Some GPS lat/longs:

Well 5129-02 (Consolidated Base Yard)

20° 51' 07.8"
156° 29' 19.4"

Well 5125-06 (MW6 Landfill)

20° 51' 14.7"
156° 29' 12.0"
Mr. Andy Hirose  
Maui Public Works  
200 South High Street  
Wailuku, Maui, HI 96793

Dear Mr. Hirose:

Well Completion Reports for Well No. 5125-04 to 06

We received a letter from Earth Tech, Inc. dated October 23, 2001, responding to questions concerning the annulus and grouting of the wells. Because these are monitor rather production wells, we will accept the bentonite grout. We believe that the use of centralizers during grouting improves the likelihood that the smaller annulus will provide an adequate seal. With this acknowledgement, we accept as complete your Well Completion Reports Part I and II for the Central Maui Landfill Monitor Wells MW-4 to -6 (Well Nos. 5125-04 to 06), received on August 10, 2001. This completes your permitting requirements.

If you have any questions, please contact Charley Ice of the Commission staff at 587-0251 or toll-free at 984-2400 extension 70251.

Sincerely,

LINNEL T. NISHIOKA  
Deputy Director

Cl:ky  
c. Earth Tech, Inc.
<table>
<thead>
<tr>
<th>TO:</th>
<th>INIT.</th>
<th>TO:</th>
<th>INIT.</th>
<th>FOR:</th>
<th>PLEASE:</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAUER, G.</td>
<td></td>
<td>CHING, F.</td>
<td></td>
<td>3</td>
<td>Approval</td>
</tr>
<tr>
<td>FUJII, N.</td>
<td></td>
<td>HARDY, R.</td>
<td></td>
<td>4</td>
<td>Information</td>
</tr>
<tr>
<td>1</td>
<td>HIGA, D.</td>
<td>NISHIOKA, L.</td>
<td></td>
<td>5</td>
<td>Signature</td>
</tr>
<tr>
<td>3</td>
<td>OHYE, M.</td>
<td>SAKODA, E.</td>
<td></td>
<td>6</td>
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</tr>
<tr>
<td>4</td>
<td>HIRANO, E.</td>
<td></td>
<td></td>
<td>7</td>
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<tr>
<td>5</td>
<td>ICE, C.</td>
<td>SUBIA, S.</td>
<td></td>
<td>8</td>
<td></td>
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<tr>
<td>6</td>
<td>IMATA, R.</td>
<td>SWANSON, S.</td>
<td></td>
<td>9</td>
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<tr>
<td>7</td>
<td>JINNAI, R.</td>
<td>UYENO, D.</td>
<td></td>
<td>10</td>
<td>Xerox copies</td>
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<td>8</td>
<td>KUNIMURA, I.</td>
<td>YODA, K.</td>
<td></td>
<td>11</td>
<td></td>
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WELL NUMBER: 5125-04 to 06  
WELL NAME: Central Maui Landfill Monitor Wells 4-6

WELL CONSTRUCTION

<table>
<thead>
<tr>
<th>ATTACHMENTS FOR WELL CONSTRUCTION PERMIT:</th>
<th>TO BE SENT TO APPLICANT</th>
<th>FOR OFFICE USE ONLY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 COVER LETTER</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 PERMIT (2x)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 PUMP TEST</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 DOH COMMENTS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 LAND DIV. COMMENTS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 WCR FORM</td>
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PUMP INSTALLATION

<table>
<thead>
<tr>
<th>ATTACHMENTS FOR PUMP INSTALLATION PERMIT:</th>
<th>TO BE SENT TO APPLICANT</th>
<th>FOR OFFICE USE ONLY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 COVER LETTER</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 PERMIT (2x)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 DOH COMMENTS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 LAND DIV. COMMENTS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 WCR FORM</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

already issued back 3/28/01. check file. That was WCR; this is PIP.
I think we should accept with 1 since
1) only members well;
   2) we didn't catch the variance up front (in data)
   3) calibrations used, so graph should be O.K.
      (we don't require, but is good).
October 23, 2001
Department of Land and Natural Resources
Commission on Water Resource Management
P.O. Box 621
Honolulu, HI 96809
Attention: Mr. Charley Ice

Subject: Central Maui Landfill, Response to DLNR Letter Regarding Well Completion Report for Well No. 5125-04, 05, and 06


Dear Mr. Ice:

We are in receipt of the referenced letter and have the following responses for technical issues raised for Well No. 5125-04, -05, & -06:

Item No. 1: Well standards require a minimum 3-inch annulus.

Response: Permit applications and a figure showing well construction details for wells 5125-04, 04 and 06 were submitted to the Commission in March, and permits were approved by the Commission on March 22, 2001. The information submitted to the Commission indicated a 2.5 inch annulus would be used. A 3-inch annulus in the subject monitoring wells would have required the advancement of a 12-inch diameter rotary percussion-drilled borehole rather than a 10-inch diameter borehole. It was generally agreed (between County, consultant, and drilling contractor) that effort, costs and potential down-hole problems would all be increased unnecessarily with the larger 12-inch diameter borehole. It was also realized that the existing permitted wells onsite (5125-01, 02 and 03) were successfully installed in 1995, with a smaller annulus (approximately 1.75-inch diameter), and have been successfully monitored (quarterly) since that time. The new wells 5125-04, 05 and 06 were installed with a minimum 2.5-inch annulus and sealed with grout using a 1.50-inch diameter tremie pipe. Additionally, stainless steel centralizers were installed at regular intervals to ensure the well casing did not contact the borehole wall. Finally, a qualified geologist was present during well installation to assure all of the wells were constructed by the driller in accordance with the project specifications. In conclusion, we believe the use of 2.5-inch diameter annulus was sufficient to allow proper grouting of the well annulus.

Item No. 2: Well standards do not allow use of bentonite as a grouting material.

Response: Permit applications and a figure showing well construction details for wells 5125-04, 04 and 06 were submitted to the Commission in March, and permits were approved by the Commission on March 22, 2001. The figure indicated bentonite grout would be used and is
consistent with previous monitoring wells constructed at the Central Maui Landfill. The bentonite product Grout-Well DF (containing 20% solids by weight) manufactured by Wyo-Ben was used in the wells. Manufacturer information indicates that this material is suitable for achieving low permeability seals in water wells and monitoring wells, and typically achieves a permeability of $1 \times 10^{-8}$ cm/sec. This permeability is much lower than the surrounding volcanic formations. Once installed, this material continues to swell, sealing off cracks and crevices while gelling to form a caulk-like consistency. Additionally, due to the depth of the wells (247 to 324 feet), potential drying and shrinking of the grout should not occur. In conclusion, we believe the grouting material used for these wells will provide a satisfactory seal.

Should you have any questions, please contact me via e-mail or telephone at (808) 523-8874.

Very truly yours,

Earth Tech, Inc.

Jem Goethals
Project Geologist

Cc: County of Maui, Department of Public Works and Waste Management
Mr. Andy Hirose  
Maui Public Works  
200 South High Street  
Wailuku, Maui, HI 96793

Dear Mr. Hirose:

Well Completion Report for Well No. 5125-04, 05, & 06

We have received your Well Completion Report Part 1 for the Central Maui Landfill Monitor Wells (Well Nos. 5125-04, 05, & 06). However, matters which must be addressed before we accept your report as complete are as follows:

1. Well standards require a minimum 3-inch annulus.  
2. Well standards do not allow use of bentonite as a grouting material.

Please respond to the above item(s) within thirty (30) days of this letter's date. Failure to do so may result in fines of up to $1000 per day.

If you have any questions, please contact Charley Ice of the Commission staff at 587-0251 or toll-free at 984-2400, extension 70251.

Sincerely,

LINNEL T. NISHIOKA  
Deputy Director  

Cl:ky
c. Earth Tech
MEMO and ROUTE SLIP

WCR 1 Check for Well No. 5125-04 to 06 (survey to regulation memo)

1. Pump Tests Check  Glenn Bauer (initial)

   Yes  No  If no, describe deficiency  10/10/01

   Step-Drawdown Test:
   - followed WCPI Stds □ □
   - analysis attached □ □
   - proposed pump cap o.k. □ □

   Aquifer Pump Test:
   - followed WCPI Stds □ □
   - T & S analysis attached □ □

   Well Interference:
   - estimated Steady-State drawdown at 1-mile radius is ______ ft.
   - analysis attached □ □

   Stream Surface Water Impacted: □ □  If yes, identify most probable stream

2. Construction Check  Mitch Ohye (initial)

   Yes  No  If no, describe deficiency  10/10/01

   data complete □ □
   - followed WCPI Stds □ □
   - well database updated □ □

   Stream Surface Water Impacted: 5" PCC 10 ft. borhole / 2½" Anew

3. Charley/Lenore/Ryan (initial) take action based on above analysis

   ATTACHMENTS FOR PUMP INSTALLATION PERMIT:
   1 COVER LETTER
   2 PERMIT (2x)
   3 DOH COMMENTS
   4 LAND DIV. COMMENTS
   5 WCR 2 FORM
   6 WUR FORM

   not necessary – only WCP.

   To be sent to applicant

4. Roy (initial) check

5. Kathy (initial) finalize

6. Linnel (initial) signature

7. Charley (initial) file
1. **Pump Tests Check** (special condition of PIP? Yes/No)  
   Glenn Bauer________(initial if yes)  
<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>If no, describe deficiency</th>
</tr>
</thead>
</table>
   **Step-Drawdown Test:**  
   followed WCPI Stds | ☐ | ☐ |
   analysis attached | ☐ | ☐ |
   proposed pump cap o.k. | ☐ | ☐ |

2. **Aquifer Pump Test:**  
   followed WCPI Stds | ☐ | ☐ |
   T & S analysis attached | ☐ | ☐ |

3. **Well Interference:**  
   estimated Steady-State  
   drawdown at 1-mile radius is _________ ft.  
   analysis attached | ☐ | ☐ |

4. **Stream Surface Water Impacted:**  
   ☐ | ☐  
   If yes, identify most probable stream  

5. **Pump Installation Check**  
   Mitch Ohye________ (initial)  
<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>If no, describe deficiency</th>
</tr>
</thead>
</table>
   data complete | ☐ | ☐ |
   followed WCPI Stds | ☐ | ☐ |
   well database updated | ☐ | ☐ |

6. Charley/Lenore/Ryan ________ (initial) take action based on above analysis  
7. Roy________ (initial) check  
8. Susan Subia________ (initial) finalize  
9. Linnel ________ (initial) signature  
10. Charley/Lenore/Ryan File
13. AS-BUILT WELL SECTION (Please attach as-built if different from diagram provided below)

Please refer to the HAWAII WELL CONSTRUCTION AND PUMP INSTALLATION STANDARDS to ensure that your as-built is in compliance with applicable standards.

Solid Casing Material:
- Carbon Steel: compliant with (check one or more): 
  - ANSI/AWWA C200
  - API Spec. 5L
  - ASTM A53
  - ASTM A139
- Stainless Steel: (check one):
  - ASTM A409 (production wells)
  - ASTM A312 (monitor wells)
- ABS Plastic conforming to ASTM F480 and ASTM D1527: (check one):
  - Schedule 40
  - Schedule 80
- PVC Plastic conforming to ASTM F480 and (ASTM D1785 or ASTM D2241): (check one):
  - Schedule 40
  - Schedule 80
  - Schedule 120
- Thermoset Plastic: (check one)
  - Filament Wound Resin Pipe conforming to ASTM D2996
  - Centrifugally Cast Resin Pipe conforming to ASTM D2997
  - Reinforced Plastic Mortar Pressure Pipe conforming to ASTM D3517
  - Glass Fiber Reinforced Resin Pressure Pipe conforming to AWWA C950
  - PTFE Fluorocarbon Tubing conforming to ASTM D3296
  - FEP Fluorocarbon Tubing conforming to ASTM D3296

Open Casing Material:
- Carbon Steel: compliant with (check one or more): 
  - ANSI/AWWA C200
  - API Spec. 5L
  - ASTM A53
  - ASTM A139
- Stainless Steel: (check one):
  - ASTM A409 (production wells)
  - ASTM A312 (monitor wells)
- ABS Plastic conforming to ASTM F480 and ASTM D1527: (check one):
  - Schedule 40
  - Schedule 80
- PVC Plastic conforming to ASTM F480 and (ASTM D1785 or ASTM D2241): (check one):
  - Schedule 40
  - Schedule 80
  - Schedule 120
- Thermoset Plastic: (check one)
  - Filament Wound Resin Pipe conforming to ASTM D2996
  - Centrifugally Cast Resin Pipe conforming to ASTM D2997
  - Reinforced Plastic Mortar Pressure Pipe conforming to ASTM D3517
  - Glass Fiber Reinforced Resin Pressure Pipe conforming to AWWA C950
  - PTFE Fluorocarbon Tubing conforming to ASTM D3296
  - FEP Fluorocarbon Tubing conforming to ASTM D3296
9. AS-BUILT PUMP SECTION (Please attach as-built if different diagram provided below)

MW-4, MW-5, and MW-6

SEE ATTACHED PUMP FIGURE

- Bench mark elevation surveyed to nearest 0.01 ft. = ft. mean sea level
- elevation of top of chase tube ft. mean sea level
- Pump intake depth = ft. (referenced to bench mark)
- Chase tube depth = ft. (referenced to bench mark)
- if airline installed, bottom of airline elevation = ft. mean sea level
WELL NUMBER: MW-4, MW-5, and MW-6

DRILLER'S LOG (7/26/99 DL Form) -- NOT AVAILABLE, REFER TO BORING LOGS (attached)

<table>
<thead>
<tr>
<th>Depths (ft.)</th>
<th>Rock Description, Water Level, etc.</th>
<th>Dates</th>
<th>Depths (ft.)</th>
<th>Rock Description, Water Level, etc.</th>
<th>Dates</th>
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<tbody>
<tr>
<td>___ to ___</td>
<td>_________________________________</td>
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</tr>
</tbody>
</table>

Remarks:
August 9, 2001

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

Attention: Mr. Charley Ice

Subject: Central Maui Landfill, Monitoring Wells MW-4, MW-5 and MW-6
Well Completion Reports, Parts I & II

Dear Mr. Ice:

Enclosed are the following completed documents:

1. Well Completion Reports, Part I, MW-4 through MW-6. State Well No. 5125-04 to 06-with requested attachments
2. Well Completion Reports, Part II, MW-4 through MW-6. State Well No. 5125-04 to 06-with requested attachments

As requested we are attaching the boring logs, well and pump installation figures and the survey data (well locations and elevations).

Should you have any questions, please contact me via e-mail or telephone at (808) 523-8874.

Very truly yours,

Jem Goethals

Earth Tech, Inc.
## WELL COMPLETION REPORT - PART I

### Well Construction

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

### 5125-04

<table>
<thead>
<tr>
<th>1. State Well No.</th>
<th>MW-4</th>
<th>Ocean</th>
<th>Island: Maui</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address</td>
<td>Central Maui Landfill, Pulehu Road</td>
<td>Tax Map Key: 3-8-3:19</td>
<td></td>
</tr>
<tr>
<td>Drilling Company</td>
<td>Valley Well Drilling</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drilling method used during construction</td>
<td>□ Rotary □ Percussion □ Other (describe)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Date Well Construction (drilled, cased, grouted) completed</td>
<td>4/13/01</td>
<td></td>
<td></td>
</tr>
<tr>
<td>In addition to the driller's log, if a geologic log was prepared, please submit with this form.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Was the subject well cored?</td>
<td>□ Yes □ No</td>
<td></td>
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<tr>
<td>Initial water-level encountered</td>
<td>286 ft. below ground</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Date and time of measurement</td>
<td>4/12/01 1300</td>
<td></td>
<td></td>
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<tr>
<td>Step-Drawdown Test completed?</td>
<td>□ Yes □ No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant Rate Aquifer Test completed?</td>
<td>□ Yes □ No</td>
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<tr>
<td>Parameters prior to pump test:</td>
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<tr>
<td>Water-level:</td>
<td>____________ ft. above msl</td>
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<tr>
<td>Date and time of measurement:</td>
<td>month/day/year time</td>
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<tr>
<td>Chloride:</td>
<td>____________ ppm</td>
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<tr>
<td>Date and time of sampling:</td>
<td>month/day/year time</td>
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<tr>
<td>Temperature:</td>
<td>____________ °F</td>
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<tr>
<td>Date and time of measurement:</td>
<td>month/day/year time</td>
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<td></td>
</tr>
</tbody>
</table>

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


15. If a pump is not planned to be installed, please describe (below in the remarks section) how well is secured to prevent unauthorized access (example: lockable cover, threaded coupling, etc.)

16. Remarks: __________________________

---

**Licensed Driller (print):** Valley Well Drilling, Co.  C-57 Lic. No. 21358

**Signature**

**Date** 6/12/01

**Surveyor (print):** Norman K. Murakami  L.P.L.S. Lic. No. L6-5824

**Signature**

**Date** 7/12/01

**Permittee (print):** Ryan Takahashi, Acting Chief

**Signature**

**Date** 7/11/01
State of Hawaii
COMMISSION ON WATER RESOURCE MANAGEMENT
Department of Land and Natural Resources
WELL COMPLETION REPORT - PART II
Pump Installation

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

<table>
<thead>
<tr>
<th>Well Name: MW-4</th>
<th>Island: Maui</th>
</tr>
</thead>
<tbody>
<tr>
<td>State Well No.:</td>
<td></td>
</tr>
<tr>
<td>Address: Central Maui Landfill, Pulehu Road</td>
<td>Tax Map Key: 3-8-3:19</td>
</tr>
<tr>
<td>Pump Installation Company: Valley Well Drilling</td>
<td></td>
</tr>
<tr>
<td>Date Pump Installed: May 1, 2001</td>
<td></td>
</tr>
<tr>
<td>PERMANENT PUMP INFORMATION</td>
<td></td>
</tr>
<tr>
<td>Pump Type, Make, Serial No.: Grunfos Electric Submersible 7S07-15/P10113US</td>
<td></td>
</tr>
<tr>
<td>Motor Type, H.P., Voltage, rpm: Franklin 3/4 HP, 230 Volt, 3450 RPM</td>
<td></td>
</tr>
<tr>
<td>Type of flow meter: NA which measures in NA</td>
<td></td>
</tr>
<tr>
<td>Method of flow measurement:</td>
<td></td>
</tr>
<tr>
<td>Flowmeter Manufacturer Make Size</td>
<td></td>
</tr>
<tr>
<td>Weir* Open Pipe* Orifice* Other*, explain below</td>
<td></td>
</tr>
<tr>
<td>*attach schematic</td>
<td></td>
</tr>
<tr>
<td>Fill in the as-built section on the other side of this sheet.</td>
<td></td>
</tr>
<tr>
<td>Other remarks/comments: Flow was measured with a graduated 5-gallon bucket and a stopwatch</td>
<td></td>
</tr>
</tbody>
</table>

Pump Installation Contractor (print) Valley Well Drilling C-57/C-57a/A Lic. No. 21358
Signature [Signature] Date 6/8/01

Permittee (print) Ryan Takahashi, Acting Chief
Signature [Signature] Date 7/11/01
PRIOR TO INSTALLATION,
ELEV = 291.22' msl

BRONZE MEDALLION BENCHMARK
ELEV = 289.28' msl

6" GALVANIZED STEEL BOLLARD
POST FILLED WITH CONCRETE.

NOTES:
1. DRAWING NOT TO SCALE.
2. WELL INSTALLED BY VALLEY
   WELL DRILLING.
3. bgs = BELOW GROUND
   SURFACE.
   msl = MEAN SEA LEVEL.

MONITORING WELL INSTALLATION
AND PUMP CONSTRUCTION
Central Maui Landfill
Puunene, Hawaii
1. State Well No.: 5125-06  
   Well Name: MW-6  
   Island: Maui
2. Address: Central Maui Landfill, Pulehu Road
3. Drilling Company: Valley Well Drilling
4. Drilling method used during construction:  
   - Rotary X  
   - Percussion  
   - Other (describe)
5. Date Well Construction (drilled, cased, grouted) completed: 4/23/01
   Attach Driller's Log (7/26/99 DL Form)
   In addition to the driller's log, if a geologic log was prepared, please submit with this form.
6. Was the subject well cored?  
   - Yes  
   - No
7. Initial water-level encountered 298.4 ft. below ground  
   Date and time of measurement: 4/23/01 10:15
8. Step-Drawdown Test completed?  
   - Yes  
   - No
   Attach Step-Drawdown Test form (12/17/97 SDPTD Form)
9. Constant Rate Aquifer Test completed?  
   - Yes  
   - No
   Attach Constant Rate Aquifer Test form (12/17/97 CRPTD Form)
Parameters prior to pump test:
10. Water-level: ft. above msl  
    Date and time of measurement: 
11. Chloride: ppm  
    Date and time of sampling: 
12. Temperature: °F  
    Date and time of measurement: 
13. Fill in the as-built section on the other side of this sheet.
15. If a pump is not planned to be installed, please describe (below in the remarks section) how well is secured to prevent unauthorized access (example: lockable cover, threaded coupling, etc.)
16. Remarks:

---

**Licensed Driller** (print) Valley Well Drilling Co.  
C-57 Lic. No. 21358
Signature [Signature]
Date 6/12/01

**Surveyor** (print) Norman K. Murakami  
L.P.L.S. Lic. No. 5824
Signature [Signature]
Date 7/10/01

**Permittee** (print) Ryan Takahashi, Acting Chief
Signature [Signature]
Date 7/11/01

---

WCR1 Form 9/29/00
# State of Hawaii

**COMMISSION ON WATER RESOURCE MANAGEMENT**

Department of Land and Natural Resources

WELL COMPLETION REPORT - PART II

**Pump Installation**

**Instructions:** Please print in ink or type and send completed report (with attachments, if applicable) to the Commission on Water Resource Management, P.O. Box 621, Honolulu, Hawaii 96809. The Commission may not accept incomplete reports. This form shall be submitted within 60 days of the completion of work.

For assistance, please consult the Hawaii Well Construction and Pump Installation Standards or call the Regulation Branch at 587-6225. For updates to this form or additional information, please visit our website at [http://www.state.hi.us/dlnr/cwrmm/](http://www.state.hi.us/dlnr/cwrmm/)

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<tr>
<th>1. State Well No.:</th>
<th>5125-06</th>
<th>Well Name:</th>
<th>MW-6</th>
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<tr>
<td>2. Address:</td>
<td>Central Maui Landfill, Pulehu Road</td>
<td>Tax Map Key:</td>
<td>3-8-3:19</td>
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<tr>
<td>3. Pump Installation Company:</td>
<td>Valley Well Drilling</td>
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<td>4. Date Pump Installed:</td>
<td>May 18, 2001</td>
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<td>5. PERMANENT PUMP INFORMATION</td>
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<tr>
<td>Pump Type, Make, Serial No.:</td>
<td>Grunfos Electric Submersible 7S07-15/P10114HS</td>
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<tr>
<td>Motor Type, H.P., Voltage, rpm:</td>
<td>Franklin 3/4 HP, 230 Volt, 3450 RPM</td>
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<tr>
<td>Type of flow meter:</td>
<td>NA which measures in NA</td>
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<tr>
<td>6. Method of flow measurement:</td>
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<tr>
<td></td>
<td>Flowmeter Manufacturer Make Size</td>
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<td></td>
<td>Weir* Open Pipe* Orifice* Other*, explain below</td>
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<tr>
<td></td>
<td>*attach schematic</td>
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<tr>
<td>7. Fill in the as-built section on the other side of this sheet.</td>
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<td>8. Other remarks/comments:</td>
<td>Flow was measured with a graduated 5-gallon bucket and a stopwatch</td>
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<td></td>
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</table>

**Pump Installation Contractor (print):** Valley Well Drilling  C-57/C-57a/A Lic. No. 21358

Signature: [Signature Image]

Date: 6/8/01

**Permittee (print):** Ryan Takahashi, Acting Chief

Signature: [Signature Image]

Date: 7/11/01

WCR2 Form 5/2/00
TOP OF SOUNDING PIPE
ELEV = 307.03' msl

BRONZE MEDALLION BENCHMARK
ELEV = 305.39' msl

6" GALVANIZED STEEL BOLLARD
POST FILLED WITH CONCRETE.

NOTES:
1. DRAWING NOT TO SCALE.
2. WELL INSTALLED BY VALLEY
   WELL DRILLING
3. bgS = BELOW GROUND
   SURFACE
   msl = MEAN SEA LEVEL

SAND/CEMENT GROUT
2'-230' bgS

1" SCH 80 PVC
SOUNDING PIPE

1" SCH 80 PVC
SCREEN
15' LONG AND 0.02"
SLOT SIZE

TOP OF BENTONITE SEAL
281' bgS

TOP OF FILTER PACK
291' bgS

TOP OF SCREEN
296' bgS

WATER LEVEL
302' bgS

PUMP INTAKE
DEPTH=317' bgS

BOTTOM OF SOUNDING PIPE
311' bgS

BOTTOM OF SCREEN
316' bgS

TOTAL DEPTH
322' bgS

DRILL CUTTINGS
OR FILTER SAND

12" SCH 80 PVC RISER PIPE

STAINLESS STEEL CENTRALIZERS
(135', 215', 298', 320' bgS)

10" BOREHOLE

1.25" SCH 80 PVC
PUMP DISCHARGE PIPE & 3/16"
STAINLESS STEEL DROP CABLE

BENTONITE GROUT
(230' TO 281' bgS)

BENTONITE SEAL

SAND FILTER PACK
(MEDIUM AQUARIUM SAND)

5", CONTINUOUS-SLOT, TYPE 304
STAINLESS STEEL WELL SCREEN,

4" STAINLESS STEEL GRUNDFOS
SUBMERSIBLE PUMP, FRANKLIN
3/4 HP, 230 VOLT MOTOR

5" SCH 80 PVC RISER PIPE,
5'-0' LONG

5" METAL WELL SEAL
WITH RUBBER GASKET

3'x3'x6"
CONCRETE PAD
ABOVE GROUND

GROUND SURFACE
ELEV = 304.89' msl

CONCRETE 0-2' bgS

MW-6
Monitoring Well Installation and Pump Construction
Central Maui Landfill
Puunene, Hawaii
WELL COMPLETION REPORT - PART I
Well Construction

1. State Well No.: 5125-05
   Well Name: MW-5
   Island: Maui

2. Address: Central Maui Landfill, Pulehu Road
   Tax Map Key: 3-8-3:19

3. Drilling Company: Valley Well Drilling

4. Drilling method used during construction: ☑ Rotary ☑ Percussion ☐ Other (describe)

5. Date Well Construction (drilled, cased, grouted) completed: 4/5/01
   [Attach Driller's Log (7/26/99 DL Form)]

   In addition to the driller's log, if a geologic log was prepared, please submit with this form.

6. Was the subject well cored? ☑ Yes ☐ No

7. Initial water-level encountered: 225 ft. below ground
   Date and time of measurement: 4/4/01 1000

8. Step-Drawdown Test completed? ☑ Yes ☐ No
   [Attach Step-Drawdown Test form (12/17/97 SDPTD Form)]

9. Constant Rate Aquifer Test completed? ☑ Yes ☐ No
   [Attach Constant Rate Aquifer Test form (12/17/97 CRPTD Form)]

Parameters prior to pump test:

10. Water-level: ______ ft. above msl
    Date and time of measurement: ______

11. Chloride: ______ ppm
    Date and time of sampling: ______

12. Temperature: ______ °F
    Date and time of measurement: ______

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


15. If a pump is not planned to be installed, please describe (below in the remarks section) how well is secured to prevent unauthorized access (example: lockable cover, threaded coupling, etc.)

16. Remarks: ____________________________________________________________

Licensed Driller (print) Valley Well Drilling Co. C-57 Lic. No. 21358
Signature ____________________________________________________________ Date 6/12/01

Surveyor (print) Norman K. Murakami L.P.L.S. Lic. No. 6-5824
Signature ____________________________________________________________ Date 7/15/01

Permittee (print) Ryan Takahashi, Acting Chief
Signature ____________________________________________________________ Date 7/11/01
**State of Hawaii**  
COMMISSION ON WATER RESOURCE MANAGEMENT  
Department of Land and Natural Resources  
WELL COMPLETION REPORT - PART II  
Pump Installation

Instructions: Please print in ink or type and send completed report (with attachments, if applicable) to the Commission on Water Resource Management, P.O. Box 521, Honolulu, Hawaii 96809. The Commission may not accept incomplete reports. This form shall be submitted within 60 days of the completion of work. For assistance, please consult the Hawaii Well Construction and Pump Installation Standards or call the Regulation Branch at 587-0225. For updates to this form or additional information, please visit our website at http://www.state.hi.us/dlnr/cwrm/

<table>
<thead>
<tr>
<th></th>
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<th>Island: Maui</th>
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<tr>
<td>1. State Well No.:</td>
<td>5125-05</td>
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<tr>
<td>2. Address:</td>
<td>Central Maui Landfill, Pulehu Road</td>
<td>Tax Map Key: 3-8-3:19</td>
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<tr>
<td>3. Pump Installation Company:</td>
<td>Valley Well Drilling</td>
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<tr>
<td>4. Date Pump Installed:</td>
<td>May 1, 2001</td>
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<tr>
<td>5. PERMANENT PUMP INFORMATION</td>
<td>Grunfos Electric Submersible</td>
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<td></td>
<td>Pump Type, Make, Serial No.:</td>
<td>7807-15/P10108US</td>
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<td>Rated Capacity:</td>
<td>5.0 gpm</td>
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<td>Motor Type, H.P., Voltage, rpm:</td>
<td>Franklin 3/4 HP, 230 Volt, 3450 RPM</td>
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<tr>
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<td>Type of flow meter:</td>
<td>NA which measures in NA</td>
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<tr>
<td>6. Method of flow measurement:</td>
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<td>Flowmeter</td>
<td>Manufacturer</td>
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<td>Weir*</td>
<td>Open Pipe*</td>
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<td>Weir*</td>
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<td>Weir*</td>
<td>Open Pipe*</td>
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<tr>
<td>7. Fill in the as-built section on the other side of this sheet.</td>
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<tr>
<td>8. Other remarks/comments:</td>
<td>Flow was measured with a graduated 5-gallon bucket and a stopwatch</td>
<td></td>
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</table>

Pump Installation Contractor (print) Valley Well Drilling  
C-57/C-57a/A Lic. No. 21358  
Signature  
Date 6/8/01

Permittee (print) Ryan Takahashi, Acting Chief  
Signature  
Date 7/11/01
NOTES:
1. DRAWING NOT TO SCALE.
2. WELL INSTALLED BY VALLEY WELL DRILLING
3. bgs = BELOW GROUND SURFACE
msl = MEAN SEA LEVEL

TOP OF SOUNDING PIPE
ELEV = 230.11' msl

5" GALVANIZED STEEL BOLLARD
POST FILLED WITH CONCRETE.

BRONZE MEDALLION BENCHMARK
ELEV = 228.53' msl

12"Ø 5'-0" LOCKING WELL MONUMENT

5" METAL WELL SEAL
WITH RUBBER GASKET

3'x3'x6" CONCRETE PAD
ABOVE GROUND
GROUND SURFACE
ELEV = 228.03' msl

1" SCH 80 PVC RISER PIPE
STAINLESS STEEL CENTRALIZERS
(70', 145', 220', 244' bgs)

10"Ø BOREHOLE

1.25" SCH 80 PVC
PUMP DISCHARGE PIPE & 3/16"
STAINLESS STEEL DROP CABLE

BENTONITE SEAL
(GROUND SURFACE TO 209' bgs)

BENTONITE GROUT

SAND FILTER PACK
(MEDIUM AQUARIUM SAND)

5" Ø, CONTINUOUS-SLOT, TYPE 304
STAINLESS STEEL WELL SCREEN,

4" STAINLESS STEEL GRUNDFOS
SUBMERSIBLE PUMP, FRANKLIN
3/4 HP, 230 VOLT MOTOR

5" Ø SCH 80 PVC RISER PIPE,
5'-0" LONG

5'-0"

TOP OF BENTONITE SEAL 209' bgs

TOP OF FILTER PACK 214' bgs

TOTAL DEPTH 246' bgs

DRILL CUTTINGS
OR FILTER SAND

TOP OF SCREEN 221' bgs

WATER LEVEL 226' bgs

BOTTOM OF Sounding PIPE 236' bgs

BOTTOM OF SCREEN 241' bgs

PUMP INTAKE
DEPTH = 241' bgs

1" SCH 80 PVC SOUNDING PIPE

1" PVC SCREEN
15' LONG AND 0.02"
SLOT SIZE

5'16 SCH 80 PVC RISER PIPE

SAND FILTER PACK
(CONTINUOUS-SLOT, TYPE 304)

SUBMERSIBLE PUMP, FRANKLIN
3/4 HP, 230 VOLT MOTOR

5'-0" LONG

MEDIUM AQUARIUM SAND

4" Ø STAINLESS STEEL GRUNDFOS

SUBMERSIBLE PUMP, FRANKLIN
3/4 HP, 230 VOLT MOTOR

5" Ø SCH 80 PVC RISER PIPE,
5'-0" LONG

MW-5
Monitoring Well Installation and Pump Construction
Central Maui Landfill
Puunene, Hawaii
SURVEY DATA FROM CONTROL POINT-MAUI, NORMAN MURAKAMI-FILE # CMLF-00.CR5
(from surveyor's field notes)

<table>
<thead>
<tr>
<th>Point</th>
<th>Northing</th>
<th>Easting</th>
<th>Elevation</th>
<th>Notes</th>
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<tr>
<td>26</td>
<td>-13485.9412</td>
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<td>MW-4 Bronze Disk</td>
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<td>-15159.3383</td>
<td>-6680.2276</td>
<td>291.22</td>
<td>MW-4 Top of Sounding Tube</td>
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</table>
CLAYEY Silt: ML, dark reddish brown, 10 R 3/4, dry, medium dense, some saprolite fragments

EXTRUSIVE: tuff, dusky red, 10R 3/4, vesicular, moderately weathered, hard, dry, IE

EXTRUSIVE: basalt, reddish brown, 2.5 YR 3/2, vesicular, fresh, hard, dry, IE

grading to moderately weathered

EXTRUSIVE: basalt, bluish black, 10B 2.5/1, aphanitic, fresh, very hard, dry, IE

grading to bluish gray

EXTRUSIVE: basalt, red, 10 R 4/4, aphanitic, highly weathered (saprolite), soft, dry, IE

EXTRUSIVE: basalt, bluish gray, 10BG 4/1, aphanitic, trace calcite and plagioclase, fresh, hard, dry, IE

EXTRUSIVE: basalt, reddish brown, 2.5 YR 5/3, aphanitic, highly weathered (saprolite), soft, dry, IE

EXTRUSIVE: basalt, gray, N 6/, aphanitic, 40% calcite, moderately weathered, soft, dry, IE

Concrete Annulus

Flowable Fill - Sand Cement Grout
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<th>DEPTH IN FEET</th>
<th>DESCRIPTION OF MATERIAL</th>
<th>Lithology Graphic</th>
<th>WL</th>
<th>Well Construction</th>
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<tr>
<td>115</td>
<td>same as above</td>
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<tr>
<td>120</td>
<td>drill cuttings/circulation lost for remainder of borehole</td>
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<td>Stainless Steel Centralizer Installed</td>
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<td>Depth in Feet</td>
<td>Description of Material</td>
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<td>225</td>
<td>Flowable Fill - Sand Cement Grout</td>
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<td>240</td>
<td>Filter Pack</td>
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<td>Filter Sand: RMC Medium Aquarium Sand</td>
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<td>End of Boring 325' bgs</td>
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**Central Maui Landfill, Maui, Hawaii**

**PROJECT NUMBER** 44731.03.01 SHEET 1 OF 3

<table>
<thead>
<tr>
<th>DEPTH IN FEET</th>
<th>DESCRIPTION OF MATERIAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 ft</td>
<td><strong>FILL</strong>: basalt gravel and cobbles, bluish gray (5PB 4/1), massive, fresh, hard, dry, IE/Fill</td>
</tr>
<tr>
<td>10 ft</td>
<td><strong>EXTRUSIVE</strong>: basalt, dark bluish gray (5B 4/1), aphanitic, fresh, very hard, dry, IE</td>
</tr>
<tr>
<td>20 ft</td>
<td>20' bgs grading to fractures with some calcite infilling</td>
</tr>
<tr>
<td>35 ft</td>
<td><strong>EXTRUSIVE</strong>: tuff, dark brown (5YR 3/2), aphanitic, very small (&lt;1 mm) vesicules, highly weathered, dry, IE</td>
</tr>
<tr>
<td>50 ft</td>
<td>50' bgs grading to reddish brown, 2.5 YR 4/4</td>
</tr>
<tr>
<td>60 ft</td>
<td><strong>EXTRUSIVE</strong>: basalt, bluish gray (5B 5/1), massive, fresh, very hard, dry, IE</td>
</tr>
<tr>
<td>70 ft</td>
<td>70' bgs grading to vesicular, weak red, 10 R 5/2</td>
</tr>
<tr>
<td>80 ft</td>
<td>80' bgs grading to gray, N 5, massive, aphanitic</td>
</tr>
<tr>
<td>95 ft</td>
<td>95' bgs same as above—very fine (sand size) drill cuttings</td>
</tr>
</tbody>
</table>

**Well Construction**

- **Bentonite Grout**

**Well Log Data**

- **Well No.**: MW-4
- **Abbreviations**
  - **TOC**: Top of Casing
  - **bgs**: below ground surface
  - **WL**: Water Level
  - **msl**: mean sea level
  - **IE**: Igneous Extrusive

- **Drilling Co.**: Valley Well Drilling
- **Drilling Equipment**: Jasswell 2400
- **Drilling Method**: 10" Air Rotary Hammer
- **Borehole Diameter**: 10"
- **EAST**: -6680.23
- **NORTH**: -15159.34
- **Driller**: Dean McClure

**Notations**

- **msl = mean sea level**
- **IE = Igneous Extrusive**

**Contact Information**

- **700 Bishop Street Suite 900**
- **Honolulu, Hi. 96813**
- **Telephone**: 808.523.8874
- **Fax**: 808.523.8950
### IW-4 BOREHOLE LOG (Preliminary)

**PROJECT** Central Maui Landfill, Maui, Hawaii

**PROJECT NUMBER** 44731.03.01

<table>
<thead>
<tr>
<th>DEPTH IN FEET</th>
<th>DESCRIPTION OF MATERIAL</th>
<th>Well Construction</th>
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<tbody>
<tr>
<td>105</td>
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<td></td>
</tr>
<tr>
<td>110</td>
<td></td>
<td></td>
</tr>
<tr>
<td>115</td>
<td>115' bgs same as above</td>
<td></td>
</tr>
<tr>
<td>120</td>
<td><strong>EXTRUSIVE;</strong> basalt, bluish gray (5B 4/1), porphyritic, vesicular, 10-20% olivine, &lt;5% plagioclase, fractures, moderately weathered, moderately hard, dry, IE</td>
<td>Stainless Steel Centralizer Installed</td>
</tr>
<tr>
<td>125</td>
<td></td>
<td></td>
</tr>
<tr>
<td>130</td>
<td>130' bgs same as above</td>
<td></td>
</tr>
<tr>
<td>135</td>
<td></td>
<td></td>
</tr>
<tr>
<td>140</td>
<td>140' grades to trace olivine</td>
<td></td>
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<tr>
<td>145</td>
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<tr>
<td>150</td>
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</tr>
<tr>
<td>155</td>
<td>155' bgs same as above</td>
<td></td>
</tr>
<tr>
<td>160</td>
<td></td>
<td></td>
</tr>
<tr>
<td>165</td>
<td>165' bgs drill cuttings/circulation lost for remainder of borehole</td>
<td>Stainless Steel Centralizer Installed</td>
</tr>
<tr>
<td>170</td>
<td></td>
<td></td>
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<td>175</td>
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<td>205</td>
<td></td>
<td></td>
</tr>
<tr>
<td>210</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
PROJECT  Central Maui Landfill  Maui, Hawaii
PROJECT NUMBER  44731.03.01

DEPTH IN FEET

215
220
225
230
235
240
245
250
255
260
265
270
275
280
285
290
295
300
305
310
315
320
325

DESCRIPTION OF MATERIAL

284' bgs first water encountered

End of Boring 315' bgs
April 10, 2001

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

Attention: Mr. Charley Ice

Subject: Monitoring Well Construction and Pump Installation Permits

Dear Mr. Ice:

Enclosed are the following completed documents:

1. Well Construction Permit, MW-4 through MW-6-Well No. 5125-04 to 06
2. Pump Installation Permit, MW-4 through MW-6-Well No. 5125-04 to 06

I will be forwarding the requested well completion details after the field work is complete. Should you have any questions, please contact me via e-mail or telephone at (808) 523-8874.

Very truly yours,

Jem Goethals

Earth Tech, Inc.
In accordance with Department of Land and Natural Resources, Commission on Water Resource Management's Administrative Rules, Section 13-168, entitled "Water Use, Wells, and Stream Diversion Works", this document permits the construction and testing of MW-4 through 6 (Well No. 5125-04 to 06) at Central Maui Landfill, Pulehu Road, Wailuku, Maui, TMK 3-8-3:19, subject to the Hawaii Well Construction & Pump Installation Standards (123/97) which include but are not limited to the following conditions:

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

2. The well construction permit shall be for construction and testing of the well only. A minimum 1 1/4-inch diameter monitor tube shall be permanently installed, in a manner acceptable to the Chairperson, to record water levels. The permittee, well operator, and/or well owner shall coordinate with the Chairperson and conduct a pumping test in accordance with the Standards (a pump testing worksheet is attached). The permittee, well operator, and/or well owner shall submit to the Chairperson the test results as a basis for supporting an application to install a permanent pump and withdraw water for use. No permanent pump may be installed until a pump installation permit is approved and issued by the Chairperson.

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

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

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

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

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

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

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

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

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

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

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

Date of Approval: March 22, 2001
Expiration Date: March 22, 2003

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

Permittee's Signature: ___________________________ Date: 4/1/01
Printed Name: Andrew M. Hin
Firm or Title: Chief

Driller's Signature: ___________________________ Date: 4/10/01
Printed Name: Mike Sauer
Firm or Title: Valley Well Drilling Co.
C-57 License #: 21358

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

MW-4 to 6, Well No. 5125-04 to 06

In accordance with Department of Land and Natural Resources, Commission on Water Resource Management's Administrative Rules, Section 13-168, entitled "Water Use, Wells, and Stream Diversion Works", this document permits the pump installation for MW-4 to 6 (Well No. 5125-04 to 06) at Central Maui Landfill, Pulehu Road, Maui, TMK 3-8-3:19, subject to the Hawaii Well Construction & Pump Installation Standards (1/23/97) which include but are not limited to the following conditions:

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

2. The pump installation permit shall be for installation of a 5 gpm capacity, or less, pump in the well.

3. The permittee, well operator, and/or well owner shall provide and maintain an approved meter or other appropriate means for measuring and reporting withdrawals and water levels, and appropriate devices or means for measuring chlorides and temperature. These data shall be measured monthly and reported to the Commission none, on forms provided by the Chairperson (attached).

4. The proposed use shall not adversely affect existing or future legal uses of water in the area, including any surface water or established instream flow standards. This permit or the authorization to pump water from a well shall not constitute a determination of correlative water rights. The permittee, well operator, and/or well owner are 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.

5. The permittee, well operator, and/or well owner shall complete and submit as-built drawings and Part II - (Permanent) Pump Installation Report of the Well Completion Report (attached) to the Chairperson within sixty (60) days after completion of work.

6. The permittee, well operator, and/or well owner shall comply with all applicable laws, rules, and ordinances, and non-compliance may be grounds for revocation of this permit.

7. The pump installation permit application is incorporated into this permit by reference and is subject to the Hawaii Well Construction & Pump Installation Standards (1/23/97). If the HWGIS are not followed and as a consequence water is wasted or contaminated, a lien on the property may result.

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

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

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

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

Date of Approval: March 22, 2001
Expiration Date: March 22, 2003
GILBERT S. COLOMA-AGARAN, Chairperson
Commission on Water Resource Management

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

Permittee's Signature: [Signature] Date: 4/4/01
Printed Name: Andrei M. Rose Firm or Title: Chief

Installer's Signature: [Signature] Date: 4/10/01
Printed Name: Mike Saber Firm or Title: Valley Well Drilling Co.

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

Attachments
C. USGS
Department of Health/ Safe Drinking Water & Wastewater Branch
Maui Department of Water Supply
Valley Well Drilling
# MW-5 Borehole Log (Preliminary)

**Project**  
Central Maui Landfill, Maui, Hawaii  
**Project Number** 44731.03.01  
**Sheet** 1 of 3

<table>
<thead>
<tr>
<th>Depth in Feet</th>
<th>Description of Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.00</td>
<td>Surface Elevation 228.03' MSL</td>
</tr>
<tr>
<td>0.00</td>
<td>Fill; basalt gravel and cobbles, bluish gray (5PB 6/1), with silty soil, reddish brown, 2.5 YR 5/4, fresh, hard, dry, Fill</td>
</tr>
<tr>
<td>10.00</td>
<td>Extrusive; basalt, bluish gray (5B 5/1), aphanitic, fresh, very hard, dry, IE</td>
</tr>
<tr>
<td>20.00</td>
<td>Extrusive; tuff, gray (5YR 6/1), vesicular, faintly weathered, moderately hard, dry, IE</td>
</tr>
<tr>
<td>30.00</td>
<td>Extrusive; basalt, bluish gray (10G 5/1), vesicular, fresh, very hard, dry, IE</td>
</tr>
<tr>
<td>40.00</td>
<td>Extrusive; same as above</td>
</tr>
<tr>
<td>50.00</td>
<td>Extrusive; grading to 10-20% olivine crystals, porphyritic,</td>
</tr>
<tr>
<td>60.00</td>
<td>Extrusive; same as above</td>
</tr>
</tbody>
</table>

---

**Well Construction**

- **12" Diameter Monument**
- **Conductor Casing**
- **Bentonite Grout**
- **Stainless Steel Centralizer Installed**

---

**Well Information**

- **Well No.** MW-5
- **Depth to Water (Static):** 225.8 ft
- **Total Depth of Well (TOC):** 246 ft
- **Ground Surface Elevation (feet):** 228.03 ft
- **Lat.:** 21° 06' 53.2" N  
- **Lon.:** 156° 40' 23.2" W  
- **MSL = Mean Sea Level**  
- **Driller:** Dean McClure
  - **Drilling Co.:** Valley Well Drilling
  - **Drilling Equipment:** Jaxwell 2400
  - **Drilling Method:** 10" Air Rotary Hammer
  - **Borehole Diameter:** 10"
  - **EAST:** -8694.66  
  - **NORTH:** -13485.94  
  - **Driller:** Dean McClure

---

**Earth Tech**

700 Bishop Street Suite 900  
Honolulu, Hi. 96813  
Telephone: 808.523.8874  
Fax: 808.523.8950
## Well Construction

<table>
<thead>
<tr>
<th>Depth in Feet</th>
<th>Description of Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>same as above</td>
</tr>
<tr>
<td>105</td>
<td>grading to moderately weathered, softer, reddish</td>
</tr>
<tr>
<td>110</td>
<td>EXTRUSIVE; basalt, bluish gray (SB 6/1), aphanitic, fresh, hard, dry, IE</td>
</tr>
<tr>
<td>115</td>
<td></td>
</tr>
<tr>
<td>120</td>
<td></td>
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<tr>
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<td>130</td>
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<td>155</td>
<td></td>
</tr>
<tr>
<td>160</td>
<td>drill cuttings/circulation lost for remainder of borehole</td>
</tr>
<tr>
<td>165</td>
<td></td>
</tr>
<tr>
<td>170</td>
<td></td>
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<tr>
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</tbody>
</table>
**MW-5 BOREHOLE LOG (Preliminary)**

**PROJECT**  Central Maui Landfill  Maui, Hawaii  
**PROJECT NUMBER**  44731.03.01

### DEPTH IN FEET

<table>
<thead>
<tr>
<th>Depth</th>
<th>Description of Material</th>
</tr>
</thead>
<tbody>
<tr>
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</tr>
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<td>215</td>
<td></td>
</tr>
<tr>
<td>220</td>
<td></td>
</tr>
<tr>
<td>225</td>
<td>first water encountered</td>
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<td>230</td>
<td></td>
</tr>
<tr>
<td>235</td>
<td></td>
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<tr>
<td>250</td>
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<td>255</td>
<td></td>
</tr>
<tr>
<td>260</td>
<td></td>
</tr>
<tr>
<td>265</td>
<td>End of Boring 260' bgs</td>
</tr>
<tr>
<td>270</td>
<td></td>
</tr>
<tr>
<td>275</td>
<td></td>
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<td>300</td>
<td></td>
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<tr>
<td>305</td>
<td></td>
</tr>
</tbody>
</table>

**Position**

- Bentonite Seal
- Stainless Steel Centralizer Installed
- Stainless Steel Screen
- Filter Sand: RMC Medium Aquarium Sand
- Stainless Steel Centralizer Installed
- 250'-260' backfilled with 1-inch diameter basalt chips
Mr. Andy Hirose  
Maui Department of Public Works  
200 South High Street  
Wailuku, Maui, HI 06793  

Dear Mr. Hirose:

Pump Installation Permit  
MW-4 to 6 (Well No. 5125-04 to 06)

We acknowledge receipt, on March 22, 2001, of your completed Pump Installation Permit Application for the MW-4 through 6 (Well No.s 5125-04 to 06). Enclosed are two (2) originals of your approved Pump Installation Permit for the captioned well(s) that authorize permanent pump installation work for your well(s). As part of the Chairperson's approval, the following special conditions were added and are part of your permit under Permit Condition 11:

**Special Conditions**

1. If the elevation benchmark needs to be altered, the permittee, well operator, and/or well owner shall ensure that the benchmark is transferred (or the well resurveyed) and documentation of the new benchmark shall be submitted to the Commission within sixty (60) days after the pump is installed.

2. Reporting requirements in Condition #2 do not apply to this permit, as the wells are not production wells.

The permittee, well operator, and/or well owner are responsible for all conditions of the permit. This includes ensuring that the pump installation contractor submits a completed Part II of the Well Completion Report form (enclosed) within sixty (60) days after the pump installation work is completed. Be advised that you may be subject to fines of up to $1000 per day for any violations of your permit conditions starting from the permit approval date.

Please sign and have the contractor sign both permit originals and return one for our files. A copy of the Well Completion Report (Part II) and a copy of your water use report form are enclosed for your use.

**IMPORTANT** - Pump installation shall not commence until a fully signed permit is returned to the Commission. Except for the monthly water use report form, please provide copies of all the information in this packet to your pump installation contractor.

Except for the monthly water use report form, please provide copies of all the information in this packet to your pump installation contractor.

If you have any questions, please call Charley Ice of the Commission staff at 587-0251 or toll-free at 984-2400 extension 70251.

Aloha,

GILBERT S. COLOMA-AGARAN
Chairperson

Enclosure

C. Valley Well Drilling
In accordance with Department of Land and Natural Resources, Commission on Water Resource Management's Administrative Rules, Section 13-168, entitled "Water Use, Wells, and Stream Diversion Works", this document permits the pump installation for MW-4 to 6 (Well No. 5125-04 to 06) at Central Maui Landfill, Pulehu Road, Maui, TMK 3-8-3.19, subject to the Hawaii Well Construction & Pump Installation Standards (1/23/97) which include but are not limited to the following conditions:

1. The Chairperson to the Commission on Water Resource Management (Commission), P.O. Box 621, Honolulu, HI 96809, shall be notified, in writing, at least two (2) weeks before any work covered by this permit commences and staff shall be allowed to inspect installation activities in accordance with §13-168-15, Hawaii Administrative Rules.
2. The pump installation permit shall be for installation of a 5 gpm capacity, or less, pump in the well.
3. The permittee, well operator, and/or well owner shall provide and maintain an approved meter or other appropriate means for measuring and reporting withdrawals and water levels, and appropriate devices or means for measuring chlorides and temperature. These data shall be measured monthly and reported to the Commission none, on forms provided by the Chairperson (attached).
4. The proposed use shall not adversely affect existing or future legal uses of water in the area, including any surface water or established instream flow standards. This permit or the authorization to pump water from a well shall not constitute a determination of correlative water rights. The permittee, well operator, and/or well owner are 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.
5. The permittee, well operator, and/or well owner shall complete and submit as-built drawings and Part II - (Permanent) Pump Installation Report of the Well Completion Report (attached) to the Chairperson within sixty (60) days after completion of work.
6. The permittee, well operator, and/or well owner shall comply with all applicable laws, rules, and ordinances, and non-compliance may be grounds for revocation of this permit.
7. The pump installation permit application is incorporated into this permit by reference and is subject to the Hawaii Well Construction & Pump Installation Standards (1/23/97). If the HWCPIS are not followed and as a consequence water is wasted or contaminated, a lien on the property may result.
8. The permit may be revoked if work is not started within six (6) months after the date of approval or if work is suspended or abandoned for six (6) months, unless otherwise specified. The work proposed in the pump installation permit application shall be completed within two (2) years from the date of permit approval, unless otherwise specified. The permit may be extended by the Chairperson upon a showing of good cause and good-faith performance. A request to extend the permit shall be submitted to the Chairperson no later than three (3) months prior to the date the permit expires. If the commencement date is not met, the Commission may revoke the permit after giving the permittee, well operator, and/or well owner notice of the proposed action and an opportunity to be heard.
9. If the well is not to be used it must be properly capped. If the well is to be abandoned then the permittee, well operator, and/or well owner must apply for a well abandonment permit in accordance with §13-168-12(f) prior to any well sealing or plug work.
10. The permittee, its successors, and assigns shall indemnify, defend, and hold the State of Hawaii harmless from and against any loss, liability, claim, or demand for property damage, personal injury, or death arising out of any act or omission of the applicant, assigns, officers, employees, contractors, and agents under this permit or relating to or connected with the granting of this permit.
11. Special conditions in the attached cover transmittal letter are incorporated herein by reference.

Date of Approval: March 22, 2001
Expiration Date: March 22, 2003
GILBERT S. COLOMA-AGARAN, Chairperson
Commission on Water Resource Management

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

Permittee's Signature: ____________________________ Date: ______________
Printed Name: _____________________________________________________________________________ Firm or Title: ____________________________

Installer's Signature: ____________________________ Date: ______________
Printed Name: _____________________________________________________________________________ Firm or Title: ____________________________

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

Attachments
c: USGS
   Department of Health/ Safe Drinking Water & Wastewater Branch
   Maui Department of Water Supply
   Valley Well Drilling
March 28, 2001

Mr. Andy Hirose
Maui Department of Public Works
200 South High Street
Wailuku, Maui, HI 96793

Dear Mr. Hirose:

Well Construction Permit

MW-4 through 6 (Well No. 5125-04 to 06)

We acknowledge receipt, on March 22, 2001, of your completed Well Construction Permit Application for the MW-4 through 6 (Well No. 5125-04 to 06). Enclosed are two (2) copies of your approved Well Construction Permit for the captioned well(s) that authorize well construction activities but excludes installation work for your permanent pump. As part of the Chairperson’s approval, the following special conditions were added and are part of your permit under Permit Condition 13:

Special Conditions

1. Pump Tests are not required under Condition #2, as these are not production wells.

Please sign and have the contractor sign both permit originals and return one for our files. Also, copies of the aquifer pump test worksheet and the well completion report form are enclosed for your use.

IMPORTANT - Drilling work shall not commence until a fully signed permit is returned to the Commission. Please provide all the information in this packet to your well drilling contractor. The permittee, well operator, and/or well owner are responsible for all conditions of the permit. This includes ensuring that the well construction contractor, or other party who constructs the well(s), submits a completed Part I of the Well Completion Report form (enclosed) within sixty (60) days after the well construction work is completed. Be advised that you may be subject to fines of up to $1000 per day for any violations of your permit conditions starting from the permit approval date.

If you have any questions, please call Charley Ice of the Commission staff at 587-0251 or toll-free at 984-2400 extension 70251.

Aloha,

GILBERT S. COLOMA-AGARAN
Chairperson

Enclosures
c. Valley Well Drilling
WELL CONSTRUCTION PERMIT
MW-4 through 6, Well No. 5125-04 to 06

In accordance with Department of Land and Natural Resources, Commission on Water Resource Management's Administrative Rules, Section 13-168, entitled "Water Use, Wells, and Stream Diversion Works", this document permits the construction and testing of MW-4 through 6 (Well No. 5125-04 to 06) at Central Maui Landfill, Pulehu Road, Wailuku, Maui, TMK 3-8-3:19, subject to the Hawaii Well Construction & Pump Installation Standards (1/23/97) which include but are not limited to the following conditions:

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

2. The well construction permit shall be for construction and testing of the well only. A minimum 1\(\frac{1}{4}\) -inch diameter monitor tube shall be permanently installed, in a manner acceptable to the Chairperson, to accurately record water levels. The permittee, well operator, and/or well owner shall coordinate with the Chairperson and conduct a pump test in accordance with the Standards (a pump testing worksheet is attached). The permittee, well operator, and/or well owner shall submit to the Chairperson the test results as a basis for supporting an application to install a permanent pump and withdraw water for use. No permanent pump may be installed until a pump installation permit is approved and issued by the Chairperson.

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

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

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

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

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

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

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

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

11. If the well is not to be used it must be properly capped. If the well is to be abandoned then the permittee, well operator, and/or well owner must apply for a well abandonment permit in accordance with §13-168-12(6) prior to any well sealing or plugging work.

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

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

Date of Approval: March 22, 2001
Expiration Date: March 22, 2003

GILBERT S. COLOMA-AGARAN, Chairperson
Commission on Water Resource Management

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

Permittee's Signature: ____________________________ Date: ______________
Printed Name: ____________________________ Firm or Title: ____________________________

Driller's Signature: ____________________________ C-57 License # : ______________ Date: ______________
Printed Name: ____________________________ Firm or Title: ____________________________

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

Attachment

C: USGS
Department of Health/ Safe Drinking Water, Wastewater, and Clean Water Branches
State of Hawaii Department of Water Supply
Wailuku, Maui, Hawaii 96793

Valley Well Drilling
OMISSION ON WATER RESOURCE MANAGEMENT
ROUTE SLIP FOR PERMIT ISSUANCE


DATE: 28 March 01 SUSPENSE DATE: __________

TO: INIT. TO: INIT. FOR: PLEASE:


1 2 3 4

DATE: ____________


1 2 3 4

PLEASE: 1 Review & Comment 2 Type Final 3 Approval 4 Signature 5 File 6 Xerox copies

WELL NUMBER 5125-04-06 WELL NAME: MW-4 to 6

☑ WELL CONSTRUCTION

ATTACHMENTS FOR WELL CONSTRUCTION PERMIT:
1 COVER LETTER 2 PERMIT (2x) 3 PUMP TEST 4 DOSH COMMENTS 5 LAND DIV. COMMENTS 6 WCR FORM

TO BE SENT TO APPLICANT

FOR OFFICE USE ONLY

☑ PUMP INSTALLATION

ATTACHMENTS FOR PUMP INSTALLATION PERMIT:
1 COVER LETTER 2 PERMIT (2x) 3 DOSH COMMENTS 4 LAND DIV. COMMENTS 5 WCR FORM 6 WUR FORM

TO BE SENT TO APPLICANT

FOR OFFICE USE ONLY
WELL NUMBER

WELL NAME

Wailuku MW-4 to 6

☐ WELL CONSTRUCTION
☐ PUMP INSTALLATION
☑ BOTH

ATTACHMENTS FOR APPLICATION PROCESSING - Both applicant & staff generated
1 TRANS. LETTER
2 CWRM MAP
3 APPL. FORM (3X)
4 USGS MAPS (3X)
5 TAX MAPS (3X)
6 PARCEL OWNER VERIF. - MLS PRINTOUT
7 CONTRACTOR VERIF. - DCCA LICENSE SCREEN PRINTOUT
8 ALL INFO FILLED IN
9 BACKGROUND CHECK

FOLDER:
☐ MADE NEW FILE FOLDER, ATTACHED
☐ FILE FOLDER ALREADY MADE, IN FILE CABINET

INCOMPLETE ACTION DATES:
DATE ACTION

PLEASE:
See Me
1 Review & Comment
2 Take Action
3 Type Draft acknow letter
4 Type Final, label new file folder
5 File
6 Xerox copies

FROM: CHARLEY
DATE: 21-Mar-01
SUSPENSE DATE:

TO: INIT.
BAUER, G.

TO: INIT.
LUM, A.

TO: INIT.
NAKAMA, L.

TO: INIT.
NAKANO, D.

TO: INIT.
HARDY, R.

TO: INIT.
NISHIOKA, L.

TO: INIT.
HIGA, D.

TO: INIT.
OHYE, M.

TO: INIT.
HIRANO, E.

TO: INIT.
SAKODA, E.

TO: INIT.
ICE, C.

TO: INIT.
SUBIA, S.

TO: INIT.
IMATA, R.

TO: INIT.
SWANSON, S.

TO: INIT.
JINNAI, R.

TO: INIT.
UYENO, D.

TO: INIT.
KUNIMURA, I.

TO: INIT.
YODA, K.
## Well Background Check

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<th>Applicant</th>
<th>Driller</th>
<th>Type</th>
<th>Well Construction Issued</th>
<th>Signed</th>
<th>WCR1 Accept</th>
<th>Pump Installation Issued</th>
<th>Signed</th>
<th>WCR2 Accept</th>
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<td>Maui Dept. of Public Works</td>
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<td>12/7/1995</td>
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<td>Maui Dept. of Public Works</td>
<td>C-21358</td>
<td>BOTH</td>
<td>8/3/1995</td>
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<td>12/7/1995</td>
<td></td>
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</tbody>
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State of Hawaii
COMMISSION ON WATER RESOURCE MANAGEMENT
Department of Land and Natural Resources
APPLICATION FOR PERMIT

1. WELL OWNER: County of Maui
   Contact Person: Andy Hirose
   Phone: 270-7872
   Fax: 270-7875
   E-mail: _______________________

2. LAND OWNER: Maui Landfill
   Address: 200 South St., Wailuku, HI 96793

3. LAND OWNER: Maui Landfill
   Address: 200 South St., Wailuku, HI 96793

4. CONTRACTOR: Valley Well Drilling
   Contact Person: Mike Sober
   Phone: 682-1767
   Fax: 682-1768
   E-mail: _______________________
   Lic #: _______________________

5. WELL NAME: MW-4
   Island: Maui
   Address: Central Maui Landfill
   Tax Map Key: 3 8 3 19
   Parcels: _______________________

6. Proposed Work: Construct New Well
   (check all that apply)
   Modify Existing Well
   Abandon/Seal

7. Proposed Use: Municipal (including hotels, stores, etc.)
   (check all that apply)
   Industrial
   Domestic (individual, noncommercial water system)

8. Proposed Amount of Withdrawal: 100 gallons per minute
   Method of Flow Measurement:
   (check all that apply)
   Flowmeter
   Open-pipe
   Weir
   Office
   Other (explain)

9. Remarks, Explanations: 3 new monitoring wells for on-going groundwater monitoring at CMLF

   Environmental monitoring (every 6 wks)

   Well Owner (print legibly)
   Signature: _______________________
   Date: _______________________

   Landowner (print legibly)
   Signature: _______________________
   Date: _______________________

   Contractor (print legibly)
   Signature: _______________________
   Date: _______________________

   For official use only
   Latitude: _______________________
   Longitude: _______________________
   Aquifer System No.: 60902
   State Well No.: W-9126-04
APPLICATION FOR PERMIT

WELL & PUMP INFORMATION:
1. WELL NAME: MW - 5
2. Island: Maui
3. Address: Central Maui Landfill
4. Tax Map Key: Zone 2 Sec 8 Fab 3:19

3. PROPOSED WORK:
   [ ] Construct New Well
   [ ] Install New Pump
   [ ] Modify Existing Well
   [ ] Modify Pump
   [ ] Abandon/Seal

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

4. CONSTRUCTION:
   [ ] Drilled
   [ ] Dug
   [ ] Shaft
   [ ] Tunnel
   Is this well part of a battery of wells? Yes No
   (Please describe)

5. PROPOSED PUMP INFORMATION:
   [ ] 5 gallons per minute

   Rated Pump Capacity:

   Pump Type (Check one):
   [ ] Deep Well Turbine
   [ ] Rotary
   [ ] Submersible
   [ ] Reciprocating
   [ ] Centrifugal
   [ ] Rotary-Gear
   [ ] Propeller
   [ ] Rotary-Displacement
   [ ] Impulse
   [ ] Impulse

6. PROPOSED USE:
   [ ] Industrial
   [ ] Municipal (including hotels, stores, etc.)
   [ ] Domestic (individual, noncommercial water system)
   [ ] Irrigation (crop)
   [ ] Military

   Does this well serve 25 or more people at least 60 days per year or have 15 or more service connections? Yes No
   (Please describe)

7. (a) PROPOSED AMOUNT OF WITHDRAWAL:
   100 gallons per day
   (every 6 wks)

(b) METHOD OF FLOW MEASUREMENT:
   [ ] Flowmeter
   [ ] Open-pipe
   [ ] Weir
   [ ] Orifice
   [ ] Other (explain)

OTHER IMPORTANT INFORMATION:

9. REMARKS, EXPLANATIONS: 3 new monitoring wells for on-going groundwater monitoring at CMLF

I understand that approval of this application attaches the following standard conditions: 1) the proposed work is to be completed within two (2) years of the approval date; 2) the contractor shall submit to the Commission a well completion/abandonment report within 60 days after the completion date of the permitted work; 3) monthly water use data shall be submitted to the Commission; 4) such approval shall not constitute a determination of correlative water rights and shall not guarantee the pump capacity or future use up to the permitted pump capacity.

Well Owner
Signature
Date

Landowner
Signature
Date

Contractor
Signature
Date

Mike Sober

For official use only
Latitude: 6090
Longitude: 69129-09

WCP/IPA Form 10/25/00
Water rights and

8.

9.

the permitted

3) monthly water use data shall be submitted to the Commission; 4) such approval shall not constitute a determination of correlative 

water rights and shall not guarantee the pump capacity or future use up to the permitted pump capacity. 

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

1. (a) D OWNOWNER: County of Maui Contact Person: Andy Hirose Phone: 270-7872 Water Mailing Address: Dept. of Public Works, 200 South St., Wailuku, HI 96793 (b) D LAND OWNER: Same Contact Person: Andy Hirose Phone: 270-7875 Fax: 270-7875 E-mail: 66793 (c) D CONTRACTOR: Valley Well Drillers Contact Person: Mike Sober Phone: 682-1767 Fax: 682-1768 Mailing Address: 9-235A Ohana St., Kapolei, HI 96707

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

2. WELL NAME: MW - 6 Island: Maui Well Name: Central Maui Landfill Mailing Address: Tax Map Key: 3 - 8 - 3 : 19 Puunene

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

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

*State Well No.: ___ __ __ __ ___ __ (if unknown, please call Commission at 587-6225)

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

5. PROPOSED PUMP INFORMATION: Rated Pump Capacity: 5 gallons per minute Pump Type (Check one):

□ Deep Well Turbine □ Reciprocating □ Submersible □ Centrifugal

□ Rotary-Displacement □ Rotary-Gear □ Rotary

□ Impulse

6. PROPOSED USE: (check all that apply) □ Municipal (including hotels, stores, etc.) □ Industrial □ Domestic (individual, noncommercial water system) Does this well serve 25 or more people at least 60 days per year or have 15 or more service connections? □ Yes □ No □ Irrigation (crop) □ No. of Acres: □ Other (explain): Environmental Monitoring (every 6 wks)

7. (a) PROPOSED AMOUNT OF WITHDRAWAL: 100 gallons per day 

(b) METHOD OF FLOW MEASUREMENT: □ Flowmeter □ Open-pipe □ Weir □ Orifice □ Other (explain)

OTHER IMPORTANT INFORMATION:

8. LEGAL REQUIREMENTS: □ CDUP □ SMAP □ EIS □ EA □ None □ Other (explain)

9. REMARKS, EXPLANATIONS: 3 new monitoring wells for on-going groundwater monitoring at CMLF (if more space is needed, please attach additional sheet)

I understand that approval of this application attaches the following standard conditions: 1) the proposed work is to be completed within two (2) years of the approval date; 2) the contractor shall submit to the Commission a well completion/abandonment report within 60 days after the completion date of the permitted work; 3) monthly water use data shall be submitted to the Commission; 4) such approval shall not constitute a determination of correlative water rights and shall not guarantee the pump capacity or future use up to the permitted pump capacity.

Well Owner (print legibly) Landowner (print legibly) Contractor (print legibly) 

Signature __________________________ Signature __________________________ Signature __________________________

Date 10/20/19 Date 10/20/19 Date 10/15/19

For official use only Lat. Long. Aquifer System No. State Well No.

Lat. 30:20.16° Long. 159:24.01° WCPIPA Form 102500
NOTES:
1. Sounding pipe is on outside of 5" well pipe.
2. Drawing not to scale.
Figure 4
Central Maui Landfill Monitoring Well and Pump Design
Puunene, Hawaii