

Ro 2461

PORT OF OAKLAND

January 28, 2003

Mr. Barney Chan
Alameda County Health Care Services Agency
Department of Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502

Alameda County

JAN 30 2003

Environmental Health

**Subject: Monitoring Well Abandonment Report
Former Seabreeze Yacht Center, Oakland**

Dear Mr. Chan:

Please find enclosed for your review, a letter report documenting the abandonment of monitoring wells PW-1 through PW-4, MW-SB1 and MW-SB2, former Seabreeze Yacht Harbor, Oakland. Each well was abandoned in accordance with the destruction requirements specified in drilling permits W02-1162 through W02-1166, issued by the Alameda County Public Works Agency on December 2, 2002.

If you have any questions, please contact me at 510-627-1184.

Sincerely,



Douglas P. Herman
Associate Port Environmental Scientist

Cc (w/encl.): Betty Graham, RWQCB
Peter Langtree, Lowney Associates
Alameda County Public Works Agency
399 Elmhurst Street
Hayward, CA 94544-1395

Cc:(w/o encl): Susanne M. von Rosenberg, GAIA

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consulting, inc.

2101 Webster Street, 12th Floor Oakland, CA 94612
tel (510) 663-4257 fax (510) 663-4141
www.gaiainc.com

January 10, 2003

Mr. Douglas Herman
Port of Oakland
530 Water Street
Oakland, CA 94607

SUBJECT: Letter Report for Well Abandonment of Monitoring Wells
PW-1 through PW-4, MW-SB1, and MW-SB2
Former Seabreeze Yacht Center Oakland, CA

Dear Doug:

GAIA Consulting, Inc is pleased to present this letter report documenting the completion of well abandonment for monitoring wells PW-1 through PW-4, MW-SB1, and MW-SB2 at the former Seabreeze Yacht Center on December 6th, 2002. Future site plans include the construction of a tidal channel in the southern portion of the site to restore wetland habitat. A request letter to abandon monitoring wells PW-1 through PW-4 and MW-SB1 was submitted from the Port to the County on April 9, 2002. PW-4 was removed to facilitate adequate construction of the proposed tidal channel area. Because monitoring wells PW-1 through PW-3 and MW-SB1 are not included in the network of wells that are monitored annually at the site (MW-SB2 through MW-SB5), they were removed as well. In addition to these wells, MW-SB2 was mistakenly removed due to a field measurement error. The location of these wells is provided in Figure 1. Each well was abandoned in accordance with the destruction requirements specified in drilling permits W02-1162 through W02-1166, issued by the Alameda County Public Works Agency on December 2, 2002 (see attachment).

GAIA subcontracted Precision Sampling, Inc. to destroy the wells using the pressure grouting method. Because the County permit only required the wells to be pressure grouted; no drill rig was brought onto the site. Monitoring wells PW-2, PW-3, PW-4, MW-SB1, and MW-SB2 were located on the unpaved area of the site (Figure 1). The entire length of PVC casing and protective stovepipe finish was completely removed from the ground for these monitoring wells using a forklift. The holes remaining in the ground were then tremie grouted with neat cement (basalite) to about 0.5 to 1 foot below ground surface (bgs). After the cement dried, soil was shoveled over each hole to match existing conditions at the site and comply with Alameda county regulations.

PW-1 was located in the paved area of the Seabreeze site. The method that was used for the other wells was not feasible for this well. Unlike the other monitoring wells, which had been stovepipe surface completions, PW-1 was flush-mounted, and completed with a

protective well box. Monitoring well PW-1 was first grouted with neat cement to about 3 feet bgs and then left to dry. A jackhammer was then utilized to go through the pavement surrounding the well to remove the well box. The top 2.5 feet (bgs) of casing and piping were then removed as specified in the County permits. The remaining length in the hole was then grouted up to ground surface.

Depth to water and total well depth was measured for each well prior to abandonment except for monitoring well PW-3, which had already been previously grouted to the top of the casing. The measurements taken are listed below.

Monitoring Well Measurements

Well ID #	Depth to Water (ft.)	Depth to Bottom of Well (ft.)
MW SB-1	5.7	9.5
MW-SB2	5.9	15.5
PW-1	3.8	13.5
PW-2	3.3	15.4
PW-3	NA	NA
PW-4	5.1	15.5


Notes: PW-3 had already been grouted.
MW-SB2 was mistakenly abandoned

The components of all the wells were placed in a debris pile on site to be disposed of by the Port. At the end of the day, cones were placed over each well or former well and labeled with a sharpie to display well ID numbers appropriately.

Although well MW-SB2 was mistakenly abandoned, in accordance with recent phone conversations with Ms. Betty Graham from the Regional Water Quality Control Board (January 7, 2003) and Mr. Barney Chan from Alameda County (December 30, 2003), MW-SB2 does not need to be reinstalled.

Please contact me if you have any questions or require further information.

Cordially,



Susanne M. von Rosenberg, P.E.
Principal

SEABREEZE YACHT AREA
OAKLAND, CA

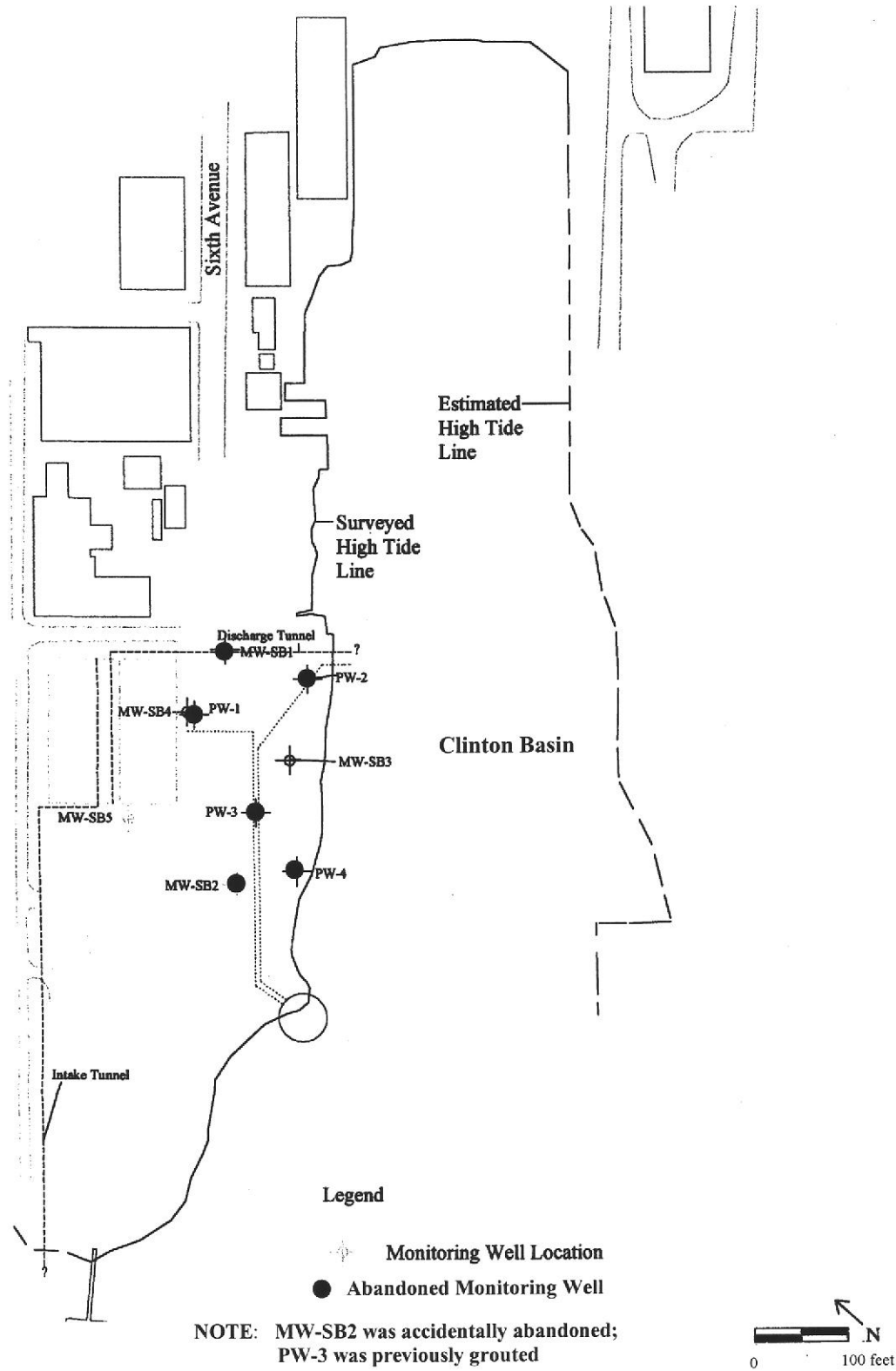


FIGURE 1
Port of Oakland
Monitoring Well Abandonment Locations
Seabreeze Yacht Center, Oakland, CA

Well Permits

NOV-17-00 FRI 11:34 AM

ALAMEDA COUNTY PWA RM239

FAX NO. 5107821939

P. 02



ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION
199 ELMHURST ST. HAYWARD CA 94544-1396
PHONE (510) 670-3354 — 690-6633 Same as YOU
FAX (510) 782-1939

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT Seabreeze Yacht Center
380 Sixth Avenue, Oakland CA

PERMIT NUMBER W02-1162
WELL NUMBER _____
APN _____

CLIENT
Name Port of Oakland
Address 530 Winter St Phone 510-633-1184
City Oakland Zip 94604

APPLICANT
Name GMA Consulting, Inc. / Craig
Address 210 Webster St, 12th Fl Phone 510-663-4208
City Oakland Zip 94612

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"/>

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:

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 Cascade or Precision

DRILLER'S LICENSE NO. C57-717510 or 636387

WELL PROJECTS

Drill Hole Diameter	<u>4 4/8" in.</u>	Maximum	
Casing Diameter	<u>3" in.</u>	Depth	<u>15.5 ft.</u>
Surface Seal Depth	<u>2" (for 4" & one 2")</u>	Owner's Well Number	<u>PW-1</u>

GEOTECHNICAL PROJECTS

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

ESTIMATED STARTING DATE 12/15/02 or 12/16/02
ESTIMATED COMPLETION DATE 12/15/02 or 12/16/02

APPROVED _____ DATE 12-2-02

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-66.

APPLICANT'S SIGNATURE _____ DATE 11/26/02

PLEASE PRINT NAME Craig M. Zett Rev. 5-13-00

PERMIT CONDITIONS

Circled Permit Requirements Apply

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 original Department of Water Resources-Well Completion Report.
3. 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

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

E. CATHODIC

Fill hole anode zone with concrete placed by trowel.

F. WELL DESTRUCTION — PG # 1 Attached.

Send a map of work area. Separate permit is required for wells deeper than 45 feet.

G. SPECIAL CONDITIONS

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

NOV-17-00 FRI 11:34 AM ALAMEDA COUNTY PWA RM239 FAX NO. 5107821939 P. 02



ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION
399 ELMHURST ST. (HAYWARD CA. 94544-1395)
PHONE (510) 878-5555 670-6633 James Yu
FAX (510)782-1939

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT Seabreeze Yacht Center
280 Sixth Avenue, Oakland CA

PERMIT NUMBER W02-1163
WELL NUMBER _____
APN _____

CLIENT Port of Oakland
Name _____
Address 530 Water St Phone 510-637-1184
City Oakland Zip 94604

PERMIT CONDITIONS
Circled Permit Requirements Apply

APPLICANT GAA Consulting Inc./Craig
Name _____
Address 2101 Webster St, 12th Fl Phone 510-663-6708
City Oakland Zip 94612

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 original Department of Water Resources Well Completion Report.
3. 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 tremie.
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.

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 tremie.
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 tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted capping.

DRILLER'S NAME Cascade or Precision

E. CATHODIC

Fill hole anode zone with concrete placed by tremie.

DRILLER'S LICENSE NO. CS7-717510 or 636387

F. WELL DESTRUCTION

Send a map of well site. Separate permit is required for wells deeper than 45 feet.

WELL PROJECTS

Drill Hole Diameter	<u>4 1/2"</u> in.	Maximum Depth	<u>15.5 ft</u>
Casing Diameter	<u>3"</u> in.	Owner's Well Number	<u>plw-2</u>
Surface Seal Depth	<u>2"</u> ft.		

G. SPECIAL CONDITIONS

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

GEOTECHNICAL PROJECTS

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

ESTIMATED STARTING DATE 12/5/02 or 12/6/02
ESTIMATED COMPLETION DATE 12/5/02 or 12/6/02

APPROVED [Signature] DATE 12-2-02

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-66.

APPLICANT'S SIGNATURE [Signature] DATE 11/26/02

PLEASE PRINT NAME Craig M. Zettl Rev. 5-13-00

NOV-17-00 FRI 11:34 AM ALAMEDA COUNTY PWA RM239 FAX NO. 5107821938 P. 02



ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION
 399 ELMHURST ST. OAKLAND CA, 94612-1395
 PHONE (510) 470-5554 **670-6633 James You**
 FAX (510) 782-1939

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE
 LOCATION OF PROJECT Seabreeze Yacht Center
280 Sixth Avenue, Oakland CA

FOR OFFICE USE
 PERMIT NUMBER WD-1164
 WELL NUMBER _____
 APN _____

CLIENT
 Name Port of Oakland
 Address 530 Winter St Phone 510-623-1184
 City Oakland Zip 94604

APPLICANT
 Name GALT Consulting, Inc./Kraig
 Address 210 Webster St, 12th Fl. Phone 510-663-4208
 City Oakland Zip 94612

PERMIT CONDITIONS
 Circled Permit Requirements Apply

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"/>

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:

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 Cascade or Precision
DRILLER'S LICENSE NO. CS7-217510 or 636387

WELL PROJECTS

Drill Hole Diameter	<u>4" & 2"</u> in.	Maximum Depth	<u>15.5 ft.</u>
Casing Diameter	<u>2"</u> in.	Owner's Well Number	<u>PL-3</u>
Surface Seal Depth	<u>2"</u> ft.		

GEOTECHNICAL PROJECTS

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

ESTIMATED STARTING DATE 12/5/02 or 12/6/02
ESTIMATED COMPLETION DATE 12/5/02 or 12/6/02

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-65.

APPLICANT'S SIGNATURE [Signature] **DATE** 11/26/02
PLEASE PRINT NAME Craig M. Zelt **Rev. 3-13-00**

- 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 original Department of Water Resources Well Completion Report.
 3. 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**
- Backfill bore hole by trowel with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted casing.
- E. CATHODIC**
- Fill hole inside zone with concrete placed by trowel.
- F. WELL DESTRUCTION** DF#7 Attached.
 Send a map of work area. A separate permit is required for wells deeper than 45 feet.
- G. SPECIAL CONDITIONS**

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** 12-2-02

NOV-17-00 FRI 11:34 AM

ALAMEDA COUNTY PWA RM239

FAX NO. 5107821939

P. 02



ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION
199 ELMHURST ST. MAYWARD CA 94544-1395
PHONE (510) 478-2662 670-6633 James You
FAX (510) 782-1939

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT Seabreeze Yacht Center
280 Sixth Avenue, Oakland CA

PERMIT NUMBER W02-1165
WELL NUMBER _____
APN _____

CLIENT Port of Oakland
Name _____
Address 570 Water St Phone 510-627-1184
City Oakland Zip 94604

PERMIT CONDITIONS
Circled Permit Requirements Apply

APPLICANT G.A.L. Consulting, Inc. K. Craig
Name _____
Address 210 Webster St, 12th Fl Phone 510-663-4208
City Oakland Zip 94612

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 original Department of Water Resources-Well Completion Report.
3. 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 tremie.
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.

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 tremie.
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 tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cements.

DRILLER'S NAME Cascade or Precision

E. CATHODIC

Fill hole anode zone with concrete placed by tremie.

DRILLER'S LICENSE NO. C57-717510 or 636387

F. WELL DESTRUCTION

Send a map of well like a separate permit is required for wells deeper than 45 feet.

WELL PROJECTS

Drill Hole Diameter 4 1/2" (for 4" + one 2") in.
Casing Diameter 3 in.
Surface Seal Depth _____ ft.
Maximum Depth 25.5 ft.
Owner's Well Number PW-4

G. SPECIAL CONDITIONS

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

GEOTECHNICAL PROJECTS

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

ESTIMATED STARTING DATE 12/5/02 or 12/6/02
ESTIMATED COMPLETION DATE 12/5/02 or 12/6/02

APPROVED _____ DATE 11/26/02

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-61.

APPLICANT'S SIGNATURE Craig M. Zett DATE 11/26/02

PLEASE PRINT NAME Craig M. Zett Rev. 5-13-00

[Handwritten signature and date 11-26-02]

NOV--17-00 FRI 11:34 AM ALAMEDA COUNTY PWA RM239 FAX NO. 5107821938

P. 02



ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION
399 ELMHURST ST. HAYWARD CA. 94544-1396
PHONE (510) 670-5554 670-6633 JAMES YOU
FAX (510) 782-1939

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT Seabreeze Yacht Center
280 Sixth Avenue, Oakland CA

FOR OFFICE USE

PERMIT NUMBER W02-1166
WELL NUMBER _____
APN _____

CLIENT
Name Port of Oakland
Address 530 Water St Phone 510-624-1189
City Oakland Zip 94604

PERMIT CONDITIONS
Circled Permit Requirements Apply

APPLICANT
Name G.Alt Consulting, Inc. / Craig
Address 210 Webster St, 12th Fl Phone 510-613-4208
City Oakland Zip 94612

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 original Department of Water Resources - Well Completion Report.
3. Permit is void if project not begun within 90 days of approval date.

TYPE OF PROJECT

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"/>

B. WATER SUPPLY WELLS

1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
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 tremie.
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 means with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings.

DRILLER'S NAME Cascade or Precision
DRILLER'S LICENSE NO. C57-717510 or 636387

F. WELL DESTRUCTION - PG&I Attached.
Send a map of work site. A separate permit is required for wells deeper than 45 feet.

WELL PROJECTS

Drill Hole Diameter 4 1/2" & 2" (for 4" & one 2") in.
Casing Diameter _____ in.
Surface Seal Depth _____ ft.
Maximum Depth 15.5 ft
Owner's Well Number MW-SB1

G. SPECIAL CONDITIONS

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

GEOTECHNICAL PROJECTS

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

ESTIMATED STARTING DATE 12/5/02 or 12/6/02
ESTIMATED COMPLETION DATE 12/5/02 or 12/6/02

APPROVED _____ DATE 12-2-02

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

APPLICANT'S SIGNATURE _____ DATE 11/26/02

PLEASE PRINT NAME Craig M. Zelt Rev. 5-13-00