# Abandonment and Sealing of Monitoring and Exiraction Wells <br> East Bay Bridge Cenier, Yerba Buena Avenue and Hollis Street, Emeryville and Oakland, Alameda County, California <br> Catellus Parcels CA0010598 and CA0010603 

00100164904
June 28, 2004

Prepared for
Catellus Finance 1, LLC
201 Mission Street
San Francisco, Califomia

Mr. Stephen A. Hill
California Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, California 94612
Attention: Ms. Betty Graham

Subject: Abandonment and Sealing of Monitoring and Extraction Wells, East Bay Bridge Center, Yerba Buena Avenue and Hollis Street, Emeryville and Oakland, Alameda County, California, Catellus Parcels CA0010598 and CA0010603

Dear Mr. Hill and Ms. Graham:
The enclosed report is submitted on behalf of Catellus Finance 1, LLC, to comply with the June 2, 2002 letter of no further action, which requested documentation of the closure of wells associated with the investigation and remedial action at the East Bay Bridge Center in Emeryville and Oakland, California.

If you have any questions or comments, please call either of the undersigned at (510) 652-4500.
Sincerely,


Ron Goloubow
Senior Geologist


John C. Keeler
Project Scientist

Enclosure
cc: James Yoo, Alameda County Public Works Agency Jeffrey Austin, Catellus Finance 1, LLC
1.0 INTRODUCTION .....  1
2.0 PERMITTING ..... 1
3.0 ABANDONMENT AND SEALING OF GROUNDWATER WELLS ..... 1

## FIGURE

1 Site Plan Showing Monitoring and Extraction Well Locations APPENDICES
A Permits
B DWR Form 188 Well Completion Reports

### 1.0 INTRODUCTION

LFR Levine• Fricke (LFR) has prepared this report for Catellus Finance 1, LLC (Catellus) to describe activities associated with the closure of monitoring wells at the East Bay Bridge Center, located in Emeryville and Oakland, California. The closure of these wells is in response to a "no further action" letter issued by the California Regional Water Quality Control Board (RWQCB), dated June 6, 2002. This letter confirms the adequate completion of site investigations and remedial actions at the East Bay Bridge Center (Catellus Parcels CA0010598 and CA0010603).

### 2.0 PERMITTING

On March 22, 2004, the Alameda County Public Works Agency (ACPWA) issued permits for the abandonment of monitoring wells $\mathrm{MW}-2, \mathrm{MW}-3, \mathrm{MW}-4, \mathrm{MW}-5$, MW-6, MW-6D, MW-7, MW-7D, MW-7Z, MW-8, MW-9, MW-9D, MW-10R, MW-12R, MW-32R, MW-34R, LF-22, and LF-23; and extraction wells EX-3 and EX-4 via the pressure grouting method. Permits were also issued for the closure-inplace of EX-1 and EX-2, which are vertical conduits to a horizontal extraction trench. Figure 1 is the Site Plan Showing Monitoring and Extraction Well Locations. Copies of the ACPWA permits and the well destruction specifications are included in Appendix A.

### 3.0 ABANDONMENT AND SEAING OF GROUNDWATER MONITORING AND EXIRACTION WELLS

The abandomment and sealing of monitoring and extraction wells was conducted from March 23 to March 25, 2004, in accordance with specifications provided by the ACPWA. Gregg Drilling and Testing, Inc., a licensed drilling subcontractor, conducted the fieldwork under the supervision of LFR personnel.

All permitted monitoring wells (MW-2,-3, -4, -5, -6, -6D , -7, -7D , -72, -8, -9, -9D, $-10 \mathrm{R},-12 \mathrm{R},-32 \mathrm{R},-34 \mathrm{R}, \mathrm{LF}-22$, and LF-23) and two permited extraction wells (EX-3 and EX-4) were abandoned by the pressure grout technique. A tremmie pipe was placed into the well below static water just off the bottom of the well, and neat Portiand cement was pumped into the well until the casing was entirely filled with the cement. A pressure fitting was then attached to the outside of the casing, and a hose was connected to the fitting from the grout pump. Grout was again pumped into the well until a pressure of at least 25 pounds per square inch was attained. The pressure was then maintained for approximately five minutes. After the pressure grouting was completed, the grout was allowed to settle before the well box at the ground surface was removed. The remaining excavated area was backfilled with concrete or compacted soil to match the respective existing ground surface.

Two extraction wells (EX-3 and EX-4) and the extraction trench conduits (EX-1 and EX-2) were completed in subsurface steel vaults. The wells were pressure-grouted, using the methodology described above, and the vaults have been left in place.

Wells EX-1 and EX-2 are located at either end of a groundwater extraction trench. The connection was made from well to trench via a horizontal 4 -inch-diameter "lateral" located 4 feet from the bottom of each well casing. Prior to grouting of EX-1 and EX-2, bentonite pellets were placed from the bottom of the well to a minimum of one foot above the lateral described above. The bentonite pellets were allowed to hydrate for a minimum of 15 minutes before the neat Portland cement was pumped into the well via the tremmie pipe. This abandonment technique was performed in conformance with the methodology approved in the permit issued by the ACPWA. The volume of grout used to fill the casing indicated that the bentonite pellet seal had performed as designed. Based on an inspection of the cement grout at wells EX-1 and EX-2 the following day, there was no visible sign that the cement had settled in the casing.
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Site Plan Showing Monitoring and Extraction Well Locations
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APPENDIXA

Permits




## ALAMEDA COUNTK PURLIC WORKS AGENCY

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## ALAMEDA COUNTY PUBLIC WORKS ACRNCY

WATER RESOLRCHS SRCTMON<br>309 ELAMDURET EK. HAYTVARI) (. . 94942-1995<br>lllONE ( 510 ) $670-6633$ James Voa<br>FAK (510) 782.5939<br> 

## DRLIING PERMLI APPDICATION




# ALAMEDA COUNTY PUBIMC WORKS AGENCY 

Water resources SEction
399 ELMHURST ST, HAYWARD, CA. 945441395
PHONF (510) 670-6633 James Yoo FAX (510)782-1939
PERMIT NO. W04-0262-0283

## WATER RESOURCES SECIION <br> GROUNDWATHR PROTECTHON ORDINANCL <br> Desfraction of W'els (f.cus that 45 feet in deprh)

## Destrucion Requirements: PRESSURE GROUTING:

1) Remove any casing(s) and amular seal to 3.5 foct bolow finished grade of original ground, whichever is the lower elcuation. If woll(s) are obstructed, then detil out to original depth.
2) Destroy well by grouting neat cement with a tremte pipe or pressure grousing ( 25 psi for 5 nis ) to the bollom of the well and by filling widn neat coment to threc ( 3 - F ) fect below surface grade. Allow the scaling material to spill ove the top of the casing to fill any amular space becwecn casing and soil
3) After the seal has see, backfill the remaining hole with concrete or compacted matcrial to match exisring condtrions.
4) Driling permits are valid from the start date to the complesion date. Pernits can be extended by a plione call, but drillng permir applections will not be extonded beyond 90 days from the approved siant date. Permit is valid from Marcll 2 ? to March 31, 2004.
5) Permite, permiltee"s, contructors consultants or agcots shat be responsible to assure that all maxerial or weters generated during drilling, boring desmuchon, and or other activitics associned with this Pomld will be safely handled, properly monaged, and disposed of accoding to all applicable federal, state, and locsi seatues regulang suct. In no case shall theso materiats andor waters be allowed to chere, or potentially conter, on-or off site siom sewers, dry wells, or watways or bo allowed to move off the property where wok is being completed.
6) Permit is valui only for the purpuse specificd hercin. No changes in construction procedures, as described on the permil application. This permil may be voided if 11 contans incorted information.
7) Dmiling Permits) can be volded canceled only in witing. It is the applicants responsibilitios to notify Alaneda Coumy Public Works Agency, Water Resuurces Scetion m writing for an extension or to chnol the driting permit application. No drilling pormit application(s) shall bo extonded beyond niney (90) diys from the original stort duts. Applicants nay not cancel a drilling permit application after the completion date of the permis iscued has passed.
8) Compliance wh the above weli-sealing specticarions shall not exompt the well-sealing contractor fiom
 13755 (Drwsion 7. Chapter 10, Article 3) of the Cahfomia Water Codo) Contractor muse comphete State OWP Form 188 and mall original to me Ahmedis County Public Works Agency, Wace Rosourees Sccton, witum 60 thys. Meluding: permit rumber and site map.
9) Permluce shall nssume contre responsbibey for all activilics and uses under the permit and shall indemify, derond and save the Alameda Counly Public Works Agerncy, its officers, agcuts, and mployees free and ha"mless from any and all cxpense, cose, liability in connection with or resulting from the exereise of this Permir including, but nor limuted to, properly danuge personal injury and wionguldath.

## APBENDIXB

DWR Form 188 Well Completion Reports

# CONFIDENTIAL 

STATE OF CALIFORNIA DWR WELL COMPLETION REPORT (WELL LOGS)

REMOVED

# CONFIDENTIAL 

STATE OF CALIFORNIA DWR WELL COMPLETION REPORT (WELL LOGS)

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