



RECEIVED

2:38 pm, Mar 27, 2009

Alameda County
Environmental Health

March 25, 2009

VIA ALAMEDA COUNTY FTP UPLOAD

Mr. Paresh Khatri
Alameda County Environmental Health
1331 Harbor Bay Parkway, Suite 250
Alameda, California 94502

Re: **Final Corrective Action Plan**
5175 Broadway, Oakland, California, ACEH Fuel Leak Case No. RO0000139

Dear Mr. Khatri:

On behalf of property owner Rockridge Heights LLC, Pangea Environmental Services, Inc (Pangea) has prepared this Final Corrective Action Plan (Final CAP). This Final CAP was prepared in response to Alameda County Environmental Health (ACEH) directive letter dated August 22, 2008.

INTRODUCTION

The planned corrective action will be as described in the "Revised Site Conceptual Model and CAP" dated July 23, 2008, and in the "CAP Addendum" dated August 11, 2008 (together considered the 'Draft CAP'), with the slight modification described herein. The modification is required because the development plan and schedule have slightly changed. Due to the recent economic crisis and the housing market collapse, there are no specific plans for site redevelopment.

The Draft CAP recommended two alternatives depending on the final development plan. Alternative #1 assumed site development with a subgrade parking garage, and involved soil excavation and biosparging system to cleanup subsurface contamination. Alternative #3 assumed *no* subgrade development, and involved installation of an aboveground remediation system (Dual Phase Extraction / Air Sparging).

Because there are no firm plans for site redevelopment at this time, the property owner would like to proceed with site remediation using the DPE/AS technique proposed in the approved Draft CAP. The property owner understands that, in the event a subgrade parking garage is built in the future, the Fund may not reimburse costs associated with encountered contamination during the subgrade work.

REVISED ALTERNATIVE #3 – REVISED DPE/AS

To help control cost during DPE/AS implementation, Pangea recommends minimizing new well installation by using many *existing monitoring wells for DPE and/or AS*. DPE/AS approach would be identical to the approach in the CAP, just fewer new wells and relying on existing wells for both remediation and monitoring. To monitor remedial effectiveness on site groundwater, Pangea would turn off the system prior to groundwater sampling – the downtime before sampling could be one week during initial monitoring and up to a month once groundwater impact has been significantly reduced. With this approach, additional remediation wells could be added later if needed based on system monitoring data.

PANGEA Environmental Services, Inc.

1710 Franklin Street, Suite 200, Oakland, CA 94612 Telephone 510.836.3700 Facsimile 510.836.3709 www.pangeaenv.com

The proposed DPE/AS wells and estimated primary influence areas are shown on Figure 24R. The proposed DPE/AS approach involves the following:

- Dual phase extraction (DPE) from a total of eleven (11) wells. This would include DPE in five (5) existing wells (MW-3A, MW-4A, MW-6A, MW-7B and MW-8A) and six (6) proposed new wells (wells DPE-1 through DPE-6). The new DPE wells will be screened from approximately 10 to 20 ft bgs, although wells may be shallower where bedrock is encountered. Well DPE-6 within the former UST excavation area will have the top of the well screen deeper to minimize potential short circuiting.
- Air sparging (AS) within six (6) existing wells (MW-1, MW-2C, MW-3C, MW-5B, MW-7C and MW-8C) and one new well (AS-1). Proposed well AS-1 will be screened from approximately 16 to 20 ft bgs, but may be shallower to avoid screening within site bedrock.
- Aboveground piping to control system installation costs.

As shown on Figure 24R, the proposed DPE/AS well network will target the primary impact area at the site, and even contaminants that may have migrated offsite. Alternative #3 in the Draft CAP proposed the installation of thirteen (13) new DPE wells and six (6) new AS wells. By proposing only six (6) new wells and using aboveground piping, the revised DPE/AS approach will be considerably more cost effective than Alternative #3 in the Draft CAP.

PROJECT SCHEDULE

The estimated project schedule is shown below.

- April or May 2009 – Receive ACEH Approval of Final CAP
- May 2009 – Commence System Design and Permitting
- June 2009 – Remediation Well Installation
- July 2009 – Receive Air and Groundwater Discharge Permits
- August 2009 – Install Remediation System and Commence DPE/AS
- Ongoing – Perform Quarterly Groundwater Monitoring to Evaluate DPE/AS Effectiveness
- February 2010 – Remediation Performance Evaluation after 6 Months of DPE/AS (sooner if merited)

CLOSING

Pangea and Rockridge Heights LLC appreciate your assistance on this project. If you care to discuss this project with Pangea and/or Mr. Delgado of the Fund, please feel free to email me or call me at (510) 435-8664.

Sincerely,
Pangea Environmental Services, Inc.

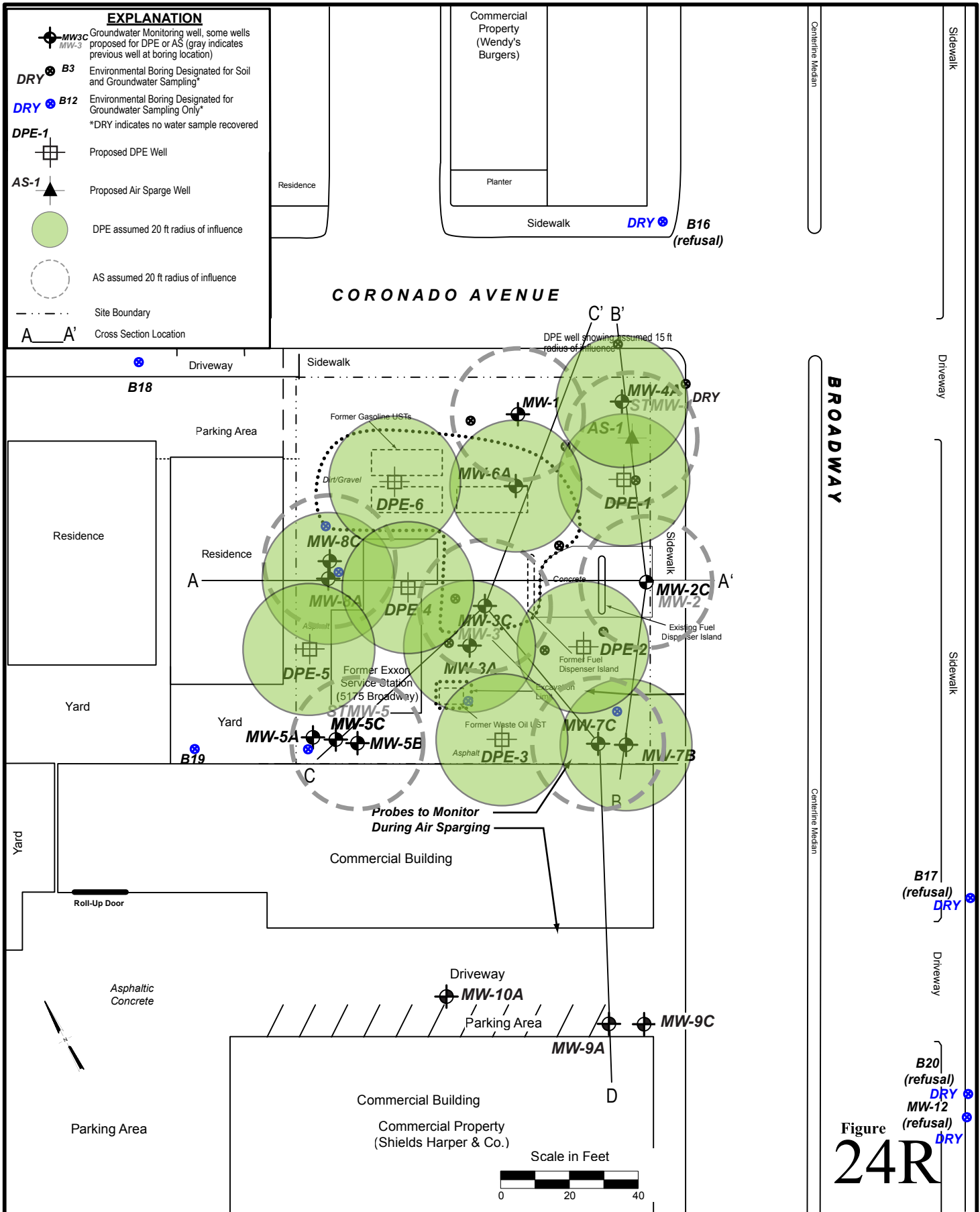


Bob Clark-Riddell, P.E.
Principal Engineer

cc: Rockridge Heights LLC, C/O Gary Feiner, 34 Schooner Hill, Oakland, California 94618
Mr. Jeff Delgado, California UST Cleanup Fund

ATTACHMENT Figure 24R – Revised DPE/AS Approach





EXPLANATION

- MW3C Groundwater Monitoring well, some wells proposed for DPE or AS (gray indicates previous well at boring location)
- DRY B3 Environmental Boring Designated for Soil and Groundwater Sampling*
- DRY B12 Environmental Boring Designated for Groundwater Sampling Only*
*DRY indicates no water sample recovered
- DPE-1 Proposed DPE Well
- AS-1 Proposed Air Sparge Well
- DPE assumed 20 ft radius of influence
- AS assumed 20 ft radius of influence
- Site Boundary
- Cross Section Location

BROADWAY

B17 (refusal) DRY
B20 (refusal) DRY
MW-12 (refusal) DRY

Figure 24R

**Former Exxon Station
5175 Broadway
Oakland, California**

Revised DPE/AS Approach



Rockledge, S.C.M map.pdf 7/7/08