

20356



Atlantic Richfield Company
(a BP affiliated company)

6 Centerpointe Drive, Room 172
La Palma, CA 90623-1066
Phone: (714) 670-5303
Fax: (714) 670-5195

RECEIVED
MAY 10 2005
ENVIRONMENTAL HEALTH & SAFETY

May 9, 2005

Re: Soil and Groundwater Investigation Work Plan addendum
Former BP Service Station #11117
7210 Bancroft Avenue
Oakland, CA
ACEHS Fuel Leak Case No. ~~820080356~~

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

Submitted by:

Kyle Christie
Environmental Business Manager



May 9, 2005

Mr. Robert Schultz
Hazardous Material Specialist
Alameda County Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

**SUBJECT: Soil and Groundwater Investigation Work Plan Addendum
Former BP Service Station #11117
7210 Bancroft Avenue, Oakland, California
ACEHS Fuel Leak Case No. RO0000356**

Dear Mr. Schultz:

On behalf of the Atlantic Richfield Company, RM -a BP affiliated company, URS Corporation (URS) has prepared this *Soil and Groundwater Investigation Work Plan Addendum (Addendum)* to revise the proposed scope for the additional soil and groundwater characterization at Former BP Service Station #11117, 7210 Bancroft Avenue, Oakland, California (the Site, Figure 1). This Addendum was prepared to request a change in scope to the URS *Soil and Groundwater Investigation Work Plan (Work Plan)* dated November 28, 2003, which was approved by the Alameda County Environmental Health Services (ACEHS) in a letter dated December 29, 2004. A copy of the ACEHS letter is provided as Attachment A. This addendum includes a discussion of the revised proposed scope of work and schedule.

1.0 SITE BACKGROUND

The Site is an active 76-branded gasoline retail outlet located at the north corner of Bancroft Avenue and 73rd Avenue in Oakland, California (Figure 1). The land use in the immediate vicinity of the Site is mixed commercial and residential. BP acquired the facility from Mobil Oil Corporation in 1989. In January 1994, BP transferred the property to TOSCO Marketing Company (TOSCO) and has not operated the facility since that time.

The Site consists of a service station building and three 12,000-gallon gasoline underground storage tanks (USTs) and one 10,000-gallon diesel UST with associated piping and dispensers. The Site is covered with asphalt or concrete surfacing except for planters along the southeastern and southwestern property boundaries and at the north corner of the property (Figures 2 and 3). A detailed Site background is included in the Site Features and Background Section of the *Soil and Groundwater Investigation Work Plan (Work Plan)* dated November 28, 2003.

Mr. Robert Schultz
May 9, 2005
Page 2 of 6

2.0 PROPOSED SCOPE OF WORK

The scope of work proposed in URS' November 2003 *Work Plan* included activities to complete source area characterization and groundwater plume delineation. Twelve soil borings (A-1 through A-12) were proposed to be advanced in the vicinity of the possible hydrocarbon source areas such as the locations of the former and current USTs, product dispensers, and in the vicinity of MW-4 to adequately characterize the lateral and vertical extent of petroleum hydrocarbons in soils in the identified source areas. To further define the downgradient, cross-gradient and upgradient (i.e., northern through eastern through southern) extent of the groundwater plume, URS proposed advancing borings at six sample locations (two borings per location) using a GeoProbe™ or equivalent direct push sampling rig.

Upon further review of the proposed sampling locations for source area and groundwater plume characterization, URS does not believe that all the previously proposed locations are necessary and proposes the following two-phased scope of work. The first phase of work will be on-site to assess the source area. An off-site assessment will be completed during the second phase of work, using the first phase of work to confirm that the proposed off-site locations are adequate and to install additional on-site groundwater monitoring or remediation wells.

2.1 PHASE ONE – ON-SITE SOURCE AREA CHARACTERIZATION

URS' proposed revised scope of work includes advancing six soil borings (A-1 through A-6), to help assess the lateral and vertical extent of petroleum hydrocarbons in soils in the identified source areas. Soil boring A-1 is proposed to assess the extent of hydrocarbons in soil in the vicinity of well MW-1 below 25 feet below ground surface (bgs), the total depth explored during the 1991 well installation. During historical low groundwater levels (greater than 25 feet bgs) groundwater concentrations in well MW-1 are elevated. Soil borings A-2 and A-3 are proposed to provide soil and groundwater data between wells MW-1 and MW-4. Soil boring A-4 is proposed in the vicinity of well MW-4. Soil boring A-5 and A-6 are proposed in the vicinity of the former and current USTs and product dispensers. The proposed soil boring locations are presented on Figure 1. Soil boring locations A-4 and A-5 may potentially be completed as air sparge and vapor extraction wells for possible future remediation. The completion of the remediation wells will be completed during phase two, dependant upon concentrations and lithology encountered during drilling activities. Remediation well installation details are provided in Phase Two - Section 2.2.2.1 Remediation Well Installation of this report.

2.1.1 Preliminary Field Activities

Prior to initiating field activities, URS will obtain Alameda County Public Works permits, prepare a site-specific Health and Safety Plan (HASP) for the proposed work, and conduct a subsurface utility clearance. The utility clearance will include notifying Underground Service Alert (USA) of the pending work a minimum of 48-hours prior to initiating the field investigation, and securing the services of a private utility locating company to confirm the absence of underground utilities at each boring location. The HASP will address the proposed

Mr. Robert Schultz
May 9, 2005
Page 3 of 6

boring/well installations and groundwater sampling. A copy of the HASP will be available on-site at all times. The subcontractor(s) performing field activities will be provided with a copy of the HASP prior to initiating work.

2.1.2 Soil Boring Advancement and Sampling

With the exception of boring A-1, the borings will be advanced to a total depth of approximately 30 feet bgs, or approximately 10 feet below expected depth to first encountered groundwater. Soil boring A-1 will be advanced to a depth of approximately 40 feet bgs to assess the soil and groundwater conditions below 25 feet bgs, dependant upon conditions observed in the field. In order to collect depth discrete groundwater samples within a continuously cored direct push soil boring, or conduct soil sampling while using depth discrete groundwater sampling probes, URS proposes a closely spaced pair of borings (within 2 feet apart) at each boring location. The lithologic characterization of the initial boring will provide the information necessary to determine the proper discrete groundwater sampling depths. Soil samples will be collected for analysis every 5-feet, at the capillary fringe and at signs of obvious soil impacts. Depth discrete groundwater samples will be collected at the saturated/unsaturated zone interface, 10 feet below saturated/unsaturated zone interface, and at multiple discrete water-bearing zones and lithologic changes, if encountered within the initial boring.

Soil samples will be logged by URS personnel under the supervision of a State of California Professional Geologist, according to the Unified Soil Classification System (USCS), and monitored for grain size, color, consistency, staining, and odor using a photoionization detector (PID). Soil samples collected for potential chemical analysis will be sealed with Teflon® tape, capped, and placed in an ice-filled cooler for transportation to the laboratory. Soil samples collected during this investigation will be submitted to a California State-certified analytical laboratory for analysis of gasoline range organics (GRO), benzene, toluene, ethylbenzene, and xylenes (BTEX), and fuel additives (methyl tert-butyl ether [MTBE], tert-butyl alcohol [TBA], ethyl tert-butyl ether [ETBE], tert-amyl methyl ether [TAME], di-isopropyl ether [DIPE], 1,2-dichloroethane [1,2-DCA], ethylene dibromide [EDB], and ethanol) using EPA Method 8260B.

Depth discrete groundwater samples will be collected, labeled and placed in ice-filled coolers for preservation, and sent under standard chain-of-custody procedures to a California state-certified laboratory. The groundwater samples will be analyzed for the presence of GRO, BTEX, and fuel additives using EPA Method 8260B.

Upon completing sampling activities, each boring will be grouted to ground surface with Portland cement.

Mr. Robert Schultz
May 9, 2005
Page 4 of 6

2.2 PHASE TWO – OFF-SITE PLUME DELINEATION AND REMEDIATION WELL INSTALLATION

URS' proposed revised scope of work includes advancing four off-site soil borings (A-7 through A-10), to help assess the extent of the groundwater plume in the area southeast and north to northeast of the source area (Figure 2). Soil borings A-7 through A-9 are proposed to assess the extent of hydrocarbons in soil and groundwater downgradient of the source area. Soil boring A-10 is proposed upgradient and in the vicinity of well MW-9 to further assess groundwater concentrations. The proposed off-site soil boring locations are presented on Figure 1. The final location of the off-site soil boring locations may be adjusted after a review the soil and groundwater results from the on-site phase of work. If relocation of the off-site boring locations is deemed necessary, a map with the new boring locations will be submitted to the ACEHS for approval.

2.2.1 Preliminary Field Activities

Prior to initiating field activities, URS will obtain necessary permits, prepare a site-specific Health and Safety Plan (HASP) for the proposed work, and conduct a subsurface utility clearance as described in the previous preliminary field activities section.

2.2.1.1 Soil Boring Advancement and Sampling

The borings will be advanced to a total depth of approximately 30 feet bgs, or approximately 10 feet below expected depth to first encountered groundwater. In order to collect depth discrete groundwater samples within a continuously cored direct push soil boring, or conduct soil sampling while using depth discrete groundwater sampling probes, URS proposes a closely spaced pair of borings (within 2 feet apart) at each boring location. The lithologic characterization of the initial boring will provide the information necessary to determine the proper discrete groundwater sampling depths. Soil samples will be collected for analysis every 5-feet, at the capillary fringe and at signs of obvious soil impacts. Depth discrete groundwater samples will be collected at the saturated/unsaturated zone interface, 10 feet below saturated/unsaturated zone interface, and at multiple discrete water-bearing zones and lithologic changes, if encountered within the initial boring.

Soil samples will be logged by URS personnel under the supervision of a State of California Professional Geologist, according to the Unified Soil Classification System (USCS), and monitored for grain size, color, consistency, staining, and odor using a photoionization detector (PID). Soil samples collected for potential chemical analysis will be sealed with Teflon® tape, capped, and placed in an ice-filled cooler for transportation to the laboratory. Soil samples collected during this investigation will be submitted to a California State-certified analytical laboratory for analysis of GRO, BTEX and fuel additives using EPA Method 8260B.

Mr. Robert Schultz
May 9, 2005
Page 5 of 6

Depth discrete groundwater samples will be collected, labeled and placed in ice-filled coolers for preservation, and sent under standard chain-of-custody procedures to a California state-certified laboratory. The groundwater samples will be analyzed for the presence of GRO, BTEX, and fuel additives using EPA Method 8260B.

Upon completing sampling activities, each boring will be grouted to ground surface with Portland cement.

2.2.2.1 Remediation Well Installation

After reviewing concentration data and soil boring logs from phase one soil borings A-4 and A-5, a pair of air sparge and vapor extraction wells are proposed to be installed for future remediation. The remediation wells will be installed as two-inch diameter, flush-threaded, Schedule 40 stainless steel or PVC casing with 0.020-inch factory-slotted screen. The well will screen no more than a 5-foot interval and will be depending upon the lithology encountered in the proposed locations. The vapor extraction wells will be screened above groundwater from approximately 5 feet bgs to approximately 10 feet bgs, dependant upon depth to groundwater. The sparge wells will be screened from approximately 20 feet bgs to 25 feet bgs, dependant upon lithology encountered and depth to groundwater. Actual depths and screened intervals of the wells will be determined by the URS field geologist working under the supervision of a state professional geologist. A sand pack will be placed in the annular space across the entire screened interval, and will extend approximately 1 foot above the top of the screen for the well. A one-foot bentonite transition seal will be placed atop the sand pack, and a Portland cement seal will extend from the bentonite transition seal to ground surface. Finish to grade will consist of a traffic rated vault box set flush to grade, with a concrete surface seal. Top-of-casing will be sealed with a water tight locking well cap.

3.0 WASTE DISPOSAL

Investigation derived waste (IDW) will be temporarily stored in DOT-approved 55-gallon drums and stored on-site pending characterization and disposal. URS will coordinate with Dillard Environmental services (Dillard, under direct contract to RM) will transport and dispose of the IDW at an approved facility.

4.0 GEOTRACKER

In accordance with GeoTracker requirements, URS will upload well survey data, soil and groundwater analytical data, and groundwater gauging data related to this investigation.

5.0 PROPOSED SCHEDULE

URS will begin obtaining the necessary permits and access agreements to complete the work upon obtaining approval from ACEHS. URS anticipates submitting the soil and groundwater investigation report to the ACEHS within 60 days of receipt of all final laboratory analytical results from field activities. The data obtained from the proposed Site assessment activities will

Mr. Robert Schultz
May 9, 2005
Page 6 of 6

be evaluated. Based on the evaluation, a corrective action plan or a remedial action plan will be submitted proposing a cost-effective final cleanup solution for the remaining petroleum hydrocarbons in soil and groundwater.

6.0 LIMITATIONS

This report is based on data, Site conditions and other information that is generally applicable as of the date of the report, and the conclusions and recommendations herein are therefore applicable only to that time frame. Background information including but not limited to previous field measurements, analytical results, Site plans and other data have been furnished to URS by RM, their previous consultants, and/or third parties, which URS has used in preparing this report. URS has relied on this information as furnished, and is neither responsible for nor has confirmed the accuracy of this information.

Analytical data provided by the RM approved laboratory has been reviewed and verified by the laboratory. URS has not performed an independent review of the data and is neither responsible for nor has confirmed the accuracy of this data. Field measurements have been supplied by a groundwater sampling subcontractor. URS has not performed an independent review of the field sampling data and is neither responsible for nor has confirmed the accuracy of this data.

If you have any questions or concerns, please contact Lynelle Onishi at (510) 874-1758.

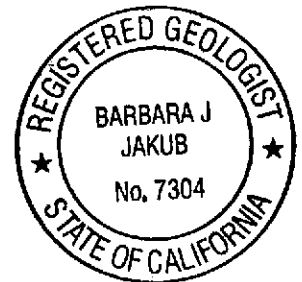
Sincerely,
URS CORPORATION



Lynelle Onishi
Project Manager



Barbara J. Jakub, P.G.
Senior Geologist

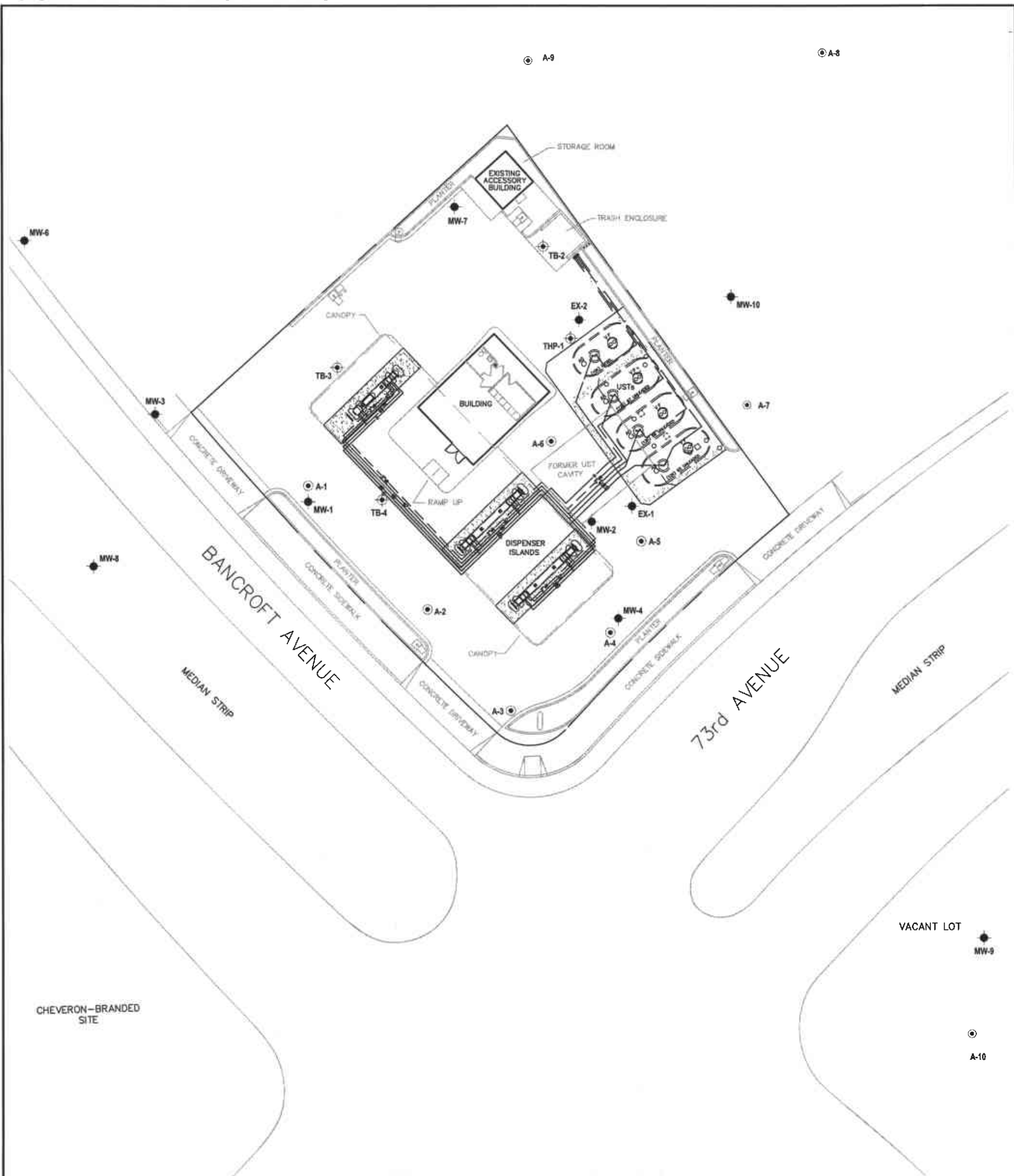


cc: Mr. Kyle Christie, RM (electronic file uploaded to ENFOS)
Mr. Ade Fagorala, San Francisco Bay Regional Water Quality Control Board, 1515 Clay
Street, Suite 1400, Oakland, California 94612
Ms. Liz Sewell, ConocoPhillips (electronic file uploaded to URS ftp server)

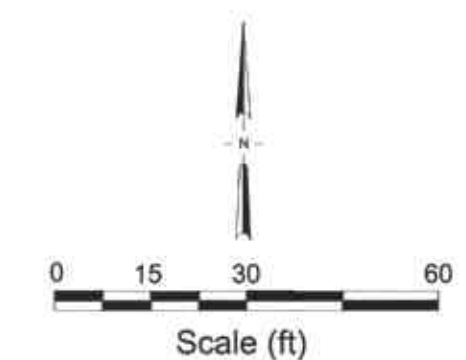
ATTACHMENTS

Figure 1 – Proposed Soil Boring Locations

Attachment A – ACEHS December 29, 2004 Letter



CHEVRON-BRANDED SITE



EXPLANATION	
	Soil Boring Location
	Monitoring Well Location
	Proposed Boring and Sampling Location
	S.W. F/g. Vapor recovery line 3" \varnothing
	D.W. F/g. Product lines 2" \varnothing w/ 3" \varnothing
	S.W. F/g. Tank vent lines 3" \varnothing
	New concrete slab

NOTE: SITE MAP ADAPTED FROM TOSCO MARKETING COMPANY AS-BUILT AND CAMBRIA ENVIRONMENTAL FIGURES. SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED.

URS	Project No. 38487251	PROPOSED SOIL BORING LOCATIONS	FIGURE 1
	ARCO Service Station #11117 7210 Bancroft Avenue Oakland, California		

Attachment A

ACEHS Directive Letter Dated December 29, 2004

ALAMEDA COUNTY
HEALTH CARE SERVICES



AGENCY

DAVID J. KEARS, Agency Director

December 29, 2004

Kyle Christie
Atlantic Richfield Company
6 Centerpointe Drive, LPR6-161
La Palma, CA 90623-1066

Jim Givens
One Eastmont Mall
Oakland, CA 94605

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

Liz Sewell
ConocoPhillips
76 Broadway
Sacramento, CA 95818

Subject: Fuel Leak Case No. RO0000356, BP #11117, 7210 Bancroft Avenue, Oakland, California – Workplan Approval

Dear Mssrs. Christie and Givens, and Ms. Sewell:

Alameda County Environmental Health (ACEH) has reviewed your November 28, 2003, *Soil and Groundwater Investigation Workplan* prepared by URS Corporation, Inc., and the case file for the above-referenced site. We concur with your workplan provided the following conditions are met:

1. Source area borings will be advanced to define the vertical extent of contamination.
2. If deemed necessary by your geologist or engineer to fully define the vertical and lateral extent of contamination, additional soil or groundwater samples will be collected as part of the current investigation efforts. ACEH will be informed via telephone or email of any additions to the sampling and analysis plan. Any additional work will follow the workplan-specified procedures. Dynamic investigations are consistent with USEPA protocol for expedited site assessments, which are scientifically valid and offer a cost-effective approach to fully define a plume and to help progress a case toward closure.
3. Sufficient data will be collected in the field and/or from historical site investigation to evaluate the present, historical and likely future rates and efficacy of intrinsic bioremediation. If deemed necessary by your geologist or engineer, groundwater analysis conducted during the current investigation will include the bioparameters DO, ORP, alkalinity, nitrate, sulfate, ferrous iron, and methane.
4. 72-hr advance written notification (email preferred) will be provided to ACEH prior to field sampling activities.

Please implement the proposed investigation and submit technical reports following the schedule below. In addition, we request that you address the following technical comments in your report.

TECHNICAL COMMENTS

1. Corrective Action Plan

URS states that a CAP will be prepared for the site 180 days after completion of an investigation report. To reduce the overall project costs and the time period to case closure, we request that

you present the investigation results in a single document together with your corrective action plan. In accordance with 23 CCR 2725, an assessment of the impacts, a feasibility study, and applicable cleanup levels need to be included in your CAP. We request that 1) your assessment summarize all subsurface investigation performed at the site, 2) your feasibility study evaluate at least three potentially feasible remedial technologies, and 3) your CAP propose cleanup goals and cleanup levels for the site. Your cleanup goals need to be consistent with water quality objectives for the basin. Soil and groundwater cleanup levels for the site need to be protective of human health and the environment, including offsite groundwater use, and need to address potential nuisance conditions. Prior to discontinuation of active remediation, the appropriate cleanup levels will need to be achieved. Please submit your CAP in the report requested below.

2. Groundwater Flow Direction

The calculated groundwater flow direction at your site and at the nearby Chevron service station has historically been to the north-northeast. Regionally, groundwater is expected to flow toward the southwest. The well survey for the site identified two water supply wells within 1/2 mile of the site: an industrial well and an irrigation well, both located to the north. Please address the apparent inconsistency of the local groundwater flow direction with the anticipated regional flow regime in the report requested below.

REPORT REQUEST

Please submit your *Soil and Water Investigation Report and Corrective Action Plan* by **August 1, 2005**. ACEH makes this request pursuant to California Health & Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2778 outline the responsibilities of a responsible party for an unauthorized release from an UST system, and require your compliance with this request.

Professional Certification and Conclusions/Recommendations

The California Business and Professions Code (Sections 6735 and 7835.1) requires that workplans 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.

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.

UNDERGROUND STORAGE TANK CLEANUP FUND

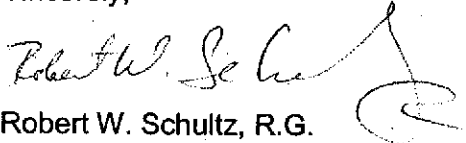
Please note that delays in investigation, late reports or enforcement actions by ACEH may result in you becoming ineligible to receive cleanup cost reimbursement from the state's Underground Storage Tank Cleanup Fund (senate Bill 2004).

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 County District Attorney or other appropriate agency, for enforcement. California Health and Safety Code, Section 25299.76 authorizes ACEH enforcement including administrative action or monetary penalties of up to \$10,000 per day for each day of violation.

Please call me at (510) 567-6719 with any questions regarding this case.

Sincerely,



Robert W. Schultz, R.G.
Hazardous Materials Specialist

cc: Diane Clark, Eastmont Town Center, LLC, 7200 Bancroft Ave., Oakland, CA 94605-1907
✓ Leonard Niles, URS Corporation, 500 12th St., Ste. 200, Oakland, CA 94607-4014
Donna Drogos, ACEH
Barney Chan, ACEH
Robert W. Schultz, ACEH