

Atlantic Richfield Company

Chuck Carmel
Operations Project Manager

PO Box 1257
San Ramon, CA 94583
Phone: (925) 275-3803
Fax: (925) 275-3815
E-Mail: charles.carmel @bp.com

October 15, 2014

Re: Well Destruction Report
Atlantic Richfield Company Service Station #771
899 Rincon Avenue, Livermore, Alameda County, California
ACEH Case No. RO0200

"I declare, that to the best of my knowledge at the present time, that the information and/or recommendations contained in the attached document are true and correct.

Submitted by,



Chuck Carmel
Operations Project Manager

Attachment



WELL DESTRUCTION REPORT
Atlantic Richfield Company Station No. 771
899 Rincon Avenue
Livermore, Alameda County, California

Prepared for:

Mr. Chuck Carmel
Atlantic Richfield Company
P.O. Box 1257
San Ramon, CA 94583

Prepared by:

Broadbent & Associates, Inc.
4820 Business Center Drive, Suite 110
Fairfield, California 94534
(707) 455-7290

October 15, 2014

Project No. 06-82-608



4820 Business Center Drive, Suite 110
Fairfield, CA 94534
[T] 707 455-7290 [F] 707 863-9046
broadbentinc.com

Creating Solutions. Building Trust.

October 15, 2014

Project No. 06-82-608

Atlantic Richfield Company
P.O. Box 1257
San Ramon, CA 94583
Submitted via ENFOS

Attn.: Mr. Chuck Carmel

Re: Well Destruction Report, Atlantic Richfield Company Station No. 771
899 Rincon Avenue, Livermore, Alameda County, California
ACEH Case No. RO0000200

Dear Mr. Carmel:

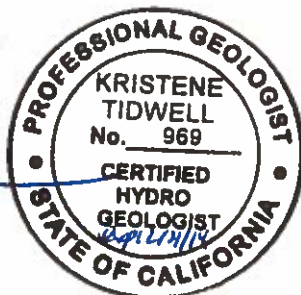
Broadbent & Associates, Inc. (Broadbent) is pleased to submit this *Well Destruction Report* (Report) for Atlantic Richfield Company Station No. 771 located at 899 Rincon Avenue, Livermore, California (Site). This Report documents the permanent decommissioning of twelve groundwater monitoring wells, and one vapor extraction well. These activities were carried out in accordance with the Alameda County Environmental Health Agency's directive letter dated August 13, 2014.

Should you have questions or require additional information, please do not hesitate to contact us at (707) 455-7290.

Sincerely,

BROADBENT & ASSOCIATES, INC.

Kristene Tidwell, P.G., C.H.G.
Associate Hydrogeologist



Enclosures

cc: Mr. Jerry Wickham, Alameda County Environmental Health (Submitted via ACEH ftp Site)
Electronic copy uploaded to GeoTracker

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Drawing 1	Site Location Map
Drawing 2	Well Destruction Location Map

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WELL DESTRUCTION REPORT

Atlantic Richfield Company Station No. 771
899 Rincon Avenue, Livermore, California
ACEH Case #RO0000200

1.0 INTRODUCTION

On behalf of the Atlantic Richfield Company, RM (a BP affiliated company) Broadbent & Associates, Inc. (Broadbent) has prepared this *Well Destruction Report* (Report) documenting case closure activities at Atlantic Richfield Company Station No. 771, located at 899 Rincon Avenue, Livermore, California (Site). Case Closure was recommended by Alameda County Environmental Health (ACEH) in their August 13, 2014 *Well Decommissioning Letter* (Appendix A). This Report presents details of the field activities performed.

2.0 SITE BACKGROUND

The Site is located at 899 Rincon Avenue, Livermore, California. It is an active ARCO-brand gasoline station (Station No. 771) with an AM/PM convenience store. Current structures on the Site include four underground storage tanks (USTs), two fuel dispenser islands with a total of four dispensers, and a small building. The majority of the Site is paved with asphalt and concrete. Limited planter islands are present along the perimeter of the Site. A Site location map is included as Drawing 1. A Site Plan depicting current building, UST, and, well locations is presented as Drawing 2.

The Site is bound by Rincon Ave to the east, Pine Street to the north, and a shopping center to the west and south. Across Rincon Avenue to the east are single family residences. Across Pine Street to the north is Livermore-Pleasanton Fire Department Fire Station Number 7.

The Site has operated as a gasoline fueling station since the environmental case was opened in 1987. The Site is likely to remain a service station for the foreseeable future.

3.0 FIELD ACTIVITIES PERFORMED

During September 2 through 4, 2014, Broadbent oversaw Cascade Drilling, LP (Cascade) pressure grout twelve monitoring wells (MW-1 through MW-11 and RW-1) and one vapor extraction well (VW-1). The top two feet of well casing was also removed from each of the wells following completion of pressure grouting. During September 8 through 10, 2014, Broadbent oversaw Cornerstone Environmental Contractors, Inc. (Cornerstone) remove all well vaults and completed surfaces to match existing. A Site map depicting abandoned well locations is provided as Drawing 2.

3.1 Preliminary Field Activities

Necessary permits from Alameda County Public Works Agency (ACPWA) and an encroachment permit (for wells MW-8 through MW-11 – see Drawing 2) from the City of Livermore were secured prior to performing the field activities. Copies of these permits are included in Appendix C. All borings were marked and areas were outlined with white spray paint, and an Underground Service Alert (USA) ticket was secured to notify all member utility companies of the planned field activities. Additionally, all boring locations were cleared for underground utilities by NORCAL Geophysical Consultants, Inc. (NORCAL) on August 11 and 12, 2014.

3.2 Well Destruction and Completion Activities

During September 2 through 4, 2014, Cascade pressure grouted monitoring wells MW-1 through MW-11 and RW-1; and vapor extraction well VW-1. The wells were filled with Portland Type II-V cement (grout) via tremie pipe. After the tremie pipe was removed, the remaining free head space in the well was filled with grout. Once the grout settled, Cascade applied PVC adapters to the well and placed the fitted pressure apparatus. After the equipment was set up for pressure grouting, Cascade used the Vac Truck to pressurize the well with air at 25 pounds per square inch for five minutes. The top two feet of well casing was removed from all wells following completion of pressure grouting. Well boxes for MW-3, MW-6, MW-8, MW-9, MW-10, and MW-11 were removed using pneumatic tools to a depth of two feet. The top two feet of well casing for wells MW-1, MW-2, MW-4, MW-5, MW-7, and RW-1 were located within well vaults and easily removed with hand tools with no ground disturbance. Each well was destroyed in accordance with ACPWA requirements. The California Department of Water Resources Well Completion Reports have been completed, but are not published in this Report due to confidentiality of the records.

On September 8 through 10, 2014, Cornerstone removed all well vaults and completed surfaces to match the existing asphalt pavement. The larger well vaults were removed by saw cutting a square in the asphalt, which allowed for easier breakage around the vault. Once the surrounding concrete/asphalt was broken up and removed, Cornerstone filled the vaults with base rock material where the top was set six inches below the ground surface. Cornerstone then filled the remaining six inches with hot asphalt and used paving machinery to match the grade of the exiting pavement. The same method was applied for the offsite monitoring wells on Rincon Street and Vine Street.

3.3 Excess Material Produced

Excess material produced during investigation activities was temporarily being stored onsite in Department of Transportation-approved 55-gallon drums until August 2014, when they were removed and transported to appropriate California-regulated facilities by Belshire Environmental Services, Inc. of Foothill Ranch, CA. These materials include concrete cuttings, removed well casings, and relict remediation equipment from the well vaults. No water or soil cuttings were produced during the destruction activities.

4.0 CONCLUSIONS & RECOMMENDATIONS

Monitoring and soil vapor extracion wells were abandoned in general accordance with ACPWA monitoring well destruction requirements. Well abandonment work activities complete the Site case closure process. No further actions are recommended. We anticipate that following submittal of this report, Atlantic Richfield Company will be issued a "Remedial Action Completion Certificate."

5.0 LIMITATIONS

This document has been prepared for the exclusive use of Atlantic Richfield Company. The findings presented in this report are based upon the observations of Broadbent field personnel. Services were performed in accordance with the generally accepted standard of practice at the time this report was written. No warranty, expressed or implied, is intended.

DRAWINGS

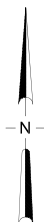
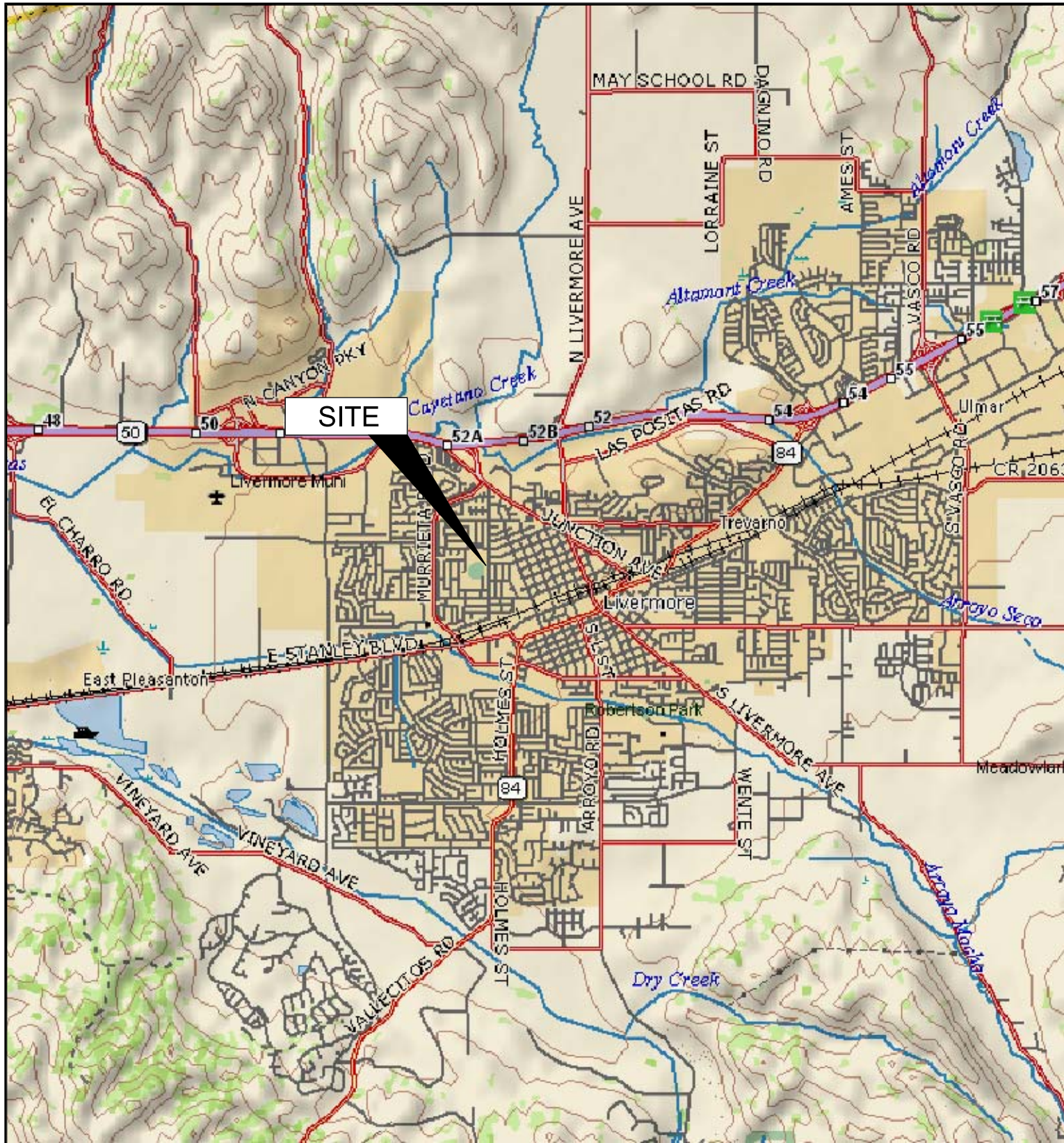
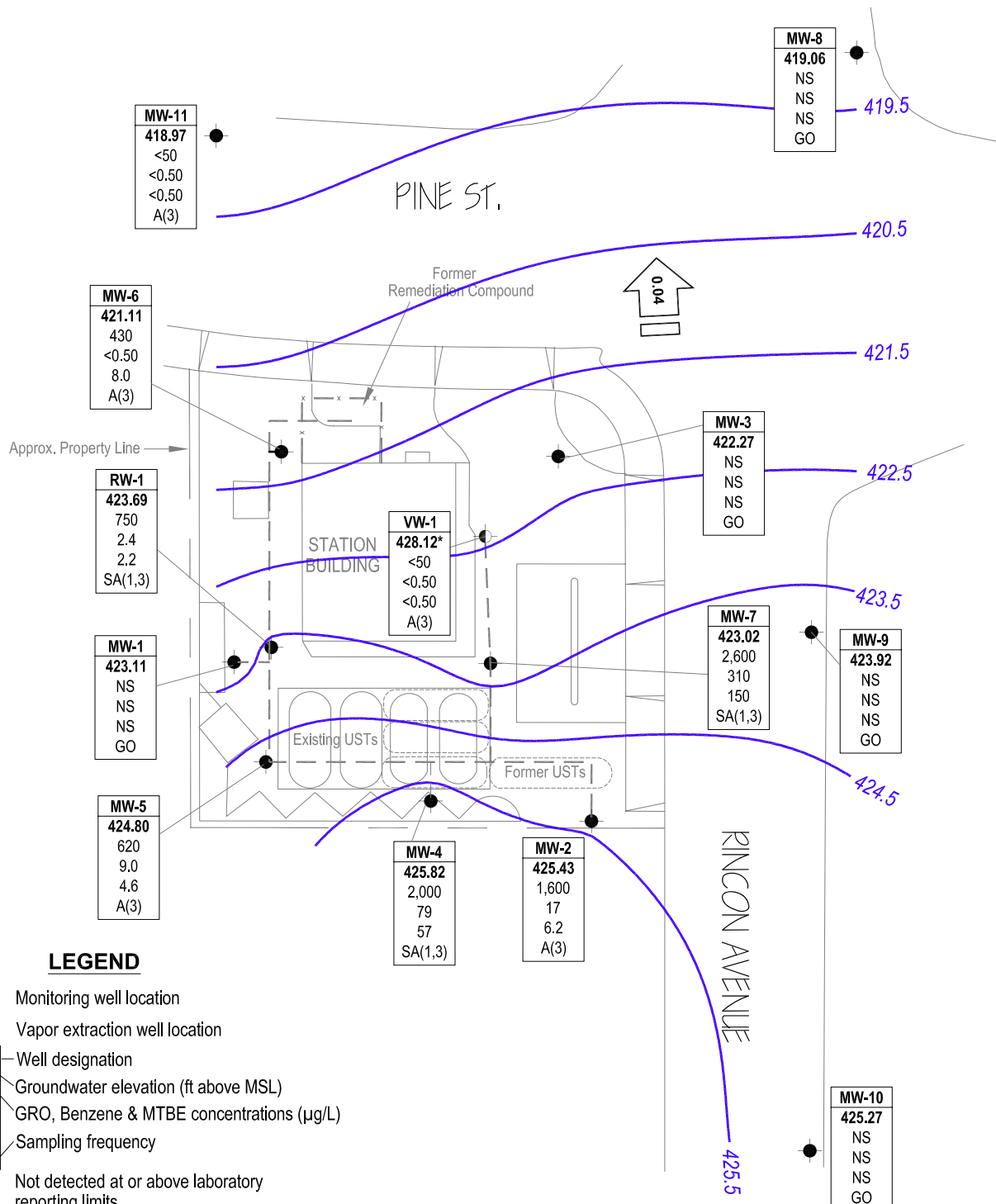
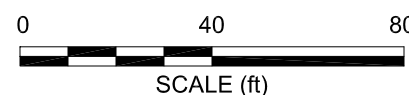


IMAGE SOURCE: DELORME



LEGEND

- Monitoring well location
- ◉ Vapor extraction well location
- Well ID** — Well designation
- ELEV** — Groundwater elevation (ft above MSL)
- GRO** — GRO, Benzene & MTBE concentrations (µg/L)
- Benzene**
- MTBE** — Sampling frequency
- SA or A**
- < — Not detected at or above laboratory reporting limits
- * — Not used in contouring
- NG — Not gauged
- NS — Not sampled
- A(3) — Sampled annually during 3rd quarter
- GO — Not sampled, gauged only
- SA(1,3) — Sampled semi-annually, 1st & 3rd quarters
- 425.5 — Groundwater elevation contour (ft above MSL)
- ← 0.04 — Approximate groundwater flow direction and gradient (ft/ft)
- — Remediation piping



NOTE: SITE MAP ADAPTED FROM URS FIGURES. SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED.

APPENDIX A

REGULATORY CORRESPONDENCE



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

August 13, 2014

Charles Carmel
Atlantic Richfield Company
P.O. Box 1257
San Ramon CA 94583
(Sent via E-mail to: charles.carmel@bp.com)

Subject: Well Decommissioning for Fuel Leak Case No. RO0000200 and GeoTracker Global ID T0600100113, ARCO #00771, 899 Rincon Avenue, Livermore, CA 94550

Dear Mr. Carmel:

Alameda County Environmental Health (ACEH) staff have reviewed the fuel leak case file for the above-referenced site and concur that no further action related to the underground storage tank fuel release is required at this time. No comments were received on the proposed case closure during a public comment period that ended August 11, 2014. Please decommission the monitoring wells and provide documentation of the well decommissioning and waste disposal to this office no later than December 8, 2014. Remedial action completion certification will be issued following receipt of the documentation.

Well destruction permits may be obtained from the Zone 7 Water Agency (<http://www.zone7water.com>). If you have any questions, please call me at (510) 567-6791 or send me an electronic mail message at jerry.wickham@acgov.org.

TECHNICAL REPORT REQUEST

Please upload technical reports to the ACEH ftp site (Attention: Jerry Wickham), and to the State Water Resources Control Board's GeoTracker website according to the following schedule and file-naming convention:

- **December 8, 2014** – Well Decommissioning Report
File to be named: WELL_DCM_R_yyyy-mm-dd RO200

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

Responsible Parties
RO0000200
August 13, 2014
Page 2

If you have any questions, please call me at (510) 567-6791 or send me an electronic mail message at jerry.wickham@acgov.org. Case files can be reviewed online at the following website: <http://www.acgov.org/aceh/index.htm>. If your email address does not appear on the cover page of this notification ACEH is requesting you provide your email address so that we can correspond with you quickly and efficiently regarding your case

Sincerely,

Jerry Wickham, California PG 3766, CEG 1177, and CHG 297
Senior Hazardous Materials Specialist

Attachment: Responsible Party(ies) Legal Requirements/Obligations

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Leroy Griffin, Oakland Fire Department, 250 Frank H. Ogawa Plaza, Ste. 3341, Oakland, CA 94612-2032 2032 (*Sent via E-mail to: lgriffin@oaklandnet.com*)

Kristene Tidwell, Broadbent, 875 Cotting Lane, Suite G, Vacaville, CA 95688 (*Sent via E-mail to: ktidwell@broadbentinc.com*)

Jason Duda, Broadbent & Associates, Inc., 1324 Mangrove Avenue, Suite 212, Chico, CA 95926 (*Sent via E-mail to: jduda@broadbentinc.com*)

Jerry Wickham, ACEH (*Sent via E-mail to: jerry.wickham@acgov.org*)

GeoTracker, eFile

Attachment 1

Responsible Party(ies) Legal Requirements / Obligations

REPORT REQUESTS

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

ELECTRONIC SUBMITTAL OF REPORTS

ACEH's Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of reports in electronic form. The electronic copy replaces paper copies and is expected to be used for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program FTP site are provided on the attached "Electronic Report Upload Instructions." Submission of reports to the Alameda County FTP site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) GeoTracker website. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for all groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitoring wells, and other data to the GeoTracker database over the Internet. Beginning July 1, 2005, these same reporting requirements were added to Spills, Leaks, Investigations, and Cleanup (SLIC) sites. Beginning July 1, 2005, electronic submittal of a complete copy of all reports for all sites is required in GeoTracker (in PDF format). Please visit the SWRCB website for more information on these requirements (http://www.waterboards.ca.gov/water_issues/programs/ust/electronic_submittal/).

PERJURY STATEMENT

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6735, 6835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

UNDERGROUND STORAGE TANK CLEANUP FUND

Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

AGENCY OVERSIGHT

If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to \$10,000 per day for each day of violation.

Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC)	REVISION DATE: May 15, 2014
	ISSUE DATE: July 5, 2005
	PREVIOUS REVISIONS: October 31, 2005; December 16, 2005; March 27, 2009; July 8, 2010, July 25, 2010
SECTION: Miscellaneous Administrative Topics & Procedures	SUBJECT: Electronic Report Upload (ftp) Instructions

The Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of all reports in electronic form to the county's ftp site. Paper copies of reports will no longer be accepted. The electronic copy replaces the paper copy and will be used for all public information requests, regulatory review, and compliance/enforcement activities.

REQUIREMENTS

- **Please do not submit reports as attachments to electronic mail.**
- Entire report including cover letter must be submitted to the ftp site as **a single portable document format (PDF) with no password protection.**
- It is **preferable** that reports be converted to PDF format from their original format, (e.g., Microsoft Word) rather than scanned.
- **Signature pages and perjury statements must be included and have either original or electronic signature.**
- **Do not password protect the document.** Once indexed and inserted into the correct electronic case file, the document will be secured in compliance with the County's current security standards and a password. **Documents with password protection will not be accepted.**
- Each page in the PDF document should be rotated in the direction that will make it easiest to read on a computer monitor.
- Reports must be named and saved using the following naming convention:

RO#_Report Name_Year-Month-Date (e.g., RO#5555_WorkPlan_2005-06-14)

Submission Instructions

- 1) Obtain User Name and Password
 - a) Contact the Alameda County Environmental Health Department to obtain a User Name and Password to upload files to the ftp site.
 - i) Send an e-mail to deh.loptoxic@acgov.org
 - b) In the subject line of your request, be sure to include "**ftp PASSWORD REQUEST**" and in the body of your request, include the **Contact Information, Site Addresses**, and the **Case Numbers (RO# available in Geotracker) you will be posting for.**
- 2) Upload Files to the ftp Site
 - a) Using Internet Explorer (IE4+), go to <ftp://alcoftp1.acgov.org>
 - (i) Note: Netscape, Safari, and Firefox browsers will not open the FTP site as they are NOT being supported at this time.
 - b) Click on Page located on the Command bar on upper right side of window, and then scroll down to Open FTP Site in Windows Explorer.
 - c) Enter your User Name and Password. (Note: Both are Case Sensitive.)
 - d) Open "My Computer" on your computer and navigate to the file(s) you wish to upload to the ftp site.
 - e) With both "My Computer" and the ftp site open in separate windows, drag and drop the file(s) from "My Computer" to the ftp window.
- 3) Send E-mail Notifications to the Environmental Cleanup Oversight Programs
 - a) Send email to deh.loptoxic@acgov.org notify us that you have placed a report on our ftp site.
 - b) Copy your Caseworker on the e-mail. Your Caseworker's e-mail address is the entire first name then a period and entire last name @acgov.org. (e.g., firstname.lastname@acgov.org)
 - c) The subject line of the e-mail must start with the RO# followed by **Report Upload**. (e.g., Subject: RO1234 Report Upload) If site is a new case without an RO#, use the street address instead.
 - d) If your document meets the above requirements and you follow the submission instructions, you will receive a notification by email indicating that your document was successfully uploaded to the ftp site.

APPENDIX B

PERMITS



ZONE 7 WATER AGENCY

100 NORTH CANYONS PARKWAY, LIVERMORE, CALIFORNIA 94551 VOICE (925) 454-5000 FAX (925) 245-9306
E-MAIL whong@zone7water.com

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT 899 Rincon Avenue
Livermore, CA 94551

PERMIT NUMBER 2014103
WELL NUMBER (see attached - 13 wells)
APN 98-0351-005-00

Coordinates Source _____ ft. Accuracy _____ ft.
LAT: 37°41'17.3" N R. LONG: 121°47'11.2" W ft.
APN 98-351-5

PERMIT CONDITIONS (Circled Permit Requirements Apply)

CLIENT
Name Atlantic Richfield Company
Address PO BOX 1257 Phone (925) 275-3804
City San Ramon, CA Zip 94583

- A. GENERAL**
1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to your 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 (DWR Form 188), signed by the driller.
 3. Permit is void if project not begun within 90 days of approval date.
 4. Notify Zone 7 at least 24 hours before the start of work.

APPLICANT
Name Broadbent & Associates, Inc.
Email jduda@broadbentinc.com Fax (530) 566-1401
Address 1370 Ridgewood Dr., Ste. 5 Phone (530) 566-1400
City Chico, CA Zip 95973

- B. WATER SUPPLY WELLS**
1. Minimum surface seal diameter is four inches greater than the well casing diameter.
 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.
 3. Grout placed by tremie.
 4. An access port at least 0.5 inches in diameter is required on the wellhead for water level measurements.
 5. A sample port is required on the discharge pipe near the wellhead.

TYPE OF PROJECT:
Well Construction _____ Geotechnical Investigation _____
Well Destruction Contamination Investigation _____
Cathodic Protection _____ Other _____

- C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS**
1. Minimum surface seal diameter is four inches greater than the well or piezometer casing diameter.
 2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.
 3. Grout placed by tremie.

PROPOSED WELL USE:
Domestic _____ Irrigation _____
Municipal _____ Remediation _____
Industrial _____ Groundwater Monitoring
Dewatering _____ Other _____

- 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.

DRILLING METHOD:
Mud Rotary _____ Air Rotary _____ Hollow Stem Auger _____
Cable Tool _____ Direct Push _____ Other Air Knife

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

DRILLING COMPANY Cascade Drilling

DRILLER'S LICENSE NO. 938110

- F. WELL DESTRUCTION.** See attached.

WELL SPECIFICATIONS: See attached sheet.
Drill Hole Diameter _____ in. Maximum _____
Casing Diameter _____ in. Depth 43 ft.
Surface Seal Depth _____ ft. Number 13

- G. SPECIAL CONDITIONS.** Submit to Zone 7 within 60 days after completion of permitted work the well installation report including all soil and water laboratory analysis results.

SOIL BORINGS:
Number of Borings _____ Maximum _____
Hole Diameter _____ in. Depth _____ ft.

ESTIMATED STARTING DATE 8-11-2014
ESTIMATED COMPLETION DATE 8-14-2014

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

Approved Wyman Hong Date 7/10/14
Wyman Hong

APPLICANT'S SIGNATURE Jason Mauer Date 6-17-2014

ATTACH SITE PLAN OR SKETCH


July 10, 2014

Zone 7
Water Resources Engineering
Groundwater Protection Ordinance

Atlantic Richfield Company
899 Rincon Avenue
Livermore

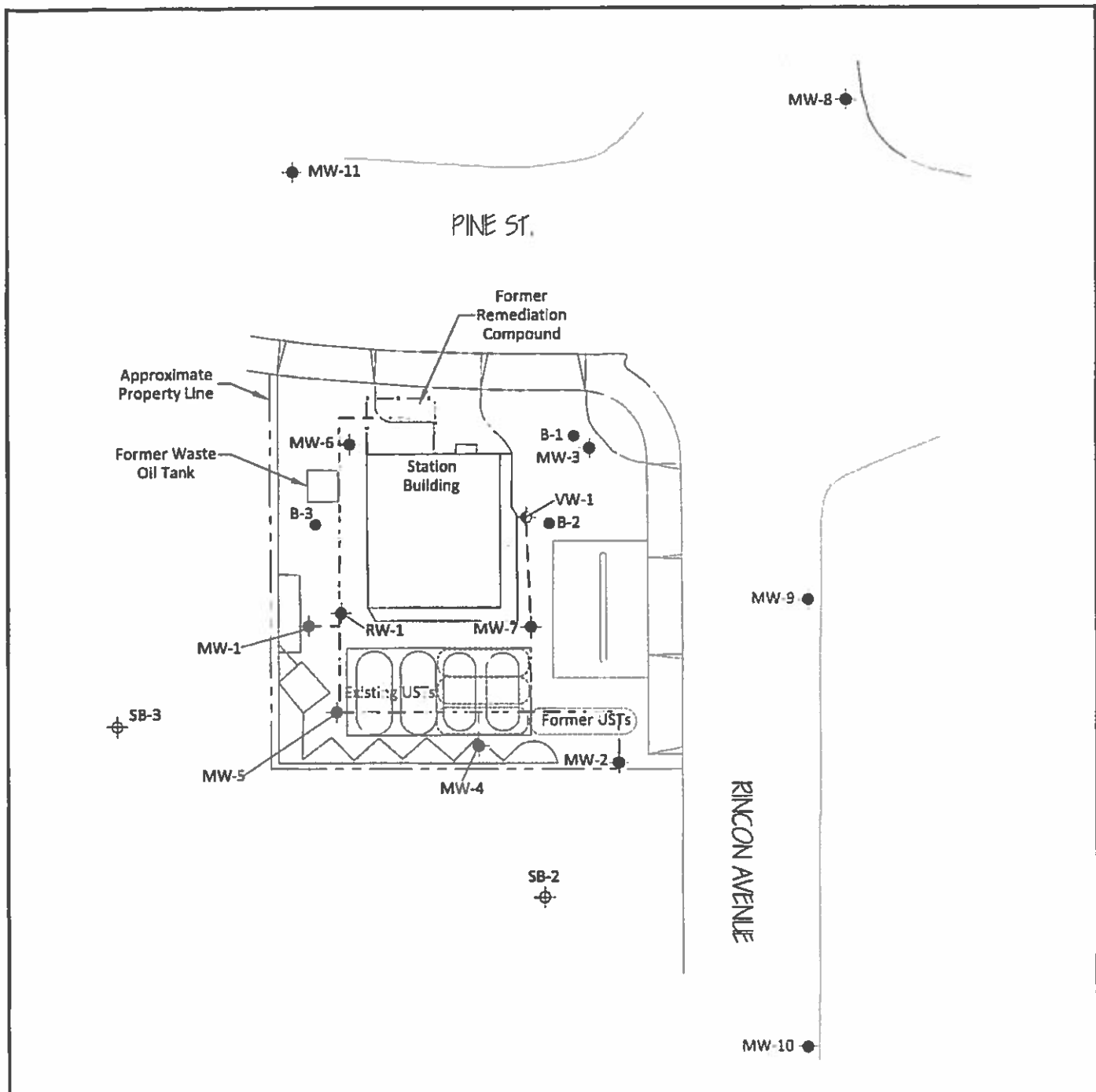
Wells 3S/2E-8E2 to 8E5 (MW-4 to MW-7), 3S/2E-8E6 to 8E8 (MW-1 to MW-3),
3S/2E-8E9 (RW-1), 3S/2E-8E10 (VW-1) & 3S/2E-8F2 to 8F4 (MW-8 to MW-10)
Permit 2014103

Destruction Requirements:

1. Remove from the well any pump, appurtenances, debris, or other materials.
2. Sound the well as deeply as practicable and record for your report. 
3. Fill casing with neat cement or cement grout sealing material to two feet below the finished grade and pressurize to 25 psi and maintain for 5 minutes, forcing the sealing material through the existing perforations and into the surrounding formation.
4. Release the pressure and refill the empty portion of the casing with grouting material allowing it to spill over the top of the casing to form a cap.
5. Cut and remove any casing(s) to two feet below the finished grade or original ground, whichever is the lower elevation (optional).
6. After seal has set, backfill the remaining hole with compacted material.

Well Construction Details
 ARCO Service Station #771
 899 Rincon Avenue, Livermore, CA

Well Name	Well Type	Casing Diameter (in.)	Casing Material	Drill Hole Diameter (in.)	Surface Seal Depth (ft.)	Total Depth (ft.)	Screen Interval (ft.)	
3S/2E-8E6	MW-1	Monitoring	4	PVC	10	30	41	32-41
3S/2E-8E7	MW-2	Monitoring	4	PVC	10	27.5	38	30-38
3S/2E-8E8	MW-3	Monitoring	4	PVC	10	30	40	32-40
3S/2E-8E2	MW-4	Monitoring	4	PVC	10	25	42	26-42
3S/2E-8E3	MW-5	Monitoring	4	PVC	10	31.5	41	31.5-41
3S/2E-8E4	MW-6	Monitoring	4	PVC	10	31	42.5	32.5-42.5
3S/2E-8E5	MW-7	Monitoring	4	PVC	10	27.5	40	30-40
3S/2E-8F2	MW-8	Monitoring	2	PVC	8	26	42.5	27.5-42.5
3S/2E-8F3	MW-9	Monitoring	2	PVC	8	27	39.5	29.5-39.5
3S/2E-8F4	MW-10	Monitoring	2	PVC	8	27.5	37	29-37
3S/2E-8E11	MW-11	Monitoring	2	PVC	8	28	39	29-39
3S/2E-8E9	RW-1	Monitoring	6	PVC/Steel	12	23	40.5	25.5-40.5
3S/2E-8E10	VW-1	Vapor Extraction	4	PVC	12	17.5	28.5	18.5-28.5



LEGEND

- ◆ Monitoring Well Location
- ⊕ Vapor Extraction Well Location
- CPT Boring Locations
- ⊕ Soil Boring Locations
- - - Remediation Piping

NOTE: SITE MAP ADAPTED FROM URS FIGURES. SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED.

0 40 80
SCALE (ft)

BROADBENT
1370 Ridgewood Dr., Suite 5
Chico, California 95973
Project No.: 06-82-608 Date: 5/17/2013

Station #771
899 Rincon Avenue
Livermore, California

Site Map

Drawing
2

App.

City of Livermore

Community Development Department
1052 S. Livermore Avenue
Livermore, CA 94550
(925) 960-4500

Encroachment
Permit No. EN140235
Type: Other

PERMIT TO DO WORK IN ACCORDANCE WITH CHAPTER 12.08 OF THE LIVERMORE MUNICIPAL CODE AND SPECIFICATIONS AS ADOPTED BY THE CITY OF LIVERMORE AND ANY SPECIAL REQUIREMENTS SHOWN OR LISTED HEREIN.

Applicant/Permittee:

Name: Atlantic Richfield Company
Address: PO Box 1257
San Ramon, CA, 94583
Phone: 928-275-3804

Permit Fee: \$90.00
Inspection Fee: \$440.00
Bond: \$0.00

Total: \$530.00

Contractor:

Name: Broadbent & Associates, Inc
Address: 1370 Ridgewood Drive, Ste 5
Chico, CA 95973
Phone: 530-566-1400

PLEASE READ THIS PERMIT CAREFULLY. KEEP IT AT THE WORK SITE. TO ARRANGE FOR AN INSPECTION, PHONE (925) 960-4500 AT LEAST 24 HOURS BEFORE YOU START WORK.

JOB LOCATION: 899 Rincon Avenue ****

DESCRIPTION OF WORK: Abandon groundwater monitoring wells (4) per City of Livermore Standard Detail G-1D.

Length of Excavation: L.F. Width: L.F. Depth: L.F.

Attention is directed to the General Provisions printed on the reverse side of this permit and to the attached special requirements (to be determined as needed by the Engineering Division).

Prosecution of Work: All work authorized by the permit shall be performed in a workmanlike, diligent, and expeditious manner, and must be completed to the satisfaction of the City Engineer.

Liability and Damages: The permittee shall be responsible for all liability imposed by law for personal injury or property damage which may arise out of the work permitted and done by permittee under this permit, or which may arise out of the failure on the part of the permittee to perform his obligations under said permit in respect to maintenance and encroachment. The permittee shall protect and indemnify the City of Livermore, its officers and employees, and save them harmless in every way from all action at law for damage or injury to persons or property that may arise out of or be occasioned in any way because of his operations as provided in this permit.

Hold Harmless and Indemnification Agreement: Atlantic Richfield Company agrees to defend, indemnify and hold the City of Livermore, elected officials, officers, directors, employees, agents and volunteers harmless from and against any and all loss, liability, damage, including reasonable attorney and expert fees and/or court costs, arising out of or in connection with this agreement, except for the gross negligence and willful misconduct of the City of Livermore, its elected officials, officers, directors, employees, agents and volunteers.

Atlantic Richfield Company

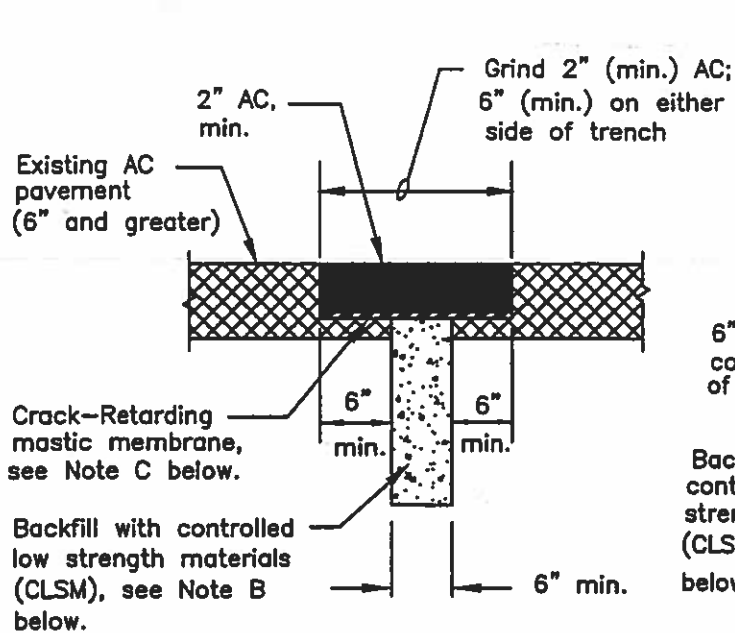
Signature of Permittee:

By: [Signature]
Title: Senior Staff Engineer
Date: 8/4/14

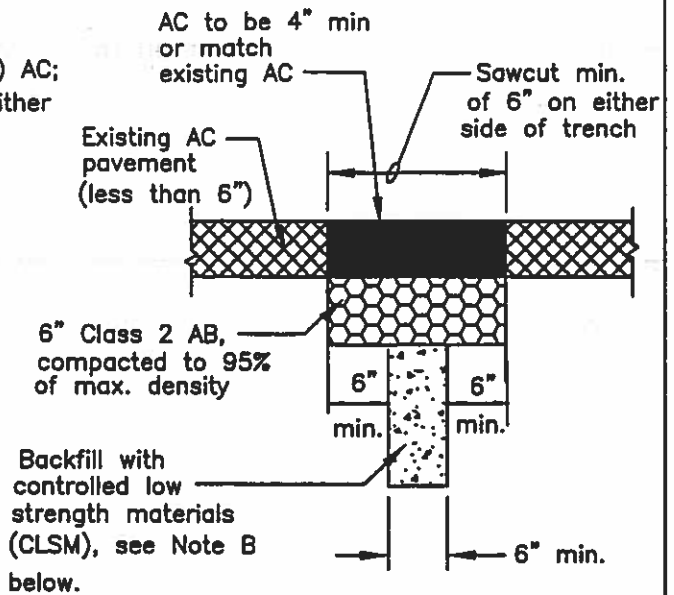
City Engineer

By: Mark K. Quillen
Date of Issue: 6/18/14
Inspector: _____

Date Work Completed: _____



SECTION "A"
FOR EXISTING ASPHALT CONCRETE
SECTIONS 6" AND GREATER



SECTION "B"
FOR EXISTING ASPHALT CONCRETE
SECTIONS LESS THAN 6"

NOTES

- A. PRIOR TO TRENCHING, CONTACT USA 1-800-227-2600
- B. CONTROLLED LOW STRENGTH MATERIALS (CLSM) SHALL BE A FLOWABLE, HAND-EXCAVATABLE MIXTURE OF CEMENT, POZZOLAN, COARSE AND FINE AGGREGATE, ADMIXTURES AND WATER WHICH HAS BEEN MIXED IN ACCORDANCE WITH ASTM C 94. ALL PROPERTIES, COMPOSITIONS AND INSTALLATION REQUIREMENTS SHALL BE PER SPECIFICATION SECTION 312323. (CLSM) SHALL NOT COME IN CONTACT WITH UTILITIES. MAINTAIN A CLEARANCE OF 6" MINIMUM BETWEEN CLSM AND UTILITIES FOR BACKFILL.
- C. CRACKED-RETARDING MASTIC MEMBRANE SHALL BE AS MANUFACTURED BY CONTECH CONSTRUCTION PRODUCTS INC. - PAVEPREP, AMOCO FABRICS FIBERS COMPANY - PETROTAC OR EQUAL.
- D. ANY EXCAVATIONS LARGER THAN 3'x3' SHALL COMPLY WITH CITY STD DETAIL G-1B.

User note:

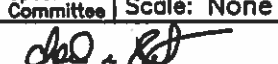
These details shall be used in conjunction with all the City standard details and specifications. Refer to the City standard specifications for the materials, installation, testing, protective coatings, and other requirements.

W01D.DWG

Date:	By:	Rev:

SOIL BORING AND
SMALL EXCAVATION IN STREET
SECTION

CITY OF LIVERMORE
STANDARD DETAIL

Dwn: MAP	Date: May-05	No.
Ckd: Spec. Committee	Scale: None	G-ID
 City Engineer		