Atlantic Richfield Company

Chuck Carmel
Remediation Management Project Manager

PO Box 1257
San Ramon, CA 94583
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E-Mail: chuck.carmel@bp.com

October 8, 2014

Re: Well Destruction Report
Atlantic Richfield Company Station No. 2107
3310 Park Boulevard, Oakland, California
ACEH Case #RO0002526

"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

Remediation Management Project Manager

Attachment:

WELL DESTRUCTION REPORT
Atlantic Richfield Company Station No. 2107
3310 Park Blvd.
Oakland, 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 8, 2014

Project No. 06-88-614

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

Creating Solutions. Building Trust.

October 8, 2014

Project No. 06-88-614

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. 2107
3310 Park Boulevard, Oakland, Alameda County, California
ACEH Case No. RO0002526

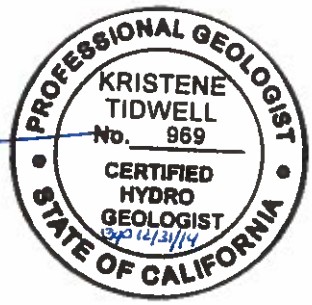
Dear Mr. Carmel:

Broadbent & Associates, Inc. (Broadbent) is pleased to submit this *Well Destruction Report* (Report) for Atlantic Richfield Company Station No. 2107 located at 3310 Park Boulevard, Oakland, California (Site). This Report documents the permanent decommissioning of six groundwater monitoring wells. These activities were carried out in accordance with the Alameda County Environmental Health Agency's directive letter dated July 22, 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.HG.
Associate Hydrogeologist

Enclosures

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

TABLE OF CONTENTS

WELL DESTRUCTION REPORT

Atlantic Richfield Company Station No. 2107
3310 Park Boulevard, Oakland, California
ACEH Case #RO0002526

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. 2107, located at 3310 Park Boulevard, Oakland, California (Site). Case Closure was recommended by Alameda County Environmental Health (ACEH) in their July 22, 2014 *Well Decommissioning Letter* (Appendix A). This Report presents details of the field activities performed.

2.0 SITE BACKGROUND

The Site is located at 3310 Park Boulevard, Oakland, California. It is an active ARCO-brand gasoline station (Station No. 2107) with an AM/PM convenience store. Current structures on the Site include three underground storage tanks (USTs), four fuel dispenser islands with a total of eight dispensers, and a small commercial 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 Park Boulevard to the northwest, E 34th Street to the northeast, and commercial and residential buildings to the west and south. Across Park Boulevard, to the northwest is the athletic field of Oakland High School. Directly to the west of the Site is a residential apartment building. Across E 34th Street to the northeast is a vacuum repair shop.

The Site has operated as a gasoline station since the environmental case opened in 1987. The Site is likely to remain a service station for the foreseeable future. A detailed Site history is included in Appendix B.

3.0 FIELD ACTIVITIES PERFORMED

On August 21, 2014, Broadbent oversaw Cascade Drilling, LP (Cascade), pressure grout monitor wells MW-11A, MW-11B, MW-12A, MW12B, MW-13A, and MW-13B. Upon completion of pressure grouting, the well boxes of MW-11A and MW-11B were filled with concrete and matched to existing grade. On August 26 and 27, Broadbent oversaw Cornerstone Environmental Contractors, Inc. (Cornerstone) removal of off-site well boxes (MW-12A, MW-12B, MW-13A, and MW-13B) and completion of 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-12A, MW-12B, MW-13A, and MW-13B along Park Boulevard – see Drawing 2) from the City of Oakland were secured prior to performing the field investigation. 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 14, 2014. NORCAL's survey report is included in Appendix D.

3.2 Well Destruction Activities

On August 21, 2014, monitor wells MW-11A, MW-11B, MW-12A, MW-12B, MW-13A, and MW-13B were destroyed by pressure grouting. Additionally, monitor wells MW-11A and MW-11B were destroyed by removing the top portion of their well boxes and finishing the surface with concrete to match the existing grade. On August 26 through 27, 2014, Cornerstone removed well boxes at MW- MW-12A, MW-12B, MW-13A, and MW-13B and restored the concrete sidewalk surfaces to match existing. Each well was destroyed in accordance with ACPWA requirements. California Department of Water Resources Well Completion Reports have been completed, but are not published in this Report due to confidentiality of the records.

3.3 Excess Water Produced

Approximately 3 gallons of excess well-water was generated during pressure grouting. Excess water produced during investigation activities was temporarily stored onsite in Department of Transportation-approved 55-gallon drums until September 2014, when they were removed and transported to appropriate California-regulated facilities by Belshire Environmental Services, Inc. of Foothill Ranch, CA. The waste manifest is provided in Appendix E.

4.0 CONCLUSIONS & RECOMMENDATIONS

Monitoring 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

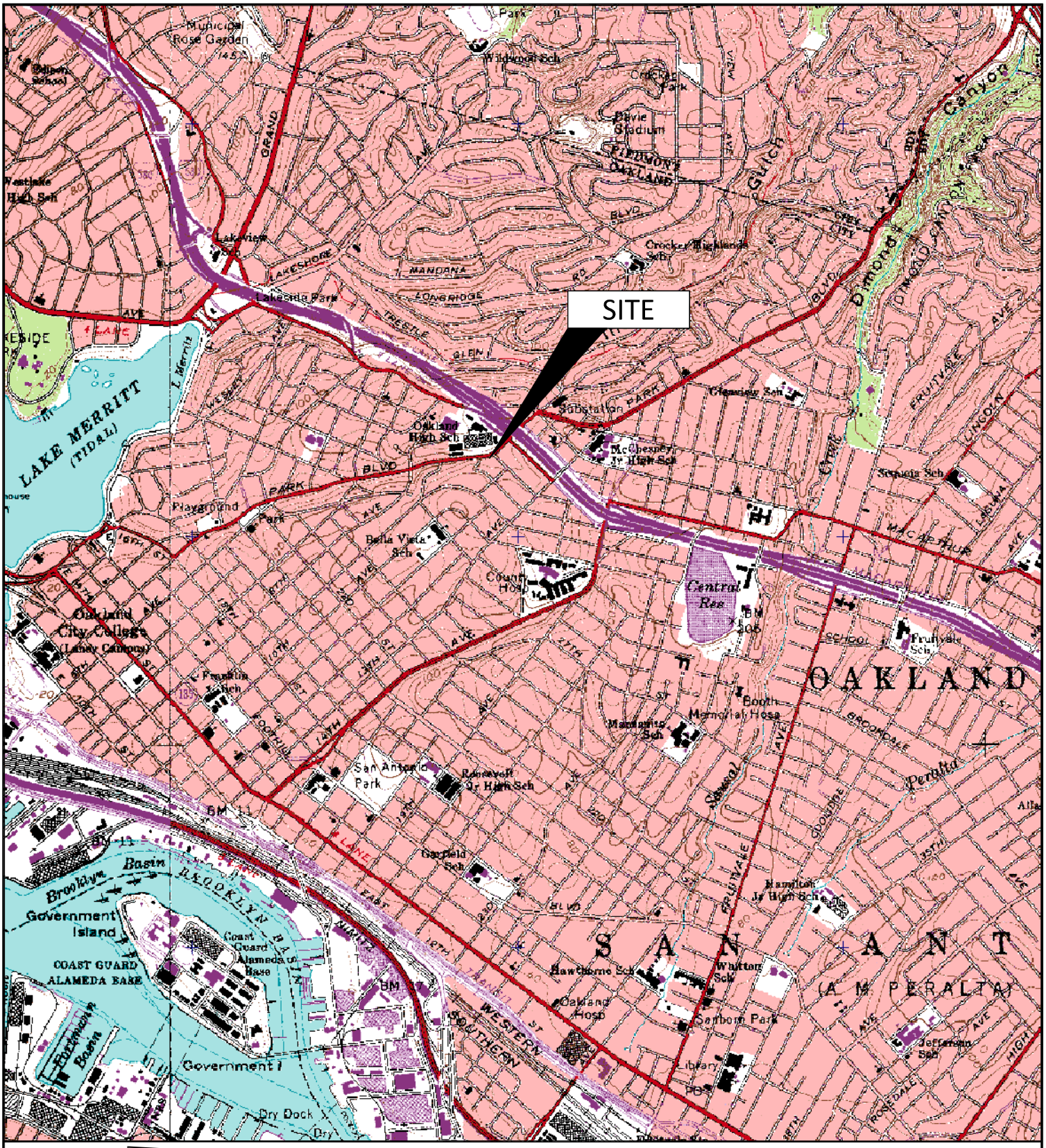


IMAGE SOURCE: USGS

BROADBENT 1370 Ridgewood Dr., Suite 5 Chico, California 95973 Project No.: 06-88-614 Date: 10/08/2013	Station No.2107 3310 Park Boulevard Oakland, California	Site Location Map	Drawing 1

APPENDIX A

REGULATORY CORRESPONDENCE

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
ALEX BRISCOE, Director

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

July 22, 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. RO0002526 and GeoTracker Global ID T06019734306, ARCO #2107, 3310 Park Boulevard, Oakland, CA 94610

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 July 18, 2014. Please decommission the monitoring wells and provide documentation of the well decommissioning and waste disposal to this office no later than November 14, 2014. Remedial action completion certification will be issued following receipt of the documentation.

Well destruction permits may be obtained from the Alameda County Public Works Agency (http://www.acgov.org/pwa/wells/index.shtml). 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:

- **November 14, 2014** – Well Decommissioning Report
  File to be named: WELL_DCM_R_yyyy-mm-dd RO2526

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.

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*)

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

DETAILED SITE HISTORY

Previous Environmental Activities at Site

On January 12, 1987, contamination by petroleum hydrocarbons was discovered during excavation and removal of a waste-oil underground storage tank (UST) and three gasoline USTs from the Site. With this discovery, Alameda County Environmental Health (ACEH) opened the release/leak case number RO651. In a letter dated July 11, 1997, ACEH confirmed that no further action was required at the Site. However, methyl tert-butyl ether (MTBE) was not requested or required to be analyzed prior to the time of closure. Therefore, the remediation and monitoring infrastructure (nine monitoring wells and one remediation well) were removed from the Site, with the exception of remediation piping which was left under the main driveway. No additional environmental work was conducted at the Site until product line removal and upgrade construction activities in October and November of 2002. Historical data prior to closure of ACEH Case No.RO651, including geologic cross-sections, boring location maps, summarized soil and groundwater laboratory analytical results, and remediation system data, are mostly available within the ACEH files. However, due to the dates of completion and incomplete records, soil boring logs could not be located for the various subsurface investigations conducted prior to 1997.

In November 2002, URS oversaw a product line upgrade at the Site. Numerous soil samples were collected during the product line upgrading activities from depths ranging between 3.5 and 7.5 feet (ft) below ground surface (bgs). Gasoline Range Organics (GRO, C6-C12) was detected above laboratory reporting limits in six of the 20 collected soil samples, including over-excavation samples, at concentrations up to 4,000 milligrams per kilogram (mg/kg) in sample S-D7. Benzene was detected above laboratory reporting limits in one of the 20 soil samples collected at a concentration of 0.89 mg/kg in sample S-L2. Toluene, ethylbenzene, and total xylenes were detected above laboratory reporting limits in four of the 20 soil samples collected at maximum concentrations of 220 mg/kg, 150 mg/kg, and 1,100 mg/kg, respectively, in sample S-D7. MTBE was detected above laboratory reporting limits in 14 of the 20 collected soil samples at maximum concentrations of 83 mg/kg in sample S-L3.

Two groundwater samples (T-1 and BT-1) were collected during product line replacement activities. Sample T-1 was collected at eight ft bgs from the area underneath dispenser 8 (S-D8-5) and BT-1, collected from groundwater extracted during excavation activities. A water sample (Sump-1) was also collected from the sump for UST1, which appeared to contain light-non aqueous phase liquid (LNAPL). Laboratory analysis of sample Sump-1 indicated very high concentrations of GRO, benzene, toluene, ethylbenzene, and xylenes (BTEX), and MTBE, most likely due to the presence of LNAPL within the sump. GRO was detected above the laboratory reporting limit in sample T-1 at a concentration of 4,200 micrograms per liter (µg/L). BTEX was detected above the laboratory reporting limit in sample T-1 at concentrations of 300 µg/L, 3,200 µg/L, 1,300 µg/L, and 11,000 µg/L, respectively. MTBE was reported above the laboratory reporting limit in both samples T-1 and BT-1 at concentrations of 4,900 µg/L and 1,800 µg/L, respectively. Concentrations discovered during product line replacement activities indicated a potential release. Therefore, an Unauthorized Release Report was issued for the Site on January 21, 2003. Field activities are summarized in the URS *Product Line Removal and Upgrade Soil Sampling Report* dated January 31, 2003. A site map depicting sampling locations is provided as Drawing 2. A summary of laboratory analytical data are provided in Appendix C.

Additional groundwater investigation activities were carried out at the Site in March and May 2004. A total of 20 soil samples and four groundwater samples were collected during the additional investigation. GRO was detected above the laboratory reporting limits in one of the 20 soil samples at a

concentration of 350 mg/kg in sample SB-4-1.0. Toluene and total xylenes were detected above the laboratory reporting limits in soil samples collected from SB-1-5 at concentrations of 0.096 mg/kg and 0.016 mg/kg, respectively. MTBE was detected above laboratory reporting limits in three of the 20 soil samples at maximum concentrations of 0.027 mg/kg in samples SB-3-13 and SB-3-23.0. No additional analytes were detected above their respective reporting limits.

GRO was detected above laboratory reporting limits in one of the four groundwater samples collected at a concentration of 88 µg/L in sample SB-3. Toluene was detected above the laboratory reporting limit in one of the four groundwater samples collected at a concentration of 1.4 µg/L in sample SB-2. MTBE was detected above the laboratory reporting limit in two of the four samples at a concentration of 34 µg/L in samples SB-3 and SB-5. No additional analytes were detected above their respective reporting limits.

On August 30, 2004, URS received a letter from ACEH requesting additional field work at the Site to complete the scope of work proposed in the original work plan and addendum. The ACEH also requested depth-discrete groundwater sampling.

URS addressed the ACEH requests by conducting a soil and groundwater investigation. URS collected twelve depth-discrete groundwater samples from six locations (HP-3 through HP-8). URS also collected 26 soil samples from six onsite borings (SB-7 through SB-8 and HP-3). Soil analytical results from this investigation are summarized as follows:

- GRO was detected above the laboratory reporting limit in five of the 26 samples at concentrations ranging from 0.31 mg/kg (SB-11-6.5) to 220 mg/kg (SB-11-11.5);
- Total Xylenes were detected above the laboratory reporting limit in two of the 26 samples at concentrations of 0.011 mg/kg (SB-8-29.5) and 0.012 mg/kg (SB-11-29.5); and
- MTBE was detected above the laboratory reporting limit in 10 of the 26 soil samples at concentrations ranging from 0.0069 mg/kg (SB-9-19.5) and 0.56 mg/kg (SB-9-13.5).

Groundwater analytical results from this investigation are summarized as follows:

- GRO was detected above the laboratory reporting limit in six of the 12 samples collected at concentrations ranging from 72 µg/L (HP-6-30) and 1,300 µg/L (HP-7-20);
- Benzene was detected above the laboratory reporting limit in three of the 12 samples at concentrations ranging from 0.64 µg/L (HP-3-35) to 1.6 µg/L (HP-4-18);
- Toluene was detected above the laboratory reporting limit in eight of the 12 samples collected at concentrations ranging from 7.0 µg/L (HP-5-18) to 38 µg/L (HP-4-18);
- Ethylbenzene was detected above the laboratory reporting limit in seven of the 12 samples at concentrations ranging from 0.94 µg/L (HP-5-18) to 5.4 µg/L (HP-4-18);
- Total Xylenes were detected above the laboratory reporting limit in eight of the 12 samples at concentrations ranging from 6.2 µg/L (HP-5-18) to 27 µg/L A(HP-4-18); and
- MTBE was detected above the laboratory reporting limit in seven of the 12 samples collected at concentrations ranging from 6.6 µg/L (HP-6-30) to 3,700 µg/L (HP-7-30).

Results of this subsurface investigation are provided in Appendix C.

On June 25 and 26, 2007, Stratus observed RSI Drilling (RSI) advance a total of eight soil borings in four distinct locations on the north side of Park Boulevard, north of the Site, to evaluate the off-site horizontal extent of petroleum hydrocarbon impacted soil and groundwater. Soil borings SB-12 through SB-15 and Hydropunch® borings HP-9 through HP-12 were installed along the north side of Park

Boulevard. Each soil boring was advanced to a maximum depth of 30 feet bgs, with each Hydropunch® boring advanced to a maximum depth of 25 ft bgs.

MTBE was detected above the laboratory reporting limit of 0.005 mg/kg in two of the 16 soil samples collected June 25 and 26, 2007 at concentrations of 0.0087 mg/kg in boring sample SB12-15 and 0.0065 mg/kg in boring sample SB15-23. The remaining analytes were not detected above their respective reporting limits. GRO was detected above the laboratory reporting of 50 µg/L in three of the seven groundwater samples collected at concentrations of 51 µg/L in sample HP9-13, 59 µg/L in sample HP11-24, and 84 µg/L in sample HP12-25. Benzene was detected above the laboratory reporting limit of 0.50 µg/L in two of the seven groundwater samples collected at concentrations of 0.63 µg/L in sample HP11-24 and 0.80 µg/L in sample HP10-24. MTBE was detected above the laboratory reporting limit of 0.50 µg/L in each of the seven groundwater samples collected at concentrations ranging from 0.78 µg/L in sample HP10-16 to 110 µg/L in sample HP12-25. The remaining analytes were not detected above their respective reporting limits in the collected Hydropunch® samples. Results were reported by Broadbent in the *Offsite Soil and Ground-Water Investigation Report* dated August 29, 2007.

Monitoring wells MW-11A, MW-11B, MW-12A, MW-12B, MW-13A and MW-13B were installed by Stratus downgradient of the Site in March 2009. These wells were constructed as shallow wells (MW-11A, MW-12A, and MW-13A) and deeper wells (MW-11B, MW-12B, and MW-13B). The shallow wells were completed to total depths around 18 ft bgs and the deeper wells were advanced to approximately 30 ft bgs. The highest concentrations of petroleum compounds were detected in well MW-12B, directly across the street from the Site in the downgradient direction (Drawing 2). Results of this investigation were presented in an investigation report by Broadbent (Broadbent, 2009).

Current hydrocarbon concentrations detected in Site monitoring wells are primarily MTBE, with the highest concentrations being detected in well MW-12B. Lower concentrations of MTBE are detected in wells MW-12A, MW-11B, MW-13A, and MW-13. This current data indicates that the extent of MTBE downgradient of the Site is not defined.

References

ACEH, 15 April 2003. *Fuel Leak Case No.RO0002526, Arco #2107, 3310 Park Blvd., Oakland, CA 94610.* Letter to Atlantic Richfield Company.

ACEH 30 August 2004. *Fuel Leak Case No.RO0002526, Arco #2107, Active Automobile Service Station at 3310 Park Blvd., Oakland, California.* Letter to Atlantic Richfield Company.

ACEH, 10 January 2005. *Fuel Leak Case No.RO0002526, ARCO #2107, Active Service Station at 3310 Park Blvd., Oakland, California – Response to Report and Workplan*.

ACEH, 16 October 2006. *Fuel Leak Case No.RO0002526, ARCO #2107, Active Service Station at 3310 Park Blvd., Oakland, California – Work Plan Approval*.

Broadbent & Associates, Inc., 29 August 2007. *Offsite Soil and Ground-Water Investigation Report, Atlantic Richfield Company Service Station #2107, 3310 Park Boulevard, Oakland, California; ACEH Case #RO0002526.*

California Regional Water Quality Control Board, San Francisco Bay Region, June 1999. *East Bay Plain Groundwater Basin, Beneficial Use Evaluation Report, Alameda and Contra Costa Counties, CA*.

Muir, Kenneth S., 1993. *Classification of Groundwater Recharge Potential in the East Bay Plain, Alameda County, California*. Alameda County Flood Control and Water Conservation District.

State Water Resources Control Board. 17 April 2012*. Low-Threat Underground Storage Tank Case Closure Policy.*

URS, 31 January 2003. *Product Line Removal and Upgrade Soil Sampling Report.*

URS, 29 October 2003. *Addendum to Work Plan for Additional Investigation*.

URS, 11 March 2004. *Second Addendum to Work Plan for Additional Investigation.*

URS, 12 August 2004. *Site Investigation Report and Well Installation Workplan, Atlantic Richfield Company Service Station #2107, 3310 Park Boulevard, Oakland, California, Fuel Leak Case No. RO0002526, URS Project No. 38486908.0013601*.

URS, 30 November 2004. *Additional Site Investigation Report and Workplan for Offsite Investigation, Atlantic Richfield Company Service Station #2107, 3310 Park Boulevard, Oakland, California, Alameda County Case No. RO-0002526*.

URS, 5 April 2005. *Conduit and Well Survey Report and Work Plan Addendum for Offsite Investigation, Atlantic Richfield Company Service Station #2107, 3310 Park Boulevard, Oakland, California, Alameda County Case No. RO-0002526*.

APPENDIX C

PERMITS

Alameda County Public Works Agency - Water Resources Well Permit

Public Works Agency
Alameda County

399 Elmhurst Street
Hayward, CA 94544-1395
Telephone: (510)670-6633 Fax:(510)782-1939

Application Approved on: 07/23/2014 By jamesy

Permit Numbers: W2014-0676 to W2014-0681
Permits Valid from 08/18/2014 to 08/29/2014

Application Id: 1405440575125 **City of Project Site:** Oakland
Site Location: 3310 Park Blvd.
Project Start Date: 08/18/2014 **Completion Date:** 08/29/2014
Assigned Inspector: Contact Steve Miller at (510) 670-5517 or stevem@acpwa.org

Applicant: Broadbent & Associates, Inc. - Lu Damerell
4820 Business Center Drive #110, Fairfield, CA 94534 **Phone:** 707-455-7290
Property Owner: Chuck Carmel
P.O. Box 1257, San Ramon, CA 94583 **Phone:** --
Client: ** same as Property Owner **
Contact: Lu Damerell **Phone:** --
Cell: 510-364-2079

Total Due: $2382.00
Receipt Number: WR2014-0294 **Total Amount Paid:** $2382.00
Payer Name : Broadbent & Associates, Inc. Paid By: CHECK **PAID IN FULL**

Works Requesting Permits:

Well Destruction-Monitoring - 6 Wells
Driller: Cascade Exploration - Lic #: 938110 - Method: press **Work Total: $2382.00**

Specifications

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth	State Well #	Orig. Permit #	DWR #
W2014-0676	07/23/2014	11/16/2014	MW-11A	10.00 in.	2.00 in.	5.00 ft	20.00 ft	1S/3W31F	W2009-0134	e0087955
W2014-0677	07/23/2014	11/16/2014	MW-11B	10.00 in.	2.00 in.	5.00 ft	30.00 ft	1S/3W31F	W2009-0135	e0087956
W2014-0678	07/23/2014	11/16/2014	MW-12A	10.00 in.	2.00 in.	5.00 ft	18.00 ft	1S/3W31F	W2009-0136	e0087957
W2014-0679	07/23/2014	11/16/2014	MW-12B	10.00 in.	2.00 in.	5.00 ft	30.00 ft	1S/3W31F	W2009-0137	e0087958
W2014-0680	07/23/2014	11/16/2014	MW-13A	10.00 in.	2.00 in.	5.00 ft	16.50 ft	1S/3W31F	W2009-0138	e0087960
W2014-0681	07/23/2014	11/16/2014	MW-13B	10.00 in.	2.00 in.	5.00 ft	22.50 ft	1S/3W31F	W2009-0139	e0087961

Specific Work Permit Conditions

1. Drilling Permit(s) can be voided/ cancelled only in writing. It is the applicant's responsibility to notify Alameda County Public Works Agency, Water Resources Section in writing for an extension or to cancel the drilling permit application. No drilling permit application(s) shall be extended beyond ninety (90) days from the original start date. Applicants may not cancel a drilling permit application after the completion date of the permit issued has passed.

2. Prior to any drilling activities, it shall be the applicant's responsibility to contact and coordinate an Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits or agreements required for that Federal, State, County or City, and follow all City or County Ordinances. No work shall begin until all the permits and requirements have been approved or obtained. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County an Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.

3. Compliance with the well-sealing specifications shall not exempt the well-sealing contractor from complying with appropriate State reporting-requirements related to well construction or 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. Include permit number and site map.

4. Applicant shall submit the copies of the approved encroachment permit to this office within 60 days.

5. 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 and liability in connection with or resulting from the exercise of this Permit including, but not limited to, property damage, personal injury and wrongful death.

6. Applicant shall contact assigned inspector listed on the top of the permit at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.

7. Permittee, permittee's contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on or off-site storm sewers, dry wells, or waterways or be allowed to move off the property where work is being completed.

8. Remove the Christy box or similar structure.

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.

After the seal has set, backfill the remaining hole with concrete or compacted material to match existing conditions.

9. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of $500.00.

APPENDIX D

UTILITY CLEARANCE SURVEY

PERSONNEL: DTH

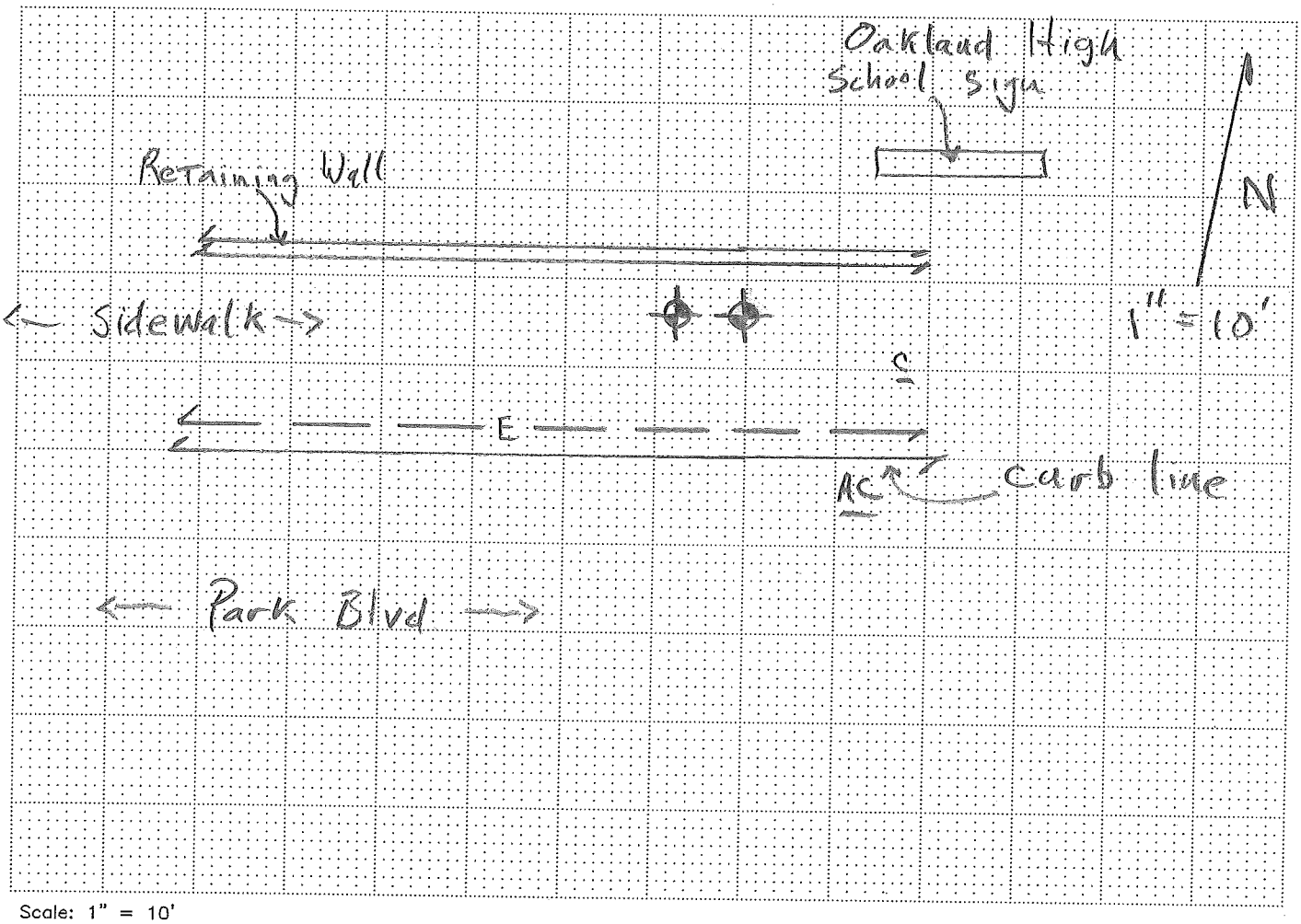
JOB: 14-1034.32 | DATE: 8/14/14

NORCAL GEOPHYSICAL CONSULTANTS INC.

CLIENT: Broadbent & Assoc.

LOCATION: 3310 Park Blvd., Oakland

BORING: MW-12 A & B



Scale: 1" = 10'

EXPLANATION

- Original Boring Location
- Final Boring Location
- Existing Well Location
- GPR Traverse
- OR ← → Localized GPR Anomaly
- Utility Alignment

Utilities

- _ T (Telephone, Comm.)
- ✓ E (Electric)
- _ NG (Natural Gas)
- _ CA (Compressed Air)
- _ STM (Steam)
- _ SS (Sanitary Sewer)
- _ SD (Storm Drain)
- _ W (Water)
- _ FS (Fire Supression)
- _ UU (Undifferentiated Utility)

Surface

- _ RC (Reinforced Concrete)
- ✓ AC (Asphalt)
- ✓ C (Concrete)
- _ Soil
- _ Gravel
- _ other

NOTES

Equipment:
- ✓ GPR (Radar)
- ✓ RD 4000
- ✓ M Scope
- _ other

Procedure:
- _ EMC (Conduction)
- ✓ EMI (Induction)
- ✓ Ambient
- ✓ GPR

Surface Conditions:
- _ Wet
- ✓ Dry
- _ other

REMARKS

PERSONNEL: DTH

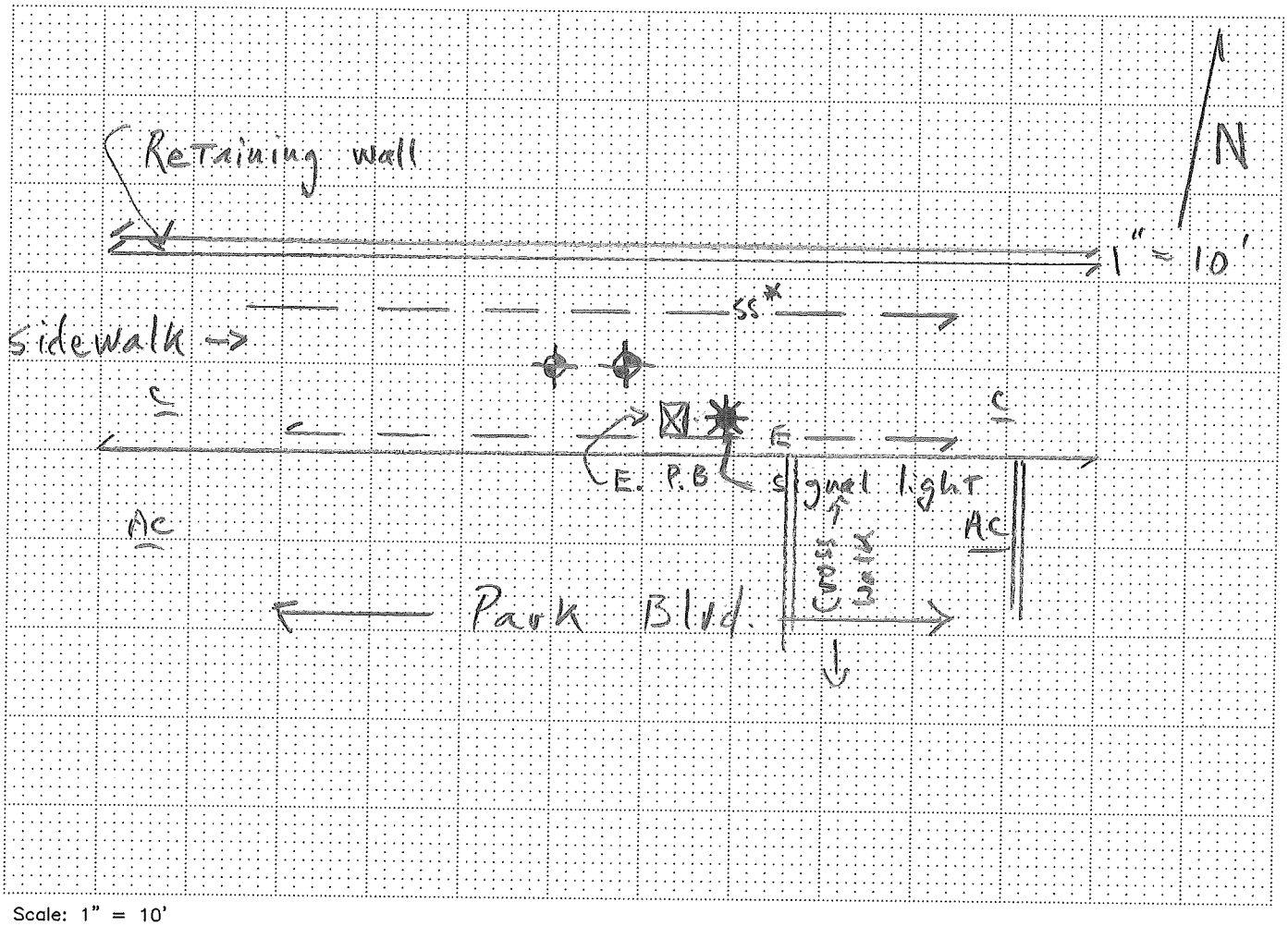
JOB: 14-1034.32 | DATE: 8/14/14

NORCAL GEOPHYSICAL CONSULTANTS INC.

CLIENT: Broadbeat & Assoc.

LOCATION: 3310 Park Blvd., Oakland

BORING: MW-13 A & B



Scale: 1" = 10'

EXPLANATION

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- Existing Well Location
- GPR Traverse
- OR → Localized GPR Anomaly
- Utility Alignment

Utilities

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- _ NG (Natural Gas)
- _ CA (Compressed Air)
- _ STM (Steam)
- ✓ SS (Sanitary Sewer)
- _ SD (Storm Drain)
- _ W (Water)
- _ FS (Fire Supression)
- _ UU (Undifferentiated Utility)

Surface

- _ RC (Reinforced Concrete)
- ✓ AC (Asphalt)
- ✓ C (Concrete)
- _ Soil
- _ Gravel
- _ other

NOTES

Equipment:
- ✓ GPR (Radar)
- _ RD 4000
- ✓ M Scope
- _ other

Procedure:
- _ EMC (Conduction)
- _ EMI (Induction)
- _ Ambient
- ✓ GPR

Surface Conditions:
- _ Wet
- ✓ Dry
- _ other

REMARKS

SS* = As marked by others.

14-1089.32

PERSONNEL: D.Bissini / C.Bissini / DTH

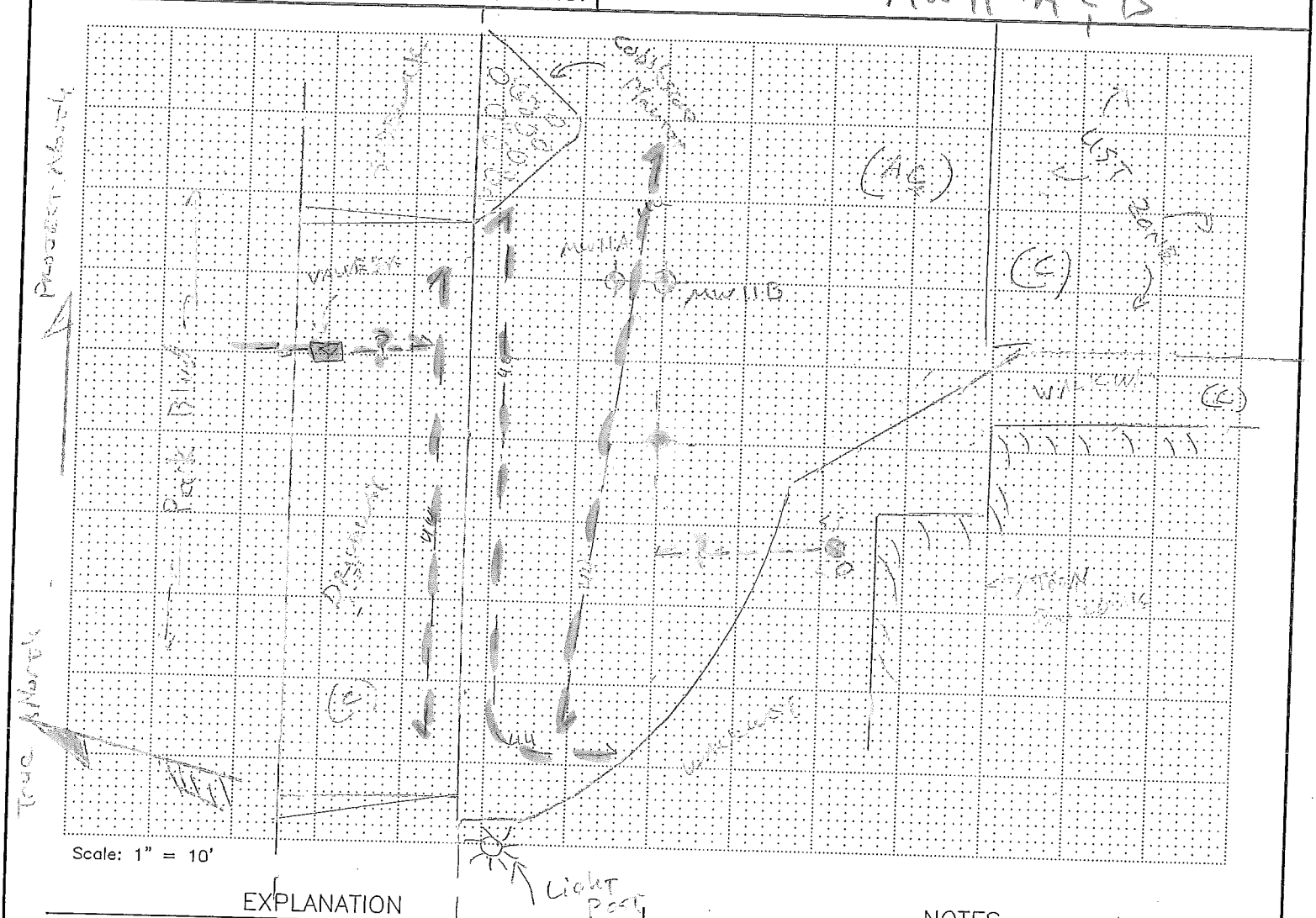
JOB: ~~13-1089.16~~ | DATE: 12-23-13

CLIENT: Broadbent & Associates

LOCATION: BP-Arco Station No. 2107
3310 Park Blvd, Oakland, CA

BORING: ~~CTPH~~ MW11 A & B

NORCAL GEOPHYSICAL CONSULTANTS INC.



EXPLANATION

- Original Boring Location
- Final Boring Location
- Existing Well Location
- GPR Traverse
- OR — Localized GPR Anomaly
- Utility Alignment

Utilities

- _ T (Telephone, Comm.)
- _ E (Electric)
- _ NG (Natural Gas)
- _ CA (Compressed Air)
- _ STM (Steam)
- _ SS (Sanitary Sewer)
- _ SD (Storm Drain)
- _ W (Water)
- _ FS (Fire Supression)
- / UU (Undifferentiated Utility)

Surface

- _ RC (Reinforced Concrete)
- _ AC (Asphalt)
- _ C (Concrete)
- _ Soil
- _ Gravel
- _ other

NOTES

Equipment:
- / GPR (Radar)
- _ RD 4000
- / M Scope
- _ other

Procedure:
- _ EMC (Conduction)
- / EMI (Induction)
- / Ambient
- / GPR

Surface Conditions:
- _ Wet
- _ Dry
- _ other

REMARKS

-W-? WATER SERVICE LATERAL NOT DETECTED

-SS-? SANITARY SEWER LATERAL NOT DETECTED

SS — Sanitary sewer clean-out

alignments of water & sewer are estimated

APPENDIX E

UNIFORM HAZARDOUS WASTE MANIFEST

NO. 712966

NON-HAZARDOUS WASTE DATA FORM

BESI # 243460

GENERATOR

Generator's Name and Mailing Address
BP WEST COAST PRODUCTS, LLC
P.O. BOX 80249
RANCHO SANTA MARGARITA, CA 92688

Generator's Site Address (If different than mailing address)
BP 02107
3310 PARK BOULEVARD
OAKLAND, CA 94610

Generator's Phone: 949-460-5200

Container type removed from site:
XX Drums ☐ Vacuum Truck ☐ Roll-off Truck ☐ Dump Truck
☐ Other _____
Quantity 1

Container type transported to receiving facility:
☐ Drums XX ☐ Vacuum Truck ☐ Roll-off Truck ☐ Dump Truck
☐ Other _____
Quantity 1 Volume 55 gallons

WASTE DESCRIPTION NON-HAZARDOUS WATER

GENERATING PROCESS WELL PURGING / DECON WATER

COMPONENTS OF WASTE	PPM	%
1. WATER		99-100%
2. TPH		<1%
3.		
4.		

Waste Profile _____ PROPERTIES: pH 7-10 ☐ SOLID XX LIQUID ☐ SLUDGE ☐ SLURRY ☐ OTHER _____

HANDLING INSTRUCTIONS: _____

Generator Printed/Typed Name: Larry Moothart of BESI on behalf of generator
Signature: lw
Month 9 Day 3 Year 14

The Generator certifies that the waste as described is 100% non-hazardous

TRANSPORTER

Transporter 1 Company Name: BELSHIRE
Phone#: 949-460-5200
Transporter 1 Printed/Typed Name: Larry Moothart
Signature: lw
Month 9 Day 3 Year 14
Transporter Acknowledgment of Receipt of Materials

Transporter 2 Company Name: NIETO & SONS TRUCKING, INC.
Phone#: 714-990-8855
Transporter 2 Printed/Typed Name: Miguel Garcia
Signature: [signature]
Month 9 Day 16 Year 14
Transporter Acknowledgment of Receipt of Materials

RECEIVING FACILITY

Designated Facility Name and Site Address
DEMENNO KERDOON
2000 N. ALAMEDA ST.
COMPTON, CA 90222
Phone#: 310-537-7100

Printed/Typed Name: Alexander Reyes
Signature: Alexander Reyes
Month 09 Day 16 Year 14
Designated Facility Owner or Operator: Certification of receipt of materials covered by this data form.

02107
1058499