R316

CITICORP CENTER

ONE SANSOME STREET

SUITE 1900

SAN FRANCISCO, CALIFORNIA 94104

TEL 415-951-4793 · FAX 415-951-4701 · FAX 800-804-IMFC

Alameda County Health Care Services Agency Department of Environmental Health Hazardous Material Division 1131 Harbor Bay Parkway Alameda, California 94502-6577 April 23, 2002

APA & 5 TOR

Attention:

Mr. Don Hwang

Subject:

Well Abandonment and Final Site Closure Report

2504 MacArthur Boulevard Oakland, California 94602

Dear Mr. Hwang:

In response to your letter of October 11, 2002, enclosed we are pleased to submit one copy of a report titled "Abandonment of Groundwater Monitoring Wells" dated April 2002, for the site located at 2504 MacArthur Boulevard, Oakland, California. This report effectively completes all remedial actions for the final closure of the site. On behalf of Mr. Michael Marr, we request that the closure letter for the site be issued at your earliest convenience.

If you have any comments or questions, please do not hesitate to call us.

Very truly yours,

Fred A. Serafin

Project Manager

Enclosure

cc: Mr. Michael Marr, 3577 Fruitvale Ave, Oakland, CA 94602

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R 316

#### ABANDONMENT OF GROUNDWATER MONITORING WELLS

2504 MacArthur Boulevard Oakland, California

Prepared for

MARR & ASSOCIATES 3577 Fruitvale Avenue Oakland, CA 94602

Project No. MAR-104J

April 2002

CITICORP CENTER

ONE SANSOME STREET

SUITE 1900

SAN FRANCISCO, CALIFORNIA 94104

April 23, 2002

TEL 415-951-4793 + FAX 415-951-4701 + FAX 600-804-IMFC

APR 2 5 2002

Marr and Associates 3577 Fruitvale Avenue

Oakland, CA 94602

Attention:

Mr. Michael Marr

Subject:

Well Abandonment and Final Site Closure Report

2504 MacArthur Boulevard Oakland, California 94602

Dear Mr. Marr:

Enclosed please find two copies of the report titled "Abandonment of Groundwater Monitoring Wells" dated April 2002, for the site located at 2504 MacArthur Boulevard, Oakland, California. The activities delineated in this report are in response to the Alameda County Health Care Services Agency's request of October 11, 2001, and are the final steps in closure of the site.

Please forward one copy of this report along with your project costs to the UST Cleanup Fund for reimbursement.

We have also sent a copy of this report to the Alameda County Health Care Services Agency, and have requested that the final closure letter be issued.

If you have any comments or questions, please do not hesitate to call us.

Very truly yours,

Fred A. Serafin

Project Manager

Enclosure

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### ABANDONMENT OF GROUNDWATER MONITORING WELLS

2504 MacArthur Boulevard Oakland, California

Prepared for

MARR & ASSOCIATES 3577 Fruitvale Avenue Oakland, CA 94602

Project No. MAR-104J

April 2002

### Report Prepared for Marr & Associates 3577 Fruitvale Avenue Oakland, California

**PROJECT:** 

**Abandonment of Groundwater Monitoring Wells** 

LOCATION:

2504 MacArthur Boulevard,

Oakland, California

**PROJECT NO:** 

MAR-104J

DATE:

April 10, 2002

Lynford R. Edwards, P.E.



No. 1088

Fred A. Serafin, REA #01088

Project Manager

#### Abandonment of Monitoring Wells 2504 MacArthur Boulevard Oakland, California

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Figure 1- SITE LOCATION MAP

Figure 2- LOCATIONS OF MONITORING WELLS

Appendix A- Letter from Alameda County Department of Environmental Health

Appendix B- Permits for Well Abandonment

Appendix C-Alameda County Public Works Agency, Groundwater Protection Ordinance

#### ABANDONMENT OF GROUNDWATER MONITORING WELLS

### 2504 MacArthur Boulevard Oakland, California

#### A. GENERAL

This document presents the abandonment and destruction of three monitoring wells at the site located at 2504 MacArthur Boulevard, Oakland, California (Site). A Site Location Map is presented in Figure 1, and the monitoring well locations are shown on Figure 2.

This work was performed at the specific request of, and in compliance with the requirements of the Alameda County Department of Environmental Health (County); and guidelines of: 1) the leaking Underground Fuel Tank (LUFT) field manual by the State Water Resources Control Board; 2) Tri-Regional Board Staff Recommendations for Preliminary Evaluation and Investigation of Underground Tank Sites, San Francisco Bay Region Water Quality Control Board (RWQCB), Region 2; and 3) the State Water Resources Control Board's a) Petroleum Underground Storage Tank Cleanup Fund Regulations, b) Petroleum Underground Storage Tank Cleanup Fund Corrective Action Guide, and c) Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code Section 13304.

#### B. BACKGROUN D

#### **B-1.** Tank Removal

Four underground storage tanks were removed from the Site on June 27, 1994. Reportedly, the use of the Site as a gas station was stopped in the 1970s, and consequently, the tanks had remained unused prior to removal. During the excavation, extensive visible staining in the sidewalls was observed and strong hydrocarbon fuel odor was detected. Soil samples obtained from the tank excavation area confirmed that the subsurface had been moderately to highly impacted by fuel hydrocarbons. Upon removal of the tanks, under the direction of the representative of the County, the tank pits were overexcavated and the contaminated soil was stockpiled at the Site. Subsequently, the contaminated soil was removed from the Site.

#### **B-2.** <u>Initial Subsurface Investigation</u>

A program of subsurface investigation was implemented in July 1995. The services were based on the requirements of the County and RWQCB. It was intended that the investigation would reasonably define the horizontal and vertical extent of the pollutants in and around the location of former underground tanks, and would also initially define the geologic and hydrogeologic parameters needed for determining an effective and feasible remedial action for this site. The investigation consisted of advancing five soil borings at pre-determined locations; converting three of the five soil borings into monitoring wells (MWB-1, MWB-3, and MW-5); chemical analyses of selected soil and groundwater samples; establishing horizontal and vertical control of the wells, and calculating the groundwater potentiometric levels and flow direction; and identifying and recommending appropriate remedial technology.

Evaluation of available data indicated the existence of a contaminated zone, extending to an approximate depth of 15 feet below ground surface (bgs), located in the southwest of the Site, in the vicinity of monitoring well B-1 and MacArthur Boulevard sidewalk. This contaminated zone was very close to the locations of various utilities, sanitary sewer and storm drain; and therefore, Constituted a health and safety hazard.

#### B-3. Additional Investigation and Remedial Action

The results of the investigation also indicated that some immediate interim remediation measure should be implemented. The intended purpose of the measure was to establish control, reduce the rate of migration and expansion of the existing plume of hydrocarbon to the adjacent property(ies), and to remove the potential source of groundwater contamination. The examination of the alternatives concluded that excavation and off-site disposal to be an acceptable means for cleaning up the Site because it provided for source removal, thus eliminating many long-term site management concerns. After approval of the workplan by the County, the services were implemented in the field. Also, as part of the plan, a program of quarterly groundwater monitoring was implemented.

Due to the detection of low levels of contaminants in the groundwater, a program of quarterly monitoring was implemented to gather additional data for characterization of contamination, and for the future selection of an appropriate treatment technology, if needed.

Chemical analyses of groundwater samples collected from monitoring wells MWB-1, MWB-3, and MWB-5 indicated non-detectable levels of contaminants tested for above the laboratory detection limits.

#### **B-4.** Site Closure Actions

The County in a letter dated May 9, 2001, requested an evaluation of the risk to human health and the environment posed by groundwater. Based on a review of the Oakland Urban Land Redevelopment Program Guidance Document, the site qualified for the Oakland Tier 1 Risk Based Screening Levels (RBSLs). The results of analysis and evaluation showed that no significant risk was posed to human health and the environment from groundwater at the site.

Review of generated data during the performance of various investigations revealed that this Site met all the requirements for Low-Risk Site Closure as defined and established by the California

Regional Water Quality Control Board. Therefore, it was recommended that this site be granted Low-Risk Site Closure.

On October 11, 2001, The County advised that the California Regional Water Quality Control Board, San Francisco Bay Region has reviewed the case closure summary and concurs that no further action related to the underground tank release is required at this time. However, before a remedial action completion letter is sent, the on-site monitoring wells MW B-1, MW B-3, and MW B-5 must be decommissioned (Appendix A).

#### C. WELL ABANDONMENT

To comply with the request of the County, necessary permit was obtained from the Water Resources Section of Alameda County Public Works Agency (Appendix B). The well abandonment services were performed on March 5, 2002, in accordance with the Alameda County Public Works Agency's Groundwater Protection Ordinance (Appendix C), and all other applicable local, state and federal environmental, safety and construction laws and regulations.

As required by 29 CFR 1910.120, a site specific Health and Safety Plan was prepared to cover the work including but not limited to data acquisition, and phases such as maintenance, monitoring, abandonment and/or removal, and waste disposal.

The wells were abandoned via overdrilling to the total depth, removing the casing and annular seal, and backfilling with cement grout. The wells were overdrilled using a hollow stem auger-equipped drill rig, using augers of sufficient diameter to completely remove the casing and filter pack materials from the boreholes. Each borehole was grouted from the bottom up to the ground surface in one continuous action to an approximate depth of 3 feet below ground surface. The wells were then backfilled to grade with concrete. Cuttings from the well abandonment activities were placed in 55-gallon drums and temporarily stored on-site. The drummed materials will be subsequently transported off-site for disposal.

#### D. CONCLUSIONS AND RECOMMENDATIONS

The Site has met all the requirements for Low-Risk Site Closure as defined and established by the California Regional Water Quality Control Board, The Alameda County Environmental Health Services, and the City of Oakland. Further, the on-site monitoring wells have been abandoned. Therefore, it is recommended that The County issue the closure letter.

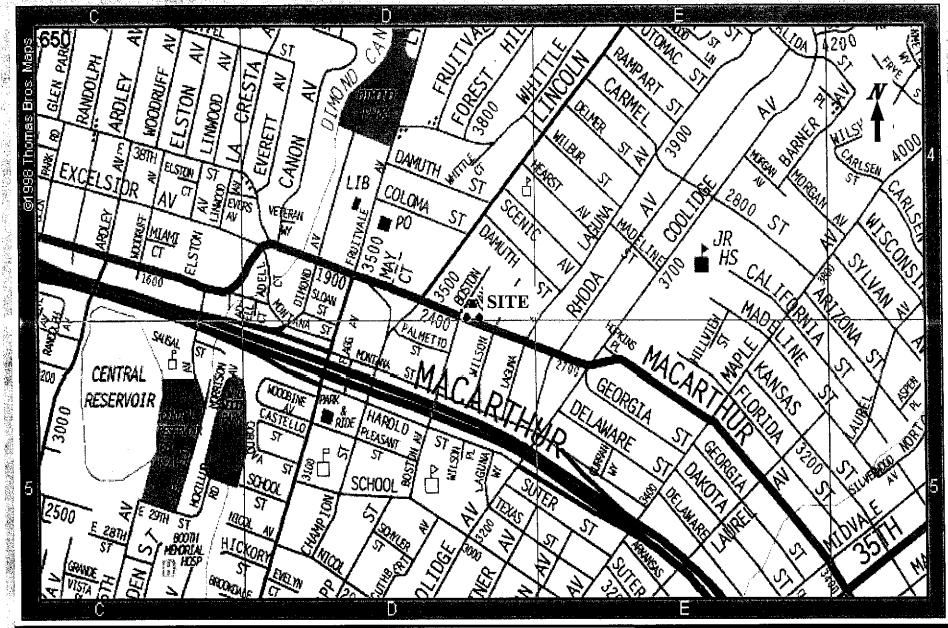
#### E. LIMITATIONS

The data, information, interpretations, and recommendations contained in this technical report are presented solely as bases and guides to the existing environmental conditions of the site located at 2504 MacArthur Boulevard, Oakland, Alameda County, California. The conclusions and professional opinions presented herein were developed by IMFC in accordance with generally accepted engineering principles and practices. As with all geotechnical and environmental reports, the opinions expressed here are subject to revisions in light of new information, new governmental regulations or new interpretations of existing regulations, which may be developed in the future, and no warranties are expressed or implied.

Soil deposits may vary in type, strength, permeability, and many other important properties between points of observation and exploration. Additionally, changes can occur in groundwater and soil moisture conditions due to seasonal variations, or for other reasons. Furthermore, the distribution of chemical concentrations in the soil and groundwater can vary spatially and over time. The chemical analysis results presented herein are illustrative of only the sampling locations at the time of sampling. Therefore, it must be recognized that IMFC does not and cannot have complete knowledge of the subsurface conditions underlying the subject site. The opinions presented are based upon the findings at the points of exploration and upon interpretative data, including interpolation and extrapolation of information obtained at points of observation.

#### F. REFERENCES

- Wahler Associates, Limited Subsurface Investigation, 2504 MacArthur Boulevard, Oakland, California, November 1993.
- Wahler Associates, Removal and Disposal of Four Underground Storage Tanks, 2504 MacArthur Boulevard, Oakland, California, June1994.
- Eichleay Engineers Inc. of California, Report on Phase II Subsurface Investigation, 2504 MacArthur Boulevard, Oakland, California, September 1995.
- Ingram Mason & Fairbairn, Implementation of Corrective Action Plan, 2504 MacArthur Boulevard, Oakland, California, February 1997.
- Ingram Mason & Fairbairn, Implementation of Corrective Action Plan, Second Quarterly Monitoring Program, 2504 MacArthur Boulevard, Oakland, California, October 1997.
- Ingram Mason & Fairbairn, Collection and Chemical Analysis of Grab Groundwater Samples, 2504 MacArthur Boulevard, Oakland, California, February 2000, Revised December 2000.
- Ingram Mason & Fairbairn, Revised Risk Analysis Report, Grace Auto Repair, 2504 MacArthur Boulevard, Oakland, California, July 12, 2001.
- Lawrence Livermore National Laboratory, Recommendations to Improve the Cleanup Process for California's Leaking Underground Fuel Tanks, October 1995.
- California Regional Water Quality Control Board, Interim Guidance on Required Cleanup at Low Risk Fuel Sites, January 1996.
- A large volume of correspondence dated 1993 to 1999 between the Alameda County Department of Environmental Health, various consultants, and subcontractors.



IMFC

MARR AND ASSOCIATES

2504 MacArthur Boulevard Oakland, California

SITE LOCATION MAP			
PROJECT NO.	DATE	FIGURE NO.	
MAR-104J	APRIL 2002	1	



BOULEVARD BOSTON **AVENUE** MW B-3 MacARTHUR

MW B-1

#### **LEGEND**

SHOP

MW B-5

**Location of Monitoring Wells** 

Not to Scale



**MARR & ASSOCIATES** 

2504 MacArthur Boulevard Oakland, California

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LUCATIONS	OF MONITORING	WELLS

PROJECT NO.	DATE	FIGURE NO.
MAR-104J	APRIL 2002	2



Photo No. 1- Typical monitoring well prior to abandonment.



Photo No.2- Overdrilling for removal of casing and annular materials.

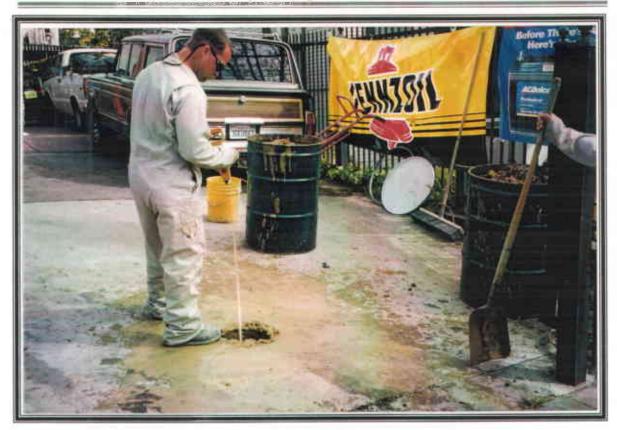


Photo No. 3- Monitoring well after removal of casing and annular materials.



Photo No. 4- Completed abandonment of monitoring well and concrete seal.

# APPENDIX A

#### ALAMEDA COUNTY

#### **HEALTH CARE SERVICES**





DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES

ENVIRONMENTAL PROTECTION 1131 Harbor Bay Parkway, Suite 250 Alameda, CA 94502-6577 (510) 567-6700 FAX (510) 337-9335

October 11, 2001

Michael Marr 3577 Fruitvale Ave. Oakland, CA 94602

Dear Mr. Marr:

Subject:

Grace Auto Repair, 2504 MacArthur Blvd., Oakland, CA 94602

RO0000316

This office and the California Regional Water Quality Control Board, San Francisco Bay Region, have reviewed the case closure summary for the above referenced site and concur that no further action related to the underground tank release is required at this time. Before a remedial action completion letter is sent, the onsite monitoring wells, MW B-1, MW B-3, and MW B-5, must be decommissioned. Please submit a copy of the well destruction permit and a report of the well destruction so a closure letter can be issued. (Well destruction permits may be obtained from the Water Resources Section of the Alameda County Public Works Agency, at 510-670-5554, 510-782-1939 FAX.)

If you have any questions, please call me at (510) 567-6746.

Sincerely,

Don Hwang

C:

Hazardous Materials Specialist

Fred Serafin, IMFC, 1 Sansome St., Suite 1900, San Francisco, CA 94104

File

## APPENDIX B

**IMFC** 

207-29-01 MON 09:56 AM ALAHEDA COUNTY PWA RM239

FAX NO. 5107821939

P. 02/02



MASSEPRINT NAME Fred Seration

#### ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION 399 ELMRURST ST. HAYWARD CA. 94144-1305 PHONE (\$18) 670-5554 FAX (\$10)712-1939

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Number of Dorlings	Number of Doctries Maximum	Harded, Please send for on when the start & complete dutes will a
Hole Diameter in Dopth n	Hole Diameter in Depth 12	med she could be could be a could
ESTIMATED STARTING DATE Dec. 101 DATE DATE DATE	STIMATED STARTING DATE Dec. 1 0	APPROVED DATE 12-20-21
22 CO.D. With all requirements of this permit and Alameda County Ordinance No. 73-68.		digapes No. 73-68
A DDI S'ANT'S SIGNATURE \$ 1 1 -1 - DATE MASSELL		

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FAX NO. 5107821838

P. 02/02



## ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION
JPS ELMHURET ST, HAYWARD CA. 94544-1395
PHONE (510) 670-5554
PAX (510)783-1939

,	
DRILLING PI	ERMIT APPLICATION
FOR APPLICANT TO COMPLETE	
COCATION OF PROJECT 2 CAR LA A A	FOR OFFICE USE
Dakland CA 94602	PERMIT NUMBER 401-2148 WELL NUMBER APN
2 5 2 8 cm	PERMIT CONDITIONS
Address 35 77 Fruitvale the Phone (510)482-1536 City Dakland CA Zip , 94602	Circled Permit Requirements Apply  A. GENERAL
ADDICANT	I. A yermit application about the con-
IMEC	proposed steeling the days prior to
ADOLICANT  TMFC  PRIMATO 951-4701  ADOLICANT  TMFC  PRIMATO 951-4701  ADOLICANT  TMFC  PRIMATO 951-4701  ADOLICANT  TMFC  PRIMATO 951-4703  ADOLICANT  TMFC  PRIMATO 951-4703  ADOLICANT  TMFC  PRIMATO 951-4703  ADOLICANT  TMFC  PRIMATO 951-4703	2. Sybmit to ACPWA wishin 60 days after completion of permitted original Department of Water Resources.  Well Completion Report.
TYPE OF PROJECT	3. Family Levid if project not begun within 90 days of approval due  B. WATER SUPPLY WELLS
Well Construction Cathodic Protoctor  Cathodic Protoctor	is Minimum surface seal thinkness is two inches of
Water Supply  Magazination  Contamination	Industrial wells or 20 feet for municipal and
FROPOSED WATER SUPPLY A MINISTER SUPPLY AND	C. GROUNDWATER MONITORING SPECIALLY approved.
Replacement Domestio	I. Minimum my lace seal thirthness
SRILLING METHOD:	2. Minimum seal doubt for monitoring wells is the
Mud Rotary (1 Air Rotary (1 Auger	D. GEOTECHNICAL  Backfill born hole by transit with
Other Cheng Drilling	or with
THE CHENSKING 485.165	Filter
WELL PROJECTS	Soud a map of work site & and
Drill Hote Diningter + 6 in. Maximum	G. SPECIAL CONDITIONS
Depth 40 n. Owner's Well Number	NOTE: One application must be submitted for each well or well for geotechnical and contemporation in a special process and see application are acceptable
Number of Floring	for Rediccinical and remaining the receptable
PSTIMATURE OF THE PSTIMATURE O	the stant of com oreting the chill he
ESTIMATED STARTING DATE DEC. LOI	The Strat & Completin chites will be APPROVED DATE 12-20-07
APPLICANT'S SIGNATURE . APPLICANT'S SIGNATURE	
SASE PRINT NAME Fred Seration DATE II	(15/01
Rev.	5-13-00

ALAMEDA COUNTY PWA RM239

FAX NO. 5107821838

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P. 04/04



## ALAMEDA COUNTY PUBLIC WORKS AGENCY

**WATER RESOURCES SECTION** 199 ELMHURST ST, HAYWARD CA. 94544-1395 PHONE (518) 670-5554 FAX (518)772-3828

DRIFTING	Province (
DAILLING	ERMIT APPLICATION
for applicant to complete	
LOCATION OF PROJECT 2 - A A A A A A	FOR OPFICE USE
Dakis Caranta Dist.	PERMIT NUMBER WO 1-2145
Ozkland CA 94602	WELL NUMBER
The second secon	
Address 35.77 Fruit vale the Phose (510) 482-1536  City Dakland, CA Zip 94602	PERMIT CONDITIONS Circled Permit Requirements Apply
Address 3577 250C1ales	
City Dakland (0)	A. General
- CP946-02	1. A permit application should be submitted so as to
APPLICANT_	arrive at the ACPWA office five days prior to
ANDLICANT	proposed starting date.
San Francisco CA 20 Par (ALT) 951-4701	(/ 4-340m) to ACPU A white and a
Pulifosi Day Salar	Well Correlation Reportment of Water Resources-
San Francisco CA 20 Settod	Well Completion Report,
	J. Formit is void if project mealing the
	Approval date
TYPE OF PROJECT	B. WATER SUPPLY WELLS
Well Constructions	i. Minimum surface and shipton
Cathodic Protection (1 General Investigation	commit grow placed by transe.
Water Supply	** /*\ni\num #tal denth (a to the f
Monitories Compilification 64	
Well Desiruction	wells unless a lesser depth is appointly approved.  C. GROUNDWATER MONITORING TO BE Approved.
FROPOSED WATER SUPPLY WELL USE	C. GROUNDWATER MONITORING WELLS
Very Demostic    Replacement D	TO A TANK THE PARTY OF THE PART
Proprietation Design	). Minimum surface seel duckness is two inches of
forbustation (TERRITOR)	
Officer	2. Minimum scal depth for monitoring wells is the
DRILLING METHOD:	maximum depth practicable or 20 feet.  D. CEOTECHNICAL
Maria Day	D. GEOTECHNICAL
Cable Circulary () Apper	Backfill home hole by
COURT !!	Backfill bore hale by tremic with ectnent grout or content
TOTAL PRIS NAME COLOR	or with compensed to the replaced in kind
BULER'S NAME Grego Drilling	E. CATHODIC
17 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Fill bala and a
-403/65	Fill hate snode zone with concrete placed by frame,
	Sond a map of work site. A separate permit is required for wells deeper than 45 feet
WELL PROJECTS	for wells deeper than 45 feet.
Drill Hole Prisoner - 🛬 🗸	G. SPECIAL CONDITIONS
	1
in Depth 40 n.	NOTE: One application must be abbrilled for each well or well
Owner's Well Number	uniform, Multiple boilings on one engineering for each well or well
The state of the s	despuestion. Multiple beings on one application are acceptable for geotechnical and communication investigations.
Number of fineities	
Hole Diameter Maximum Depth 8	Harried Place Sand ford on Files
Depth	the Sant From plan Dates wil be.
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THE COMPLETION DATE	1.//1./V1
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APPLICANT'S SIGNATURE F. 1

SASEPHINT NAME FYED SCRETIN.

# APPENDIX C



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#### ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION
399 ELMHURST ST. HAYWARD, CA. 94544-1395
PHONE (510) 670-5554 FAX (510) 782-1939

PERMIT NO. W01-2147-2149

## WATER RESOURCES SECTION GROUNDWATER PROTECTION ORDINANCE Destruction of Monitoring Wells (Less than 45 feet in depth)

#### Destruction Requirements: OVERDRILL

- 1. Overdrill or clean out to original depth.
- 2. Remove any casing(s) and annular seal to 3-5 feet below finished grade of original ground, whichever is the lower elevation.
- 3. Destroy well by grouting neat cement with a tremic pipe or pressure grouting (25 psi for 5min.) to the bottom of the well and by filling with neat cement to three (3-5) feet below surface grade. Allow the scaling material to spill over the top of the casing to fill any annular space between casing and soil.
- 4. After the seal has set, backfill the remaining hole with concrete or compacted material to match existing conditions.
- 5. Drilling permits are valid from the start date to the completion date. Permits can be extended by a phone call, but drilling permit applications will not be extended beyond 90 days from the approved start date.
- 6. Compliance with the above well-sealing specifications shall not exempt the well-sealing contractor from complying with appropriate state reporting-requirements related to well destruction (Sections 13750 through 13755 (Division 7, Chapter 10, Article 3) of the California Water Code). Contractor must complete State DWR Form 188 and mail original to the Alameda County Public Works Agency, Water Resources Section, within 60 days.
- 7. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.