**BP OIL**

BP Oil Company
Environmental Remediation Management
295 SW 41st Street
Renton, Washington 98055-4931
(425) 251-0667
Fax No: (425) 251-0736

March 8, 1999

Alameda County Heath Care Services Agency
Attention Ms. Eva Chu - Hazardous Materials Specialist
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

RE: Former BP Oil Site No. 11120
6400 Dublin Boulevard
Dublin, CA
StID 2095

Dear Ms. Chu:

Following on the 28 December 1998 letter from the Alameda County Heath Care Services Agency , enclosed find the *Destruction of Groundwater Monitoring Wells* report prepared on behalf of BP by Alisto Engineering Group.

Now that you have received a copy of this report, I understand that a closure letter will be forwarded to my attention.

Please give me a call at (425) 251-0689 if you have questions.

Sincerely,

Scott Hooton

attachment

cc: site file
David Camille - Tosco (w/attachment)
Brady Nagle - Alisto

# WELL DESTRUCTION REPORT

Former BP Site No. 11129
6400 Dublin Boulevard
Dublin, California

Project No. 10-170-06-003

Prepared for:

BP Amoco Company
295 SW 41st Street
Renton, Washington 98055

Prepared by:

Alisto Engineering Group
1575 Treat Boulevard, Suite 201
Walnut Creek, California

March 5, 1999

Brady Nagle
Project Manager

Al Sevilla, P.E.
Principal

# WELL DESTRUCTION REPORT

**Former BP Site No. 11120**
**6400 Dublin Boulevard**
**Dublin, California**

**Project No. 10-170-06-003**

**March 5, 1999**

## INTRODUCTION

BP Amoco Company retained Alisto Engineering Group to destroy six groundwater monitoring wells at the BP Oil Service Station No. 11120, 6400 Dublin Boulevard, Dublin, California. A site vicinity map is shown on Figure 1, and the locations of the destroyed wells are shown on Figure 2.

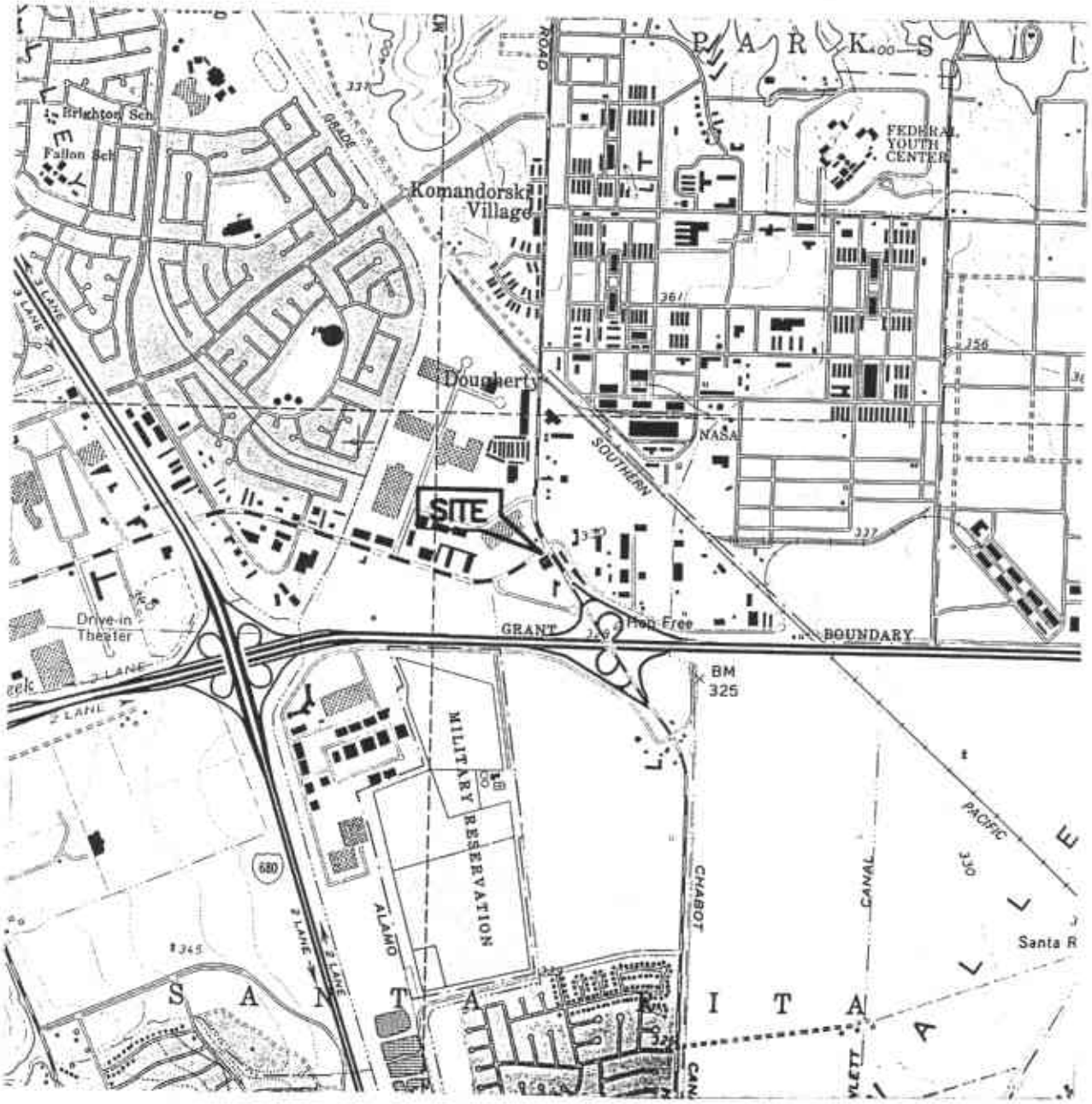
The six monitoring wells, MW-2 through MW-7, were constructed to total depths ranging from 19 to 22 feet. Wells MW-2 through MW-5, and MW-7 were constructed of 2-inch-diameter PVC casing, and Well MW-6 was completed with 4-inch-diameter PVC casing.

Monitoring Well MW-1 was destroyed on January 30, 1996 by Tosco Refining and Marketing Company prior to reconfiguration of the service station. A copy of the well destruction permit and a description of the methods for well destruction are included in Appendix A.

## FIELD PROCEDURES

Well destruction was conducted in accordance with the guidelines and requirements of the Alameda County Department of Water Resources Management (Zone 7). Before field activities were performed, well destruction permits were obtained from Zone 7. Copies of the permit is included in Appendix A, and available boring logs and well construction details are included in Appendix B.

On February 22, 1999, Monitoring Wells MW-2 through MW-7 were destroyed by pressure grouting with neat cement through a 1-inch-diameter tremie pipe to within 5 feet of the bottom of the wells. After tremie grouting to approximately 1 foot below grade, the remaining boreholes were backfilled with cement and the surface repaired with asphalt to match surrounding conditions. The well vaults were removed prior to pressure grouting.




SOURCE:
USGS MAP, DUBLIN QUADRANGLE, CALIFORNIA. 7.5 MINUTE SERIES. 1961. PHOTOREVISED 1980.

N

0 1000' 2000'

CALIF

QUADRANGLE LOCATION

# FIGURE 1

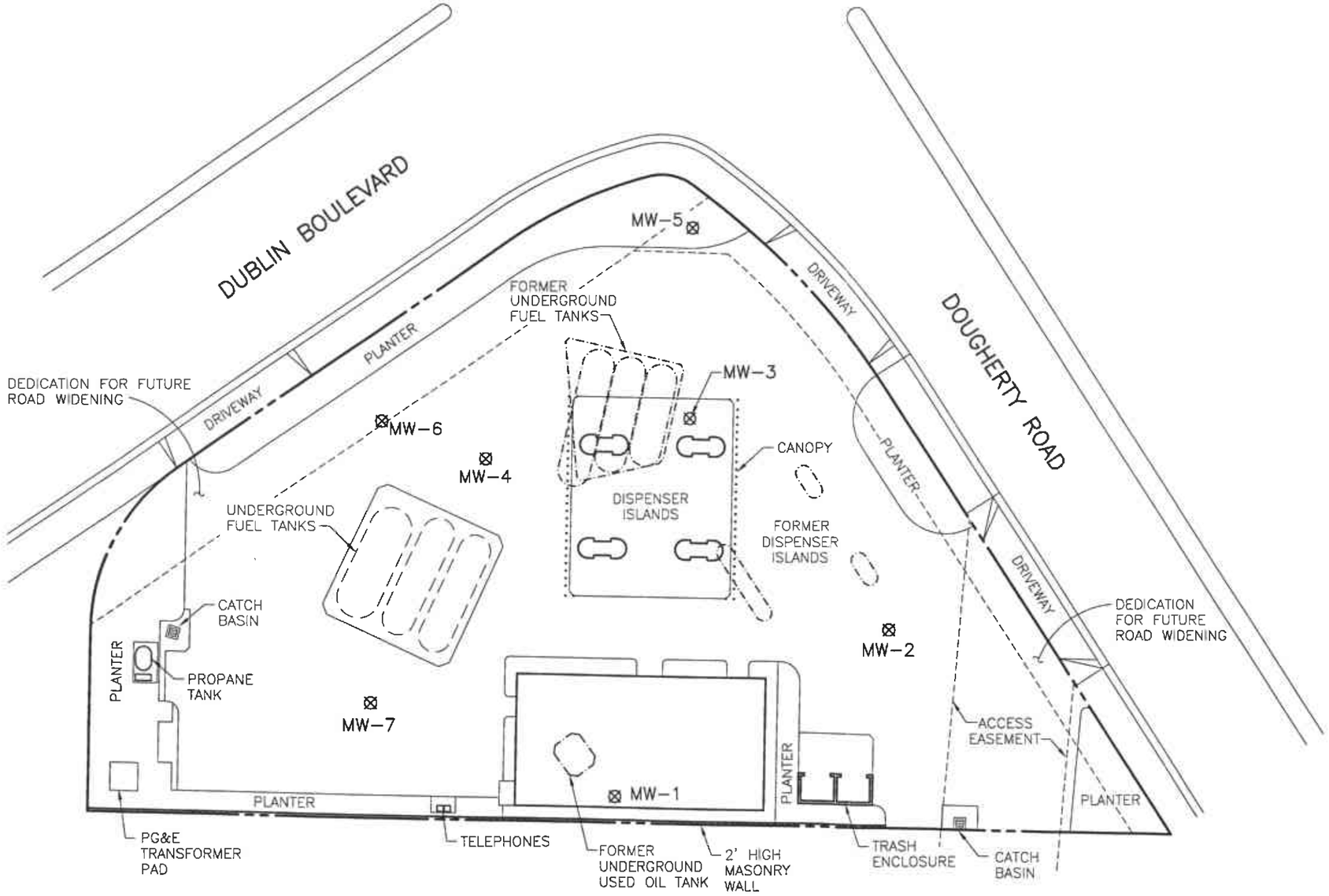
## SITE VICINITY MAP

BP OIL SERVICE STATION NO. 11120
6400 DUBLIN BOULEVARD
DUBLIN, CALIFORNIA

PROJECT NO. 10-170

ALISTO ENGINEERING GROUP
WALNUT CREEK, CALIFORNIA

10170R—JMC 10-8-93 RM 1=1




N

0 30 60

SCALE IN FEET

LEGEND

⊠ DESTROYED GROUNDWATER MONITORING WELL

FIGURE 2

SITE PLAN

BP OIL SERVICE STATION NO. 11120
6400 DUBLIN BOULEVARD
DUBLIN, CALIFORNIA

PROJECT NO. 10-170

ALISTO ENGINEERING GROUP
WALNUT CREEK, CALIFORNIA

10170C—DWG 3-4-99 REV 1-30

ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
5997 PARKSIDE DRIVE • PLEASANTON, CALIFORNIA 94588-5127 • PHONE (925) 484-2600 FAX (925) 462-3914

January 29, 1999

Mr. Brady Nagle
Alisto Engineering
1575 Treat Blvd., Ste. 201
Walnut Creek, CA 94598

Dear Mr. Nagle:

Enclosed is permit 96063 and the destruction report for well 3S/1E 6F20 you requested for the updating of your files.

If you have questions, please contact Wyman Hong at extension 235 or me at extension 240.

Very truly yours,

Craig A. Mayfield
Water Resources Engineer III

CAM:WH:arr

Enc.



E:\Amanda\GPOs\GPO4\GPO4.UPDATING.wpd

3S/1E 6F20

**INNOVATIVE TECHNICAL SOLUTIONS, Inc.**

ITSI

February 23, 1996

Mr. Wyman Hong
Alameda County Flood Control and Water Conservation District
Zone 7
5997 Parkside Drive
Pleasanton, CA 94588

SUBJECT: Drilling Permit Number 96063
BP Service Station
6400 Dublin Boulevard
Dublin, California

Dear Mr. Hong:

Monitoring well (MW-1) at the referenced site was abandoned on January 30, 1996. Innovative Technical Solutions, Inc. observed the destruction of the 20-foot, two inch monitoring well. The well casing was first removed from the borehole and then the borehole was over-drilled using hollow stem augers. The over-drilled borehole was back filled with a cement/bentonite mixture using a tremie pipe.

If you have questions regarding the well abandonment please contact us at (510) 256-8898. Thank you.

Sincerely,
Innovative Technical Solutions, Inc.

Tim Watchers

2855 Mitchell Drive, Suite 118, Walnut Creek, CA 94598 (510) 256-8898 (510) 256-8998 fax

# ZONE 7 WATER AGENCY

5997 PARKSIDE DRIVE PLEASANTON, CALIFORNIA 94588 VOICE (510) 484-2600
FAX (510) 462-3914


## DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT BP Service Station
6400 Dublin Blvd, Dublin CA

CLIENT
Name Tosco Refining and Marketing Co.
Address 601 Union St., # 2500 Phone (206) 492-7000
City Seattle, WA Zip 98101

APPLICANT
Name Innovative Technical Solutions, Inc.
Jeffrey D. Hess, R.G. FAX: 256-8998
Address 2855 Mitchell, #118 Phone (510) 256-8898
City Walnut Creek, CA Zip 94598

TYPE OF PROJECT

| Well Construction | | Geotechnical Investigation | |
|---|---|---|---|
| Cathodic Protection | ___ | General | ___ |
| Water Supply | ___ | Contamination | ___ |
| Monitoring | ___ | Well Destruction | X |

PROPOSED WATER SUPPLY WELL USE
Domestic ___ Industrial ___ Other ___
Municipal ___ Irrigation ___

DRILLING METHOD:
Mud Rotary ___ Air Rotary ___ Auger X
Cable ___ Other ___

DRILLER'S LICENSE NO. C-57 582696
Soils Exploration Services, Inc.

WELL PROJECTS

| | | | | | |
|---|---|---|---|---|---|
| Drill Hole Diameter | 8 | in. | Maximum | | |
| Casing Diameter | 2 | in. | Depth | 20 | ft. |
| Surface Seal Depth | ___ | ft. | Number | 1 | |

GEOTECHNICAL PROJECTS

| | | | | | |
|---|---|---|---|---|---|
| Number of Borings | ___ | | Maximum | | |
| Hole Diameter | ___ | in. | Depth | ___ | ft. |

ESTIMATED STARTING DATE 1/25/96
ESTIMATED COMPLETION DATE 2/1/96

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

APPLICANT'S SIGNATURE Jeffrey D. Hess Date 1/24/96

FOR OFFICE USE

PERMIT NUMBER 96063
LOCATION NUMBER 3S/1E 6F20

PERMIT CONDITIONS

Circled Permit Requirements Apply

(A.) GENERAL
1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to proposed starting date.
2. Submit to Zone 7 within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well Projects, or drilling logs and location sketch for geotechnical projects.
3. Permit is void if project not begun within 90 days of approval date.

B. WATER WELLS, INCLUDING PIEZOMETERS
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. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

C. GEOTECHNICAL. Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.

D. CATHODIC. Fill hole above anode zone with concrete placed by tremie.

(E.) WELL DESTRUCTION. See attached.

Approved Wyman Hong Date 31 Jan 96
Wyman Hong

31992

25 January 1996

ZONE 7
WATER RESOURCES ENGINEERING
DRILLING ORDINANCE

TOSCO REFINING & MARKETING
6400 DUBLIN BOULEVARD
DUBLIN
WELL 3S/1E 6F20
PERMIT 96063

Destruction Requirements:

1. Drill out the well so that the casing, seal, and gravel pack are removed to the bottom of the well.

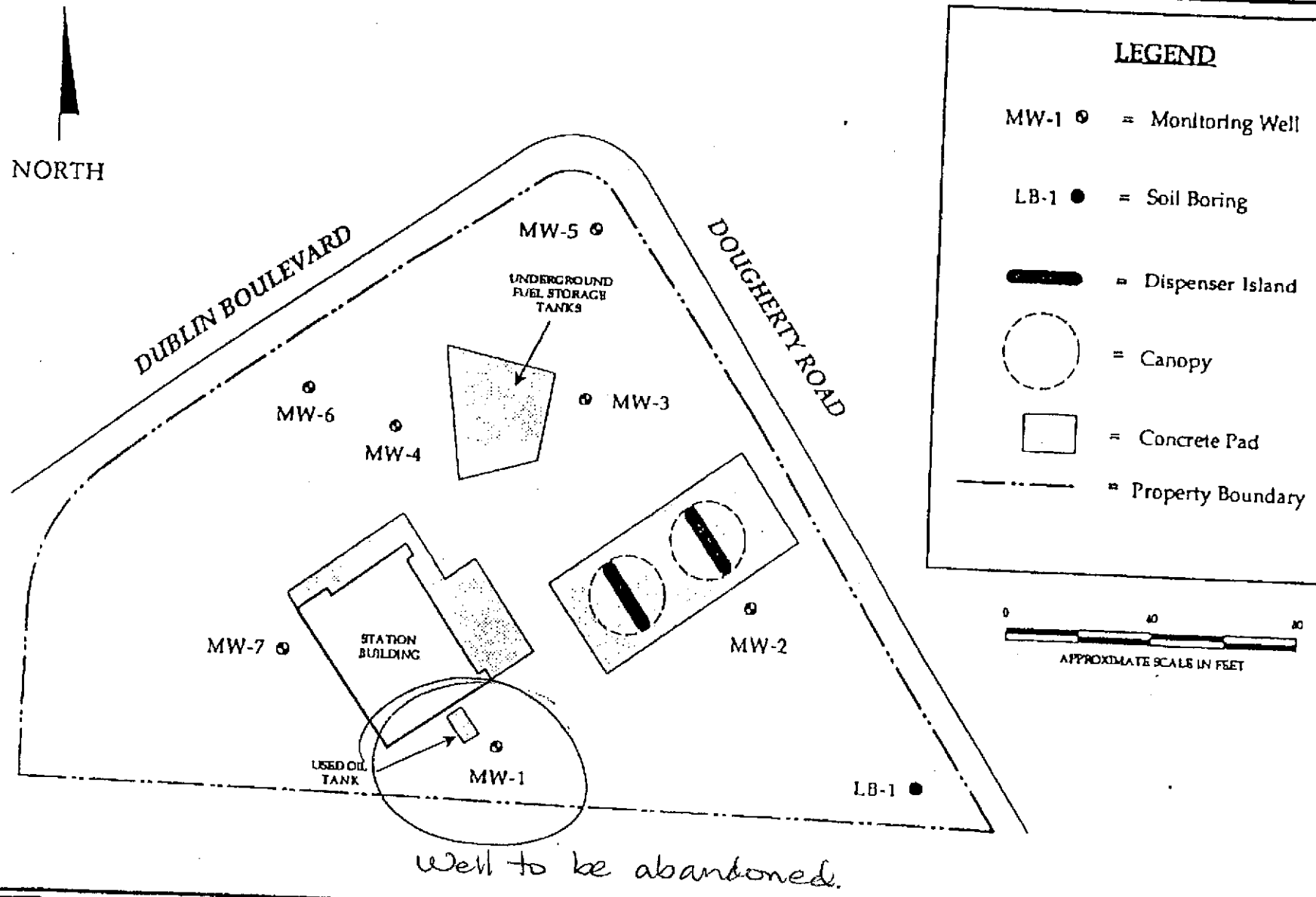
2. Sound the well as deeply as practicable and record for your report.

3. Using a tremie pipe, fill the hole to 2 feet below the lower of finished grade or original ground with neat cement.

4. After the seal has set, backfill the remaining hole with compacted material.

These destruction requirements as proposed by Jeffrey Hess of Innovative Technical Solutions meet or exceed the Zone 7 minimum requirements.

Figure C-2




HYDRO-ENVIRONMENTAL TECHNOLOGIES, INC.

# SITE PLAN

BP Service Station No. 11120
6400 Dublin Boulevard
Dublin, California

Figure 2

9-040.1 6/93

ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
5997 PARKSIDE DRIVE • PLEASANTON, CALIFORNIA 94588-5127 • PHONE (925) 484-2600 FAX (925) 462-3914

January 29, 1999

Mr. Brady Nagle
Alisto Engineering Group
1575 Treat Blvd., Ste. 201
Walnut Creek, CA 94598

Dear Mr. Nagle:

Enclosed is drilling permit 99014 for the destruction of wells 3S/1E 6F21 to 3S/1E 6F26 at 6400 Dublin Boulevard in Dublin for BP Oil Company.

Please note that permit condition A-2 requires that a well destruction report be submitted after completion of the work. The report should include a description of methods and materials used to destroy the well, location sketch, date of destruction, and permit number. Please submit the original of your completion report. We will forward your submittal to the California Department of Water Resources.

If you have any questions, please contact Wyman Hong at extension 235 or me at extension 240.

Very truly yours,

Craig A. Mayfield
Water Resources Engineer III

CAM:WH:arr

Enc.



E:\Amanda\GPOs\GPO1\GPO1.DESTRUCTION.wpd

# ZONE 7 WATER AGENCY

6997 PARKSIDE DRIVE, PLEASANTON, CALIFORNIA 94588-5127 PHONE (510) 484-2600 X235
FAX (510) 462-3914

## DRILLING PERMIT APPLICATION

### FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT SS # 11120
6400 Dublin Boulevard
Dublin CA

California Coordinates Source _____ ft. Accuracy ± _____ ft.
CCN _____ ft. CCE _____ ft.
APN _____

CLIENT
Name BP Oil
Address 295 S.W. 41st #13 Suite N Phone _____
City Renton WA Zip 98055

APPLICANT
Name ALISTO ENGINEERING Group
Fax 925 295 1823
Address 1575 Treat Blvd Ste 201 Phone 925 295 1650
City Walnut Creek Zip 94598

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 | ☐ |
| Municipal | ☐ | Irrigation | ☐ |
| Industrial | ☐ | Other _____ | ☐ |

DRILLING METHOD:

| | | | | | |
|---|---|---|---|---|---|
| Mud Rotary | ☐ | Air Rotary | ☐ | Auger | ☐ |
| Cable | ☐ | Other | ☐ | Pressure Grouting | ☒ |

DRILLER'S LICENSE NO. C57-720904

WELL PROJECTS

| | | | |
|---|---|---|---|
| Drill Hole Diameter | _____ in. | Maximum | |
| Casing Diameter | _____ in. | Depth | _____ ft. |
| Surface Seal Depth | _____ ft. | Number | _____ |

GEOTECHNICAL PROJECTS

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

ESTIMATED STARTING DATE 2/22/99
ESTIMATED COMPLETION DATE 2/22/99

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

APPLICANT'S SIGNATURE _____ Date 1/25/99

### FOR OFFICE USE

PERMIT NUMBER 99014
WELL NUMBER 3S/1E 6F21 to 6F26
APN 941 0550 009 11

PERMIT CONDITIONS

Circled Permit Requirements Apply

(A.) GENERAL
1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to proposed starting date.
2. Submit to Zone 7 within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well projects, or drilling logs and location sketch for geotechnical projects.
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 with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.

E. CATHODIC. Fill hole above anode zone with concrete placed by tremie.

(F.) WELL DESTRUCTION. See attached.

G. SPECIAL CONDITIONS

Approved Wyman Hong Date 26 Jan 99
Wyman Hong

101996

January 26, 1999

**Zone 7**
**Water Resources Engineering**
**Groundwater Protection Ordinance**

**BP Oil Company**
**6400 Dublin Boulevard**
**Dublin**
**Wells 3S/1E 6F21 to 6F26**
**Permit 99014**

Destruction Requirements:

1. Clean out all bridged or poorly compacted materials to the bottom of the well.

2. Sound the well as deeply as practicable and record for your report.

3. Pressure grout the casing to two feet below the finished grade or original ground, whichever is the lower elevation.

4. Remove the casing, seal, and gravel pack to two feet below the finished grade or original ground, whichever is the lower elevation.

5. After the seal has set, backfill the remaining hole with compacted material.

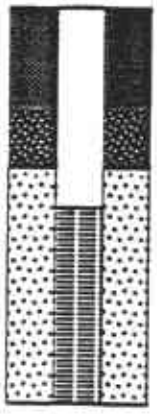
# APPENDIX B

# BORING LOGS AND WELL CONSTRUCTION DETAILS

# UNIFIED SOIL CLASSIFICATION SYSTEM - VISUAL CLASSIFICATION OF SOILS
## (ASTM D-2488)

| MAJOR DIVISIONS | | GROUP SYMBOL | GROUP NAME | DESCRIPTION |
|---|---|---|---|---|
| COARSE GRAINED SOILS | GRAVEL AND GRAVELLY SOILS | GW | Well-graded gravel<br>Well-graded gravel with sand | Well-graded gravels or gravel-sand mixtures, little or no fines. |
| | | GP | Poorly-graded gravel<br>Poorly-graded gravel with sand | Poorly-graded gravels or gravel sand mixtures, little or no fines. |
| | | GM | Silty gravel<br>Silty gravel with sand | Silty gravels, gravel-sand-silt mixtures. |
| | | GC | Clayey gravel<br>Clayey gravel with sand | Clayey gravels, gravel-sand-clay mixtures. |
| | SAND AND SANDY SOILS | SW | Well-graded sand<br>Well-graded sand with gravel | Well-graded sands or gravelly sands, little or no fines. |
| | | SP | Poorly-graded sand<br>Poorly-graded sand with gravel | Poorly-graded sands or gravelly sands, little or no fines. |
| | | SM | Silty sand<br>Silty sand with gravel | Silty sands, sand-silt mixtures. |
| | | SC | Clayey sand<br>Clayey sand with gravel | Clayey sands, sand-clay mixtures. |
| FINE GRAINED SOILS | SILTS AND CLAYS | ML | Silt; Silt with sand; Silt with gravel; Sandy silt; Sandy silt with gravel; Gravelly silt; Gravelly silt with sand | Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity. |
| | | CL | Lean clay; Lean clay with sand; Lean clay with gravel<br>Sandy lean clay; Sandy lean clay with gravel<br>Gravelly lean clay; Gravelly lean clay with sand | Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays. |
| | ELASTIC SILTS AND CLAYS | MH | Elastic silt; Elastic silt with sand; Elastic silt with gravel<br>Sandy elastic silt; Sandy elastic silt with gravel<br>Gravelly elastic silt; Gravelly elastic silt with sand | Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts. |
| | | CH | Fat clay; Fat clay with sand; Fat clay with gravel<br>Sandy fat clay; Sandy fat clay with gravel<br>Gravelly fat clay; Gravelly fat clay with sand | Inorganic clays of high plasticity, fat clays. |
| HIGHLY ORGANIC SOILS | | OL/OH | Organic soil; Organic soil with sand; Organic soil with gravel<br>Sandy organic soil; Sandy organic soil with gravel<br>Gravelly organic soil; Gravelly organic soil with sand | Organic silts and organic silt-clays of low plasticity.<br>Organic clays of medium to high plasticity. |
| | | Pt | Peat | Peat and other highly organic soils. |

## WELL CONSTRUCTION DETAILS



= Cement

= Bentonite

= Filter pack

= PVC Screen

= PVC Blank

Approximate first encountered water level

Approximate stabilized water level

Retained for Analysis

Sample Interval

NOTE: Blow count represents the number of blows of a 140-lb hammer falling 30 inches per blow required to drive a sampler through the last 12 inches of an 18-inch penetration.

No warranty is provided as to the continuity of soil strata between borings. Logs represent the soil section observed at the boring location on the date of drilling only.

S = Sampler sank into medium under the weight of the hammer (no blow count)

P = Sampler was pushed into medium by drilling rig (no blow count)

NR = No Recovery

| SANDS & GRAVELS | BLOWS/FT |
|---|---|
| VERY LOOSE | 0 - 5 |
| LOOSE | 5 - 12 |
| MED. DENSE | 12 - 37 |
| DENSE | 37 - 62 |
| VERY DENSE | OVER 62 |

| SILTS & CLAYS | BLOWS/FT |
|---|---|
| SOFT | 0 - 5 |
| FIRM | 5 - 10 |
| STIFF | 10 - 20 |
| VERY STIFF | 20 - 40 |
| HARD | OVER 40 |

HYDRO-ENVIRONMENTAL TECHNOLOGIES, INC.

SOIL BORING AND WELL CONSTRUCTION LOG LEGEND

APPENDIX A

PLATE A-1