

December 16, 2002  
0164.L46

Alameda County  
DEC 17 2002  
Environmental Health



Ms. Susan Hugo  
Supervising Hazardous Materials Specialist  
Alameda County Environmental Health Services  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502-6577

RE: WELL COMPLETION REPORT TRANSMITTAL  
Hardage Construction Corporation/Woodfin Suite Hotels Site  
5800 Shellmound  
Emeryville, CA

Dear Ms. Hugo:

You will find enclosed the following:

- Alameda County Public Works Agency Permits approving the destruction of wells ATD1B, ATD2A, ATD3, ATD4A, ATD5, ATD6, and ATD7.
- Well Completion Reports documenting the destruction of wells ATD1B, ATD2A, ATD3, ATD4A, ATD5, ATD6, and ATD7 on August 8, 2002 at the subject site.

This work was performed in accordance with your letter dated June 17, 2002.

Should you have any questions, please do not hesitate to call us at (510) 547-7771.

Sincerely,

RGA Environmental, Inc.

Paul H. King  
Hydrogeologist

Enclosures

PHK/hcm  
0164.L46



### ALAMEDA COUNTY PUBLIC WORKS AGENCY

**WATER RESOURCES SECTION**  
399 E. MERCURY ST. HAYWARD CA. 94544-1395  
PHONE: (510) 870-6033 James Yoo  
FAX: (510) 782-1939

APPLICANTS: PLEASE ATTACH A SITE MAP FOR ALL DRILLING PERMIT APPLICATIONS  
DESTRUCTION OF WELLS OVER 45 FEET REQUIRES A SEPARATE PERMIT APPLICATION

## DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT  
5800 Shelly Road St  
Emeryville, CA 94608

PERMIT NUMBER W02-0788  
WELL NUMBER \_\_\_\_\_  
APN \_\_\_\_\_

CLIENT  
Name Horlage Construction  
Address 5800 Shelly Road  
City Emeryville, CA Zip 94608

PERMIT CONDITIONS  
Circled Permit Requirements Apply

APPLICANT  
Name RCA Environmental Inc.  
Address 470 Doyle Street Phone 510-823-0712  
Address Suite H Phone 510-858-4363  
City Emeryville, CA Zip 94608

#### A. GENERAL

1. A permit application should be submitted so as to arrive at the ACPWA office five days prior to proposed starting date.
2. Submit to ACPWA within 60 days after completion of permitted project Department of Water Resources Well Completion Report.
1. Permit is void if project not begun within 90 days of approval date.

TYPE OF PROJECT

Well Construction	<input type="checkbox"/>	Geotechnical Investigation	<input type="checkbox"/>
Cathodic Protection	<input type="checkbox"/>	General	<input type="checkbox"/>
Water Supply	<input type="checkbox"/>	Contamination	<input type="checkbox"/>
Monitoring	<input type="checkbox"/>	Well Destruction	<input checked="" type="checkbox"/>

#### B. WATER SUPPLY WELLS

1. Minimum surface seal thickness is two inches of cement grout placed by trowel.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.

PROPOSED WATER SUPPLY WELL USE

New Domestic	<input type="checkbox"/>	Replacement Domestic	<input type="checkbox"/>
Municipal	<input type="checkbox"/>	Irrigation	<input type="checkbox"/>
Industrial	<input type="checkbox"/>	Other	<input type="checkbox"/>

#### C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS

1. Minimum surface seal thickness is two inches of cement grout placed by trowel.
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

DRILLING METHOD

Mud Rotary	<input type="checkbox"/>	Air Rotary	<input type="checkbox"/>	Auger	<input type="checkbox"/>
Cable	<input type="checkbox"/>	Other	<input type="checkbox"/>		

#### D. GEOTECHNICAL

Backfill bore hole by trowel with cement grout or cement grout and mixture. Upper two-three feet replaced in kind or with compacted cuttings.

DRILLER'S NAME \_\_\_\_\_

#### E. CATHODIC

Full bore anode zone with concrete placed by trowel

DRILLER'S LICENSE NO. \_\_\_\_\_

**WELL DESTRUCTION** - PG #1 Attached  
Send a permit work for A separate permit is required for wells deeper than 45 feet.

WELL PROJECTS (See Well Construction Details)  
Drill Hole Diameter \_\_\_\_\_ in Maximum \_\_\_\_\_ ft  
Casing Diameter \_\_\_\_\_ in Depth \_\_\_\_\_ ft  
Surface Seal Depth \_\_\_\_\_ ft Owner's Well Number ATD-18

**SPECIAL CONDITIONS** - Driller Lic & Name needed prior to start.

GEOTECHNICAL PROJECTS  
Number of Borings \_\_\_\_\_ Maximum \_\_\_\_\_ ft  
Hole Diameter \_\_\_\_\_ in Depth \_\_\_\_\_ ft

NOTE: One application must be submitted for each well or well destruction. Multiple borings on one application are acceptable for geotechnical and contamination investigations.

ESTIMATED STARTING DATE 8/7/02  
ESTIMATED COMPLETION DATE 8/7/02

APPROVED \_\_\_\_\_ DATE 7-31-02

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68

APPLICANT'S SIGNATURE Paul H. King DATE 7/29/02

PLEASE PRINT NAME Paul H. King Rev 3-04-02



# ALAMEDA COUNTY PUBLIC WORKS AGENCY

**WATER RESOURCES SECTION**  
399 ALMADEN ST. HAYWARD CA. 94544-1305  
PHONE: (510) 870-8033 James Voo  
FAX: (510) 782-1939

APPLICANTS PLEASE ATTACH A SITE MAP FOR ALL DRILLING PERMIT APPLICATIONS  
DESTRUCTION OF WELLS OVER 45 FEET REQUIRES A SEPARATE PERMIT APPLICATION

## DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT  
3600 Shellmound St  
Emeryville CA 94608

CLIENT  
Name Horloge Construction  
Address 3800 Shellmound St  
City Emeryville, CA Zip 94608

APPLICANT  
Name RCA Environmental Inc.  
Address 4701 Dangle Street Phone 510-833-0772  
City Emeryville, CA Zip 94608

TYPE OF PROJECT		Geotechnical Investigation	
Well Construction		General	<input type="checkbox"/>
Cathodic Protection	<input type="checkbox"/>	Contamination	<input type="checkbox"/>
Water Supply	<input type="checkbox"/>	Well Destruction	<input checked="" type="checkbox"/>
Monitoring	<input type="checkbox"/>		

PROPOSED WATER SUPPLY WELL USE			
New Domestic	<input type="checkbox"/>	Replacement Domestic	<input type="checkbox"/>
Municipal	<input type="checkbox"/>	Irrigation	<input type="checkbox"/>
Industrial	<input type="checkbox"/>	Other	<input type="checkbox"/>

DRILLING METHOD			
Mini Rotary	<input type="checkbox"/>	Air Rotary	<input type="checkbox"/>
Cable	<input type="checkbox"/>	Other	<input type="checkbox"/>
		Auger	<input type="checkbox"/>

DRILLER'S NAME \_\_\_\_\_

DRILLER'S LICENSE NO. \_\_\_\_\_

WELL PROJECTS (See Well Construction Details)

Drill Hole Diameter	_____ in	Maximum	_____ ft
Casing Diameter	_____ in	Depth	_____ ft
Surface Seal Depth	_____ ft	Owner's Well Number	<u>ATD2A</u>

94WR626

GEOTECHNICAL PROJECTS

Number of Borings	_____	Maximum	_____ ft
Hole Diameter	_____ in	Depth	_____ ft

ESTIMATED STARTING DATE: 8/17/02  
ESTIMATED COMPLETION DATE: 8/27/02

I hereby agree in conformity with all requirements of this permit and Alameda County Ordinance No. 13-68.

APPLICANT'S SIGNATURE: Paul H. King DATE: 7/29/02

PLEASE PRINT NAME: Paul H. King Rev. J-04-02

FOR OFFICE USE

PERMIT NUMBER W02-0789  
WELL NUMBER \_\_\_\_\_  
APN \_\_\_\_\_

PERMIT CONDITIONS

Circled Permit Requirements Apply

### A. GENERAL

1. A permit application should be submitted on or to arrive at the ACPWA office five days prior to proposed starting date.
2. Submit to ACPWA within 60 days after completion of permitted original Department of Water Resources Well Completion Report.

1. Permit is void if project not begun within 90 days of approval date.

### B. WATER SUPPLY WELLS

1. Minimum surface seal thickness is two inches of cement grout placed by trowel.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.

### C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS

1. Minimum surface seal thickness is two inches of cement grout placed by trowel.
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

### D. GEOTECHNICAL

Drill bit bore hole by trowel with cement grout or cement grout/sand mixture. Upper two-inch feet replaced in kind or with damaged cuttings.

### E. CATHODE

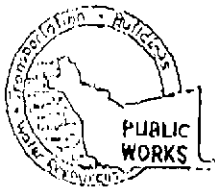
Full hole anode zone with concrete placed by trowel.

**WELL DESTRUCTION** 96H7 Attached. Need a copy of work log. A separate permit is required for wells deeper than 45 feet.

**SPECIAL CONDITIONS** - Dallas Lic & frame needed prior to start.

NOTE: One application must be submitted for each well or well destruction. Multiple borings on one application are acceptable for geotechnical and contamination investigations.

APPROVED: [Signature] DATE: 7-31-02



# ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION  
399 ELMHURST ST. HAYWARD CA. 94544-1396  
PHONE: (510) 470-6633 James Voo  
FAX: (510) 782-1030

APPLICANTS: PLEASE ATTACH A SITE MAP FOR ALL DRILLING PERMIT APPLICATIONS  
DESTRUCTION OF WELLS OVER 45 FEET REQUIRES A SEPARATE PERMIT APPLICATION

## DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT  
5800 Shellywood St  
Emeryville CA 94608

PERMIT NUMBER W02-0790  
WELL NUMBER \_\_\_\_\_  
APP \_\_\_\_\_

CLIENT  
Name Horloge Construction  
Address 5800 Shellywood St  
City Emeryville, CA Zip 94608

PERMIT CONDITIONS  
Circled Permit Requirements Apply

APPLICANT  
Name RCA Environmental Inc.  
Address 4701 Dodge Street City Emeryville, CA Zip 94608  
Phone 510-833-0712  
Phone 510-658-4363

### A. GENERAL

1. A permit application should be submitted on 97 to arrive at the ACPWA office five days prior to proposed starting date.
  2. Submit to ACPWA within 60 days after completion of finished original Department of Water Resources Well Completion Report.
1. Permit is void if project not begun within 90 days of approval date.

### B. WATER SUPPLY WELLS

1. Minimum surface seal thickness is two inches of cement grout placed by trowel.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 30 feet for domestic and irrigation wells unless a lesser depth is specially approved.

### C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS

1. Minimum surface seal thickness is two inches of cement grout placed by trowel.
2. Minimum seal depth for monitoring wells at the monitoring depth practicable or 20 feet.

### D. GEOTECHNICAL

Backfill bore hole by trowel with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings.

### E. CATHODIC

Fill hole annular zone with concrete placed by trowel.

**(1) WELL DESTRUCTION** - PG #1 Attached.  
Send a map of work site. A separate permit is required for wells deeper than 45 feet.

**(2) SPECIAL CONDITIONS** - Ditches ETC have needed prior to start.

NOTE: One application must be submitted for each well or well destruction. Multiple borings on one application are acceptable for geotechnical and contamination investigations.

### TYPE OF PROJECT

Well Construction		Geotechnical Investigation	
Carbonate Protection	<input type="checkbox"/>	General	<input type="checkbox"/>
Water Supply	<input type="checkbox"/>	Contamination	<input type="checkbox"/>
Monitoring	<input type="checkbox"/>	Well Destruction	<input checked="" type="checkbox"/>

### PROPOSED WATER SUPPLY WELL USE

New Domestic	<input type="checkbox"/>	Replenish Domestic	<input type="checkbox"/>
Municipal	<input type="checkbox"/>	Irrigation	<input type="checkbox"/>
Industrial	<input type="checkbox"/>	Other	<input type="checkbox"/>

### DRILLING METHOD

Mud Rotary	<input type="checkbox"/>	Air Rotary	<input type="checkbox"/>	Auger	<input type="checkbox"/>
Cable	<input type="checkbox"/>	Other	<input type="checkbox"/>		

### DRILLER'S NAME

### DRILLER'S LICENSE NO.

### WELL PROJECTS

(See Well Construction Details)

Drill Hole Diameter	_____ in	Maximum	_____ ft
Casing Diameter	_____ in	Depth	_____ ft
Surface Seal Depth	_____ ft	Owner's Well Number	<u>ATD3</u>

### GEOTECHNICAL PROJECTS

Number of Borings	_____	Maximum	_____ ft
Hole Diameter	_____ in	Depth	_____ ft

### ESTIMATED STARTING DATE

8/17/02

### ESTIMATED COMPLETION DATE

8/17/02

I hereby agree in compliance with all requirements of this permit and Alameda County Ordinance No. 72-61

APPLICANT'S SIGNATURE Paul H. King DATE 7/29/02

PLEASE PRINT NAME Paul H. King (Rev. 3-04-02)

APPROVED \_\_\_\_\_

DATE 7-31-02



# ALAMEDA COUNTY PUBLIC WORKS AGENCY

**WATER RESOURCES SECTION**  
369 ELMHURST ST. HAYWARD CA. 94544-3796  
PHONE (510) 670-6633 James Yoo  
FAX (510) 782-1939

APPLICANTS: PLEASE ATTACH A SITE MAP FOR ALL DRILLING PERMIT APPLICATIONS  
DESTRUCTION OF WELLS OVER 45 FEET REQUIRES A SEPARATE PERMIT APPLICATION

## DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT  
3800 Shellmound St  
Emeryville, CA 94608

PERMIT NUMBER W02-0791  
WELL NUMBER \_\_\_\_\_  
APN \_\_\_\_\_

CLIENT  
Name Heritage Construction  
Address 3800 Shellmound St  
City Emeryville, CA Zip 94608

PERMIT CONDITIONS  
Circled Permit Requirements Apply

APPLICANT  
Name RGA Environmental Inc.  
Address 4701 Dodge Street Phone 510-831-0712  
City Emeryville, CA Zip 94608

**A. GENERAL**

1. A permit application should be submitted in as to arrive at the ACPWA office five days prior to proposed starting date.
2. Submit to ACPWA within 60 days after completion of permitted project Department of Water Resources Well Completion Report.

**TYPE OF PROJECT**

Well Construction		Geotechnical Investigation	
Corrosive Protection	<input type="checkbox"/>	General	<input type="checkbox"/>
Water Supply	<input type="checkbox"/>	Contamination	<input type="checkbox"/>
Maintenance	<input type="checkbox"/>	Well Destruction	<input checked="" type="checkbox"/>

**B. WATER SUPPLY WELLS**

1. Minimum surface seal thickness is two inches of cement grout placed by trowel.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.

**PROPOSED WATER SUPPLY WELL USE**

New Domestic	<input type="checkbox"/>	Replaces non-domestic	<input type="checkbox"/>
Municipal	<input type="checkbox"/>	Irrigation	<input type="checkbox"/>
Industrial	<input type="checkbox"/>	Other	<input type="checkbox"/>

**C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS**

1. Minimum surface seal thickness is two inches of cement grout placed by trowel.
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

**DRILLING METHOD(S)**

Air Rotary	<input type="checkbox"/>	Auger	<input type="checkbox"/>
Cable	<input type="checkbox"/>	Other	<input type="checkbox"/>

**D. GEOTECHNICAL**

Backfill bore hole by trowel with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings.

DRILLER'S NAME: \_\_\_\_\_

DRILLER'S LICENSE NO. \_\_\_\_\_

**E. CATHODIC**

Fill hole annular zone with concrete placed by trowel.

**WELL PROJECTS**

(See Well Construction Details)

Drill Hole Diameter	<input type="checkbox"/>	Atkinson	<input type="checkbox"/>
Casing Diameter	<input type="checkbox"/>	Depth	<input type="checkbox"/>
Surface Seal Depth	<input type="checkbox"/>	Owner's Well Number	<u>A-104A</u>

**WELL DESTRUCTION** - PG-H-1 Attached. Send a copy of work with A separate permit application for wells deeper than 45 feet.

**GEOTECHNICAL PROJECTS**

Number of Borings	<input type="checkbox"/>	Maximum Depth	<input type="checkbox"/>
Hole Diameter	<input type="checkbox"/>		

98WR327

**SPECIAL CONDITIONS** - Drillers Lic frame needed prior to start.

ESTIMATED STARTING DATE: 8/7/02

ESTIMATED COMPLETION DATE: 8/7/02

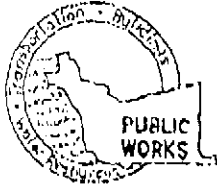
APPROVED: \_\_\_\_\_

DATE: 7-31-02

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 23-08

APPLICANT'S SIGNATURE: Paul H. King DATE: 7/25/02

PLEASE PRINT NAME: Paul H. King (REV) 04-02



### ALAMEDA COUNTY PUBLIC WORKS AGENCY

**WATER RESOURCES SECTION**  
399 ELMHURST ST. HAYWARD CA. 94544-3395  
PHONE: (510) 870-6633 James Yoo  
FAX (510) 782-1939

APPLICANTS: PLEASE ATTACH A BILL MAT FOR ALL DRILLING PERMIT APPLICATIONS  
RESTRICTION OF WELLS OVER 45 FEET REQUIRES A SEPARATE PERMIT APPLICATION

## DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE:

LOCATION OF PROJECT  
5800 Shellmound St  
Emeryville, CA 94608

CLIENT  
Name Horvath Construction  
Address 5800 Shellmound St  
City Emeryville, CA Zip 94608

APPLICANT  
Name RCA Environmental Inc.  
3701 Doyle Street Phone 510-834-0712  
Address Suite 4 Phone 510-658-4263  
City Emeryville, CA Zip 94608

TYPE OF PROJECT  
Well Construction  Geotechnical Investigation   
Cathodic Protection  General   
Water Supply  Contamination   
Monitoring  Well Destruction

PROPOSED WATER SUPPLY WELL USE  
New Domestic  Replaces own Domestic   
Municipal  Irrigation   
Industrial  Other

DRILLING METHOD:  
Mud Rotary  Air Rotary  Auger   
Cable  Other

DRILLER'S NAME: \_\_\_\_\_

DRILLER'S LICENSE NO: \_\_\_\_\_

WELL PROJECTS (See Well Construction Details)  
Drill Hole Diameter \_\_\_\_\_ in. Maximum \_\_\_\_\_ ft.  
Casing Diameter \_\_\_\_\_ in. Depth \_\_\_\_\_ ft.  
Surface Foot Depth \_\_\_\_\_ ft. Owner's Well Number A1D5

GEOTECHNICAL PROJECTS  
Number of Borings \_\_\_\_\_ Maximum \_\_\_\_\_ ft.  
Hole Diameter \_\_\_\_\_ in. Depth \_\_\_\_\_ ft.

ESTIMATED STARTING DATE: 8/7/02  
ESTIMATED COMPLETION DATE: 8/7/02

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-08.

APPLICANT'S SIGNATURE: Paul H. King DATE: 7/25/02

PLEASE PRINT NAME: Paul H. King (Rev 3-04-02)

FOR OFFICE USE:

PERMIT NUMBER: W02-0792  
WELL NUMBER: \_\_\_\_\_  
APN: \_\_\_\_\_

PERMIT CONDITIONS  
Circled Permit Requirements Apply

- A. GENERAL  
1. A permit application should be submitted as far in advance of the ACPWA office five days prior to proposed starting date.  
2. Submit to ACPWA within 60 days after completion of permitted project Department of Water Resources Well Completion Report.

- B. WATER SUPPLY WELLS  
1. Minimum surface seal thickness is two inches of cement grout placed by volume.  
2. Minimum seal depth is 50 feet for municipal and industrial wells or 30 feet for domestic and irrigation wells unless a lesser depth is specially approved.

- C. GROUNDWATER MONITORING WELLS, INCLUDING PIEZOMETERS  
1. Minimum surface seal thickness is two inches of cement grout placed by volume.  
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

- D. GEOTECHNICAL  
Backfill bore hole by cement with cement grout or cement grout and mixture. Upper two-thirds feet replaced in kind or with compacted cuttings.

- E. CATHODIC  
All hole annule zone with concrete placed by volume.

- F. WELL DESTRUCTION PG #2 Attached  
Send a copy of work and A report to permit is required for wells deeper than 45 feet.

- G. SPECIAL CONDITIONS - Willer Lic & name needed prior to

NOTE: One application must be submitted for each well or well destruction. Multiple borings on one application are acceptable for geotechnical and contamination investigations.

APPROVED: [Signature] DATE: 7/31/02



ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION
399 ELMHURST ST, HAYWARD CA. 94544-9395
PHONE: (510) 670-6633 James Yoo
FAX: (510) 782-1939

APPLICANTS: PLEASE ATTACH A SITE MAP FOR ALL DRILLING PERMIT APPLICATIONS
RESTRICTION OF WELLS OVER 45 FEET REQUIRES A SPECIALTY PERMIT APPLICATION

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT: 5800 Shellmound St, Emeryville, CA 94608

PERMIT NUMBER: W02-0773
WELL NUMBER:
APN:

CLIENT: Heritage Construction
Name:
Address: 5800 Shellmound St, Emeryville, CA 94608
City: Emeryville, CA Zip: 94608

PERMIT CONDITIONS
Circled Permit Requirements Apply

APPLICANT: RGA Environmental Inc.
Name:
Address: 470 Dwyer Street, Suite 2, Emeryville, CA 94608
City: Emeryville, CA Zip: 94608

- A. GENERAL
1. A permit application should be submitted to arrive at the ACPWA office five days prior to proposed starting date.
2. Submit to ACPWA within 60 days after completion of permitted original Department of Water Resources Well Completion Report.
1. Permit is void if project not begun within 90 days of approval date.

TABLE: TYPE OF PROJECT
Well Construction, Cathodic Protection, Water Supply, Monitoring
Geotechnical Investigation, General, Contamination, Well Destruction

- B. WATER SUPPLY WELLS
1. Minimum surface seal thickness is two inches of cement grout placed by trowel.
2. Minimum seal depth is 50 feet for municipal and industrial water or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.

PROPOSED WATER SUPPLY WELL USE
New Domestic, Municipal, Industrial
Replacement or Domestic, Irrigation, Other

- C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS
1. Minimum seal thickness is two inches of cement grout placed by trowel.
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

DRILLING METHOD:
Mud Rotary, Cable, Air Rotary, Other

- D. GEOTECHNICAL
Backfill bore hole by trowel with cement grout in cement grout/sand mixture. Upper two-three feet replaced in kind or with simulated casing.
E. CATHODIC
Fill hole annular zone with concrete placed by trowel.

DRILLER'S NAME:

WELL DESTRUCTION - P643 Attached.
Send a map of well with a separate permit if required for wells deeper than 45 feet.

DRILLER'S LICENSE NO:

SPECIAL CONDITIONS - Drillers LIC# name needed prior to start.

WELL PROJECTS (See Well Construction Details)
Drill Log Diameter, Casing Diameter, Surface Seal Depth, Maximum Depth, Owner's Well Number A-106

GEOTECHNICAL PROJECTS
Number of Borings, Hole Diameter, Maximum Depth

ESTIMATED STARTING DATE: 8/7/02
ESTIMATED COMPLETION DATE: 8/7/02

APPROVED: [Signature] DATE: 7-31-02

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-08

APPLICANT'S SIGNATURE: Paul H. King DATE: 7/25/02

PLEASE PRINT NAME: Paul H. King



# ALAMEDA COUNTY PUBLIC WORKS AGENCY

**WATER RESOURCES SECTION**  
309 ELMHURST ST. HAYWARD CA. 94544-1395  
PHONE: (510) 870-6633 James Voo  
FAX: (510) 782-1939

APPLICANTS: PLEASE ATTACH A SITE MAP FOR ALL DRILLING PERMIT APPLICATIONS  
DESTRUCTION OF WELLS OVER 45 FEET DEPTH REQUIRES A SEPARATE PERMIT APPLICATION

## DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE:

LOCATION OF PROJECT  
5800 Shellywood St  
Emeryville, CA 94608

PERMIT NUMBER W02-0787  
WELL NUMBER \_\_\_\_\_  
APN \_\_\_\_\_

CLIENT Harbage Construction  
Name: \_\_\_\_\_  
Address: 5800 Shellywood St  
City: Emeryville, CA Zip: 94608

PERMIT CONDITIONS  
Circled Permit Requirements Apply

APPLICANT  
Name: RGA Environmental Inc.  
Address: 4701 Dimple Street  
City: Emeryville, CA Zip: 94608  
Phone: 510-833-0712  
Phone: 510-833-4363

### A. GENERAL

1. A permit application should be submitted in triplicate to the ACPWA office five days prior to proposed starting date.
  2. Submit to ACPWA within 60 days after completion of permitted original Department of Water Resources Well Completion Report.
1. Permit is void if project not begun within 90 days of approval date.

### B. WATER SUPPLY WELLS

1. Minimum surface seal thickness is two inches of cement grout placed by trowel.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a larger depth is specifically approved.

### C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS

1. Minimum surface seal thickness is two inches of cement grout placed by trowel.
2. Minimum seal depth for monitoring wells is the maximum depth producible or 20 feet.

### D. GEOTECHNICAL

Backfill bore hole by trowel with cement grout or cement grout and mixture. Upper two-three feet replaced as kind or with compacted cuttings.

### E. CATHODIC

Fill hole sandy zone with concrete placed by trowel.

### F. WELL DESTRUCTION

Send a trip of work for a special permit is required for wells deeper than 45 feet.

### G. SPECIAL CONDITIONS

Dillers L&L Mine needed prior to Start.

NOTE: One application must be submitted for each well or well destruction. Multiple permits on one application are acceptable for geotechnical and contamination investigations.

Well Construction		Geotechnical Investigation	
Cathodic Protection	<input type="checkbox"/>	General	<input type="checkbox"/>
Water Supply	<input type="checkbox"/>	Contamination	<input type="checkbox"/>
Monitoring	<input type="checkbox"/>	Well Destruction	<input checked="" type="checkbox"/>

PROPOSED WATER SUPPLY WELL USE			
New Domestic	<input type="checkbox"/>	Replacement Domestic	<input type="checkbox"/>
Municipal	<input type="checkbox"/>	Irrigation	<input type="checkbox"/>
Industrial	<input type="checkbox"/>	Other	<input type="checkbox"/>

DRILLING METHOD(S)			
Mud Rotary	<input type="checkbox"/>	Air Rotary	<input type="checkbox"/>
Cable	<input type="checkbox"/>	Other	<input type="checkbox"/>

DRILLER'S NAME: \_\_\_\_\_

DRILLER'S LICENSE NO: \_\_\_\_\_

WELL PROJECTS (See Well Construction Details)

Drill Hole Diameter	_____ in	Maximum	_____ ft
Casing Diameter	_____ in	Depth	_____ ft
Surface Seal Depth	_____ ft	Owner's Well Number	<u>A1D7</u>

GEOTECHNICAL PROJECTS

Number of Borelogs	_____	Maximum Depth	_____ ft
Hole Diameter	_____ in		

ESTIMATED STARTING DATE: 3/7/02

ESTIMATED COMPLETION DATE: 3/7/02

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68

APPLICANT'S SIGNATURE: Paul H. King DATE: 7/25/02

PLEASE PRINT NAME: Paul H. King Rev. 3-04-02

APPROVED: \_\_\_\_\_ DATE: 7/31/02



**CONFIDENTIAL**

STATE OF CALIFORNIA DWR  
WELL COMPLETION REPORT  
(WELL LOGS)

**REMOVED**

BORING NO.: ATD1B		PROJECT NO.: HSH15835		PROJECT NAME: HARDAGE CONSTRUCTION CORP.		
BORING LOCATION: SEE MAP			ELEVATION AND DATUM:			
DRILLING AGENCY: GREGG DRILLING AND TESTING, INC.		DRILLER: PAUL & FAUSTO		DATE & TIME STARTED:	DATE & TIME FINISHED:	
DRILLING EQUIPMENT: 8 INCH OUTSIDE DIAMETER HOLLOW STEM AUGER				10/2/00	10/2/00	
COMPLETION DEPTH: 10 FEET		BEDROCK DEPTH: NONE ENCOUNTERED		LOGGED BY:	CHECKED BY:	
FIRST WATER DEPTH: UNKNOWN		NO. OF SAMPLES: NONE		GMB		
DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	WELL CONSTRUCTION LOG	BLOW COUNT PER 6"	PID	REMARKS
5	Portland cement, monitoring well and construction debris (FILL), dense, moist.	FILL	See Attached Well Construction Detail Diagram			Saturated soil at approximately 8 feet.
10	Gray clayey silt (ML), dense, saturated.	ML	▽			
15						Borehole terminated at 10.0 feet.  Borehole converted to groundwater monitoring well, designated ATD1B.
20						
25						
30						

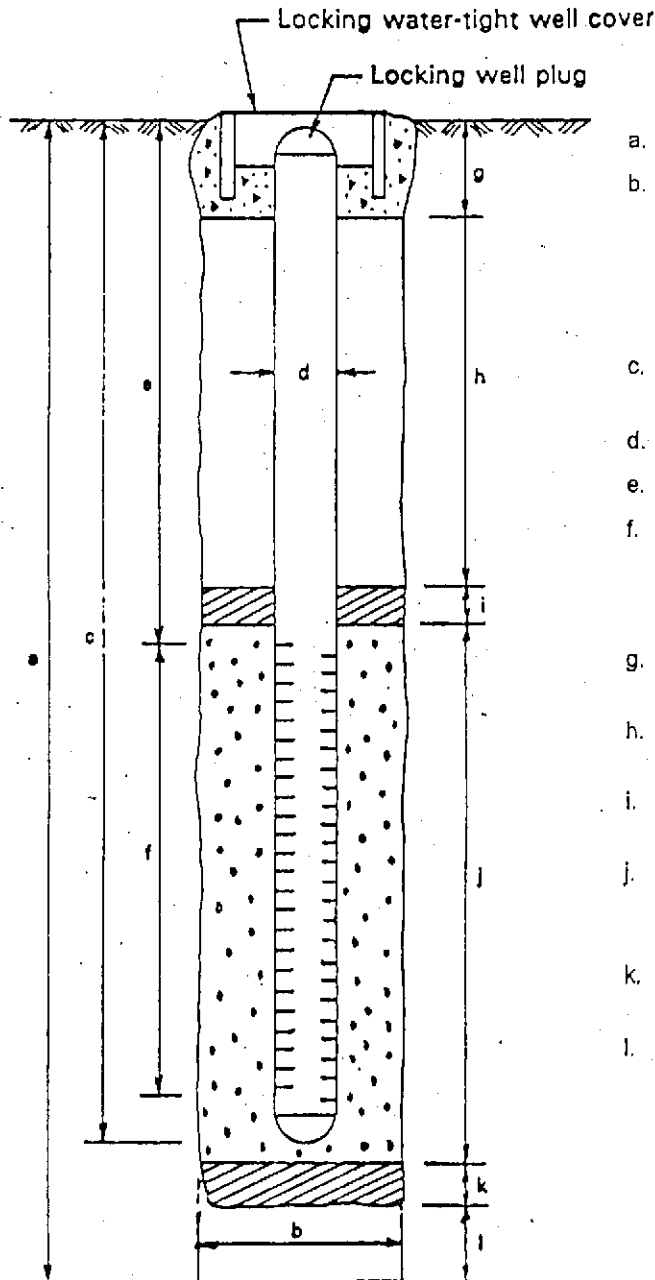
# RGA Environmental, Inc.

4701 Doyle Street, Suite 14  
Emeryville, California 94608  
Telephone: (510) 547-7771

## WELL CONSTRUCTION DETAILS

PROJECT NUMBER HSHI5835  
PROJECT NAME HARDAGE CONSTRUCTION CORP.  
COUNTY ALAMEDA  
WELL PERMIT NO. W00-544

BORING/WELL NO. ATD1B  
TOP OF CASING ELEVATION TBD  
GROUND SURFACE ELEVATION TBD  
DATUM TBD



### EXPLORATORY BORING

a. Total Depth 10 ft.  
b. Diameter 8 in.  
Drilling Method Hollow Stem Auger

### WELL CONSTRUCTION

c. Casing Length 10 ft.  
Material Schedule 40 PVC  
d. Diameter 2 in.  
e. Depth to top perforations 5 ft.  
f. Perforated length 5 ft.  
Perforated interval from 5 to 10 ft.  
Perforation type Factory Slot  
Perforation size 0.010 inch  
g. Surface sanitary seal 2.5 ft.  
Seal material Neat cement grout  
h. Sanitary seal 0 ft.  
Seal material \_\_\_\_\_  
i. Filter pack seal 1 ft.  
Seal material Bentonite chips  
j. Filter pack length 6.5 ft.  
Filter pack interval from 3.5 to 10 ft.  
Pack material #2/16 Lonestar sand  
k. Bottom seal 0 ft.  
Seal material \_\_\_\_\_  
l. Slough in bottom of borehole 0 ft.

**CONFIDENTIAL**

STATE OF CALIFORNIA DWR  
WELL COMPLETION REPORT  
(WELL LOGS)

**REMOVED**

BORING NO.: ATD2A		PROJECT NO.: HSHI4089		PROJECT NAME: HARDAGE CONSTRUCTION CORP.			
BORING LOCATION: SEE MAP				ELEVATION AND DATUM:			
DRILLING AGENCY: GREGG DRILLING AND TESTING, INC.			DRILLER: TREVOR & GERMAN		DATE & TIME STARTED:	DATE & TIME FINISHED:	
DRILLING EQUIPMENT: 10 INCH OUTSIDE DIAMETER HOLLOW STEM AUGER					1/14/00 8:30 AM	1/14/00	
COMPLETION DEPTH: 10 FEET		BEDROCK DEPTH: NONE ENCOUNTERED		LOGGED BY:		CHECKED BY:	
FIRST WATER DEPTH: UNKNOWN		NO. OF SAMPLES: NONE		GMB			
DEPTH (FT)	DESCRIPTION	GRAPHIC COLUMN	WELL CONSTRUCTION LOG	BLOW COUNT PER 6"	PID	REMARKS	
5	Portland cement, monitoring well and construction debris (FILL), some brown sand, dense, wet.	FILL	See Attached Well Construction Detail Diagram				
10	Brown silt (ML), dense, wet.	ML					
15						Borehole terminated at 100 feet.	
20						Borehole converted to groundwater monitoring well	
25							
30							

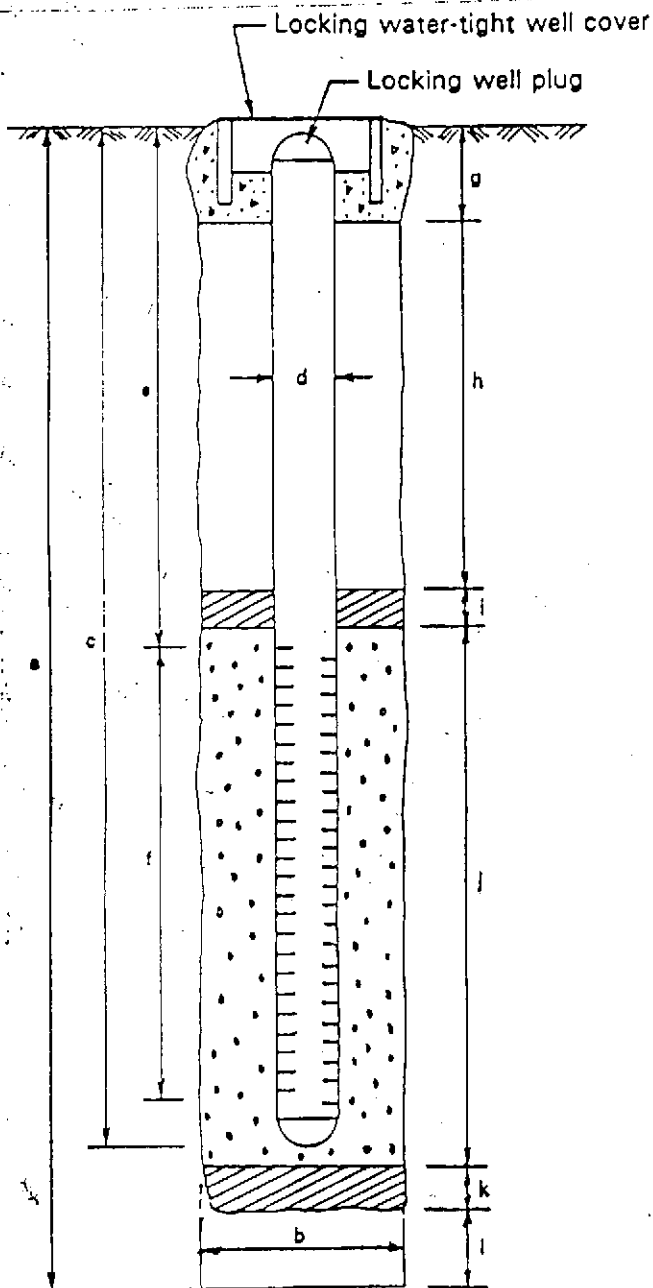
# RGA Environmental, Inc.

4701 Doyle Street, Suite 14  
Emeryville, California 94608  
Telephone: (510) 547-7771

## WELL CONSTRUCTION DETAILS

PROJECT NUMBER HSHI4089  
PROJECT NAME HARDAGE CONSTRUCTION CORP.  
COUNTY ALAMEDA  
WELL PERMIT NO. 99WR626

BORING/WELL NO. ATD2A  
TOP OF CASING ELEVATION TBA  
GROUND SURFACE ELEVATION TBA  
DATUM TBA



### EXPLORATORY BORING

a. Total Depth 10 ft.  
b. Diameter 10 in.  
Drilling Method Hollow Stem Auger


### WELL CONSTRUCTION

c. Casing Length 9.5 ft.  
Material Schedule 40 PVC  
d. Diameter 4 in.  
e. Depth to top perforations 4.5 ft.  
f. Perforated length 5 ft.  
Perforated interval from 4.5 to 9.5 ft.  
Perforation type Factory Slot  
Perforation size 0.010 inch  
g. Surface sanitary seal 2.5 ft.  
Seal material Neat cement grout  
h. Sanitary seal 0 ft.  
Seal material \_\_\_\_\_  
i. Filter pack seal 1 ft.  
Seal material Bentonite pellets  
j. Filter pack length 6.5 ft.  
Filter pack interval from 3.5 to 10 ft.  
Pack material #2/16 Lonestar sand  
k. Bottom seal 0 ft.  
Seal material \_\_\_\_\_  
l. Slough in bottom of borehole 0 ft.














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STATE OF CALIFORNIA DWR  
WELL COMPLETION REPORT  
(WELL LOGS)

**REMOVED**

PROJECT ▷ ANOTHER TREE		 <b>APPLIED GEOSCIENCES INC.</b>	PROJECT NUMBER ▷ A901749A	
LOGGED BY ▷ MICHAEL MILLER			START DATE ▷ 31 July 1991	
CHECKED BY ▷ FRED R. CONWELL <i>FR</i>			COMPLETION DATE ▷ 31 July 1991	
GROUND SURFACE ELEVATION DATUM (FT-MSL) ▷ 8.8		DRILLING COMPANY ▷ SPECTRUM EXPLORATION		
DRILLING EQUIPMENT ▷ CME-55				
BORING DEPTH (FT) ▷ 22.0	WELL DEPTH (FT) ▷ 22	WATER DEPTH (FT)-Initial: 18.5 Completion: 3.5		
WELL MATERIALS ▷ No. 3 MONTEREY SAND		WELL SCREEN INTERVAL (FT) ▷ 16.5 TO 21.5		
WELL CASING ELEVATION (FT-MSL) ▷ 8.21		OVM/OVA ▷ Hnu with 10.2 eV PROBE		

BACKFILL MATERIAL ▷ CEMENT-BENTONITE GROUT

DEPTH (FT)	LITHOLOGY		WELL	BLOW COUNT	OVM/OVA (PPM)	SAMPLE			COMMENTS
	DESCRIPTION	GRAPHIC				RECOVERY %	TYPE	NUMBER	
0	Asphalt								
0-4	Dark yellow brown (10 YR 4/2), moist, medium dense. Silty GRAVEL (GM)			12	<1			ATD-3-1	
4-7	Dark yellow brown (10 YR 4/2), moist, stiff, Silty CLAY (CL)			11	<1			ATD-3-2	
7-10	Becomes moderate yellow brown (10 YR 5/4) at 7 feet			22	<1			ATD-3-3	
10-18.5				38	<1			ATD-3-4	
18.5-22	Increase in gravel at 18.5 feet			29	<1			ATD-3-5	Water encountered at 18.5 feet
22	Boring terminated at 22 feet								Terminated boring approximately 3 feet below the initial encounter of water

BORING DESIGNATION  
**ATD3**

**BORING LOG**

PAGE NUMBER  
1 OF 1

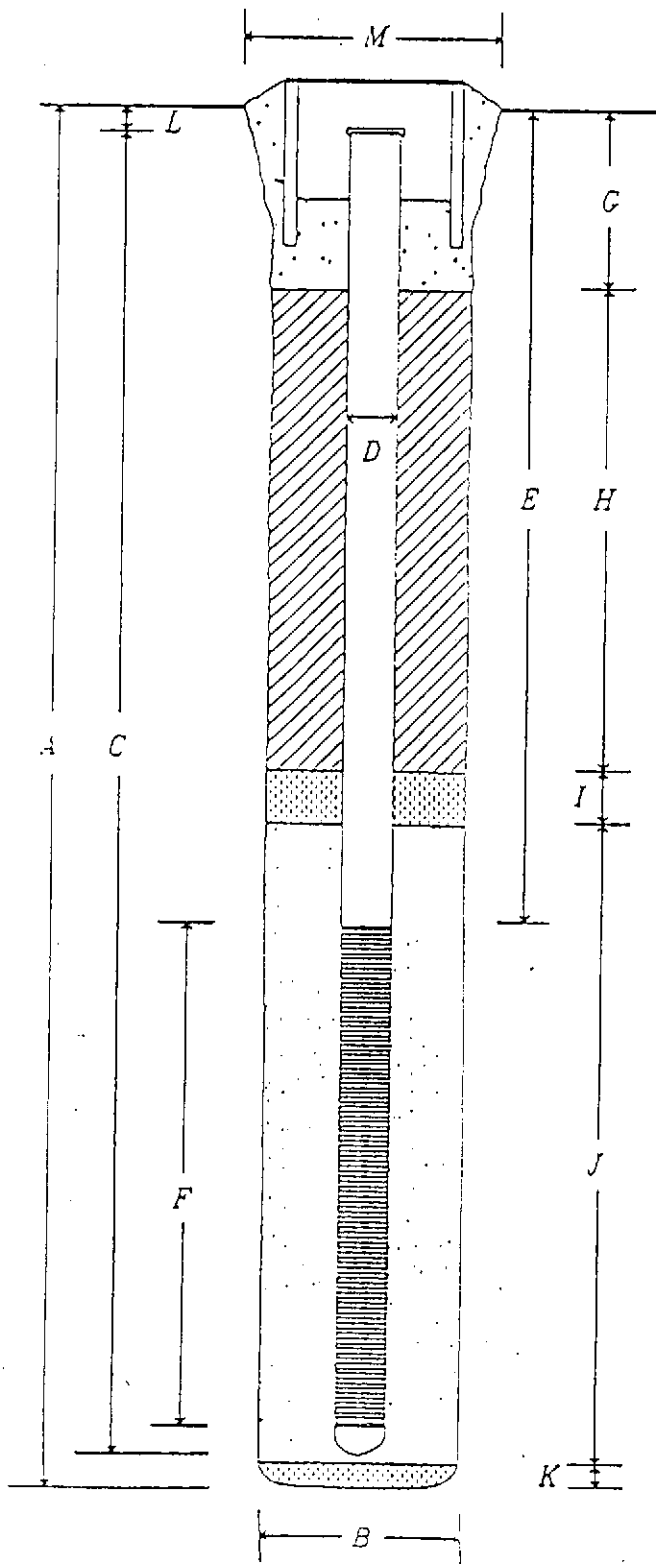
FIGURE NUMBER



# SINGLE COMPLETION WELL DETAILS

PROJECT NUMBER: A901749A  
 PROJECT NAME: MARKETPLACE II  
 COUNTY: ALAMEDA  
 WELL PERMIT NO.: \_\_\_\_\_

BORING/WELL NO.: ATD3  
 TOP OF CASING ELEV.: 8.21  
 GROUND SURFACE ELEV.: 8.80  
 DATUM: MEAN SEA LEVEL



## EXPLORATION BORING

A. Total Depth 22.0 ft  
 B. Boring Diameter 10 in  
 Drilling Method HOLLOW-STEM AUGER

## WELL CONSTRUCTION


C. Casing Length 21.5 ft  
 Material SCHEDULE 40 PVC  
 D. Diameter 4 in  
 E. Depth to Top of Perforations 16.5 ft  
 F. Perforated Length 5.0 ft  
 Perforated Interval from 16.5 to 21.5 ft  
 Perforation Type MACHINE SLOT  
 Perforation Size 0.020 INCH  
 G. Surface Seal 2.0 ft  
 Seal Material CEMENT GROUT  
 H. Backfill 12.5 ft  
 Backfill Material CEMENT GROUT  
 I. Seal 1.0 ft  
 Seal Material BENTONITE PELLETS  
 J. Gravel Pack 6.0 ft  
 Material NO.3 LONESTAR SAND  
 K. Bottom Seal 0 ft  
 Material NONE  
 L. Top of Casing Depth 6 in  
 M. Protective Cover Diameter 12.25 in



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STATE OF CALIFORNIA DWR  
WELL COMPLETION REPORT  
(WELL LOGS)

**REMOVED**

BORING NO.: ATD4A		PROJECT NO.: HSH14089		PROJECT NAME: HARDAGE CONSTRUCTION CORP.		
BORING LOCATION: CONSTRUCTION SITE			ELEVATION AND DATUM: TOP OF CASING = 8.45 FEET MEAN SEA LEVEL			
DRILLING AGENCY: Exploration Geoservices, Inc.			DRILLER: DAN & DANNY		DATE & TIME STARTED:	
DRILLING EQUIPMENT: MOBIL B56			10" OD HOLLOW STEM AUGER		DATE & TIME FINISHED:	
COMPLETION DEPTH: 10.0 FEET			BEDROCK DEPTH: NONE ENCOUNTERED		LOGGED BY:	
FIRST WATER DEPTH: 6 FEET			NO. OF SAMPLES: 0		CHECKED BY:	
DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	WELL CONSTRUCTION LOG	BLOW COUNT PER 6"	PID/ppm	REMARKS
0	Gray Silty Sandy baserock, moist. No Petroleum Hydrocarbon (PHC) odor.	FILL	See Attached Diagram			
5	Gray black Silty Clay (CL); wood fragments, moist to saturated, stiff. No PHC odor.	CL		10 6 6	0	Groundwater first encountered at 6 feet.  Area immediately north of ATD4A was dewatered.
10				6 4 9	0	Borehole terminated at 10.0 feet.  Borehole converted to groundwater monitoring well.
15						
20						
25						
30						

# RGA ENVIRONMENTAL, INC.

4701 Doyle Street, Suite 14

Emeryville, CA 94608

Telephone (510) 547-7771

## WELL CONSTRUCTION DETAILS

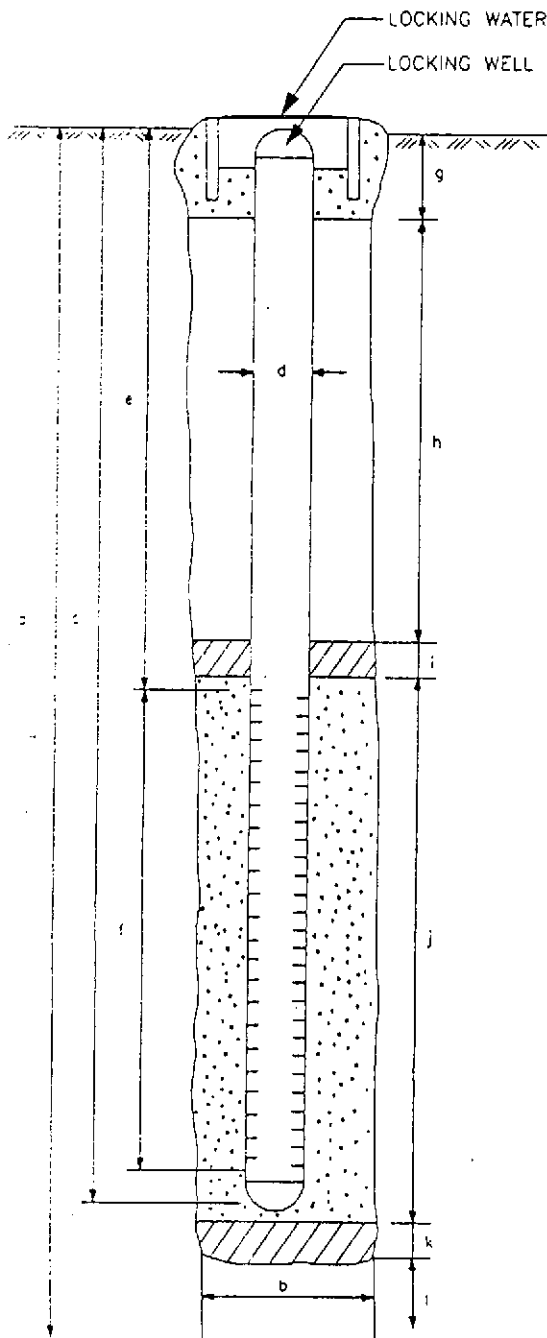
PROJECT NUMBER            HSHI4089            BORING/WELL NO.            ATD4A           

PROJECT NAME            Hardoge Construction Corp.            TOP OF CASING ELEV.            8.74 FEET           

COUNTY            Alameda            GROUND SURFACE ELEV.            UNKNOWN           

WELL PERMIT NO.            98WR327            DATUM            MEAN SEA LEVEL           

DATE INSTALLED            3/4/99           



### EXPLORATORY BORING

a. Total depth            10.0            FT.

b. Diameter            10.0            IN.

Drilling method            Hollow Stem Auger           

### WELL CONSTRUCTION

c. Casing length            10            FT.

Material            Schedule 40 PVC           

d. Diameter            2            IN.

e. Depth to top perforations            5.0            FT.

f. Perforated length            5            FT.

Perforated interval from            5            to            10            FT.

Perforation type            Factory Slot           

Perforation size            0.010 In.           

g. Surface sanitary seal            0.5            FT.

Seal material            Concrete           

h. Sanitary seal            3.0            FT.

Seal material            Neat Cement           

i. Filter pack seal            1.0            FT.

Seal material            Bentonite Pellet           

j. Filter pack length            5.5            FT.

Filter pack interval from            4.5            to            10            FT.

Pack material            #2/16 Lanestor Sock Sand           

k. Bottom seal            0            FT.

Seal material                      

l. Stuff in bottom of borehole            0            FT.

**CONFIDENTIAL**

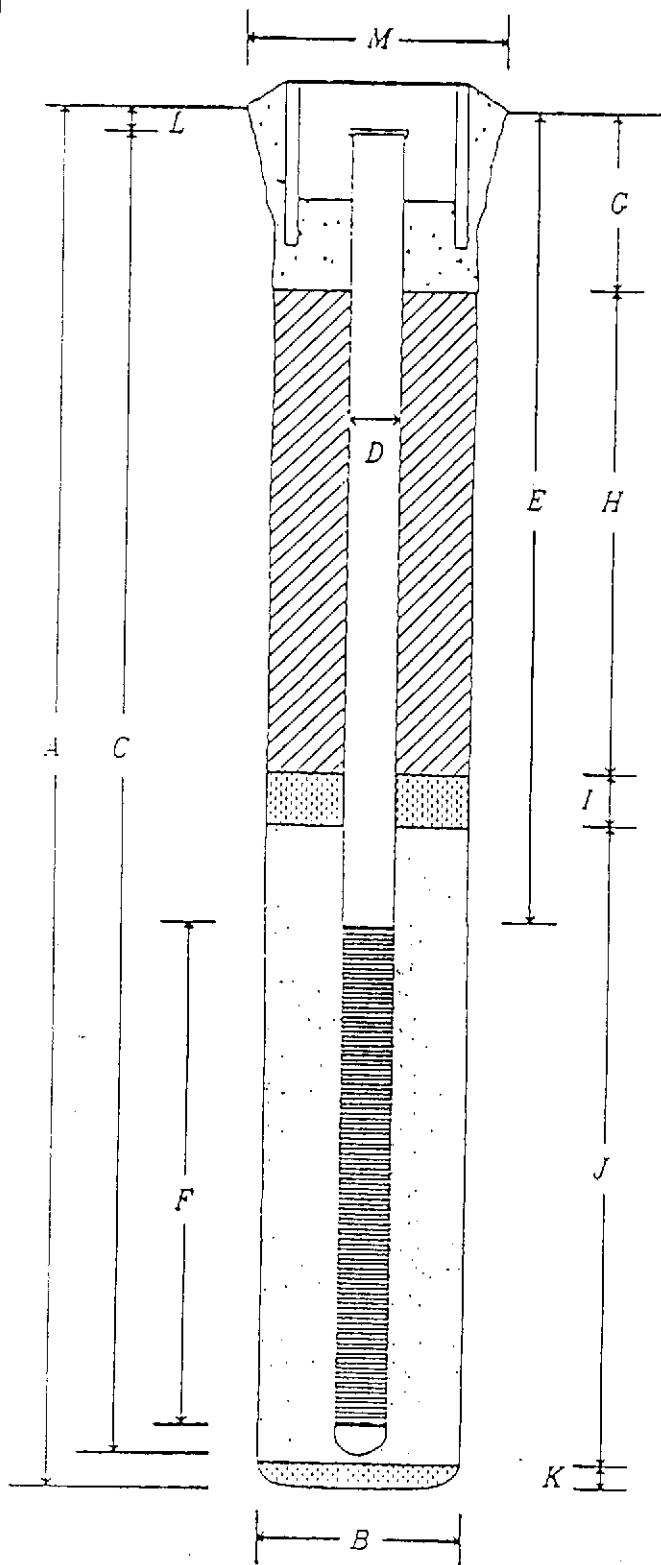
STATE OF CALIFORNIA DWR  
WELL COMPLETION REPORT  
(WELL LOGS)

**REMOVED**

# SINGLE COMPLETION WELL DETAILS

PROJECT NUMBER: A901749A  
 PROJECT NAME: MARKETPLACE II  
 COUNTY: ALAMEDA  
 WELL PERMIT NO.: \_\_\_\_\_

BORING/WELL NO.: ATDS  
 TOP OF CASING ELEV.: 7.56  
 GROUND SURFACE ELEV.: 7.89  
 DATUM: MEAN SEA LEVEL



## EXPLORATION BORING

A. Total Depth 11.5 ft.  
 B. Boring Diameter 10 in.  
 Drilling Method HOLLOW-STEM AUGER

## WELL CONSTRUCTION


C. Casing Length 9.5 ft.  
 Material SCHEDULE 40 PVC  
 D. Diameter 4 in.  
 E. Depth to Top of Perforations 4.0 ft.  
 F. Perforated Length 5 ft.  
 Perforated Interval from 4.0 to 9.0 ft.  
 Perforation Type MACHINE SLOT  
 Perforation Size 0.020 INCH  
 G. Surface Seal 1.0 ft.  
 Seal Material CONCRETE  
 H. Backfill 2.0 ft.  
 Backfill Material CEMENT-BENTONITE  
 I. Seal 0.5 ft.  
 Seal Material BENTONITE PELLETS  
 J. Gravel Pack 8.0 ft.  
 Material NO.3 LONESTAR SAND  
 K. Bottom Seal 0 ft.  
 Material NONE  
 L. Top of Casing Depth 0 in.  
 M. Protective Cover Diameter 12.25 in.

















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STATE OF CALIFORNIA DWR  
WELL COMPLETION REPORT  
(WELL LOGS)

**REMOVED**

PROJECT ▷ ANOTHER TREE	 <b>APPLIED GEOSCIENCES INC.</b>	PROJECT NUMBER ▷ A901749A
LOGGED BY ▷ JOSEPH MELLO		START DATE ▷ 31 July 1991
CHECKED BY ▷ FRED R. CONWELL <i>FRC</i>		COMPLETION DATE ▷ 31 July 1991
GROUND SURFACE ELEVATION DATUM (FT-MSL) ▷ 8.3		DRILLING COMPANY ▷ SPECTRUM EXPLORATION
DRILLING EQUIPMENT ▷ ACKER DRILLING CO. AD-2		
BORING DEPTH (FT) ▷ 11.5	WELL DEPTH (FT) ▷ 11.5	WATER DEPTH (FT)-Initial: 5.0 Completion: 5.4
WELL MATERIALS ▷ No. 3 MONTEREY SAND		WELL SCREEN INTERVAL (FT) ▷ 4.0 TO 9.0
WELL CASING ELEVATION (FT-MSL) ▷ 7.87		OVM/OVA ▷ Hnu with 10.2 eV PROBE
BACKFILL MATERIAL ▷ CEMENT-BENTONITE GROUT		

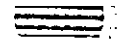
DEPTH (FT)	LITHOLOGY DESCRIPTION	GRAPHIC	WELL	BLOW COUNT	OVM/OVA (PPH)	SAMPLE			COMMENTS
						RECOVERY %	TYPE	NUMBER	
0	Asphalt								
1-4	Grayish black (N2), damp, stiff, Clayey SILT (ML) with trace fine sand			11	78	75		ATD6-1	Diesel odor noted in the sample obtained at 2.5 feet Analyze a sample from this boring for VOCs
5-7	Mottled grayish blue (5 PB 5/2) and light brown (5 YR 5/6), saturated, firm, CLAY (CH)			7	94	70		ATD6-2	Hnu = 28 parts per million downhole at 5 feet
8-10	Moderate yellowish brown (10 YR 5/4), saturated, medium dense, Silty fine Sandy GRAVEL (GM) with minor clay			25	9	70		ATD6-3	Gasoline odor noted in the sample obtained at 7.5 feet
11	Boring terminated at 11.5 feet			27	1	85		ATD6-4	Terminated boring approximately 6.5 below the initial encounter of water

BORING DESIGNATION  
**ATD6**


**BORING LOG**

PAGE NUMBER  
1 OF 1














FIGURE NUMBER





PROJECT ▷ ANOTHER TREE	 <b>APPLIED GEOSCIENCES INC.</b>	PROJECT NUMBER ▷ A901749A
LOGGED BY ▷ JOSEPH MELLO		START DATE ▷ 31 July 1991
CHECKED BY ▷ FRED R. CONWELL <i>FC</i>		COMPLETION DATE ▷ 31 July 1991
GROUND SURFACE ELEVATION DATUM (FT-MSL) ▷ 8.2	DRILLING COMPANY ▷ SPECTRUM EXPLORATION	
DRILLING EQUIPMENT ▷ ACKER DRILLING CO. AD-2		
BORING DEPTH (FT) ▷ 11.5	WELL DEPTH (FT) ▷ 11.5	WATER DEPTH (FT)-Initial: 4.5 Completion: 5.2
WELL MATERIALS ▷ No. 3 MONTEREY SAND		WELL SCREEN INTERVAL (FT) ▷ 4.0 TO 9.0
WELL CASING ELEVATION (FT-MSL) ▷ 7.95		OVM/OVA ▷ Hnu with 10.2 eV PROBE

BACKFILL MATERIAL ▷ CEMENT-BENTONITE GROUT

DEPTH (FT)	LITHOLOGY		WELL	BLOW COUNT	OVM/OVA (PPH)	SAMPLE			COMMENTS
	DESCRIPTION	GRAPHIC				RECOVERY %	TYPE	NUMBER	
0	Asphalt								
0-5	Light brown (S YR 5/6), slightly damp, stiff SILT (ML) Becomes mottled light brown (S YR 5/6) and dusty yellow (S Y 6/4), moist, Clayey SILT with some coarse sands at 2 feet			9	<1	65		ATD7-1	Some organic matter, some oxidation (fill material!)
5	Bluish black (S B 3/1), saturated, very soft, Silty CLAY (CL)			2	<1	75		ATD7-2	Water initially encountered at 4.5 feet Bay mud at 5 feet
5-10	Mottled light brown (S YR 5/6) and bluish black (S B 3/1), saturated, stiff CLAY (CH)			4	<1	70		ATD7-3	Hnu <1 part per million downhole at 5 feet
10-11.5	Boring terminated at 11.5 feet			12	<1	70		ATD7-4	Some debris observed in the bay mud. Bay mud used for fill?

BORING DESIGNATION  
ATD7

BORING LOG

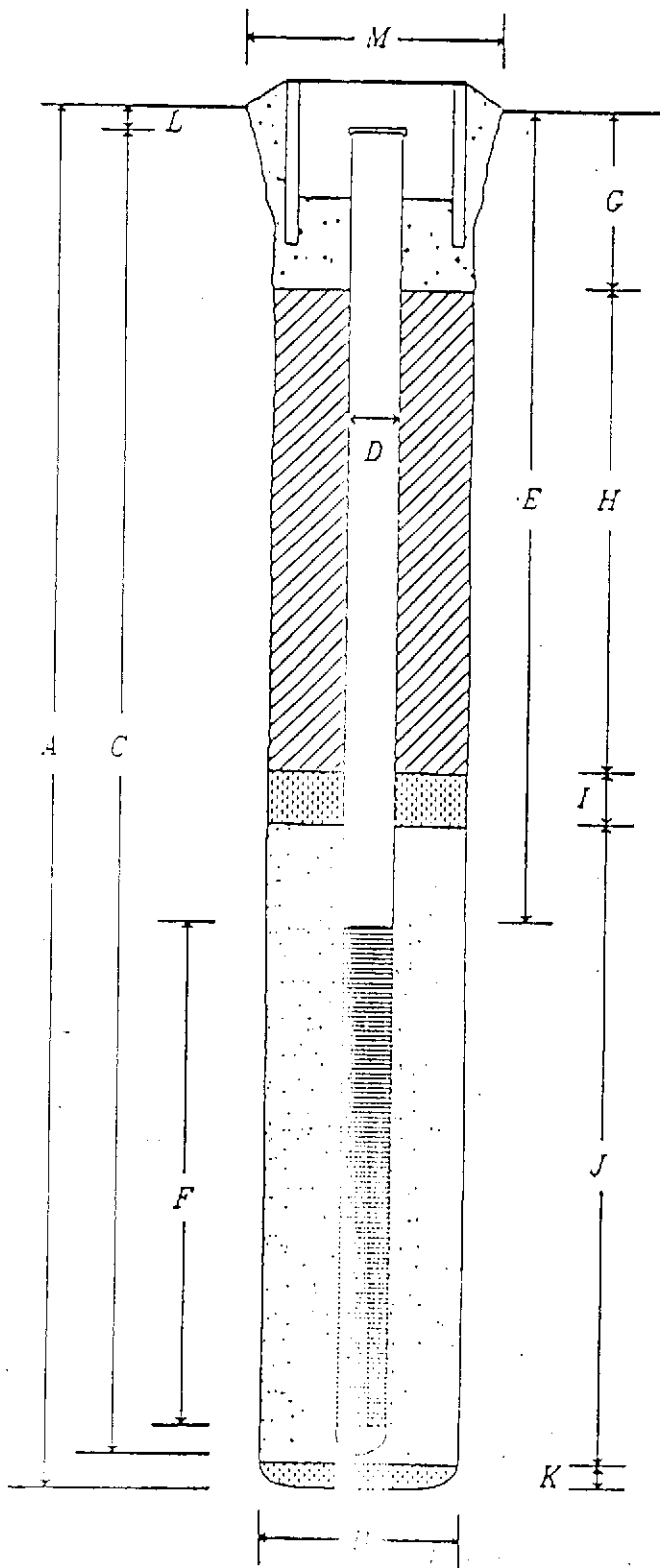
PAGE NUMBER  
1 OF 1

FIGURE NUMBER

# SINGLE COMPLETION WELL DETAILS

PROJECT NUMBER: A901749A  
 PROJECT NAME: MARKETPLACE II  
 COUNTY: ALAMEDA  
 WELL PERMIT NO.: \_\_\_\_\_

BORING/WELL NO.: ATD7  
 TOP OF CASING ELEV.: 7.95  
 GROUND SURFACE ELEV.: 8.17  
 DATUM: MEAN SEA LEVEL



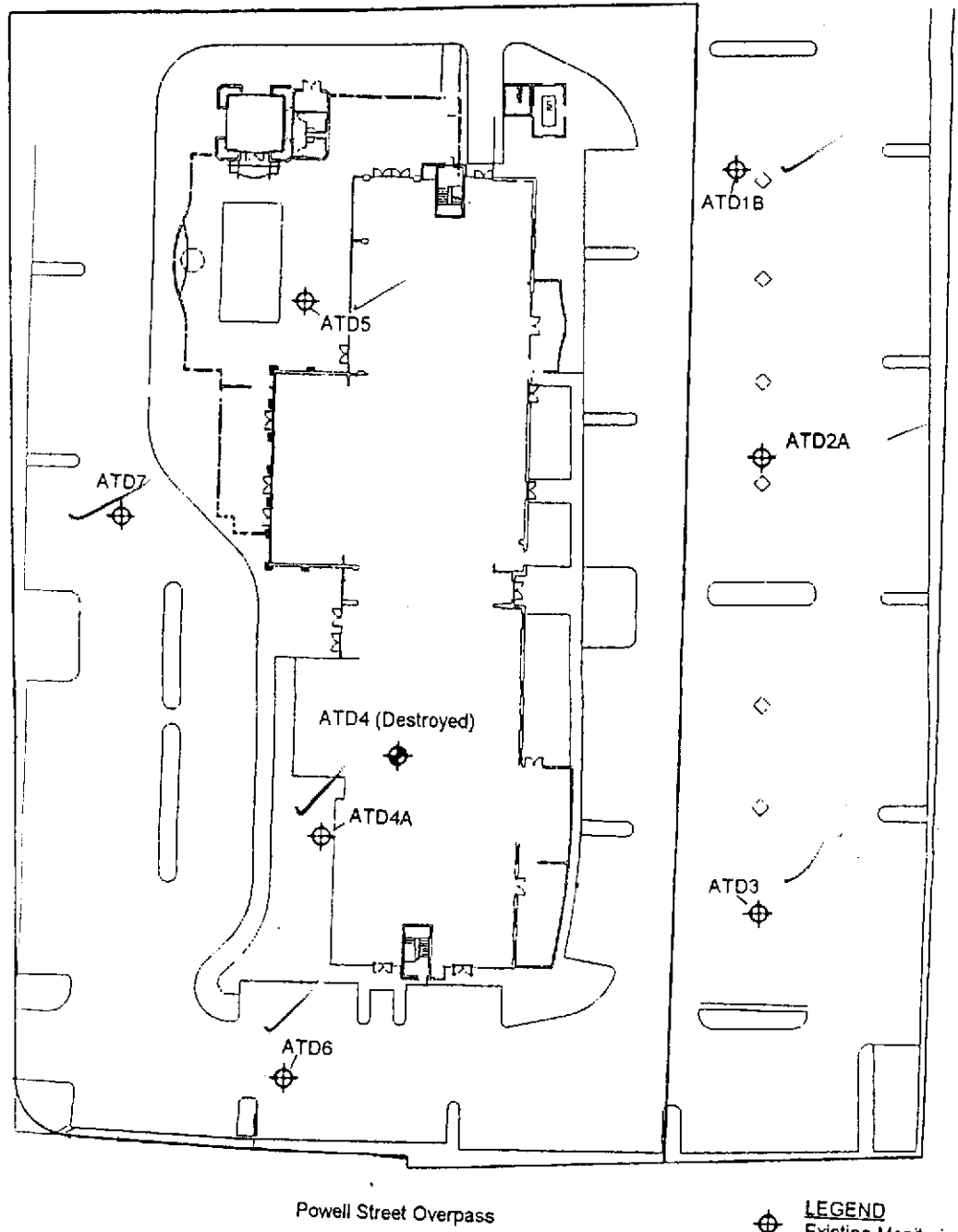
## EXPLORATION BORING

- A. Total Depth 11.5 ft
- B. Boring Diameter 10 in
- Drilling Method HOLLOW-STEM AUGER

## WELL CONSTRUCTION

- C. Casing Length 9.5 ft
- Material SCHEDULE 40 PVC
- D. Diameter 4 in
- E. Depth to Top of Perforations 4.0 ft
- F. Perforated Length 5.0 ft
- Perforated Interval from 4.0 to 9.0 ft
- Perforation Type MACHINE SLOT
- Perforation Size 0.020 INCH
- G. Surface Seal 1.0 ft
- Seal Material CONCRETE
- H. Backfill 2.0 ft
- Backfill Material CEMENT-BENTONITE
- I. Seal 0.5 ft
- Seal Material BENTONITE PELLETS
- J. Gravel Pack 8.0 ft
- Material NO.3 LONESTAR SAND
- K. Bottom Seal 0 ft
- Material NONE
- L. Top of Casing Depth 0 in
- M. Protective Cover Diameter 12.25 in





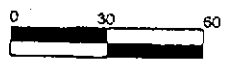
**LEGEND**  
 Existing Monitoring Well Location  
 Former Monitoring Well Location

**FIGURE 2**  
**SITE PLAN**  
 Hardage Construction Corporation Site  
 5800 Shellmound Street  
 Emeryville, California



Source:  
 Sarina & Thompson, Inc.  
 Woodfin Suite Hotel  
 Monitoring Well Location and Elevation Map  
 March, 1999

RGA Environmental, Inc.  
 4701 Doyle Street, Suite 14  
 Emeryville, California 94608



SCALE IN FEET