03 is a backup well.

Analysis

These existing sources use potable water for golf course and landscape irrigation of over 100 acres. Impact on other local wells should not be any different than it has been over the past 4 years. No specific objections to this application have been submitted to the Commission. There would appear to be ample supply available to support this demand although there has been concern over the sustainability of the thin alluvial aquifer source. This would require close monitoring of the source(s) to detect any degradation of the aquifer.

RECOMMENDATION:

That the Commission approve the issuance of a water use permit to the Minami Group (USA), Inc. to use a total of 150,000 gallons per day of potable water from the Minami 1 & 2 Wells, Well Nos. 2347-02 & 03, for irrigation of 100 acres of golf course irrigation and landscape including club house fire protection subject to the following conditions:

1. The water use authorized by the permit must be for the reasonable-beneficial use and from the source described in the permit.
2. The water use and withdrawal shall not adversely affect existing or future legal uses of water in the area, including any surface water or established instream flow standards.
Chairperson and Members
Commission on Water Resource Management   December 16, 1992

3. The water use will not interfere with the rights of the Department of Hawaiian Home Lands as provided in section 221 of the Hawaiian Homes Commission Act.

4. The applicant shall provide and maintain an approved meter for measuring and reporting total water usage on a monthly basis.

5. Prior to issuance of the permit, the applicant shall submit a water shortage plan, as required by §13-171-42(c), that identifies what the applicant is willing to do should the Commission declare a water shortage in the Koolaupoko Ground Water Management Area.

6. Modification of any permit condition shall be approved by the Commission. Modification of any permit condition without notification may result in the revocation of the water use permit.

7. The applicant shall update and modify permit when necessary to comply with all applicable laws, rules, and ordinances.

8. The final permit shall be issued only after review by the Attorney General.

Respectfully submitted,

RAE M. LOUI
Deputy Director

Attach.

APPROVED FOR SUBMITTAL:

WILLIAM W. PATY, Chairperson
November 12, 1992

MEMORANDUM FOR THE RECORD

FROM: Susan Swanson

REGARDING: Reinspection of Minami Wells # 1 (2347-02) and Minami Well # 2 (2347-03)

I met with Sean Hoolehan of Minami Group, USA on November 12, 1992 in response to Minami Group's Ground Water Management Zone application for a combined use of 150,000 gpd. The purpose of the second inspection was to complete information not in the well file and to update photos of the use area, under construction during the first visit in 7/90.

During the inspection, I recorded information from the pump on Well #1 such as the manufacturer's name (50 hp, 350 gpm Peabody Floway Pump), the pump serial # (90-31938), meter brand (McCrometer) & serial #(90 6 499) and meter reading (22,939,000).

A submersible pump is currently installed on Well # 2 (State Well # 2347-03). In 1989, a note on the declaration for Well # 2 stated that a 50 hp submersible pump had temporarily been installed during the construction but would be replaced by a vertical shaft pump; I was not able to obtain the submersible pump manufacturer's name and specific information for that pump from Mr. Hoolehan, nor is the information contained in the well file. A McCrometer meter, serial # (88 6 23348) is installed on discharge from the pump with a meter reading (36,350,400 gallons) taken on 11/12/92.

In July, 1990, Well # 2 was the primary well during the golf course construction and landscaping. Mr. Hoolehan stated that Minami Well #1 is now used as the primary source, with Minami Well # 2 (State Well 2347-03) being used as a backup supply. Well # 2 is used several times per month to maintain the pump and provide a substitute supply of water when the pump on Well # 1 is undergoing maintenance. A pump from either well fills a .5 million gallon storage tank which drains into a 6 million gallon pond which is used to irrigate Koolau Golf Course. In addition the .5 million gallon tank is used to provide firefighting protection.

Mr. Hoolehan stated that the amount of water needed to irrigate the golf course varies depending on the weather and the season of the year. The greatest amount of water was used during the period that the grass was being planted and reaching it's full growth. Mr. Hoolehan estimated use that may average 150,000 gpd throughout the year, while the actual use may vary between rainy times that the landscape does not need to be watered to dry periods when as much as 500,000 gallons per day are needed.

Note the attached sheets for each well and photographs of the wells and use area.
CORRECTED LOCATION of Minami Well # 1 (State Well # 2347-02). This was plotted with the corrected coordinates provided on the drillers report and confirmed with the use of the GPS (Global Positioning System Equipment) during the field inspection.
MEMO FOR THE RECORD REGARDING UPDATING INFORMATION FROM WATER USE DECLARATIONS FOR WELL PERMIT APPLICATIONS

See Photos # 1 - 3 of

Minami Well # 1 (State Well # 2347-02)

Additional information obtained by X field inspection or _ telephone interview.

Date: 11/12/92 By: Susan Swanson, CWRM Staff

Applicant: Minami Group Telephone #: (Sean Hoolehan) 236-4653

Well #: 2347-02 Minami Well # 1 (This is the primary pump used most of the time.)

Pump type: i.e. submersible, electric, portable gasoline, etc.: Electric, vertical shaft

Make of Pump installed: Peabody Floway HP: 50 Pump Serial #: 90-31938

Size of intake: 8" Size of output: 8" GPM: 350

USE INFORMATION: Is the system metered? X YES, _ NO

Meter Manufacturer: McCrometer Meter Serial #: 90 6 499

Meter Reading on 11/12/92: 22,939,000 (last two numbers- fixed zeros.)

Area (Acres) of Use: A total of 100 acres of landscape are irrigated by either well.

Use water for: Irrigation of Koolau Golf Course. The greatest amount of water usage was used during grow-in period of golf course grass and landscaping.

The pump automatically fills a .5 million gallon storage tank (which is also used for firefighting protection). The tank empties into a 6 million gallon pond which feeds sprinkler systems.

Estimated use averaged over a year: 150,000 gallons per day combined pumpage from both wells has been estimated as yearly average.

How does use vary throughout the year? The use varies with the rainfall. During times of frequent rainfall, they do not need to irrigate the golf course. Pumpage increases during dry periods of the year.

Notes: Well coordinates confirmed with GPS to be:

latitude: 21-23-11
longitude: 157-47-41
MINAMI GROUP WELL # 1
(State Well 2347-02)
November 12, 1992

Photos # 1 to 3 Three views of the 50 hp Peabody Floway Pump used as a primary well for Koolau Golf Course. A McCrometer meter is installed to record pumpage.
MEMORANDUM

TO: Rae M. Loui, Deputy Director
Commission on Water Resource Management

FROM: Don Hibbard, Administrator
Historic Preservation Division

SUBJECT: Water Use Permit Application, Koolaupoko
Ground Water Management Area,
Well No. 2347-02 & 03 (Minami Group)
Kane'ohé, Ko'olaupoko, O'ahu
TMK: 4-5-42

This application is for the use of water from existing facilities. Therefore, we believe that any permits granted this application will have "no effect" on historic sites.

TD: amk
Mr. Sean A. Hoolehan  
Minami Group (USA), Inc.  
45-610-A Kionaole Road  
Kaneohe, HI 96744

Dear Mr. Hoolehan:

Application for a Water Use Permit  
Koolaupoko Ground Water Management Area, Oahu

We acknowledge receipt, on September 14, 1992, of your completed water use permit application for the Minami 1 & 2 Wells (Well Nos. 2347-02 & 03). You can expect your application to be processed within ninety (90) days from the date of receipt unless there are objections to your application.

We will be sending you a copy of the public notice for your application and any further information regarding the status of your application. In addition, we may need to visit and verify your proposed water source and use sites if we have not done so already under our registration program.

If you have any questions, please contact Ed Sakoda at 587-0225.

Sincerely,

RAE M. LOUI  
Deputy Director
Exhibit 1
FIELD MEMORANDUM

DECLARANT (File Reference)  Miromu Group  DATE  7/26/90

PRESENT  Guy Yasuda, Keith Yoshimoto, Dana Yoshimoto

LOCATION  4-5-42-1:10

SOURCE(S)  2 wells (2347-03; 2347-02)

USE(S)  Irrigation of 10 acres of golf course landscape
        and fire protection

FIELD NOTES  There are 2 wells, well #2347-02 is in use as the
        pump was being installed at the time. Well #2347-03 is currently
        being used with an electric 50 hp, 350 gpm pump to irrigate
        the golf course landscape and fire protection. As of Oct. 1989
        the totalizer reading on well #2347-02 indicates that about
        273,000 gallons have been pumped. Once the golf course is
        completed, the two wells will pump water to a 1 million
        gallon pond and from the pond, an electric 250 hp, 1750
        gpm pump will pump the water to a 0.5 million gallon
        steel reservoir. From there the water will be used for
        irrigation of the golf course.
FIELD INSPECTION INFORMATION CHECKLIST  (Ver 7/27/90)

PART I: USE OF WATER

1. Tax Map Key where the water is used: A - 5 - 42: 10. Does the declarant own this land? Yes If not, who does? __________________________

2. What is the water used for? Irrigation / Fire protection
   If for irrigation, how many acres are being irrigated by crop type? About 100
   Acres of Golf Course Turfgrass
   If for drinking, how many houses? __________ by how many people?

3. Is the quantity of water use being measured? Yes If yes, document the location of the measurement point and method of measurement; also get use records if these were not submitted previously.

4. If this person takes from a multi-user pipe or ditch system:
   How is the water taken from the system? ___________________________
   What is the capacity for taking (gpm)? ___________________________
   How often is it taken (used)? ___________________________

PART II: WATER SOURCE

Source #: 2347 - 02 Name: Miramul Well #1

1. Where does the water come from / what kind of source is this? Well
   Types of sources include:
   1) Wells (drilled, dug, tunnel)
   2) Diversions (ditch, pipe, or pump from a stream, spring, swamp, pond)
   3) Multi-source systems. (Declared use cannot be traced to a single well or diversion)
   NOTE: If a multi-user system: take from pipe or ditch (need to determine whether this is a multi-source or single-source system before the data can be input to the computer
   4) Instream (i.e., livestock drink from stream, or crops planted along water edge)

2. Show the source location on maps, determine latitude and longitude, and document the nature of source development by measurements, sketches, and photographs. How is the water taken? Electric 30 hp pump
   What is the capacity for taking (gpm)? 350
   How often is it taken (used)? ___________________________

3. Tax Map Key at the source: A - 5 - 42: 10. Determine declarant’s relation to source. Does the declarant:
   1) Operate and maintain the source? Yes If not, who does? __________________________
   2) Own the land at the source? Yes If not, who does? __________________________
   3) Use the water from this source? Yes If not, who does? __________________________
   4) Own the land where the water is being used? Yes

4. Does anyone else also use water from this source? No If yes, is their use included in this user’s declaration? ______ Who are the other users? Did they file? ______

VERIFIED BY: Guy / Keith DATE: 7/20/90
FIELD INSPECTION INFORMATION CHECKLIST  
(Ver 7/27/90)

PART I: USE OF WATER

Declarant’s File Reference: Mimeo Crop

1. Tax Map Key where the water is used: A - 5 - A2: 1. Does the declarant own this land? **Yes**. If not, who does? ________

2. What is the water used for? **Irrigation** / **Fire Protection**
   If for irrigation, how many acres are being irrigated by crop type? **About 100**
   If for drinking, at how many houses? ________ by how many people? ________

3. Is the quantity of water use being measured? **Yes**. If yes, document the location of the measurement point and method of measurement; also get use records if these were not submitted previously.

4. If this person takes from a multi-user pipe or ditch system:
   How is the water taken from the system? ______________
   What is the capacity for taking (gpm)? ________
   How often is it taken (used)? ________

PART II: WATER SOURCE

Source #: 2547 - C3  Name: Mimeo Well #2

1. Where does the water come from / what kind of source is this? **Well**

   Types of sources include:
   1) Wells (drilled, dug, tunnel)
   2) Diversions (ditch, pipe, or pump from a stream, spring, swamp, pond)
   3) Multi-source systems. (Declared use cannot be traced to a single well or diversion)
   NOTE: If a multi-user system: take from pipe or ditch (need to determine whether this is a multi-source or single-source system before the data can be input to the computer
   4) Instream (i.e., livestock drink from stream, or crops planted along water edge)

2. Show the source location on maps, determine latitude and longitude, and document the nature of source development by measurements, sketches, and photographs. How is the water taken? **Electric 50 HP pump**
   What is the capacity for taking (gpm)? 350
   How often is it taken (used)? ________

3. Tax Map Key at the source: A - 5 - A2: 1. Determine declarant’s relation to source. Does the declarant:
   1) Operate and maintain the source? **Yes**. If not, who does? ________
   2) Own the land at the source? **Yes**. If not, who does? ________
   3) Use the water from this source? **Yes**. If not, who does? ________
   4) Own the land where the water is being used? **Yes**

4. Does any one else also use water from this source? **No**. If yes, is their use included in this user’s declaration? ______ Who are the other users? Did they file? ________

VERIFIED BY: Guy/Keith  DATE: 8/6/90
overview of Minami Group golf course pond

overview of Minami Group golf course
Well #2 used for construction & irrigation
2.347-03

Well #1 pump installed but not in use
2.347-02
pump house for pump from pond to golf course

6 million gallon pond (man made)
view of pump from pond

close up of pump from pond
0.5 million gallon reservoir (overview)

0.5 million gallon reservoir
November 2, 1992

Mrs. Rae M. Loui
Deputy Director
Commission on Water Resource Management
Department of Land and Natural Resources
State of Hawaii
P. O. Box 621
Honolulu, Hawaii 96809

Dear Mrs. Loui:

Subject: Water Use Permit Application for Koolaupoko Groundwater Management Area, Minami Group (USA) Inc. Well No. 2347-02, 03

Thank you for the opportunity to comment on the permit application. The proposed wells are in the vicinity of a group of wells which we turned over to the U.S. Department of Defense to irrigate the Veterans Memorial Cemetery in Kaneohe. The alluvial-volcanic ash aquifer is rather thin and may not sustain the additional pumpage without causing adverse effects.

If you have any questions, please call Herbert H. Minakami at 527-6183.

Very truly yours,

KAZU HAYASHIDA
Manager and Chief Engineer
MEMORANDUM

TO: Rae M. Loui, Deputy Director
Commission on Water Resource Management

FROM: Henry Sakuda, Administrator
Division of Aquatic Resources

SUBJECT: Comments on Water Use Permit Application for Minami Group Well Nos. 2347-02 & 03 at Kaneohe, Oahu.

The proposal involves installation of two wells to access basal water for irrigation of the Pali Golf Course irrigation. Approximately 0.15 million gallons will be pumped per day.

There appears to be no potential for impact on significant surface waters. We therefore have no objections with reference to the potential effects on the aquatic biota.
Mr. Clayton H. W. Hee  
Chairman & Trustee At Large  
Office of Hawaiian Affairs  
711 Kapiolani Blvd., Suite 500  
Honolulu, Hawaii 96813-5249

Attn: Ms. Linda Delaney, Land & Natural Resources Division

Dear Mr. Hee:

Notice of an Application for a Water Use Permit  
KOOLAUPOKO Ground Water Management Area, OAHU

Transmitted for your review and comment is a copy of a water use permit application for Minami Group (USA), Inc. for Well No. 2347-02 & 03.

If you have any objections or comments on the above application, please submit them to us in writing by November 2, 1992.

Should you have any questions, please contact the Commission on Water Resource Management at 587-0225.

Very truly yours,

WILLIAM W. PATY

Enc.
Honorable Gary Gill, Chair
City Council
City & County of Honolulu
City Hall
Honolulu, Hawaii 96813

Dear Mr. Gill:

Notice of an Application for a Water Use Permit
KOOLAUPOKO Ground Water Management Area, OAHU

In accordance with the Department of Land and Natural Resource Administrative Rule, Section 13-171-17(a), we are sending you a copy of the public notice for the water use permit application for Minami Group (USA), Inc. for Well No. 2347-02 & 03 which was published in the Honolulu Star Bulletin.

In addition, Section 13-171-13(b) of our Administrative Rules states:

"Within sixty days after receipt of notice of a permit application, the county shall inform the commission if the proposed use is inconsistent with the county land use plans and policies."

We have attached a copy of the application for your review and would appreciate receiving your comments, within the next sixty (60) days, on whether this water use is consistent with county plans and policies.

Very truly yours,

WILLIAM W. PATY

Enc.
MEMORANDUM

TO: Honorable Hoaliku L. Drake, Director
   Department of Hawaiian Home Lands

FROM: William W. Paty, Chairperson

SUBJECT: Water Use Permit Application
         KOOLAUPOKO Ground Water Management Area, OAHU

Transmitted for your review and comment is a copy of a water use permit application for Minami Group (USA), Inc. for Well No. 2347-02 & 03.

If you have any objections or comments on the above application please submit them to us in writing by November 2, 1992.

Should you have any questions, please contact the Commission on Water Resource Management at 587-0225.

Enc.
Honorable Frank F. Fasi, Mayor
City & County of Honolulu
City Hall
Honolulu, Hawaii 96813

Attn: Mr. Jeremy Harris

Dear Mayor Fasi:

Notice of an Application for a Water Use Permit
KOOLAUPOKO Ground Water Management Area, OAHU

In accordance with the Department of Land and Natural Resource Administrative Rule, Section 13-171-17(a), we are sending you a copy of the public notice for the water use permit application for Minami Group (USA), Inc. for Well No. 2347-02 & 03 which was published in the Honolulu Star Bulletin.

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We have attached a copy of the application for your review and would appreciate receiving your comments, within the next sixty (60) days, on whether this water use is consistent with county plans and policies.

Very truly yours,

WILLIAM W. PATY

Enc.
1. (a) APPLICANT
Firm/Name: Minami Group (USA), Inc.
Contact Person: Sean A. Hoolehan
Address: 45-510 A Kionaole Rd, Kaneohe, HI 96744
(b) LANDOWNER
Firm/Name: Minami Investment, Inc.
Contact Person: Tetsuo Kato
Address: 4-3-3, Sotokanda Chiyoda-ku, Chiyoda-ku, Tokyo 101

2. WATER WAYS: Windward-306

3. (a) EXISTING SOURCE NAME AND STATE NUMBER:

3. (b) PROPOSED (NEW) SOURCE NAME:

4. SOURCE LOCATION: Address 45-550 Kionaole Rd., Kaneohe HI
   Tax Map Key 4-5-42
   (Attach a USGS map, scale 1"=2000', and a property tax map showing source location referenced to established property boundaries.)

5. SOURCE TYPE (check one): □ Stream □ Bezel □ Dike-confined □ Perched □ Caprock

6. METHOD OF TAKING WATER (check one): □ Artesian Flow □ Well & Pump □ Diverted Surface Flow □ Other (explain)

7. LOCATION OF PROPOSED WATER USE: (If possible, show on same maps as source location. Otherwise, attach similar maps)
   Address 45-550 Kionaole Rd., Kaneohe HI
   Tax Map Key 4-5-42:1
   (b) Land Use District (check one): □ Urban □ Agriculture □ Conservation □ Rural
   (c) County Zoning (describe): P-1 (Preservation)

8. QUANTITY OF WATER REQUESTED: 150,000 gallons per day

9. METHOD OF MEASUREMENT: □ Flowmeter □ Open-pipe □ Weir □ Orifice □ Other (explain)

10. QUALITY OF WATER REQUESTED: □ Fresh □ Brackish □ Salt □ Potable □ Non-Potable

11. PROPOSED USE: □ Municipal (Including hotels, stores, etc.) □ Domestic (Individual, noncommercial, etc.) □ Irrigation □ Industrial □ Military □ Other (explain)

12. NUMBER AND TYPE OF UNITS TO BE SERVED (explain): (1) Golf Course + Associated Landscape.
    And Club house fire protection

13. TOTAL ACRES PROPOSED FOR IRRIGATION AND TYPE OF CROP: 106 Acres, Turfgrass & Landscape (acres)

14. PROPOSED TIME OF WATER WITHDRAWAL OR DIVERSION: 7:00 AM to 12:00 AM (Indicate hours of operation)

15. APPLICANT MUST BRIEFLY DESCRIBE FOLLOWING POTENTIAL RESTRICTIONS ON USE:
    (a) Impact on Sustainable yield (?):
        None
    (b) Permanant or Interim Instream Flow Standards affected (?):
        No
    (c) Hawaiian Home Land uses affected (?):
        No
    (d) Other existing legal uses affected (?):
        No
    (e) Other:

16. REMARKS, EXPLANATIONS:

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

NOTE: Signing below indicates that the applicant understands that, if a water use permit is granted by the Commission on Water Resource Management, a permit is subject to prior existing permitted uses, changes in sustainable yields and instream flow standards, reserved uses as defined by the Commission, and Hawaiian Home Lands Future uses. In addition, applicant understands that, upon permit approval, a water shortage plan must be submitted should the Commission require one.

Applicant (print): Sean A. Hoolehan, CGCS
Landowner (print): Tetsuo Kato
Exhibit III-2  Tax Key Map

LEGEND

- Property Line
- Parcel Boundary
- Project Area

1" = 1230'
MEMORANDUM

TO: Interested State Agencies & Other Parties

FROM: Rae M. Loui, Deputy Director

SUBJECT: Water Use Permit Application
KOOLAUPOKO Ground Water Management Area, OAHU

Transmitted for your review and comment is a copy of a water use permit application for Minami Group (USA), Inc. for Well No. 2347-02 & 03.

If you have any objections or comments on the above application, please submit them to us in writing by November 2, 1992.

Should you have any questions, please contact the Commission on Water Resource Management at 587-0225.

RH:ko
Enc.
Henry M. Sakuda, Administrator  
Aquatic Resources Division  

Thomas Arizumi, Chief  
Environmental Management Division  
State Department of Health  
ATTN: Mr. William Wong  

Mr. Dave Martin  
Native Hawaiian Advisory Council  
1088 Bishop St., Suite 1204  
Honolulu, Hawaii 96813  

Don Hibbard, Director  
Historic Preservation Program  

Ms. Marjorie Ziegler  
Sierra Club Legal Defense Fund, Inc.  
212 Merchant Street, Room 202  
Honolulu, Hawaii 96813  

Mr. Kazu Hayashida  
Manager & Chief Engineer  
Board of Water Supply  
630 South Beretania Street  
Honolulu, Hawaii 96843
Mr. Sean A. Hoolehan  
Minami Group (USA), Inc. 
45-610 A Kionaole Rd. 
Kaneohe, HI 96744 

Dear Mr. Hoolehan: 

Enclosed is a copy of the public notice for your water use permit application which will be published in the Honolulu Star Bulletin, issues of October 12 & 19, 1992. 

Please be aware that there may be objections to your application. If objections are made, the objector is required to file such objections with the Commission and is also required to send you a copy of the objections. 

You, or any other party, may respond to objections by filing a brief in support of your application with the Commission within ten (10) days of the filing of an objection. You, or the other party, must also send a copy of the response to the objector. 

If you have any questions, please contact Roy Hardy at 587-0225. 

Sincerely, 

RAE M. LOUI 
Deputy Director
FACSIMILE TRANSMITTAL PAGE

Please deliver the following pages to:

Name: Honolulu Star Bulletin  
Company: Hawaii Newspaper Agency  
From: Commission on Water Resource Management  
Date: Oct. 8, 1992  
Time: 9:20 am  
Message: Public Notice - Applications for Water Use Permits  
Ground Water Management Areas: Kapalua, Koolau, Waialua, Waipahu, Oahu

Total number of pages (including Transmittal Page): 5

If you do not receive all of the pages legibly, please call back: (808) 587-0223

Sending Facsimile Number: (808) 587-0219  
Receiving Facsimile Number: (808) 525-7449

TRANSMISSION REPORT

THIS DOCUMENT (REDUCED SAMPLE ABOVE) WAS SENT

** COUNT **
# 5

*** SEND ***

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FACSIMILE TRANSMITTAL PAGE

Please deliver the following pages to:

Name: Honolulu Star Bulletin Attn: Legal Advertising
Company: Hawaii Newspaper Agency
From: Commission on Water Resource Management
       Department of Land and Natural Resources
Date: Oct. 8, 1992 Time: 9:20 am

Message: Public Notice - Applications for Water Use Permits
Ground Water Management Areas, Kawailoa,
Koolaupoko, Waiawa & Waipahu, Oahu

Total number of pages (including Transmittal Page): 5

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If you do not receive all of the pages legibly, please call back: (808) 587-0225

Sending Facsimile Number: (808) 587-0219
Receiving Facsimile Number: (809) 525-7449
**State of Hawaii**

**Requisition & Purchase Order**

**Department of Land and Natural Resources**

**Organizations**

**CWRM**

**Function and Activity**

**Notice to Vendors**

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

**Hawaii Newspaper Agency**

**Honolulu Star Bulletin**

P.O. Box 3350

Honolulu, HI 96801 ATTN: Legal Ad

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

**QUAN.** | **UNIT** | **DESCRIPTION** | **OBJECT** | **UNIT PRICE** | **AMOUNT**
---|---|---|---|---|---

**Public Notice**

Applications for X Water Use Permits

Ground Water Management Areas, Kawaiola, Koolaupoko, Waiawa & Waipahu, Oahu

Publish in issues of October 12 & 19, 1992

(see attached notice)

Price List No. PL 92-66

$1,500.00

**Requisitioner**

Kay FURUUCHI 987-0225

**Telephone**

**Voucher Number**

**Authenticated By**

A. FURUUCHI

**Goods/Services Received in Good Order and Condition By**

**Date**

**For Department Use Only**

**Requisition No.**

00136816

**Vendor**

**Number**

**SFX**

117494 00

**SFX** | **TC** | **F** | **YR** | **APP** | **D** | **OBJECT** | **CC** | **Proj. No.** | **PH** | **ACT** | **Estimated Cost** | **Actual Cost** | **M** | **R** | **Opt Dept Data**
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01 621 G 93 044 C 4000 0726 000000 00075 1,500 00

**Copy #1 - Vendor**

STATE ACCOUNTING FORM C-03

JULY 1, 1983 (REVISED)
CONDITIONS - READ CAREFULLY

1. Prices include delivery charges unless otherwise stated.

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

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

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

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

6. Vendor and purchaser recognize that in actual economic practice, overcharges resulting from antitrust violations are in fact usually borne by the purchaser. Therefore, vendor hereby assigns to purchaser any and all claims for such overcharges as to goods and materials purchased in connection with this order or contract, except as to overcharges which result from antitrust violations commencing after the price is established under this order or contract and which are not passed on to the purchaser under an escalation clause.
Applications for Water Use Permits
Ground Water Management Areas
KAIAULOA, KOOLAUPOKO, WAIAWA & WAIPAHU, OAHU

Applications for the following water use permits have been received and are hereby made public, in accordance with Department of Land and Natural Resources Administrative Rules 13-171, "Designation and Regulation of Water Management Areas".

NAKAMURA T. (Well No. 3903-04)
Applicant: TAKEMITSU NAKAMURA
59-024 Kamehameha Hwy
Haleiwa, HI 96712
Date Completed Application Received: August 12, 1992
Aquifer: KAWAILOA System, NORTH Sector, OAHU
Well Source: NAKAMURA T., Well No. 3903-04, 59-024 KAM HWY, OAHU at
Tax Map Key: 5-9-16:3
Quantity Requested: 800 gallons per day.
Proposed Water Use: IRRIGATION FOR TWO (2) ACRES OF BANANA & CITRUS CROPS
Place of Water Use: 59-014 & 59-024 KAM HWY at Tax Map Key: 5-9-16:15

MINAMI 1 & 2 (Well Nos. 2347-02 & 03)
Applicant: MINAMI GROUP (USA), INC.
45-610 A Kionaole Rd.
Kaneohe, HI 96744
Date Completed Application Received: September 14, 1992
Aquifer: KOOLAUPOKO System, WINDWARD Sector, OAHU
Well Sources: MINAMI 1 & 2, Well Nos. 2347-02 & 03, 45-550 Kionaole Rd., Oahu at
Tax Map Key: 4-5-42:1 & 10
Quantity Requested: 150,000 gallons per day
Proposed Water Use: GOLF COURSE, ASSOCIATED LANDSCAPE, AND CLUB HOUSE FIRE PROTECTION OVER 100 ACRES
Place of Water Use: 45-550 Kionaole Rd. at Tax Map Key: 4-5-42:1 & portion of 6

PROPOSED WAIAWA 575 1 & 2 (Well Nos. 2658-03 & 2659-03)
Applicant: GENTRY HAWAII, LTD.
P.O. Box 295
Honolulu, HI 96809
Date Completed Application Received: September 1, 1992
Aquifer: WAIAWA System, PEARL HARBOR Sector, OAHU
Well Sources: WAIAWA, 575 1 & 2, WAIAWA BY GENTRY, OAHU at Tax Map Key: 9-6-5:7
Quantity Requested: 1,053,000 gallons per day, total from two wells
Proposed Water Use: MUNICIPAL FOR WAIAWA BY GENTRY PROJECT
Place of Water Use: WAIAWA BY GENTRY PROJECT, PHASE I at Tax Map Key: 9-6-4:1

(more)
PROPOSED WAIAWA 765 1 & 2 (Well Nos. 2658-04 & 05)
Applicant: GENTRY HAWAII, LTD.
P.O. Box 295
Honolulu, HI 96809
Date Completed Application Received: September 1, 1992
Aquifer: WAIAWA System, PEARL HARBOR Sector, OAHU
Well Sources: Waiawa 756 1 & 2, WAIAWA BY GENTRY, OAHU at Tax Map Key: 9-6-5:7
Quantity Requested: 737,500 gallons per day, total from two wells
Proposed Water Use: MUNICIPAL FOR WAIAWA BY GENTRY PROJECT
Place of Water Use: WAIAWA BY GENTRY, PHASE I at Tax Map Key: 9-6-4:1

KUNIA 4 & 5 (Well Nos. 2503-01 & 02)
Applicant: HALEKUA DEVELOPMENT CORP.
2024 N. King St.
Honolulu, HI 96819
Date Completed Application Received: September 1, 1992
Aquifer: WAIPAHU System, PEARL HARBOR Sector, OAHU
Well Sources: KUNIA 4 & 5 Well Nos. 2503-01 & 02, Kunia 440 Reservoir Site, Oahu at
Tax Map Key: 9-4-2:27
Quantity Requested: 1,600,000 gallons per day, total from two wells
Proposed Water Use: DOMESTIC FOR ROYAL KUNIA II
Place of Water Use: In WAIPAHU at Tax Map Key: 9-4-02:51 & 52

ROBINSON 1 & 2 (Well Nos. 2602-01 & 2702-03)
Applicant: ROBINSON ESTATE
1188 Bishop St.
Honolulu, HI 96813
Date Completed Application Received: September 1, 1992
Aquifer: WAIPAHU System, PEARL HARBOR Sector, OAHU
Well Source: ROBINSON 1 & 2, Well Nos. 2602-01 & 2702-03, HOAEAE, OAHU at
Tax Map Key: 9-4-4:4 & 7
Quantity Requested: 5,000,000 gallons per day
Proposed Water Use: IRRIGATION OF 1,300 ACRES OF DIVERSIFIED AGRICULTURE,
PINEAPPLE, & SUGARCANE CROPS
Place of Water Use: HOAEAE OAHU, HAWAII at Tax Map Key: 9-4-4:Various &
9-4-3:Various

(more)
Written objections or comments on the applications for water use may be filed by any person who has property interest in any land within the hydrologic unit of the source of water supply or who will be directly and immediately affected by the proposed water use. Written objections shall: (1) state property or other interest in the matter; (2) set forth questions of procedure, fact, law, or policy, to which objections are taken; and (3) state all grounds for objections to the proposed permits. Send written objections by NOVEMBER 2, 1992 to 1) the Commission on Water Resource Management, P.O. Box 621, Honolulu, Hawaii 96809, and 2) a copy of the letter to the applicant at the above address.

COMMISSION ON WATER RESOURCE MANAGEMENT

WILLIAM W. PATY, Chairperson

Dated: OCT 8 1992

Minami Group (USA), Inc.
1600 Kapiolani Blvd, Suite 1401, Pan Am Bldg.,
Honolulu, Hawaii 96814

Sept. 9 92
HONOLULU, HAWAII

*****TWENTY FIVE AND NO/100***

PAY

25.00

TO THE ORDER OF

State of Hawaii
Commission Water Resource Management
Department of Land and Natural Resources
Honolulu, HI 96809

Minami Group (USA), Inc.

NOTE: PLEASE DETACH WHEN DEPOSITING.

VOID AFTER 1 YEAR

NO RECEIPT NECESSARY

DESCRIPTION

Ground Water Application for Water Use Permit

For WUPA 9/17/92
APPLICATION FOR WATER USE PERMIT

Ground Water: Surface Water

State of Hawaii
COMMISSION ON WATER RESOURCE MANAGEMENT
Department of Land and Natural Resources

APPLICANT

(a) Firm/Name: Minami Group (USA), Inc.
   Contact Person: Sean A. Hooikeyan (BO)
   Address: 45-290 Kionaole Rd., Kaneohe HI 96744

(b) Firm/Name: Minami Investment, Inc.
   Contact Person: Tetsuo Kato
   Address: 4-3-3, Sotokanda Chiyoda-ku, Tokyo 101

NOTE: Signing below constitutes that the applicant understands that, if a water use permit is granted by the Commission on Water Resource Management, a permit is subject to prior existing permitted uses, changes in sustainable yields and instream flow standards, reserved uses as defined by the Commission, and Hawaiian Home Lands future uses. In addition, applicant understands that, upon permit approval, a water shortage plan must be submitted should the Commission require one.

1. (a) APPLICANT
   Firm/Name: Minami Group (USA), Inc.
   Contact Person: Sean A. Hooikeyan (BO)
   Address: 45-290 Kionaole Rd., Kaneohe HI 96744

2. (b) LANDOWNER
   Firm/Name: Minami Investment, Inc.
   Contact Person: Tetsuo Kato
   Address: 4-3-3, Sotokanda Chiyoda-ku, Tokyo 101

3. (u) EXISTING SOURCE NAME AND STATE NUMBER:

(b) PROPOSED (NEW) SOURCE NAME:

4. SOURCE LOCATION:
   Address: 45-550 Kionaole Rd., Kaneohe HI
   Tax Map Key: 4 - 5 - 42
   (Attach a USGS map, scale 1"=2000', and a property tax map showing source location referenced to established property boundaries.)

5. SOURCE TYPE (check one):
   - Stream
   - Subaqueous
   - Pipe
   - Perched
   - Caprock

6. METHOD OF TAKING WATER (check one):
   - Artesian
   - Well & Pump
   - Diverted Surface Water
   - Other (explain)

7. LOCATION OF PROPOSED WATER USE: (If possible, show on same maps as source location. Otherwise, attach similar maps)
   (a) Address: 45-250 Kionaole Rd., Kaneohe, HI
      Tax Map Key: 4-5-42
   (b) Land Use District (check one):
      - Urban
      - Agriculture
      - Conservation
      - Rural
   (c) County Zoning (describe): 8-1 (Preservation)

8. QUANTITY OF WATER REQUESTED:
   150,000 gallons per day

9. METHOD OF MEASUREMENT:
   - Flowmeter
   - Open pipe
   - Weir
   - Office
   - Other (explain)

10. QUALITY OF WATER REQUESTED:
    - Fresh
    - Brackish
    - Salty
    - Potable
    - Non-Potable

11. PROPOSED USE:
    - Municipal (including hotels, stores, etc.)
    - Domestic (individual, noncommercial, etc.)
    - Irrigation
    - Industrial
    - Military
    - Other (explain)

12. NUMBER AND TYPE OF UNITS TO BE SERVED (explain):
    - (1) Golf Course + Associated Landscape
      And Club house fire protection

13. TOTAL ACRES PROPOSED FOR IRRIGATION AND TYPE OF CROP:
    - 100 Acres, Turfgrass & Landscape

14. PROPOSED TIME OF WATER WITHDRAWAL OR DIVERSION:
    7:AM To 12:AM

15. APPLICANT MUST BRIEFLY DESCRIBE FOLLOWING POTENTIAL RESTRICTIONS ON USE:
    (a) Impact on Sustainable Yield (7):
        - None
    (b) Permanant or Interim Instream Flow Standards affected (7):
        - No
    (c) Hawaiian Home Land uses affected (7):
        - No
    (d) Other existing legal uses affected (7):
        - No
    (e) Other:

16. REMARKS, EXPLANATIONS:

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

Applicant: ___________________________________________________________________
   Signature ____________________________ Date: September 1, 1992

Landowner: ___________________________________________________________________
   Signature ____________________________ Date: September 1, 1992

For Official Use Only:
   Date Received ________________________ Hydrologic Unit No. ____________________
   Date Accepted ________________________ Diversion Works No. ____________________
   State Well No. ________________________

Notice Dates: Public _________ Mayor _________ BWS _________ Mail List _________ Bulletr _________ Public Hearing _________

6/24/92 WURA Form
Exhibit III-1  Location Map
WATER USE PERMIT NO. 748

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

**Permit Information**

| Water User:       | First Presbyterian Church of Honolulu  
|                  | 45-550 Kionoale Rd.  
|                  | Kaneohe, HI 96744   |
| Landowner of Source: | First Presbyterian Church of Honolulu  
|                  | 45-550 Kionoale Rd.  
|                  | Kaneohe, HI 96744   |
| Permitted Withdrawal Rate: | 0.150 mgd (Based upon a 12-month moving average) |
| Water Management Area: | Ko‘olaupoko |
| Island:            | Oahu                |
| Aquifer Sector/System: | Windward/Ko‘olaupoko |
| System Sustainable Yield: | 43 mgd |
| Water Type:        | Non-Potable         |
| Original CWRM Date: | September 23rd, 2005 |
| Standard Conditions: | 1-19 |
| Special Conditions: | 1-2, 100 |

**Water Source**

| State Well Number(s): | 2347-02, 2347-03 |
| Well Name:            | Minami 1-2      |
| Water Source TMK Number(s): | 1st Division, 4-5-042:001, 4-5-042:010 |
| State Land Use Classification(s): | Conservation |
| County Zoning Classification(s): | P-1 |

Geographical Coordinates:

| Well No. 2347-02 | Latitude 21° 22' 59.6'' North  
|                  | Longitude 157° 47' 31.1'' West |
| Well No. 2347-03 | Latitude 21° 22' 53.0'' North  
|                  | Longitude 157° 47' 30.0'' West |
End Use

End Use TMK Number(s): 1st Division, 4-5-042:001
State Land Use Classification(s): Conservation
County Zoning Classification(s): P-1
Beneficial Use Explanation: Use for 100 acres of golf course, landscape, and fire protection

Background Information

State Well Nos. 2347-02 and 2347-03 were originally governed by Water Use Permit 190, which was issued to Ko'olau Management, Inc. with a permitted allocation of 0.150 mgd. In late 2005, Water Use Permit 190 was superseded by Water Use Permit 748, which was issued to transfer water rights for the aforementioned wells from Ko’olau Management, Inc. to Ko’olau Golf Partners, LLC. The permittee has also submitted correspondence indicating that a transfer of Water Use Permit 748 from Ko’olau Golf Partners to the First Presbyterian Church of Honolulu was requested on August 10th, 2006. However, the Commission’s database does not reflect or indicated that any transfer has occurred. Brown and Caldwell recommends that this matter be looked into further.

Consistent water use reporting records are available for at least the past four years. The permittee’s 12-month moving average has not exceeded the permitted amount of 0.150 mgd during this time. Reference the permit file for additional information on reporting history.

Water Use Permit 748 was approved for transfer during the September 23rd, 2005 Commission on Water Resource Management meeting. Standard conditions 1-19 and special conditions 1-2 & 100 are the governing conditions for this water use permit. A complete list of all standard and special conditions is given in the final summary report to the Legislature for this 20-year Water Use Permit Review.

Field Investigation Information

Contact: Tim Brubaker
Site Address: 54-550 Kionaole Rd.
Kaneohe, HI 96744

Brown and Caldwell conducted a field investigation on April 1st, 2008 from 9:00 a.m. until 10:15 a.m. with Mr. Tim Brubaker. During this time, type of water usage was verified, GPS coordinates of well head(s) were recorded, flow meter installation and functionality were documented, and property TMK information was verified. The wellhead, its related appurtenances, and water
usage area were visually inspected to assess compliance with permit conditions. Visual inspection of water loss/waste was limited to outdoor areas within the usage boundary. The physical location of this site is at the Ko'olau Golf Course. Reference the TMK and GIS maps in the permit file for a visual representation of the site.

**Summary of Findings for Water Use Permit No. 748**

State Well Nos. 2347-02 and 2347-03 are located on TMK parcels 4-5-042:010 and 4-5-042:001, respectively, at the GPS coordinates given above. During the investigation, only State Well No. 2347-02 was visually inspected and verified. The location of State Well No. 2347-03 was unknown to Mr. Tim Brubaker at the time of the field investigation. Follow up correspondence between Brown and Caldwell and Mr. Brubaker determined the approximate location of State Well No. 2347-03. The GPS coordinates given for this well are taken from the city GIS database and were not verified.

Water is currently being drawn from both wells via mounted motor pumps that are activated by a central control system that is housed in a building adjacent to State Well No. 2347-02. Individual flowmeters are located at each well site. The control system communicates with a storage tank that is located above the golf course grounds. Water is pumped into the tank and then gravity fed into a water feature on TMK parcel 4-5-042:001. A pump house located adjacent to the water feature draws water from the pond and feeds the central irrigation system. Reference the Appendix for photographs of the previously described system components.

Based upon visual inspection of the system, all components appear to be in full working order. The permittee demonstrated functionality of an installed flowmeter and provided access to the site grounds where no wasting of water or water loss was observed. Visual inspection also confirmed that the TMK boundaries should be updated to reflect actual end use. Water use is currently being reporting on a monthly basis with no recent evidence of overpumpage violations.

However, the following are a list of standard condition(s) that the permittee is found to be in non-compliance with:

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

Since no salinity reports are being submitted to the Commission, the permittee is found to be in violation of Standard Condition (10).
Recommendations

- Address the following discrepancies between the Commission’s electronic database and actual field investigation findings:
  - Permittee and landowner name/address information
  - Change permittee contact to Ted Otaguro at (808) 236-4653
  - Water source and end use TMK parcel numbers
- No disciplinary action required for this WUP since the permittee is in compliance with all standard and special conditions.
- Address violation of Standard Condition (10) regarding non-reporting of salinity levels.
20-Year Water Use Permit Review
Water Use Permit No. 748

APPENDIX

Field Investigation Photographs
Figure 1 – State Well No. 2347-02

Figure 2 – Flowmeter for State Well No. 2347-02
Figure 3 – Housing for well system controls (TMK 4-5-042:010)

Figure 4 – Well system controls
Figure 5 – Water storage tank
Figure 6 – Storage pond fed by water tank

Figure 7 – Pump house (adjacent to storage pond)
Figure 8 – Booster pumps and controls

Figure 9 – Overall system flowmeter
Standard Conditions List

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Variations of Standard Condition (20) are as follows:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

20. Standard Condition 16 is waived for saltwater wells.

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

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

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

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

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

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

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

28. The applicant shall follow the agreed monitoring plan.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

67. Standard Condition 17 is waived.

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

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

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

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

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

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

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

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

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

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

78. Standard Condition 9 is waived.

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

80. Standard Condition 10 is waived.

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

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

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

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

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

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

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

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

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

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

92. Standard Condition 7 shall not apply.

93. Standard Condition 22 shall not apply.

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

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

96. HECO 1 mgd for industrial use

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

98. BWS 1 mgd for municipal use.

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

100. The applicant shall obtain the current version of the Department of Health's Guidelines Applicable to Golf Courses in Hawaii. Where relevant and viable, items of the guidelines should be implemented and sustained appropriately. To obtain the current version, contact the Safe Drinking Water Branch, Environmental Management Division at 808-586-4258 (Honolulu).

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

119. Standard Conditions 10 & 18 shall not apply.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

143. Proposed other uses will be considered at a later date.
Water Use Permit Survey
(Please complete one survey form for each WUP)

WUP Number: 248
Well Number(s): 7343 - 02403

Contact Information (of the person who will be present at site visit):
Name: TBD
Phone (for phone interview): 808.235.8211 Fax: 808.235.8295 Email: KOOLAU@AMERICANWATER.COM
Best time to reach for phone interview: Mon- Fri 7AM-2PM

Property Information (of the water use/well location):
Address: 45-550 KONOHONEE ROAD
City: WAIKOUNI Zip: 96744
Well Location TMK (list all if multiple wells present): (1) 4-9-42 1041
Well Water TMK (list all if used on multiple lots): (1) 4-5-042 10201

Water Use/Well Information:
Is the water source currently in use? Yes X No  
If no, please explain:

What are you currently using the water for? (example: "Use for 45 acres of diversified agriculture and 3 residences"): ____________  

Is a flow meter installed and working properly? Yes X No  
If no, please explain:

Do you submit monthly water use reports to the State? Yes X No  
If no, please explain:

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

Option #1 Date (M-F): M-F Time: 9:00 am X 12:00 pm X 3:00 pm
Option #2 Date (M-F): M-F Time: 9:00 am X 12:00 pm X 3:00 pm
Option #3 Date (M-F): M-F Time: 9:00 am X 12:00 pm X 3:00 pm

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

For Official Use Only
Received: 12/6/07 Information Updated: 12/7/07 Phone Interview Complete: 3/21/08
Notes/Comments: ____________
Phone Interview

WUP Number: 7146  Well Number(s): 2347-02 81-03

Contact Name: Tobi Doyle  Phone Number: 235-3211

Attempt #1: Date/Time: 2/17/02  Result: Not Available
Attempt #2: Date/Time: 2/27/02  Result: On Vacation (Back on 3/3/02)

Well Location TMK(s): 1.5-042.010
Water Use TMK(s): 1.5-042.010,031

Water Source Address: 14S-550 Kingdale Rd.
City:  Kankakee  Zip Code: 60744

Currently using water source?  Yes ☒  No ☐
Notes/Comments: Use for irrigation of golf course

How often is the water source being used?  Daily ☒  Weekly ☐  Monthly ☐
Notes/Comments:

How long have you been using this water source?:

Has there been any rezoning of the water source/water use properties?  Yes ☐  No ☒
Have you reported the rezoning to the State?  Yes ☐  No ☐  N/A ☒
If no, explain:

Scheduled field investigation day/time: 4/1/02 @ 9:00 a.m.

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

• Ask for Tim Brubaker (Tobi will be out)
• Go to pro shop.

Comments To Make:

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

Interviewed By: M.S.  Date: 3/2/106  Time: 10:00 a.m.
# Field Investigation Checklist

**Water Source**

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>WUP Number:</td>
<td>748</td>
</tr>
<tr>
<td>Well Number(s):</td>
<td>2347-02-03</td>
</tr>
<tr>
<td>Well Location TMK(s):</td>
<td>4-5-042:010</td>
</tr>
<tr>
<td>Well Head GPS Coordinates:</td>
<td></td>
</tr>
<tr>
<td>Latitude:</td>
<td>Below</td>
</tr>
<tr>
<td>Longitude:</td>
<td>Below</td>
</tr>
<tr>
<td>Well Type:</td>
<td>Mounted Meter</td>
</tr>
<tr>
<td>Currently using water source?</td>
<td>Yes ☑ No ☐</td>
</tr>
</tbody>
</table>

*Pumped from well site to storage tank* → to storage pond → purpose feeds irrigation system

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is there a flow meter installed?</td>
<td>Yes ☑ No ☐</td>
</tr>
<tr>
<td>Is the flow meter operational</td>
<td>Yes ☑ No ☐</td>
</tr>
</tbody>
</table>

Notes/Comments:

(2) - 1 at source, 1 at pump station

**Water Use**

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water Use TMK(s):</td>
<td>4-5-042:001, 4-5-042:006</td>
</tr>
<tr>
<td>What is the water being used for?</td>
<td>Use for irrigation of Koolau Golf Course</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is the water being used within the permitted boundaries?</td>
<td>Yes ☑ No ☐</td>
</tr>
<tr>
<td>If no, explain</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is there any observed wasting of water or water loss?</td>
<td>Yes ☐ No ☑</td>
</tr>
<tr>
<td>If no, explain</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are the permit conditions being complied with?</td>
<td>Yes ☑ No ☐</td>
</tr>
<tr>
<td>If no, explain</td>
<td></td>
</tr>
</tbody>
</table>

**Other**

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Photographs of:</td>
<td>Water Source ☑ Water Meter ☑ Usage Area ☑ Pump/Motor ☑</td>
</tr>
</tbody>
</table>

**General Notes/Comments:**

- Appears that only one well is in use

Investigated By: MSG  
Date: 1/1/08  
Time: 9:30 AM

*Met w/ Tim Brubaker to confirm 2nd well location*
December 4, 2007

Mr. Milo Smith
Brown and Caldwell
1099 Alakea Street
Suite 2400
Honolulu, Hawaii 96813

First Presbyterian Church of Honolulu-
Water Use Permit No. 748

Dear Mr. Smith:

Our office represents the First Presbyterian Church of Honolulu ("FPC"). FPC is the current owner of the real property identified as Tax Map Key Nos. (1) 4-5-42: 1, 6, and 10 (the “Property”). FPC acquired the Property from Koolau Land Partners, LLC and Koolau Golf Partners, LLC on August 10, 2006. As part of FPC’s acquisition of the Property, a Request for Transfer of Water Use Permit No. 748 was submitted to the Commission on Water Resource Management on July 31, 2007. A copy is enclosed for your reference. Please update the files accordingly.

Finally, enclosed please find the Water Use Permit Survey for Water Use Permit No. 748.

Sincerely,

Allison A. Ito

Enclosures
July 31, 2006

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

Request to Transfer Water Use Permit No. 748
From Koolau Golf Partners LLC (Current Permit Holder) to
First Presbyterian Church of Honolulu (New Permittee)

To Whom It May Concern:

Enclosed please find the Request to Transfer Water Use Permit No. 748 from Koolau Golf Partners LLC from Koolau Golf Partners LLC to First Presbyterian Church.

Very truly yours,

Allison A. Ito

Enclosure
REQUEST TO TRANSFER WATER USE PERMIT

COMMISSION ON WATER RESOURCE MANAGEMENT
Department of Land and Natural Resources

CURRENT PERMIT HOLDER:

(a) PERMITTEE

Firm/Name: Koolau Golf Partners LLC
Contact Person: David B. Tongg
Address: c/o 999 Bishop Street, Suite 2600, Honolulu, HI 96813
Phone: 539-8700 Fax: 539-8799
E-mail: dtongg@ksglaw.com

(b) LANDOWNER OF SOURCE

Firm/Name: Koolau Golf Partners LLC
Contact Person: David B. Tongg
Address: c/o 999 Bishop Street, Suite 2600, Honolulu, HI 96813
Phone: 539-8700 Fax: 539-8799
E-mail: dtongg@ksglaw.com

Signature: [Signature] Date: July 24, 2006

PERMIT TO BE TRANSFERRED TO:

2. (a) PERMITTEE

Firm/Name: First Presbyterian Church of Honolulu
Contact Person: Ted Otaguro
Address: 45-550 Kionaole Road, Kaneohe, HI 96744
Phone: 236-4653 Fax: 235-7737
E-mail: ttotag@aol.com

(b) LANDOWNER OF SOURCE

Firm/Name: First Presbyterian Church of Honolulu
Contact Person: Ted Otaguro
Address: 45-550 Kionaole Road, Kaneohe, HI 96744
Phone: 236-4653 Fax: 235-7737
E-mail: ttotag@aol.com

Signature: [Signature] Date: July 24, 2006

WATER USE PERMIT TRANSFER INFORMATION

3. WATER USE PERMIT NO.: 748

4. WELL/STREAM DIVERSION NAME AND STATE NUMBER: Well Nos. 2347-02; 2347-03

Signature: [Signature] Date: July 24, 2006

Effective Date of Transfer: 8/10/06

Well Nos. 2347-02; 2347-03

WUP TRANSFER FORM (01/20/2005)
WUP 748 - 12 Month Moving Average
748.wup

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Alan Goda
Koolau Golf Partners LLC
999 Bishop Street, Suite 2600
Honolulu, HI 96813

Dear Mr. Goda:

Approval of Water Use Permit (WUP No. 748) for Well Nos. 2347-02 & 03
Koolauloa Ground-Water Management Area, Oahu

This letter transmits your water use permit for Minami 1 and 2 Wells (Well No.2347-02 & 03) for use of 0.150 million gallons per day (mgd) of water on a 12-month moving average basis that was approved by the Commission on Water Resource Management (Commission) on March 17, 1993. As part of the Commission's approval, the following special conditions were added and are part of your permit under Standard Permit Condition 19:

Special Conditions

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

2. The applicant shall obtain the current version of the Department of Health's Guidelines Applicable To Golf Courses in Hawaii. Where relevant and viable, items of the guidelines should be implemented and sustained appropriately. To obtain the current version, contact the Safe Drinking Water Branch, Environmental Management Division, at 808-586-4258 (Honolulu).

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

Enclosed with this letter of approval are the following:

1. Your water use permit
2. Your official monthly water use report form

Please be sure to read the conditions of your approved permit.
We draw your attention to two key conditions of your permit that require your response. First, you are required to keep a record of your monthly total pumpage, water level, salinity, and water temperature. This information must be submitted to the Commission on a regular monthly basis using the enclosed water use report form. You should make copies of the enclosed report form as needed.

Second, you are required to submit a water shortage plan to the Commission **within thirty (30) days** of the issuance date of this permit. Your water shortage plan simply identifies what you are willing to do should the Commission declare a water shortage situation in the Koolauloa Ground-Water Management Area and can be as short as a one page letter. In a water shortage situation, the Commission may require temporary reductions in pumpage from all sources. The Commission is required, by law, to formulate a plan to implement such area-wide reductions, which should accommodate, include, and be consistent with your plans. Therefore, your help, by submitting your water shortage plan, is greatly needed in formulating the Commission's overall Water Shortage Plan.

If you have any questions, please call Ryan Imata of the Commission staff at 587-0255.

Sincerely,

Peter T. Young
Chairperson

Attachments
GROUND-WATER USE PERMIT
WUP NO. 748

PERMITTEE

<table>
<thead>
<tr>
<th>Permittee/Water User</th>
<th>Landowner of Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Koolau Golf Partners LLC</td>
<td>Koolau Golf Partners LLC</td>
</tr>
<tr>
<td>999 Bishop Street, Suite 2600</td>
<td>999 Bishop Street, Suite 2600</td>
</tr>
<tr>
<td>Honolulu, HI 96813</td>
<td>Honolulu, HI 96813</td>
</tr>
</tbody>
</table>

PERMITTED SOURCE INFORMATION

<table>
<thead>
<tr>
<th>Island</th>
<th>Oahu</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water Management Area</td>
<td>Windward</td>
</tr>
<tr>
<td>Aquifer Sector</td>
<td>Koolauloa</td>
</tr>
<tr>
<td>Aquifer System</td>
<td>Koolauloa</td>
</tr>
<tr>
<td>System Sustainable Yield</td>
<td>35</td>
</tr>
<tr>
<td>Well Name</td>
<td>Minami 1 and 2 Wells</td>
</tr>
<tr>
<td>State Well No.</td>
<td>2347-02 &amp; 03</td>
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</tbody>
</table>

PERMITTED USE INFORMATION

<table>
<thead>
<tr>
<th>Reasonable beneficial use</th>
<th>Irrigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Withdrawal (12 month moving ave.)</td>
<td>0.150 mgd</td>
</tr>
<tr>
<td>Location of water use</td>
<td>4-5-042: 10 &amp; 01</td>
</tr>
<tr>
<td>TMK #</td>
<td>CONSERVATION</td>
</tr>
<tr>
<td>State land use classification</td>
<td>P-1</td>
</tr>
<tr>
<td>County zoning classification</td>
<td>------</td>
</tr>
</tbody>
</table>

Pursuant to Hawaii's State Constitution, Article XI, Section 7, Hawaii Revised Statutes, Chapter 174C; Hawaii Administrative Rules, Chapters 13-167 through 13-171; and Hawaii decisional law and custom, the permittee is hereby authorized to use ground water from the sources and in the amount and from and upon the locations described above; subject however, to the requirements of law including but not limited to the following conditions:
1. The water described in this water use permit may only be taken from the location described and used for the reasonable beneficial use described at the location described above. Reasonable beneficial uses means "the use of water in such a quantity as is necessary for economic and efficient utilization which is both reasonable and consistent with State and County land use plans and the public interest." (HRS § 174C-3)

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

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

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

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

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

7. The water use permit application and submittal, as amended, approved by the Commission at its March 17, 1993 meeting are incorporated into this permit by reference.

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

9. This permit may be modified by the Commission and the amount of water initially granted to the permittee may be reduced if the Commission determines it is necessary to:
   a. protect the water sources (quantity or quality);
   b. meet other legal obligations including other correlative rights;
   c. insure adequate conservation measures;
   d. require efficiency of water uses;
   e. reserve water for future uses, provided that all legal existing uses of water as of June, 1987 shall be protected;
   f. meet legal obligations to the Department of Hawaiian Home Lands, if applicable; or
   g. carry out such other necessary and proper exercise of the State's and the Commission's police powers under law as may be required.

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

10. An approved flowmeter(s) must be installed to measure monthly withdrawals and a monthly record of withdrawals, salinity, temperature, and pumping times must be kept and reported to the Commission on Water Resource Management on forms provided by the Commission on a monthly basis (attached).
11. This permit shall be subject to the Commission's periodic review of the Koolauloa Aquifer System's sustainable yield. The amount of water authorized by this permit may be reduced by the Commission if the sustainable yield of the Koolauloa Aquifer System, or relevant modified aquifer(s), is reduced.

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

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

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

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

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

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

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

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

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

PETER T. YOUNG, Chairperson
Commission on Water Resource Management

Attachment
**DESCRIPTION**

Date of report: May 19, 1988  
Person filing report: Loran H. Runnells

A. OWNER: Minami Group USA  
NAME: Minami #1  
ADDRESS: 24 Island Oahu

B. GENERAL LOCATION: KAILUA Koolaupoko

C. DRILLING COMPANY: ROSCOE MOSS COMPANY

D. TYPE OF RIG: 24L  
DRILLING COMPLETED: 05/08/88  
DRILLER: Hal Fenton

E. ELEVATION, msl: Top of drilling platform: approx. 234 ft.  
Height of drilling platform above ground surface: 0 ft.  
Bench mark and method used to determine elevation: 

F. HOLE SIZE: 12 in. dia. to 130 ft. below drilling platform.  
... in. dia. to ... ft. below drilling platform.  
... in. dia. to ... ft. below drilling platform.

G. CASING INSTALLED: 8 in. I.D. x 250 in. wall solid section to 38 ft. below drilling platform.  
8 in. I.D. x 250 in. wall perforated section to 128 ft. below drilling platform.  
Type of perforation: LOUVER

H. ANNULUS: Grouted 0 ft. to 20 ft. below drilling platform.  
Gravel packed 20 ft. to 128 ft. below drilling platform.

I. PERMANENT PUMP INSTALLATION:
- Pump type, make, serial no.  
- Capacity: g.p.m.  
- Motor type, H.P., voltage, r.p.m.  
- Depth of pump intake setting: ft. below drilling platform.  
- Which elevation is: ft.

**HYDROLOGY**

J. INITIAL WATER LEVEL: 33.5 ft. below drilling platform.  
Date of measurement: 05/05/88

K. INITIAL CHLORIDE: ppm, total depth of well: 128 ft. below drilling platform

L. PUMPING TESTS: 
Reference point (R.P.) used:  
Sampling Date: 
Date: 05/05/88  
Start water level: 33.5 ft. below R.P.  
End water level: 33.25 ft. below R.P.  
Depth of well: 128 ft. below R.P.  
Elapsed Time (hours):  
Rate (gpm):  
DrawDOWN (ft.):  
Cl- (ppm):  
Temp. °F:  

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 20.</td>
<td>Clay</td>
<td>to</td>
<td>to</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20. to 40.</td>
<td>Red Mud</td>
<td>to</td>
<td>to</td>
<td></td>
<td></td>
</tr>
<tr>
<td>40. to 65.</td>
<td>Brown Mud</td>
<td>to</td>
<td>to</td>
<td></td>
<td></td>
</tr>
<tr>
<td>65. to 75.</td>
<td>Brown Mud, weathered Rock</td>
<td>to</td>
<td>to</td>
<td></td>
<td></td>
</tr>
<tr>
<td>75. to 90.</td>
<td>Brown Mud, trace Blue rock</td>
<td>to</td>
<td>to</td>
<td></td>
<td></td>
</tr>
<tr>
<td>90. to 92.</td>
<td>Hard Boulder</td>
<td>to</td>
<td>to</td>
<td></td>
<td></td>
</tr>
<tr>
<td>92. to 130.</td>
<td>Soft Mud Rock</td>
<td>to</td>
<td>to</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SUBSURFACE FORMATION**

N. REMARKS:

**FOR DRILLER’S USE**

Job Name:  
Job No:  

**FOR OFFICIAL USE**

Instructions: Send three (3) copies to: Manager-Chief Engineer, Division of Water and Land Development, P.O. Box 373, Honolulu, Hawaii 96809.

DIVISION OF WATER RESOURCE MANAGEMENT

FROM: [Signature]
DATE: [Date]
FILE IN: NO.2 (2347-03)

TO: INITIAL: M. TAGOMORI

PLEASE: See Me

REMARKS:

D. Lum
G. Matsumoto
G. Akita
L. Chang
Y. Shiroma

See Me
Route to Your Branch
Review & Comment
Draft Reply
Acknowledge Receipt
Xerox copies

M. TAGOMORI
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G. Akita
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L. Chang
Y. Shiroma

Review & Comment
Draft Reply
Acknowledge Receipt
Xerox copies
Mr. Manabu Tagomori  
Deputy for Water Resource Management  
Commission on Water Resource Management  
Department of Land and Natural Resources  
State of Hawaii  
P. O. Box 621  
Honolulu, Hawaii 96809

Dear Mr. Tagomori:

Subject: Your Letter of August 24, 1988 on Location of the Minami Well #1

We return the map showing the location of the well.

If you have any questions, please contact Chester Lao at 527-5276.

Very truly yours,

FOR KAZU HAYASHIDA  
Manager and Chief Engineer

Attachment

10/6/88 Confirmed w/ Glenn Bauer, Env. Will I still be first.
TO: Department of Land and Natural Resources  
   Division of Water and Land Development  
   P. O. Box 373  
   Honolulu, Hawaii 96809

WE ARE SENDING YOU ☐ Attached  ☐ Under separate cover via__________________________ the following items:

☐ Shop drawings  ☐ Prints  ☐ Plans  ☐ Samples  ☐ Specifications
☐ Copy of letter  ☐ Change order  ☐ ______________________

<table>
<thead>
<tr>
<th>COPIES</th>
<th>DATE</th>
<th>NO.</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td>Well No. 1 as-built plans (half size)</td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
<td>Well No. 2 as-built plans (half size)</td>
</tr>
</tbody>
</table>

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☐ For your use  ☐ Approved as noted  ☐ Submit____ copies for distribution
☐ As requested  ☐ Returned for corrections  ☐ Return____ corrected prints
☐ For review and comment ☒ For your information
☐ FOR BIDS DUE _______________ 19 ☐ PRINTS RETURNED AFTER LOAN TO US

REMARKS

COPY TO Chester Lao, BWS

SIGNED: Ken Ishizaki

If enclosures are not as noted, kindly notify us at once.
Mr. Manabu Tagomori  
Manager-Chief Engineer  
Department of Land and  
Natural Resources  
Division of Water and Land  
Development  
P. O. Box 373  
Honolulu, Hawaii 96809  

Dear Mr. Tagomori:

Subject: Well Use Permit to Minami Group (USA), Inc.

We forward for your information and files, copies of the well application and the approved well use permit issued to Minami Group (USA), Inc. for the withdrawal of water from Minami Wells 1 and 2 for irrigation of a proposed golf course.

If you have any questions, please call Chester Lao at 527-5276.

Very truly yours,

HERBERT H. MINAKAMI  
Chief, Planning and Engineering Division

Enclosures
TO:  Minami Group (USA), Inc.
c/o Fujiyama, Duffy & Fujiyama
1001 Bishop Street
Pauahi Tower, Suite 2700
Honolulu, Hawaii 96813

Your application of July 20, 1988 has been approved in accordance with our Rules and Regulations for the Protection, Development and Conservation of Water Resources in the City and County of Honolulu.

You are hereby granted a permit to withdraw water from existing wells (Minami Wells 1 and 2) at TMK: 4-5-42: 1 at the amount of 700 gpm, combined flows.

This permit is granted subject to the Rules and Regulations of the Board of Water Supply and the following conditions:

1. Before the pumps and piping are installed, the construction drawings should be submitted for our review and approval. They should also include the pump manufacturer and horsepower of the pumps.

2. The Hydrology-Geology Section should be notified before any work commences on the project.

3. A water meter should be installed on each well and monthly pumpage readings shall be submitted to the Board.

4. If it is determined that streamflow is reduced as a result of pumping these wells, which conflict with instream flow regulations of the State Department of Land and Natural Resources, the responsibility for corrective action shall be borne by the applicant.

KAZU HAYASHIDA
Manager and Chief Engineer
Board of Water Supply

AUG 9 1988
Date of Permit

Pure Water . . . man's greatest need – use it wisely
APPLICATION FOR DRILLING, MODIFYING, RECASING OR REUSING WELLS

INSTRUCTIONS: Please send 1 copy to Honolulu Board of Water Supply, who will distribute to other agencies concerned. In filling out, refer to Rules and Regulations of the Honolulu Board of Water Supply adopted on May 10, 1976 and applicable rules and regulations of the State Department of Health.

OWNER: (See BWS Rules and Regulations Chapter III, Sec. 3-305, Item 1a)

Minami Group (USA), Inc.

ADDRESS: c/o Fujiyama, Duffy & Fujiyama

1001 Bishop Street
Pauahi Tower, Suite 2700
Honolulu, Hawaii 96813

1. APPLICATION FOR WELL: (See Chapter III, Sec. 3-305, Item 1)

Drill

Modification

Change in use

Reuse

Recase

Withdraw

Water

X

2. WORK TO BE PERFORMED BY: (See Chapter III, Sec. 3-311)

Water Resources International, Inc.

2828 Paa Street, Suite 2085

Honolulu, Hawaii 96819

WR 900 (Rev. 10-76)
3. USE OF WELL: (See Chapter III, Sec. 3-305, Item 1c)

Extraction of water from two exploratory wells (Minami Well No. 1 and No. 2) for irrigation of a proposed golf course.

Quantity desired: 350 gpm per well

4. ATTACHMENTS: (Each copy of the application shall have a complete set of attachments)

a. Location of well: Kaneohe, Oahu, Hawaii

Tax Map Key: 4-5-42:1

b. Land area served: (Attach map showing exact location of well and area served. See Chapter III, Sec. 3-305, Items 1b and 1d)

See attachment

c. Description of well and appurtenant details: (See Chapter III, Sec. 3-305, Item 1e)

See attachment
5. The Owner hereby agrees to install, operate, and maintain control of the well in accordance with the laws of the State of Hawaii and the Rules and Regulations of the Honolulu Board of Water Supply and the State Department of Health.

The Owner hereby understands that a fee of One Hundred Dollars ($100.00) and a permittee bond of the amount not greater than Twenty-five Thousand Dollars ($25,000.00), said amount of the bond to be set by the Engineer, are required for the drilling or excavation of each new well. The $100.00 fee per well shall be payable to the Board and shall accompany this application. The amount of the permittee bond shall be stipulated when the well owner is notified that his permit has been granted.

(See Chapter III, Sec. 3-305, Items 2 and 2a)

6. The Owner hereby agrees to the following special conditions for this well:

MINAMI GROUP (USA), INC.

JUL 15 1988
Date Submitted

By

Name of applicant if other than Owner
Elevation at top of casing
235.2± ft., MSL

Ground Elev. 234.2± ft., MSL*

Cement
Grout 8 ft.
Sand 5 ft.
Hole
Dia. 12 in.

Total Depth 128 ft.

Rock
Packing 115 ft.

Solid casing:
Material Steel
Length 38 ft.
Diameter 8 in.
Wall thickness 0.250 in.

Casing: □ Perforated ☐ Screen
Material Steel
Length 90 ft.
Diameter 8 in.
Wall thickness 0.250 in.

Steel plate welded to casing

* Approximate elevation
Final elevation (MSL) by a surveyor licensed by the State must be submitted at start of construction.
Elevation at top of casing
247± ft., MSL

Ground Elev. 246± ft., MSL*

Solid casing:
- Material: Steel
- Length: 40 ft.
- Diameter: 10 in.
- Wall thickness: 0.312 in.

Cement Grout 20 ft.
Sand 5 ft.
Hole Dia. 14 in.

Total Depth 130 ft.

Casing: \( \square \) Perforated \( \Box \) Screen
- Material: Steel
- Length: 80 ft.
- Diameter: 10 in.
- Wall thickness: 0.312 in.

Rock Packing 105 ft.

Steel plate welded to casing
10' rock packing below casing

* Approximate elevation
Final elevation (MSL) by a surveyor licensed by the State must be submitted at start of construction.

SECTION OF WELL

MINAMI WELL NO. 2
DESCRIPTION OF WELL
DATE: JUNE 1988
August 24, 1988

Mr. Kazu Hayashida
Manager and Chief Engineer
Board of Water Supply
City and County of Honolulu
630 South Beretania Street
Honolulu, Hawaii 96843

Dear Mr. Hayashida:

Minami #1 Well 2247-02, Oahu

In order to complete our well record files, we would appreciate your providing us an accurate location of the recently completed Minami #1 Well (State Well No. 2247-02). Please accurately mark the location of the well on the enclosed map and return it to our office.

Thank you for your cooperation.

Sincerely,

MANABU TAGOMORI
Deputy for Water Resource Management

MO:ko
Enc.
TO Department of Land and Natural Resources
Division of Water and Land Development
P. O. Box 373
Honolulu, Hawaii 96809

WE ARE SENDING YOU ☑ Attached ☐ Under separate cover via ______________ the following items:

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☐ Copy of letter  ☐ Change order  ☐

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<tbody>
<tr>
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<td>7/1/88</td>
<td></td>
<td>Groundwater Exploration and Development report by John Mink</td>
</tr>
</tbody>
</table>

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☐ FOR BIDS DUE _____________________________ 19 ☐ PRINTS RETURNED AFTER LOAN TO US

REMARKS

COPY TO

SIGNED:   

If enclosures are not as noted, kindly notify us at once.
MINAMI GOLF COURSE
GROUNDWATER EXPLORATION
AND DEVELOPMENT
KAMOOALII DRAINAGE, KANEHOE, OAHU

Prepared by:
John F. Mink

July 1, 1988
A golf course will be constructed between Kam Highway and the base of the Pali, west of the existing City and County Pali golf course. A water source for irrigation had to be located and developed within the boundaries of the proposed course. By agreement with the Board of Water Supply, no wells penetrating into the bedrock were to be allowed; groundwater development was restricted to the alluvial cover blanketing the lower portion of the property. Evidence that the alluvium might contain an aquifer arose when borings for an H-3 overpass at Kam Highway encountered flowing water. The borings yielded water continuously when pumped, suggesting that a shallow aquifer might be exploitable.

For the proposed golf course, exploratory-production well sites were located inland of the overpass in an area once devoted to small farms. A remaining farmer (Sakamoto) noted that farmers in the past dug shallow wells to obtain water. His recollections, augmenting the experience of flowing borings at the overpass and in conjunction with assessment of the local geology, justified drilling the wells. Well sites are shown on the accompanying map.
Brief Hydrogeology

The wells are located in a shallow valley reaching to the base of the Pali. The valley has an alluvial surface, but at a depth of about 20 feet weathered cinders appear. The cinder aquifer was first recognized by Glen Bauer of the Board of Water Supply during drilling of Well 1. Each well was drilled to a depth of 130 feet and ended in cinder but probably not far above the bedrock.

The cinder originated from the Pali volcanics (Honolulu series) which erupted long after the original Koolau volcano had ceased activity and had been deeply eroded. The cinder washed into and filled the pre-existing valley, forming a small but permeable aquifer. Stearns (H.T.Stearns & K.N. Vaksvik, 1935, Geology and Groundwater Resources of the Island of Oahu, Hawaii: Terr. Div. Hydrography Bull. 1) vividly describes what must have occurred during the eruptive period. Ash and cinder spewed from vents above and on the Pali, plastering steeply dipping beds of debris against the slopes. Some of the cinder beds are still in place today, but most washed down into the valley. The coarser cinders moved the shortest distance as indicated by the larger fragment size found in Well 2 (furthest inland) compared to Well 1. The original bottom of the valley has not been identified, but it probably is no deeper than about 150 feet below the ground surface at Well 1 and 130 feet at Well 2. Further inland the aquifer must be thinner. An alternative origin for the cinder constituting the aquifer is the Halekou vent, also
a member of the Honolulu volcanic series.

The size of the aquifer is not yet known. Pumping tests, though run continuously for 48 hours at each well, did not exhibit evidence of a boundary. On the other hand, the USGS quadrangle map (1:24,000) suggest that the valley is relatively narrow, embracing on the order of 100 acres. An aquifer with an effective porosity of 10 percent having an average depth of 100 feet and covering 100 acres would have a storage capacity of 325 million gallons. This is a conservative estimate. The aquifer is areally small but voluminous and receives steady recharge in a region where the annual average rainfall exceeds 60 inches. Additional recharge is derived from stream flow whose origin is drainage from cinder deposits through which the Pali Tunnels were driven. This flow averages more than 100,000 gallons per day.

Groundwater Occurrence

In Well 1 the groundwater table is 14 feet below ground surface, whose elevation is 234 feet, and in Well 2, where ground elevation is 246 feet, it is 27 feet deep. Thus the head (sea level datum) in Well 1 is 220 feet and in Well 2 it is 219 feet. The elevations are approximate (within a foot or two) and so are the heads. The principal item of information, however, is that the water table in each well is at about the same elevation, proving the existence of a continuous aquifer.
The thickness of the saturated zone, assuming well depths of 130 feet reach bedrock, is 116 feet at Well 1 and 93 feet at Well 2. Actual thickness is probably greater, but these estimates suggest an average aquifer thickness of about 100 feet. The bedrock in the region is poorly permeable because it is in the mineralized sector of the original Koolau caldera. A Board of Water Supply well drilled in bedrock on the southeast side of the aquifer valley failed to produce water.

Well Drilling

The cinder is fairly stable and the wells were easily drilled. Driller logs with remarks and interpretations, some based on discussions with Glen Bauer of the BWS, follow. Although cinders are dominant, bouldery gravel was encountered in each well.

Summary Lithologic Log
Minami Well 1, Kailua, Koolaupoko, Oahu
Drilled April-May, 1988 by Roscoe Moss Co.

Elevation Top Drilling Platform 234 Ft. (approx.)

<table>
<thead>
<tr>
<th>Depth</th>
<th>Driller Log</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 20</td>
<td>Clay</td>
<td>Soil, recent alluvium</td>
</tr>
<tr>
<td>20 - 40</td>
<td>Red mud</td>
<td>Weathered cinder</td>
</tr>
<tr>
<td>40 - 65</td>
<td>Brown mud</td>
<td>Fine cinder part weather</td>
</tr>
<tr>
<td>65 - 75</td>
<td>Brown mud weather rock</td>
<td>Fine cinder part weather</td>
</tr>
<tr>
<td>75 - 90</td>
<td>Brown mud, blue rock</td>
<td>Cinder, start rock boulder</td>
</tr>
<tr>
<td>90 - 92</td>
<td>Hard boulder</td>
<td>Boulder alluvium</td>
</tr>
<tr>
<td>92 - 130</td>
<td>Soft mud rock</td>
<td>Fine cinder, saprolite (?)</td>
</tr>
</tbody>
</table>
Summary Lithologic Log
Minami Well 2, Kailua, Koolaupoko, Oahu
Drilled May-June, 1988 by Roscoe Moss, Inc.

Elevation top Drilling Platform 246 Ft. (approx.)

<table>
<thead>
<tr>
<th>Depth</th>
<th>Driller Log</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 10</td>
<td>Red mud</td>
<td>Soil, recent alluvium</td>
</tr>
<tr>
<td>10 - 60</td>
<td>Brown mud</td>
<td>Weathered cinder</td>
</tr>
<tr>
<td>60 - 90</td>
<td>Brown mud, cinder</td>
<td>Cinder part weathered</td>
</tr>
<tr>
<td>90 - 130</td>
<td>Brown mud, cinder, blue pebbles</td>
<td>Cinder part weathered, boulder alluvium</td>
</tr>
</tbody>
</table>

Pump Tests

Each well was tested by both the step drawdown and continuous rate methods. During the step drawdown tests the rates, ranging from 50 to 300 gpm in Well 1 and 50 to 400 gpm in Well 2, were held steady for an hour. The data given in the tables which follow show that the wells are efficient, even at 400 gpm. For Well 1 one test was made while the well was temporarily cased and the other after permanent casing was set. For Well 2 tests were run only after well completion.

The continuous pump tests were run steadily for 48 hours at each well. At Well 1 the rate was 300 gpm and at Well 2 it was 400 gpm. Representative data sets for each well follow.

Aquifer Characteristics

The finest data set for determining aquifer characteristics is drawdown measured at Well 1 during
continuous pumping at 400 gpm in Well 2. Initially it was believed that the aquifer was artesian, but the test results indicate that between these two wells the aquifer is not confined. Further down the valley at the overpass it evidently is weakly artesian.

Aquifer transmissivity and storativity were computed using a software program by W. Walton (Groundwater Pumping Tests Design and Analysis; Lewis Publishers, 1987). Distance between the wells is 600 feet. Transmissivity, \( T \), is calculated as 34,280 sq. ft./day and storativity, \( S \), as .08. A simple Jacob semi log plot gives a \( T' \) of 30,715 sq.ft./day and \( S \) of .07. Assuming aquifer thickness of 100 feet, hydraulic conductivity is 343 ft./day. Koolau basalt in southern Oahu has a hydraulic conductivity of about 1500 ft./day.

These aquifer parameters are highly favorable for effective production of groundwater by means of wells.

**Water Quality**

Attached are the results of standard water analyses of samples taken during the continuous pump tests at each well. All listed components meet drinking water quality standards. Salinity is very low because the groundwater is not in contact with sea water. Nitrogen (N) is 1.68 mg/l in Well 1 and only .092 mg/l in Well 2, considerably below the recommended upper drinking water limit of 10 mg/l. The aquifer will provide excellent water for irrigation.
Well Completion

Completion data for each well is as follows.

<table>
<thead>
<tr>
<th>Well</th>
<th>Approx. El. (ft)</th>
<th>Dia. (in)</th>
<th>Blank Case (ft)</th>
<th>Louver Case (ft)</th>
<th>Total (ft)</th>
<th>Grout (ft)</th>
<th>Gravel (ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>234</td>
<td>8</td>
<td>38</td>
<td>90</td>
<td>128</td>
<td>8</td>
<td>115</td>
</tr>
<tr>
<td>2</td>
<td>246</td>
<td>10</td>
<td>40</td>
<td>80</td>
<td>120</td>
<td>20</td>
<td>105</td>
</tr>
</tbody>
</table>

Recommended Pump Sizes

Each well can effectively produce between 300 and 400 gpm. At 350 gpm drawdown at either well will be about 4 feet during normal times and somewhat higher when draft is sustained for weeks. Pumps set deep in the well, between 75 and 100 feet below ground surface, will not be affected by ordinary drawdown. During testing the pumps were set at 98.5 feet in Well 1 and 104.3 feet in Well 2.

Two 350 gpm pumps will provide a total capacity of 1 mgd.

Initially muddy water will discharge for a short time when the pumps are turned on until the formation stabilizes. A by pass should be provided to take care of this condition.
Step Drawdown Test
Minami Well 1, Kailua, Koolaupoko, Oahu
April-May, 1988
Static Water Level 14 Ft. Below Ground
Drawdown by Airline. Measurements by Driller

<table>
<thead>
<tr>
<th>Time</th>
<th>Rate (gpm)</th>
<th>Drawdown (ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4/27/88 (open hole)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0830</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>0830</td>
<td>50</td>
<td>0.6</td>
</tr>
<tr>
<td>0930</td>
<td>100</td>
<td>0.8</td>
</tr>
<tr>
<td>1030</td>
<td>150</td>
<td>1.2</td>
</tr>
<tr>
<td>1130</td>
<td>200</td>
<td>1.7</td>
</tr>
<tr>
<td>1230</td>
<td>250</td>
<td>2.3</td>
</tr>
<tr>
<td>1330</td>
<td>300</td>
<td>stop</td>
</tr>
<tr>
<td>5/4/88 (completed well)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>100</td>
<td>1.2</td>
</tr>
<tr>
<td></td>
<td>200</td>
<td>2.3</td>
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<tr>
<td></td>
<td>300</td>
<td>3.5</td>
</tr>
<tr>
<td></td>
<td>340</td>
<td>3.7</td>
</tr>
</tbody>
</table>

Step Drawdown Test
Minami Well 2, Kailua, Koolaupoko, Oahu
May, 1988
Static Water Level 27 Feet Below Ground
Drawdown by Airline. Measurements by Driller

<table>
<thead>
<tr>
<th>Time</th>
<th>Rate (gpm)</th>
<th>Drawdown (ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5/24/88 (completed well)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0950</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1020</td>
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<td>1100</td>
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<td>1445</td>
<td>400</td>
<td>5.8</td>
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<tr>
<td>1500</td>
<td>400</td>
<td>5.8</td>
</tr>
</tbody>
</table>
SUSTAINED PUMPING TEST

MINAMI WELL NO. 1
MAY 5-7, 1988

Drawdown by Airline. Measurements by Driller.
Test Pumping Rate: 300 gpm

<table>
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<th>PSI</th>
<th>Drawdown (ft)</th>
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<tr>
<td>May 5, 1988</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8:20 AM</td>
<td>33.5</td>
<td>3.5</td>
</tr>
<tr>
<td>8:21 Start</td>
<td>32.0</td>
<td>3.7</td>
</tr>
<tr>
<td>8:22</td>
<td>31.9</td>
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May 26, 1988

MINAMI WELL #2

TEST PUMPING RATE 400 GPM

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CONINUETION ON NEXT PAGE (2)
### TEST PUMPING - MINAMI WELL #2

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Recovered from 28.40 to 30.75 20 seconds.
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  Y (DRAWDOWN)-COORDINATE OF POINT (FT)= 2.0000D-02

POINT NUMBER= 2
  X (TIME)-COORDINATE OF POINT (MIN)= 6.0000D+02
  Y (DRAWDOWN)-COORDINATE OF POINT (FT)= 2.0000D-02

POINT NUMBER= 3
  X (TIME)-COORDINATE OF POINT (MIN)= 6.3000D+02
  Y (DRAWDOWN)-COORDINATE OF POINT (FT)= 2.0000D-02

POINT NUMBER= 4
  X (TIME)-COORDINATE OF POINT (MIN)= 7.8000D+02
  Y (DRAWDOWN)-COORDINATE OF POINT (FT)= 2.0000D-02

POINT NUMBER= 5
  X (TIME)-COORDINATE OF POINT (MIN)= 8.1000D+02
  Y (DRAWDOWN)-COORDINATE OF POINT (FT)= 1.0000D-01

POINT NUMBER= 6
  X (TIME)-COORDINATE OF POINT (MIN)= 9.3000D+02
  Y (DRAWDOWN)-COORDINATE OF POINT (FT)= 1.0000D-01

POINT NUMBER= 7
  X (TIME)-COORDINATE OF POINT (MIN)= 1.0500D+03
  Y (DRAWDOWN)-COORDINATE OF POINT (FT)= 1.0000D-01

POINT NUMBER= 8
  X (TIME)-COORDINATE OF POINT (MIN)= 1.1700D+03
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POINT NUMBER= 9
  X (TIME)-COORDINATE OF POINT (MIN)= 1.2600D+03
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  X (TIME)-COORDINATE OF POINT (MIN)= 1.2900D+03
  Y (DRAWDOWN)-COORDINATE OF POINT (FT)= 1.9000D-01

POINT NUMBER= 11
  X (TIME)-COORDINATE OF POINT (MIN)= 1.5000D+03
  Y (DRAWDOWN)-COORDINATE OF POINT (FT)= 1.9000D-01

POINT NUMBER= 12
  X (TIME)-COORDINATE OF POINT (MIN)= 1.5300D+03
  Y (DRAWDOWN)-COORDINATE OF POINT (FT)= 2.0000D-01

POINT NUMBER= 13
  X (TIME)-COORDINATE OF POINT (MIN)= 1.6500D+03
  Y (DRAWDOWN)-COORDINATE OF POINT (FT)= 2.0000D-01

POINT NUMBER= 14
  X (TIME)-COORDINATE OF POINT (MIN)= 1.6800D+03
  Y (DRAWDOWN)-COORDINATE OF POINT (FT)= 2.1000D-01

POINT NUMBER= 15
  X (TIME)-COORDINATE OF POINT (MIN)= 1.7700D+03
  Y (DRAWDOWN)-COORDINATE OF POINT (FT)= 2.1000D-01

POINT NUMBER= 16
  X (TIME)-COORDINATE OF POINT (MIN)= 1.8000D+03
  Y (DRAWDOWN)-COORDINATE OF POINT (FT)= 2.3000D-01

POINT NUMBER= 17
  X (TIME)-COORDINATE OF POINT (MIN)= 1.8600D+03
  Y (DRAWDOWN)-COORDINATE OF POINT (FT)= 2.3000D-01

POINT NUMBER= 18
  X (TIME)-COORDINATE OF POINT (MIN)= 1.8900D+03
  Y (DRAWDOWN)-COORDINATE OF POINT (FT)= 2.4000D-01
COMPUTATION RESULTS:

AQUIFER TRANSMISSIVITY (GPD/FT) = 256397.80
AQUIFER STORATIVITY (DIM) = 8.019E-02
# LABORATORY ANALYSIS REPORT

**TO:** Engineering Concepts  
**SAMPLES OF:** Well water  
**RECEIPT DATE:** 5/6/88

## Samples: Well #1

<table>
<thead>
<tr>
<th>Measurement (units)</th>
<th>Value (mg/L)</th>
<th>Analysis Date</th>
<th>Initials</th>
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<tbody>
<tr>
<td>Orthophosphate (mgP/L)</td>
<td>0.108</td>
<td>5/6 js</td>
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<td>Nitrate (mgN/L)</td>
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<td>Conductivity (umhos/cm @25°C)</td>
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<tr>
<td>pH</td>
<td>6.63</td>
<td>5/6 rc</td>
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<tr>
<td>Sulfate (mg/L)</td>
<td>6.0</td>
<td>5/19 mt</td>
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</tr>
<tr>
<td>Chlorides (mg/L)</td>
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<td>5/19 kt</td>
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<td>Boron (mg/L)</td>
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<td>Calcium (mg/L)</td>
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<td>Magnesium (mg/L)</td>
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<tr>
<td>Silica (mg/L)</td>
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**REMARKS:**
**Laboratory Analysis Report**

**To:** Engineering Concepts

**SAMPLES OF:** Well Water (Minami Well #2)

**RECEIVED DATE:** 5/27/88

<table>
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<th>Minami Well #2</th>
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<tr>
<td>pH</td>
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<td>Chloride (mg/L)</td>
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<tr>
<td>Potassium (mg/L)</td>
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<tr>
<td>Silica (mg/L)</td>
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<td>6/9 BAL</td>
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**Remarks:**
**DIVISION OF WATER AND LAND DEVELOPMENT**

**FROM:** [Signature]  
**DATE:** 10/28  
**FILE IN:** 2247-02  

<table>
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<th>PLEASE</th>
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<tr>
<td>M. TAGOMORI</td>
<td></td>
<td>See Me</td>
<td>ED assign work, and see that we</td>
</tr>
<tr>
<td>G. Matsumoto</td>
<td></td>
<td>Take Action By</td>
<td>and request completion of D.R.</td>
</tr>
<tr>
<td>L. Chang</td>
<td></td>
<td>Route to Your Branch</td>
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</tr>
<tr>
<td>G. Akita</td>
<td></td>
<td>Review &amp; Comment</td>
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<tr>
<td>D. Lum</td>
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<tr>
<td>S. Miyamoto</td>
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<td>S. Samuels</td>
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<td>P. Haraguchi</td>
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<td>N. Imada</td>
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<td>P. Matsuo</td>
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<tr>
<td>N. Kaneshiro</td>
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</tr>
<tr>
<td>R. Suzuki</td>
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</tbody>
</table>

**For Information**

S. Kokubun  
D. Hamada  
L. Nanbu  
F. Ching

**WILL BE APP**  
**STATUS SHEET**  
**INDEX CARD**
October 23, 1989

Mr. Manabu Tagomori
Manager-Chief Engineer
Department of Land and
Natural Resources
Division of Water and Land Development
P. O. Box 373
Honolulu, Hawaii 96809

Dear Mr. Tagomori:

Subject: Well Permit to Minami Group USA, Inc.

We forward for your information and files, copies of the well application and the approved well permit issued to Minami Group USA, Inc. for the drilling of a shallow, non-potable well at TMK: 4-5-42:1.

If you have any questions, please call Chester Lao at 527-5276.

Very truly yours,

HERBERT H. MINAKAMI
Chief, Planning and Engineering Division

Enclosures
WELL DRILLING PERMIT

TO: Minami Group USA, Inc.
1001 Bishop Street, Suite 2700
Honolulu, Hawaii 96813

Your application of October 16, 1987 has been approved in accordance with Chapter III of our Rules and Regulations for the Protection, Development and Conservation of Water Resources in the City and County of Honolulu.

You are hereby granted a permit to drill a shallow, non-potable well at TMK: 4-5-42: 1.

This permit is granted subject to the Rules and Regulations of the Board of Water Supply and the following conditions:

1. Chester Lao of the Board of Water Supply shall be notified before any work covered by this permit commences.

2. This permit will be valid upon receipt by the Board of Water Supply of a permittee bond in the amount of $2,000.00 in accordance with Rule VI, Sec. 2 of these Rules and Regulations.

3. Upon completion of the test well, a driller's report of formations, water levels, and yield shall be submitted to the Board of Water Supply.

4. A drawing of the as-built well shall be submitted at the completion of construction.

KAZU HAYASHIDA
Manager and Chief Engineer
Board of Water Supply

OCT 23 1987

Date of Permit

Pure Water... man's greatest need - use it wisely
September 3, 1987

Mr. Kazu Hayashida
Manager and Chief Engineer
Board of Water Supply
630 South Beretania Street
Honolulu, Hawaii 96813

SUBJECT: Well Drilling Permit for the Minami Group (USA), Inc.

On behalf of our client, Minami Group, we are transmitting for your approval an application for a well drilling permit.

The proposed well will be utilized as a nonpotable water source for irrigation of a proposed golf course.

Please call me if any questions arise.

Very truly yours,

Ken Ishizaki
Vice President

Attachment
APPLICATION FOR DRILLING, MODIFYING, RECASING OR REUSING WELLS

INSTRUCTIONS: Please send 1 copy to Honolulu Board of Water Supply, who will distribute to other agencies concerned. In filling out, refer to Rules and Regulations of the Honolulu Board of Water Supply adopted on May 10, 1976 and applicable rules and regulations of the State Department of Health.

OWNER: (See BWS Rules and Regulations Chapter III, Sec. 3-305, Item 1a)

Minami Group USA, Inc.

ADDRESS: 1001 Bishop Street, Suite 2700
Honolulu, Hawaii 96813

1. APPLICATION FOR WELL: (See Chapter III, Sec. 3-305, Item I)

Drill X Reuse ___
Modification ___ Recase ___
Change in use ___

2. WORK TO BE PERFORMED BY: (See Chapter III, Sec. 3-311)

Water Resources International, Inc.
2828 Paa Street, Suite 2085
Honolulu, Hawaii 96819
3. USE OF WELL: (See Chapter III, Sec. 3-305, Item 1c)

Drilling of a test well to investigate the possibility of
developing a nonpotable water source for irrigation of a
proposed golf course. Quantity desired: 1.0 MGD.

4. ATTACHMENTS: (Each copy of the application shall have a complete set of attachments)

a. Location of well: Kaneohe, Oahu, Hawaii
   Tax Map Key: 4-5-42:1

b. Land area served: (Attach map showing exact location of well and area served. See Chapter III, Sec. 3-305, Items 1b and 1d)
   See attachment.

c. Description of well and appurtenant details:
   (See Chapter III, Sec. 3-305, Item 1e)
   See attachment.
5. The Owner hereby agrees to install, operate, and maintain control of the well in accordance with the laws of the State of Hawaii and the Rules and Regulations of the Honolulu Board of Water Supply and the State Department of Health.

The Owner hereby understands that a fee of One Hundred Dollars ($100.00) and a permittee bond of the amount not greater than Twenty-five Thousand Dollars ($25,000.00), said amount of the bond to be set by the Engineer, are required for the drilling or excavation of each new well. The $100.00 fee per well shall be payable to the Board and shall accompany this application. The amount of the permittee bond shall be stipulated when the well owner is notified that his permit has been granted.

(See Chapter III, Sec. 3-305, Items 2 and 2a)

6. The Owner hereby agrees to the following special conditions for this well:

September 3, 1987
Date Submitted

[Signature of Owner]

Name of applicant if other than Owner
DESCRIPTION OF WELL

PROPOSED SECTION OF WELL

Elevation at top of casing  
251 ft., msl.

Ground Elev.  
250 ft., msl

Solid casing:  
Material  
Steel

Length  
45

Diameter  
8

Wall thickness  
0.3

Casing:  
Perforated  
Scr.

Material  
Steel

Length  
30

Diameter  
8

Wall thickness  
0.3

Openings  
eq. in./

Cement Grout  
10 ft.

Hole Dia.  
12 in.

Total Depth  
100 ft.

Rock Packing  
65 ft.

*Approximate elev. at filing. Final elev. (msl) by a surveyor licensed by the State must be submitted at start of construction.