

R 316

**IMFC** INGRAM MASON & FAIRBAIRN  
A DIVISION OF IMFC CORPORATION

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

Attention: Mr. Don Hwang

Subject: Well Abandonment and Final Site Closure Report  
2504 MacArthur Boulevard  
Oakland, California 94602

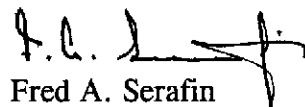
APR 25 2002

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**



INGRAM MASON & FAIRBAIRN

A DIVISION OF IMFC CORPORATION

CITICORP CENTER • ONE SANSOME STREET • SUITE 1900 • SAN FRANCISCO, CALIFORNIA 94104  
TEL 415-951-4793 • FAX 415-951-4701 • FAX 800-804-IMFC

APR 25 2002

**Marr and Associates**  
3577 Fruitvale Avenue  
Oakland, CA 94602

April 23, 2002

**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

J:\fs\mar104\submittr\pa0402

**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**

Abandonment of Monitoring Wells  
2504 MacArthur Boulevard  
Oakland, California

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


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**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.



  
Fred A. Serafin, REA #01088  
Project Manager



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

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## **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. BACKGROUND**

### **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. Initial Subsurface Investigation**

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, June 1994.

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.

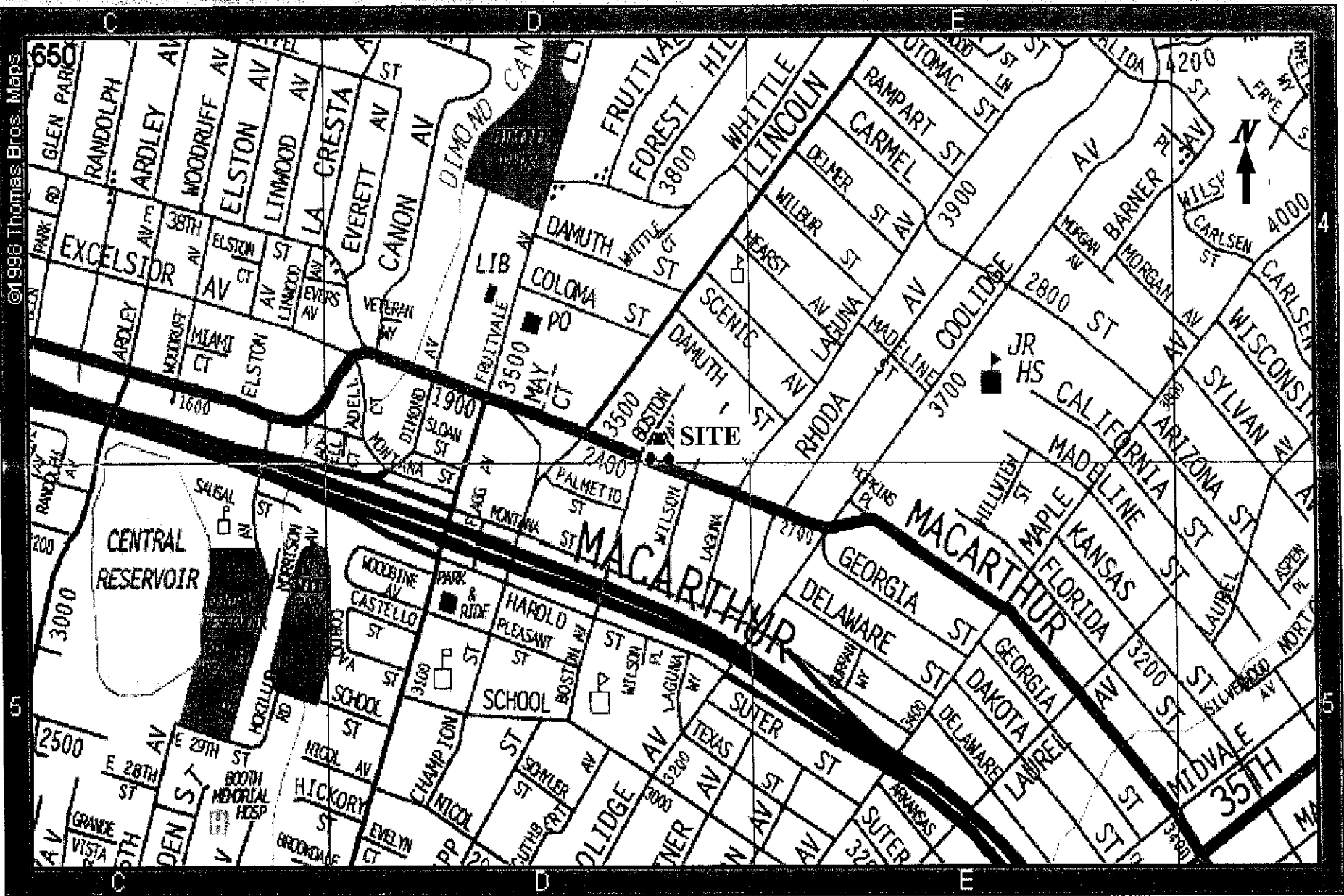
Ingram Mason & Fairbairn, Collection and Chemical Analysis of Grab Groundwater Samples, 2504 MacArthur Boulevard, Oakland, California, February 2000, Revised December 2000.

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.



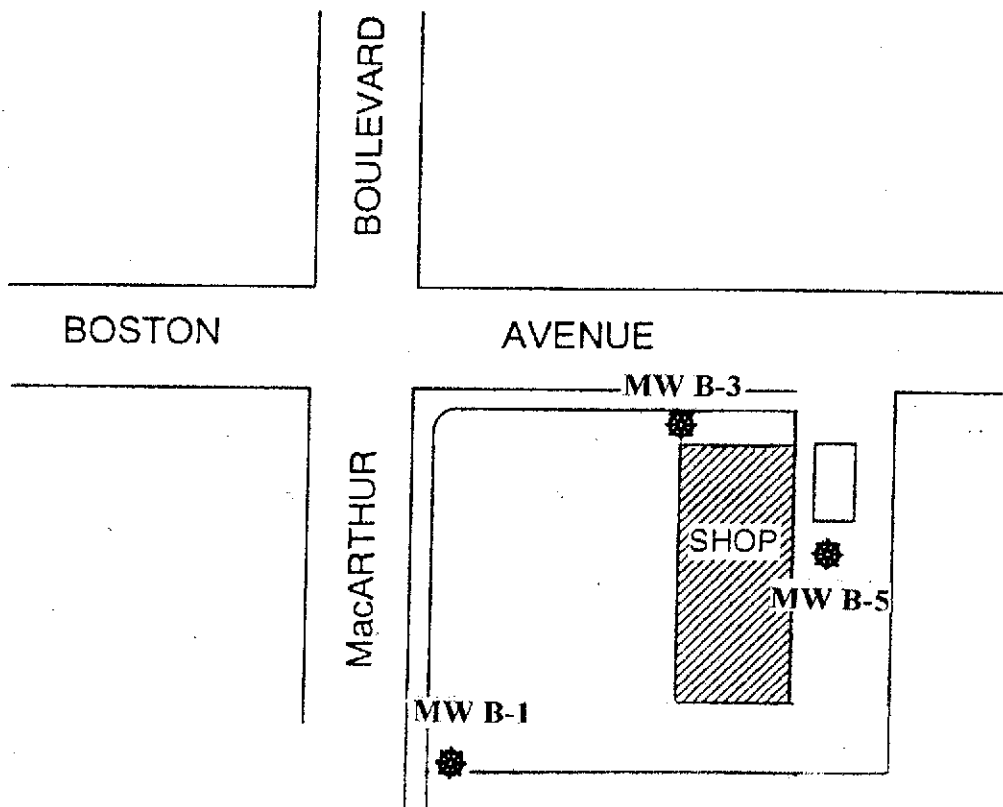
# IMFC

MARR AND ASSOCIATES

2504 MacArthur Boulevard  
Oakland, California

### SITE LOCATION MAP

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



**LEGEND**

★ Location of Monitoring Wells

Not to Scale

**IMFC**

**MARR & ASSOCIATES**

2504 MacArthur Boulevard  
Oakland, California

LOCATIONS 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

AGENCY

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  
Hazardous Materials Specialist

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

File

***APPENDIX B***



### ALAMEDA COUNTY PUBLIC WORKS AGENCY

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

## DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT 2504 MacArthur Blvd.  
Oakland, CA 94602

CLIENT Marr & Associates  
Address 3577 Fruitvale Ave Phone (510) 482-1536  
City Oakland, CA Zip 94602

APPLICANT IMFC  
Address One Sansome St Phone (415) 951-4793  
City San Francisco, CA Zip 94104

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

PROPOSED WATER SUPPLY WELL USE  
New Domestic  Replacement Domestic   
Irrigation  Irrigation   
Industrial  Other

DRILLING METHOD:  
Mud Rotary  Air Rotary  Auger   
Cable  Other

DRILLER'S NAME Gregg Drilling  
DRILLER'S LICENSE NO. 485165

WELL PROJECTS  
Drill Hole Diameter 16 in. Maximum Depth 40 ft.  
Casing Diameter \_\_\_\_\_ in. Owner's Well Number \_\_\_\_\_  
Surface Seal Depth \_\_\_\_\_ ft.

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

ESTIMATED STARTING DATE Dec. 1, 01  
ESTIMATED COMPLETION DATE Dec. 1, 01

Apply in compliance with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE F. Serafin DATE 11/15/01

PLEASE PRINT NAME: Fred Serafin Rev. 5-13-00

FOR OFFICE USE

PERMIT NUMBER W01-2147  
WELL NUMBER \_\_\_\_\_  
APN \_\_\_\_\_

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 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.

#### 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.

#### 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 cuttings.

#### E. CATHODIC

Fill hole around zone with concrete placed by tremie.

#### F. WELL DESTRUCTION

Send a map of work site. 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.

Attached, please send fax on when the start of completion dates will be.

APPROVED \_\_\_\_\_ DATE 12-20-01



# ALAMEDA COUNTY PUBLIC WORKS AGENCY

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

## DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT 2504 MacArthur Blvd.  
Oakland, CA 94602

PERMIT NUMBER W01-2148  
WELL NUMBER \_\_\_\_\_  
APN \_\_\_\_\_

AGENT  
Name Marr & Associates  
Address 3577 Fruitvale Ave Phone (510) 492-1536  
City Oakland, CA Zip 94602

**PERMIT CONDITIONS**  
Circled Permit Requirements Apply

APPLICANT  
Name IMEC  
Address One Sansome St. #1400 Phone (415) 951-4701  
City San Francisco, CA Zip 94104

### 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 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.

### 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.

### D. GEOTECHNICAL

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

### E. CATHODIC

Fill hole anode zone with concrete placed by tremie.

### F. WELL DESTRUCTION

Send a map of work site. 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.

Attached please send fax on when the start & completion dates will be.

APPROVED

DATE 12-20-01

### PROPOSED WATER SUPPLY WELL USE

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

### DRILLING METHOD:

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

DRILLER'S NAME Gregg Drilling

DRILLER'S LICENSE NO. 485165

### WELL PROJECTS

Drill Hole Diameter	<u>16</u> in.	Maximum Depth	<u>40</u> ft.
Casing Diameter	_____ in.	Owner's Well Number	<u>MWB-3</u>
Surface Seal Depth	_____ ft.		

### GEOTECHNICAL PROJECTS

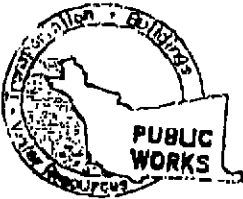
Number of Borings	_____	Maximum Depth	_____ ft.
Hole Diameter	_____ in.		

ESTIMATED STARTING DATE Dec. 1, 01  
ESTIMATED COMPLETION DATE Dec. 1, 01

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

APPLICANT'S SIGNATURE F. Serafin DATE 11/15/01

ASSAULT PRINT NAME Fred Serafin



# ALAMEDA COUNTY PUBLIC WORKS AGENCY

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

## DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT 2504 MacArthur Blvd.  
Oakland, CA 94602

PERMIT NUMBER W01-2149  
WELL NUMBER \_\_\_\_\_  
APN \_\_\_\_\_

CLIENT  
Marr & Associates  
Address 3572 Fruitvale Ave Phone (510) 482-1536  
City Oakland, CA Zip 94602

PERMIT CONDITIONS  
Circled Permit Requirements Apply

APPLICANT  
IMEC  
Address One Sansome St Phone (415) 951-4701  
San Francisco, CA Zip 94104

### 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 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.

### 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.

### 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 cuttings.

### E. CATHODIC

Fill hole annular zone with concrete placed by tremie.

### F. WELL DESTRUCTION

Send a map of work site. 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.

*Attached please send back on 12-22-01 the San Francisco dates will be.*

### 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"/> |

### PROPOSED WATER SUPPLY WELL USE

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

### DRILLING METHOD:

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

DRILLER'S NAME Gregg Drilling

DRILLER'S LICENSE NO. 485165

### WELL PROJECTS

Drill Hole Diameter 16 in. Maximum Depth 40 ft.  
Casing Diameter \_\_\_\_\_ in. Owner's Well Number MWB-5  
Surface Seal Depth \_\_\_\_\_ ft.

### GEOTECHNICAL PROJECTS

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

ESTIMATED STARTING DATE Dec. 1, 01  
ESTIMATED COMPLETION DATE Dec. 1, 01

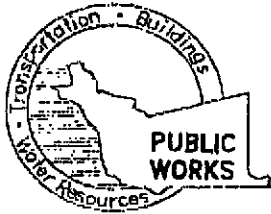
APPROVED

DATE 12-22-01

APPLICANT'S SIGNATURE Fred Scrafin DATE 11/15/01

ASSISTANT PRINT NAME Fred Scrafin

***APPENDIX C***



## 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

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### 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 tremie 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 sealing 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, property damage, personal injury and wrongful death.