**CHECKLIST**

- **WELL CONSTRUCTION PERMIT**
- **PUMP INSTALLATION PERMIT**

**WELL NAME or LOCATION:** Waianae H.S., Aquatorium, I.**LAND:** Oahu

**WELL NUMBER:** 2712-32  **Tax Map Key:** 8-5-02:18

**OWNER/OPERATOR:**
- **Firm Name:** State Dept of Education  **LANDOWNER:**
- **Firm Name:** Same

**Contact Person:**  **Contact Person:** 

**Address:**  **Address:**

**Phone:**  **Phone:**

Date application received: 10/15/92

Date acknowledged receipt/request more info: 

Date application accepted: 

Suspense date (90 days): 

Date filing fee deposited: Not needed

✓ Application sent to following:

<table>
<thead>
<tr>
<th>Date sent</th>
<th>Comments received</th>
</tr>
</thead>
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</table>

Date agenda due: 12/2/92

Date submittal due: 12/2/92

Date submittal sent to applicant: 

Date application approved or disapproved: 12/16/92

Date applicant notified of decision: 

**REMARKS:**

Please send to agencies for review. Thanks. Ed
TO: DLNR
Commission on Water Resource Management

ATTENTION: ________________________________

DATE: 2/10/93
SUBJECT: Warranties

D.A.G.S. JOB NO. 12-16-4074

WE ARE SENDING YOU ✔ Attached ☐ Under separate cover the following items:
☐ Plans ☐ Specifications ☐ Estimates
☐ Project Management Review Comments dated
(____ sheets)
☐ User's letter dated
(____) (content of letter)

ACTION REQUIRED:
☐ APPROVED, SUBJECT TO ABOVE COMMENTS. PROCEED WITH STAGE AND SUBMIT SETS OF: _____ PLANS, _____ SPECS, _____ ESTIMATE, _____ DESIGN COMPUTATIONS PER CONTRACT REQUIREMENTS.

☐ REVISE AND RESUBMIT _____ TRACINGS _____ SPECIFICATIONS
☐ Incorporate into documents
☐ For your information and use
☐ Review and comments
☐ Prepare brief description of work, comments and cost estimates
☐ Prepare Description of Change, necessary PCD, addendum and cost estimate
☐ Sign and return the original of Change Order No. ______________

☐ Well Completion report will be forwarded to you later.

SUBMITTAL DEADLINE: On or before ______________

cc:

Signed __________________________
PROJECT COORDINATOR

PM Form 1 (7/89)
TO: State of Hawaii, Department of Education
94-229 Farrington Highway
Waipahu, HI 96797

In accordance with the Department of Land and Natural Resources Administrative Rules, Section 13-168, entitled "Water Use, Wells, and Stream Diversion Works", your application to install a pump in Waianae High School Aquaculture Well (Well No. 2712-32), for an aquaculture education project, is approved subject to the following conditions:

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

2. The permit shall be for installation of a 150 gpm capacity pump in the well.

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

4. The following shall be submitted to the Commission staff within 30 days after completion of the work:
   a. Well Completion Report.
   b. As-built sectional drawing of the installed pump.
5. The applicant shall comply with all applicable laws, rules, and ordinances.

6. This 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.

WILLIAM W. PATY, Chairperson
Commission on Water Resource Management

JAN 5 1993
Date of Issuance

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: JAN 20 1993

Printed Name: Linda Y. Chung
Firm or Title: District Superintendent
Leeward Oahu District

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

cc: USGS
Department of Health
Safe Drinking Water Branch
Ground Water Protection Program
Honolulu Board of Water Supply
PUMP INSTALLATION PERMIT

for

Waianae High School Aquaculture Well
Well No. 2712-32
Waianae, Oahu

TO: State of Hawaii, Department of Education
94-229 Farrington Highway
Waipahu, HI 96797

In accordance with the Department of Land and Natural Resources Administrative Rules, Section 13-168, entitled "Water Use, Wells, and Stream Diversion Works", your application to install a pump in Waianae High School Aquaculture Well (Well No. 2712-32), for an aquaculture education project, is approved subject to the following conditions:

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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: [Signature]
Date: [JAN 20 1993]

Printed Name: Linda Y. Chung
District Superintendent
Leeward Oahu District

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

cc: USGS
Department of Health
Safe Drinking Water Branch
Ground Water Protection Program
Honolulu Board of Water Supply
### WELL COMPLETION REPORT (Pump Installation Only)

**Instructions:** Please print or type and submit completed report within 30 days after well completion to the Commission on Water Resource Management, P.O. Box 821, Honolulu, Hawaii 96826. An as-built drawing of the well and chemical analysis should also be submitted. For assistance call the Commission Regulation Branch at 587-0225.

1. **STATE WELL NO.** 2712-32  
2. **WELL NAME** Waianae High School  
3. **LOCATION:** Address Waianae High School Grounds  
4. **ISLAND** Oahu  
5. **CONTRACTOR'S C-67 LICENSE NUMBER** C-10692, BC-10431  
6. **DATE OF WELL DRILLING COMPLETION** (NOTE: Report must be submitted within 30 days after this date)

#### 8. GROUND ELEVATION (mal)
- Top of Drilling Platform (mal) ______ ft.  
- Height of Drilling Platform above Ground surface ______ ft.

#### 9. DRILLER'S LOG:

<table>
<thead>
<tr>
<th>Depth (ft.)</th>
<th>Rock Description, Remarks, Dates</th>
<th>Water Level (ft.)</th>
<th>Depth (ft.)</th>
<th>Rock Description, Remarks, Dates</th>
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(If more space is needed, continue on back.)

10. **TOTAL DEPTH OF WELL BELOW GROUND** ______ ft.

11. **HOLE SIZE:**  
- inch dia. from ______ ft. to ______ ft. below ground
- inch dia. from ______ ft. to ______ ft. below ground
- inch dia. from ______ ft. to ______ ft. below ground

12. **CASING INSTALLED:**  
- in. I.D. x in. wall solid section to ______ ft. below ground
- in. I.D. x in. wall perforated section to ______ ft. below ground  
**Type of Perforation**

13. **ANNULUS:**  
- Grouted from ______ ft. below ground to ______ ft. below ground
- Gravel packed from ______ ft. below ground to ______ ft. below ground

14. **INITIAL WATER LEVEL** ______ ft. below ground.  
**Date and time of measurement**

15. **INITIAL CHLORIDE** ppm  
**Date and time of sampling**

16. **INITIAL TEMPERATURE** °F  
**Date and time of sampling**

17. **DATE OF PUMP INSTALLATION** Nov. 1992

18. **PUMP INSTALLATION:**  
- Pump Type, Make, Serial No. (2 each) Centrifugal, Challenger 2A  
**Capacity** 75 gpm  
- Motor type, H.P., Voltage, rpm 15 HP, TEC. 460V., 3600 RPM  
- Depth of Pump Intake Setting 22 ft. below Grade, which elevation is 8.3 ft.  
- Depth of Bottom of Airline 85 ft. below ______, which elevation is ______ ft.

19. **PUMPING TESTS:**  
- **Reference Point (R.P.) used:** ______, which elevation is ______ ft.  
- **Date**
  - Start water level ______ ft. below R.P.  
  - End water level ______ ft. below R.P.  
  - Depth of well ______ ft. below R.P.  

**Elapsed Time (hours)**

<table>
<thead>
<tr>
<th>Start water level</th>
<th>End water level</th>
<th>Depth of well</th>
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(If more space is needed, continue on back.)

**Remarks:**

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

**Contractor (print)_________________________**  
**Title_________________________**  
**Signature_________________________**  
**Date_________________________**

---

For Orders Use:  
Job Name ______________________ Job No ________________________

For Official Use:  
Well No. 2712-32  
Longitude 158 12 05  
Latitude 21 27 26
<table>
<thead>
<tr>
<th>Depth (ft.)</th>
<th>Driller's Log (conf'd):</th>
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<tr>
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**Pumping Tests (conf'd):**

<table>
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<tr>
<th>Elapsed Time (hours)</th>
<th>Rate (gpm)</th>
<th>Drawdown (ft.)</th>
<th>Cl- (ppm)</th>
<th>Temp. °F</th>
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**Remarks (conf'd):**

This is supplemental report issued after final pump installation. Previous well completion report was filed by Rosco Moss after well construction and testing.
Commission on Water Resource Management
Department of Land and Natural Resources
State of Hawaii
P.O.Box 621
Honolulu, HI 96809

Subject: Well Completion Report - Pump Installation Only
Waianae High School Aquaculture Well No. 2712-32

Dear Commission,

Please find enclosed a completed copy of the relevant Well Completion Report information pertaining to the installation of 2 each 1.5 HP centrifugal pumps on the above referenced well. A prior Well Completion Report was filing following the drilling of this well. That information has not been repeated here. This document is being filed by Makai Ocean Engineering for our client the Department of Education, State of Hawaii.

Please contact me if you have any questions or comments.

Sincerely,

Dale Jensen
Ocean Engineer
Attach new cap to casing with 4 each 1-1/2" L 1/4-20 slotted flat countersunk head machine screws, Type 302 stainless steel.

Cut off existing 8" PVC pipe cap without cutting or damaging PVC well casing. Supply new cap and through drill cap and Tap PVC Pipe casing, 4 places (90° intervals) with 1/4"-20 UNC threads.

Prime suction pipe here This valve must be closed during pump operation.

1-1/2" PVC True Union Ball Valve with socket ends and removable handle.

3" Schedule 40 Tee Reduce top port to 1-1/2".

PVC cap

Place riser adjacent to 6" pipe sleeve in masonry wall. Terminate riser w/4" PVC cap solvent welded. Paint "SW-Suc" on cap after installation.

Saltwater Suction Pipe Detail  Not To Scale
Pump Layout Detail - Side View
Part of Additive/Alternate #1
Not To Scale
ATTACH 1/2" PIPE W/RHAC SERVICE
SADDLE (USE STARR Join-405×1/2"
DRILL 1/2" DIA. HOLE IN 3" PVC PIPE - DO
NOT OVER DRILL.

1/2" SCH 40 PVC PIPE
PUMP DISCHARGE
RETURN PIPE TO
PREVENT BLOCKED
FLOW.

3" SCH 40 PVC PIPE

2" SCH PVC REDUCER BUSHING
(TYP. 2 PLACES)

2" TECK-NO-CHEE DOUBLE DRAIN
LATCH VALVE W/2" NPT (TYP.
2 PLACES)

EX. 4" PVC PIPE SLEEVE IN MASONRY WALL, FILL
AROUND PIPE W/NEAT
CEMENT GROUT.

5" TRUE UNION
BALL VALVE

EX. 6" PVC PIPE SLEEVE IN MASONRY WALL. FILL
AROUND PIPE W/NEAT
CEMENT GROUT.

4" PVC SUCTION PIPE FROM WELL

2 1/2" S.C. 40 PVC PIPE
FROM EACH PUMP DISCHARGE
(TYP. 2 PLACES)

Isometric View

Salt Water Well Pumping System Layout

Part of Additive/Alternate #1
Not To Scale
TO: State of Hawaii, Department of Education
94-229 Farrington Highway
Waipahu, HI 96797

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WILLIAM W. PATY, Chairperson
Commission on Water Resource Management

JAN - 5 1993
Date of Issuance

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

Applicant's Signature: __________________________ Date: __________

Printed Name: ________________________________

Firm or Title: ________________________________

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

cc:   USGS
      Department of Health
      Safe Drinking Water Branch
      Ground Water Protection Program
      Honolulu Board of Water Supply
January 5, 1993

Honorable William W. Paty, Chair
Board of Land and Natural Resources
P.O. Box 621
Honolulu, Hawaii 96809

RE: Application for Water Use Permit
Applicant: State of Hawaii, Dept of Education
Request: Install new pump
TMK: 8-5-03:18
Location: Farrington Hwy, Waianae, Hawaii

Dear Mr. Paty:

We have received a copy of the above-referenced Water Use Permit Application. Thank you for the opportunity to review this application. At this time, we have no comments or concerns on this matter.

If you have any questions, please contact Lynn J. Lee in our Land and Natural Resources Division at 586-3777.

Sincerely,

Richard K. Paglinawan
Administrator

cc: Clayton Hee
Chair, Board of Trustees
December 7, 1992

MEMORANDUM

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

FROM: Don Hibbard, Administrator
Historic Preservation Division

SUBJECT: Pump Installation Permit, Waianae High School
Exploratory Test Hole (Well No. 2712-32)
Wai'anae, Wai'anae, O'ahu
TMK: 8-5-2: 18

The applicant proposes to install a pump at an established well. Since this doesn't involve excavation we believe there will be "no effect" on historic sites.

TD: amk
Ms. 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 Ms. Loui:

Subject: Your Letter of November 17, 1992 on Well Construction and Pump Installation Permit Applications for Waianae High School Aquaculture Well No. 2712-32

Thank you for the opportunity to comment on the applications. We have no objections to the construction of a shallow well and installation of a pump for aquaculture at Waianae High School.

If you have any questions, please call George Hiu at 527-6134.

Very truly yours,

KAZU HAYASHIDA  
Manager and Chief Engineer
Mr. Randal Tanaka  
State of Hawaii  
Department of Education  
94-229 Farrington Hwy  
Waipahu, Hawaii 96797

Dear Mr. Tanaka:

We have received your application for a permit to install a pump in a well (Well No. 2712-32) at Waianae, Oahu, (TMK 8-5-02:18). We are reviewing the application for completeness.

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

Sincerely,

RAE M. LOUI  
Deputy Director

JZ:ky
Mr. Thomas Arizumi, Chief
Environmental Management Division
State Department of Health
Five Waterfront Plaza
500 Ala Moana Blvd., Suite 250
Honolulu, Hawaii 96813

Attn: Mr. William Wong

Dear Mr. Arizumi:

Well Construction and Pump Installation Permit Applications

Transmitted for your review and comment are copies of the following permit applications:

<table>
<thead>
<tr>
<th>Island</th>
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<td>Well &amp; Pump</td>
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<td>2712-32</td>
<td>Pump Installation</td>
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Please review the applications pursuant to your area of concern and submit your comments to us, orally or in writing, ten (10) working days from date of this letter.

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

Sincerely,

RAE M. LOUI
Deputy Director

JZ:ky
Enc.
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Should you have any questions, please contact the Commission on Water Resource Management staff at 587-0225.

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

Dear Ms. Ziegler:

Well Construction and Pump Installation Permit Applications

Transmitted for your information are copies of recent well permit applications:

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

Sincerely,

RAE M. LOUI  
Deputy Director

JZ:ky  
Enc.
Honorable Hoaliku L. Drake  
Director  
Department of Hawaiian Home Lands  
State of Hawaii  
P.O. Box 1879  
Honolulu, Hawaii 96805

Dear Mrs. Drake:

Well Construction and Pump Installation Permit Applications

Transmitted for your review and comment are copies of the following permit applications:

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Please review the applications pursuant to your area of concern and submit your comments to us, orally or in writing, ten (10) working days from date of this letter.

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

Very truly yours,

William W. Paty

Enc.
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:  

Well Construction and Pump Installation Permit Applications  

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

Very truly yours,

[Signature]

WILLIAM W. PATY  
DEPUTY

Enc.
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:

Well Construction and Pump Installation Permit Application

Transmitted for your review and comment is a copy of the following permit application:

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</tbody>
</table>

Please review the application pursuant to your area of concern and submit your comments to us, orally or in writing, ten (10) working days from date of this letter.

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

Sincerely,

[Signature]

RAE M. LOUI  
Deputy Director

JZ:ky  
Enc.
FROM: [Signature]

TO: G. Matsumoto
E. Sakoda
Y. Shiroma
E. Hirano
D. Higa
G. Bauer
R. Rozeboom
R. Hardy

PLEASE:

See Me
Call
Review & Comment
Take Action
Investigate & Report
Draft Reply
Acknowledge Receipt
Type Draft
Type Final
Xerox ___ copies

FOR YOUR:

M. TAGOMORI
L. Nanbu

Approval
Signature
Information

DATE: [Blank]

FILE IN: 712-32

REMARKS:

2 pumps in one well?

Will Completion Report filed? Yes

Call Dale Jensen - Makena Ocean

259-8871

Question: Will there be two 75 gpm pumps in one 8" diameter well?
WELL CONSTRUCTION PERMIT

PUMP INSTALLATION PERMIT

APPLICATION FOR

INSTRUCTIONS: Please print or type and send completed application with attachments to the Division of Water and Land Development, P.O. Box 172, Honolulu, Hawaii 96820. Application must be accompanied by a non-refundable filing fee of $12.00 payable to the Department of Land and Natural Resources. (Filing fee waived for government agencies.) If necessary, phone 586-7145, Hydrology/Geology Section for assistance.

1. WELL LOCATION

Island: Oahu
Tax Map Key: 8-5-02:18
Address: Waianae High School 85-251 Farrington Hwy, Waianae, HI 96792

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

2. WELL OWNER

Firm Name: State of Hawaii, Dept of Ed.
Contact Person: Randal Tanaka, Principal
Address: 94-229 Farrington Hwy, Waipahu, HI 96797
Phone: 696-4244

3. PROPOSED CONTRACTOR FOR:

Name: Eddie Lee, All Pool & Spa
Address: P.O. Box A, Kailua, HI 96734
Phone: 261-3991
Contractor's License No.: C-10892, BC-10431

4. PROPOSED WORK

- Drill New Well
- Deepen Alter Install New Pump
- Seal Replace Pump
- Redrill Modify Pump

(Briefly describe the proposed work and fill in the diagram on the back of this form.)

5. PROPOSED USE

- Municipal (including hotels, stores, etc.)
- Military
- Domestic (individual, noncommercial water systems)
- Industrial
- Irrigation (specify)
- Submersible
- Centrifugal
- Orange (specify) Aquaculture
- Other (specify) Education Project

6. PROPOSED AMOUNT OF WITHDRAWAL

216,000 gallons per day (max)

7. PROPOSED PUMP INFORMATION

Pump Type: Vertical Turbine
Motor: Diesel
Gas
Rated Pump Capacity: 150 gallons per minute (gpm) (75 gpm on pump)

Submersible
Centrifugal
Electric: 2 ea @ 1/2 HP Rated Horsepower

Well Owner (print): Randal Tanaka
Signature: ____________________________ Date: 10-13-92

Landowner (print): Randal Tanaka
Signature: ____________________________ Date: 10-13-92

For Official Use Only:
Field Checked By: ____________________________ Latitude: ____________________________ Hydrologic Unit: ____________________________
Date: ________________ Longitude: ____________________________ State Well No.: ____________________________
Briefly describe the proposed work:

This well was originally drilled as a test well. Water quality tests indicated that it was suitable for use in Waianae High School Aquaculture experiments, so an Aquaculture facility has been designed and will be constructed as State Project.

Pump installation is part of this work.

*Approximate elevation at time of filing application. Final elevation (mal) by a surveyor licensed by the State must be submitted at start of construction.
WELL CONSTRUCTION PERMIT
for
Waianae High School Exploratory Test Hole
Well No. 2712-32
Waianae, Oahu

TO: State of Hawaii
Department of Education
94-229 Farrington Highway
Waipahu, HI 96797

In accordance with Department of Land and Natural Resources Administrative Rules, Section 13-168, entitled "Water Use, Wells, and Stream Diversion Works", your application to construct an exploratory test hole (Well No. 2712-32) is approved, subject to the following conditions:

1. The Division of Water Resource Management (DWRM), P.O. Box 373, Honolulu, HI 96809, shall be notified, in writing, before any work by this permit commences.

2. The well shall be used for exploration and testing only.

3. The following shall be submitted to DWRM within 30 days after completion of the well:
   b. As-built sectional drawing of the well.
   c. Plot plan and map showing the exact location of the well.
   d. Periodic reports of monitoring and testing results.

4. The applicant shall comply with all applicable laws, rules, and ordinances.
5. This permit may be revoked if work is not started within six months of the date of issuance or if work is suspended or abandoned for six months. The work shall be completed within two years of the date of issuance.

6. Upon completion of exploratory operations, the applicant shall obtain a well construction permit from the Commission to modify or seal and abandon the well.

Date of Issuance

Enc. (Well Completion Report form)
cc: USGS
    Department of Health
    Safe Drinking Water Branch
    Ground Water Protection Program
    Honolulu Board of Water Supply
TO

DIVISION OF WATER & LAND DEV.

DEPT OF LAND & NAT. RESOURCES

STATE OF HAWAII

P.O. BOX 373

HONOLULU, HI 96809

ATTENTION

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

□ Shop drawings □ Prints □ Plans □ Samples □ Specifications
□ Copy of letter □ Change order □ WELL DRILLING PERMIT Application

<table>
<thead>
<tr>
<th>COPIES</th>
<th>DATE</th>
<th>NO.</th>
<th>DESCRIPTION</th>
</tr>
</thead>
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<td>8-15-91</td>
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<td>WELL DRILLING PERMIT Application</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>WAINAIAE HIGH SCHOOL MARINE SCIENCE</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>LEARNING CENTER</td>
</tr>
</tbody>
</table>

REMARKS

ATTENTION: ED SAKUDA

Please call me if any problems or if this is approved.

SIGNATURE: ______________________________

COPY TO ________________________________

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

DATE

JOB NO.

ATTENTION

RE:

DACS JOB NO. 12-16-2074

MARINE SCIENCE LEARNING CENTER, WAINAIAE HIGH SCHOOL

RECEIVED: 9-1-95

P.O. BOX 373

HONOLULU, HI 96809

P.O. BOX 1206

KAILUA, HAWAII 96734

FAX 259-3238

(808) 259-8871

PRODUCT LINE: BS Inc., Groton, MA 01471

If enclosures are not as noted, kindly notify us at once.
Manabu—shallow test hole in caprock aquifer—Waianae. If results good—will apply for pump installation permit. DOE trying to get signature as test hole?
APPLICATION FOR
Well Construction Permit
Pump Installation Permit

INSTRUCTIONS: Please print or type and send completed application with attachments to the Division of Water and Land Development, P.O. Box 273, Honolulu, Hawaii 96816. Application must be accompanied by a non-refundable filing fee of $15.00 payable to the Department of Land and Natural Resources. (Filing fee waived for government agencies.) If necessary, phone 548-1545, Hydrology/Geology Section for assistance.

1. WELL LOCATION
Island Oahu Tax Map Key 8-5-02:18
Address Waianae High School, 85-251 Farrington Hwy, Waianae, HI 96792
(Attach a USGS map (scale 1"=2000') and property tax map showing well location referenced to established property boundaries.)

2. WELL OWNER

Firm Name State of HI, Dept of Educ. Contact Person Randal Tanaka, Principal
Address 94-229 Farrington Hwy, Waipahu, HI 96797
Phone 696-4244

3. PROPOSED CONTRACTOR FOR:
Name Roscoe Moss, Inc. Contact Person Randal Tanaka, Principal
Address 830 Ahua St., Honolulu, HI 96819
Phone 839-6888

4. PROPOSED WORK
Drill New Well
Alter
Install New Pump
Seal
Replace Pump
Redrill
Abandon
Modify Pump

(Briefly describe the proposed work and fill in the diagram on the back of this form.)

5. PROPOSED USE
Municipal (including hotels, stores, etc.)
Domestic (individual, noncommercial water systems)
Irrigation (specify)
Military
Industrial
Other (specify)
Aquaculture
Educ. Project.

6. PROPOSED AMOUNT OF WITHDRAWAL
216,000 gallons per day (max)

7. PROPOSED PUMP INFORMATION
Pump Type: Vertical Turbine
Submersible
Centrifugal
Motor: Diesel
Gas
Electric:
Rated Pump Capacity _______ gallons per minute (gpm)
Rated Horsepower _______

Well Owner (print) Randal Tanaka
Signature ____________
Date August 13, 1991

Landowner (print) Randal Tanaka
Signature ____________
Date Aug. 13, 1991

For Official Use Only:
Field Checked By ____________ Latitude ____________
Date ____________ Hydrologic Unit ____________
State Well No. 2712-32
Briefly describe the proposed work:

This well is being drilled to supply salt water to the Waianae Marine Science Learning Center. In this phase of work the well is a test well to determine the water's suitability for the proposed aquaculture work.

Roscoe Moss is drilling this well for a very low price ($8,000) and wants to drill the well to its full production diameter. If water tests show promise, a production well permit will be applied for at the time of pump installation.

PROPOSED SECTION OF WELL

Elevation at top of casing 8.33 ft., msl.

- Ground Elev. ft., msl*
- Solid Casing:
  - Material: PVC
  - Length: 30 ft.
  - Diameter: 8 in.
  - Wall thickness: 0.5 in.

- Casing: / / / / Perforated / / / / Screen
  - Material: PVC
  - Length: 20 ft.
  - Diameter: 8 in.
  - Wall thickness: 0.5 in.
  - Openings: 2.2 sq. in./L.F.

- Rock Packing 20 ft.

- Rock Packing 20 ft.

- Open Hole: (if no perforated casing needed)
  - Length: 20 ft
  - Diameter: 12 in.

*Approximate elevation at time of filing application. Final elevation (msl) by a surveyor licensed by the State must be submitted at start of construction.
### WELL COMPLETION REPORT

#### INSTRUCTIONS:
- Please print or type and submit completed report within 30 days after completion to the Division of Water & Land Development, P.O. Box 373, Honolulu, HI 96809. An updated drawing of the well and chemical analysis, if available, should also be submitted. If necessary, phone 548-3457, Hydrology, Geology Section for assistance.

#### A. STATE WELL NO.: 2712-32

#### B. LOCATION: Waianae High School Grounds

#### C. WELL OWNER: Department of Education

#### D. DRILLING OR PUMP INSTALLATION CONTRACTOR: Roscoe Moss Hawaii, Inc.

#### E. TYPE OF RIG: Auger

#### F. DATE OF WELL COMPLETION: 9/19/91

#### G. DATE OF PUMP INSTALLATION: 9/19/91

#### H. TOTAL DEPTH OF WELL BELOW GROUND: 51 ft.

#### I. HOE SIZE: 12 inch dia. from 0 ft. to 51 ft. below ground

#### J. CASING INSTALLED: PVC

#### K. TYPE OF PERMANENT PUMP INSTALLATION:

- Grouted from 0 ft. to 30 ft. below ground
- Gravel packed from 30 ft. to 51 ft. below ground
- Capacity 64 gpm

#### L. PERMANENT PUMP INSTALLATION:

- Pump type, make, serial No.
- Motor type, H.P., voltage, R.P.M.
- Depth of pump intake setting
- Depth of bottom of airline
- Which elevation is ft.
- Which elevation is ft.

#### M. PROPOSED USE: Marine Science Education

#### N. INITIAL WATER LEVEL: 7 ft. below ground

#### O. INITIAL CHLORIDE: 39,000 ppm

#### P. PUMPING TESTS: Reference point (R.P.) used; ground which elevation is 8 ft.

<table>
<thead>
<tr>
<th>Date</th>
<th>Start water level</th>
<th>End water level</th>
<th>Depth of well</th>
<th>Rate</th>
<th>Draw</th>
<th>Elapsed time</th>
<th>Rate</th>
<th>Draw</th>
<th>Elapsed time</th>
</tr>
</thead>
<tbody>
<tr>
<td>9/19/91</td>
<td>7 ft. below R.P.</td>
<td>7 ft. below R.P.</td>
<td>51 ft. below R.P.</td>
<td>0.11</td>
<td>30,000</td>
<td>0.00</td>
<td>30,000</td>
<td>0.00</td>
<td>30,000</td>
</tr>
</tbody>
</table>

#### J. DRILLER'S LOG:

<table>
<thead>
<tr>
<th>Depth, ft.</th>
<th>Rock Description &amp; Remarks</th>
<th>Water Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 3</td>
<td>Dike Fill</td>
<td>11</td>
</tr>
<tr>
<td>3 to 51</td>
<td>Coral and sand</td>
<td>11</td>
</tr>
</tbody>
</table>

#### REMARKS:
- Remarks

---

**Title:** Field Supervisor

**Date:** 9/25/91

**Signature:** Tracy Runnels

**Title:** Field Supervisor

**Date:** 9/25/91

**Signature:** Tracy Runnels