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9:39 am, Nov 22, 2011

Alameda County
Environmental Health

From: David Allen <dallen@aquascienceengineers.com>
Subject: **Missing Attachment**
Date: November 16, 2011 8:51:34 AM PST
To: Tom Curran <tfcurran@sbcglobal.net>
1 Attachment, 33.0 KB

Sorry....here's the attachment. Dave.

Thomas Curran
57 Arbor Drive
Piedmont, CA 94610

Mark Detterman
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

SUBJECT: RO0000339
Former Red Top Electric
4377 Adeline Street
Emeryville, CA 94608

Dear Mr. Detterman:

Attached please find a copy of the Workplan for Soil and Groundwater Assessment for the above referenced site. 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.

Sincerely,

Thomas Curran

Aqua Science Engineers, Inc. 55 Oak Court, Suite 220, Danville, CA 94526
(925) 820-9391 - Fax (925) 837-4853 - www.aquascienceengineers.com

November 14, 2011

WORKPLAN
for a
SOIL AND GROUNDWATER ASSESSMENT
at
Former Red Top Electric
4377 Adeline Street
Emeryville, California

Submitted by:
AQUA SCIENCE ENGINEERS, INC.
55 Oak Court, Suite 220
Danville, CA 94526
(925) 820-9391

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1.0 INTRODUCTION

This submittal presents Aqua Science Engineer's, Inc. (ASE) workplan for a soil and groundwater assessment at the former Red Top Electric facility located at 4377 Adeline Street in Emeryville, California (Figures 1 and 2). The proposed site assessment activities were initiated by Mr. Thomas Curran, the responsible party, in response to the letter from the Alameda County Health Care Services Agency (ACHCSA) dated July 22, 2011.

2.0 BACKGROUND

In November 1991, one 1,000-gallon gasoline underground storage tank (UST) was removed from the sidewalk in front of the site. Up to 230 parts per million (ppm) total petroleum hydrocarbons as gasoline (TPH-G), 0.0083 ppm toluene, 2.5 ppm ethylbenzene, and 18 ppm total xylenes were detected in soil samples. No groundwater was encountered in the excavation. ASE is unaware of any other environmental activities conducted since the UST removal.

3.0 PROPOSED SCOPE OF WORK

The purpose of this assessment is to determine whether contaminated soil or groundwater is present beneath the former UST that could be related to a release from the UST. The specific proposed scope of work is as follows:

1) Obtain a drilling permit from the Alameda County Public Works Agency and an encroachment permit from the City of Emeryville.

2) Notify Underground Service Alert (USA) of the drilling and have drilling locations cleared of subsurface utility lines by a private subsurface utility line locating company.

3) Drill two soil borings at the site to a depth of approximately 20-feet below ground surface (bgs) using a Geoprobe and collect soil and groundwater samples for analysis.

4) Analyze at least one soil and one groundwater sample from each boring at a CAL-EPA certified analytical laboratory for TPH-G, benzene, toluene, ethylbenzene, and total xylenes (collectively known as BTEX), and MTBE by EPA Method 8260B.

5) Backfill each boring with neat cement.

6) Prepare a report presenting the methods and findings of this assessment.

Details of the assessment are presented below.

TASK 1 OBTAIN NECESSARY PERMITS

Prior to drilling, ASE will obtain a drilling permit from the Alameda County Public Works Agency and an encroachment permit from the City of Emeryville to allow for drilling in the city right-of-way.

TASK 2 NOTIFY USA TO CLEAR DRILLING LOCATIONS OF UNDERGROUND UTILITY LINES

ASE will mark the proposed boring locations with white paint and will notify Underground Service Alert (USA) to have underground utility lines marked in the site vicinity at least 48-hours prior to drilling. ASE will also contract with a private underground utility locating company to clear each drilling locations of underground lines prior to drilling.

TASK 3 DRILL TWO SOIL AND COLLECT SOIL AND GROUNDWATER SAMPLES FOR ANALYSIS

ASE will drill two soil borings at the site to a depth of approximately 20-feet bgs at the locations shown on Figure 2. ASE met Mr. Curran at the site to view the former UST location. ASE also reviewed drawings within the historical file. The position of the UST on several drawings was not consistent. Also, there appeared to be 2 distinct concrete patches in the sidewalk in front of the subject site's building. Due to the discrepancies, ASE recommends one boring to be drilled in each of the sidewalk replacement locations. The borings will be drilled using a Geoprobe direct-push drilling rig. A qualified ASE geologist will direct the drilling. Undisturbed soil samples will be collected continuously for subsurface hydrogeologic description and possible chemical analysis. The soil will be described by the ASE geologist according to the Unified Soil Classification System (USCS). The samples will be collected in acetate tubes using a drive sampler advanced as the boring progresses. One soil sample from the capillary zone in each boring will be prepared for analysis. Additional samples will be collected if there is any indication of contamination based on visual inspection, odors or other evidence. The sample prepared for analysis will be immediately removed from the sampler, cut at the appropriate sample interval, trimmed, and sealed with Teflon tape and plastic caps. The samples will then be labeled with the site location, sample designation, date and time the sample was collected, and the initials of the person collecting the sample. The samples will be placed into an ice chest containing wet ice for delivery under chain of custody to a CAL-EPA certified analytical laboratory.

Soil from the remaining tubes not sealed for analysis will be removed for hydrogeologic description and will be screened for volatile compounds with a photoionization detector (PID). The soil will be screened by emptying soil into a plastic bag. The bag will be sealed and placed in the sun for approximately 10 minutes. After the hydrocarbons have been allowed to volatilize, the PID will measure the vapor through a small hole, punched in the bag. These PID readings will be used as a screening tool only since these procedures are not as rigorous as those used in an analytical laboratory.

Once groundwater is encountered, temporary PVC casing will be placed into the boring to allow for the collection of groundwater samples. The PVC casing will be slotted for at least the entire saturated interval. Water samples will then be collected using a bailer. Water will be decanted from the bailer into 40-ml volatile organic analysis (VOA) vials pre-preserved with hydrochloric acid, sealed without headspace, labeled, and placed into an ice chest with wet ice for transport to the analytical laboratory under chain of custody.

All sampling equipment will be cleaned in buckets with brushes and an Alconox solution, and then rinsed twice with tap water. Rinsates will be contained on-site in 55-gallon steel drums for future disposal.

TASK 4 ANALYZE THE SOIL AND GROUNDWATER SAMPLES

At least one soil sample collected from the capillary zone from each boring, as well all groundwater samples, will be analyzed at a CAL-EPA certified analytical laboratory for TPH-G, BTEX, and MTBE by EPA Method 8260B. If there is any indication of contamination based on odors, staining or PID readings, additional soil samples (one per every 5-feet plus samples collected above and below the contaminated zone) will also be analyzed.

TASK 5 BACKFILL THE BORINGS WITH NEAT CEMENT

Following collection of the soil samples, the boreholes will be backfilled with neat cement placed by tremie pipe.

TASK 6 PREPARE A SUBSURFACE ASSESSMENT REPORT

ASE will prepare a report presenting the methods and findings of this assessment. The report will be submitted under the seal of state registered civil engineer or geologist. This report will include a summary of all work completed during this assessment including tabulated soil analytical results, conclusions and recommendations. Based on the findings, the report will evaluate the need for possible additional groundwater monitoring wells, possible soil vapor survey, and possible interim remediation. Copies of the analytical report and chain of custody will be included as appendices. The report, analytical data, and boring logs will also be uploaded to the state Geotracker database.

4.0 SCHEDULE

ASE will schedule field activities upon approval of this workplan by the ACHCSA. Depending on how quickly the encroachment permit can be obtained, ASE could complete this project in approximately 12-weeks.

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Should you have any questions or comments, please call us at (925) 820-9391.

Respectfully submitted,

AQUA SCIENCE ENGINEERS, INC.

Robert E. Kitay, P.G., R.E.A.
Senior Geologist

Aqua Science Engineers, Inc. 55 Oak Court, Suite 220, Danville, CA 94526
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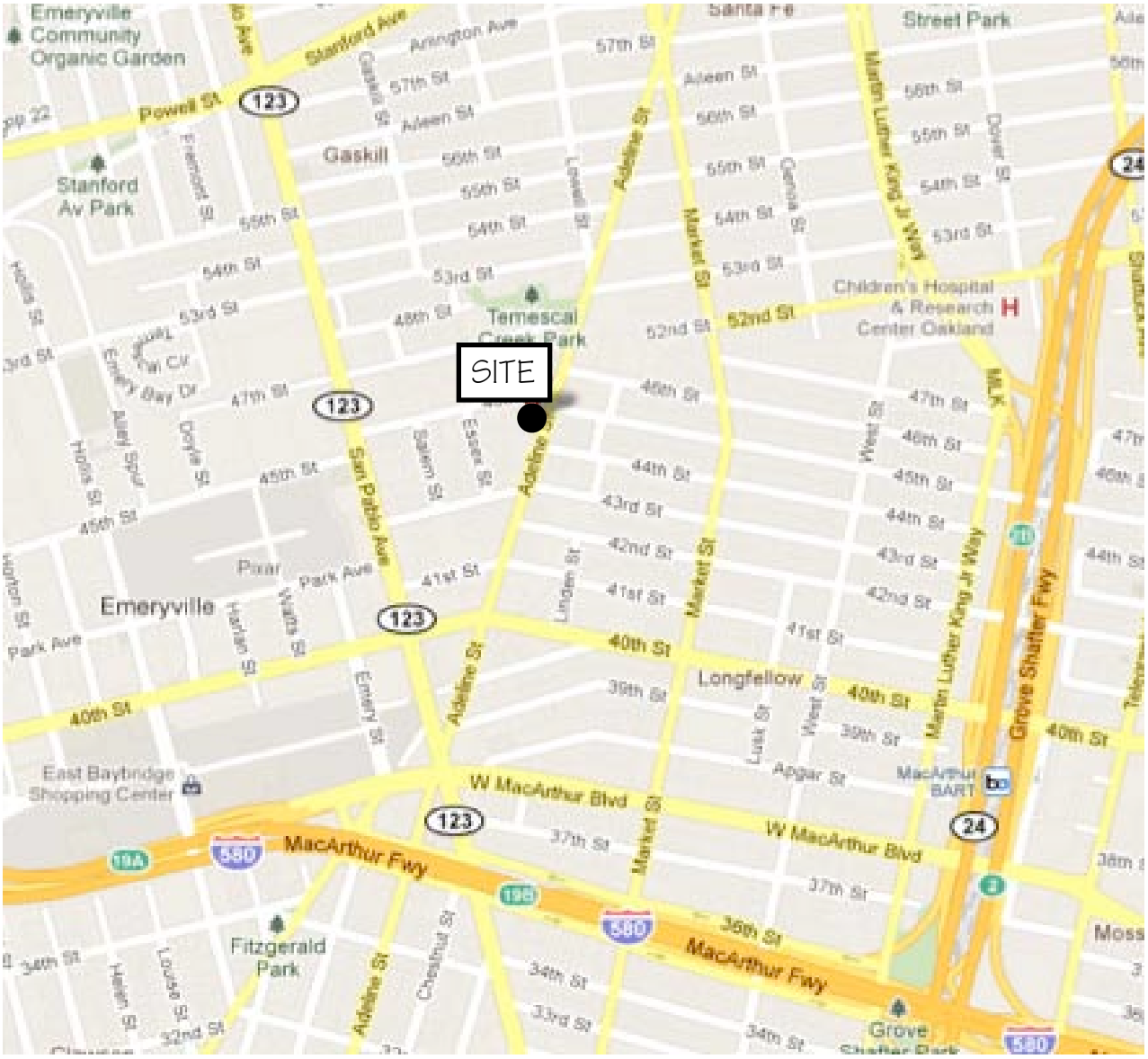
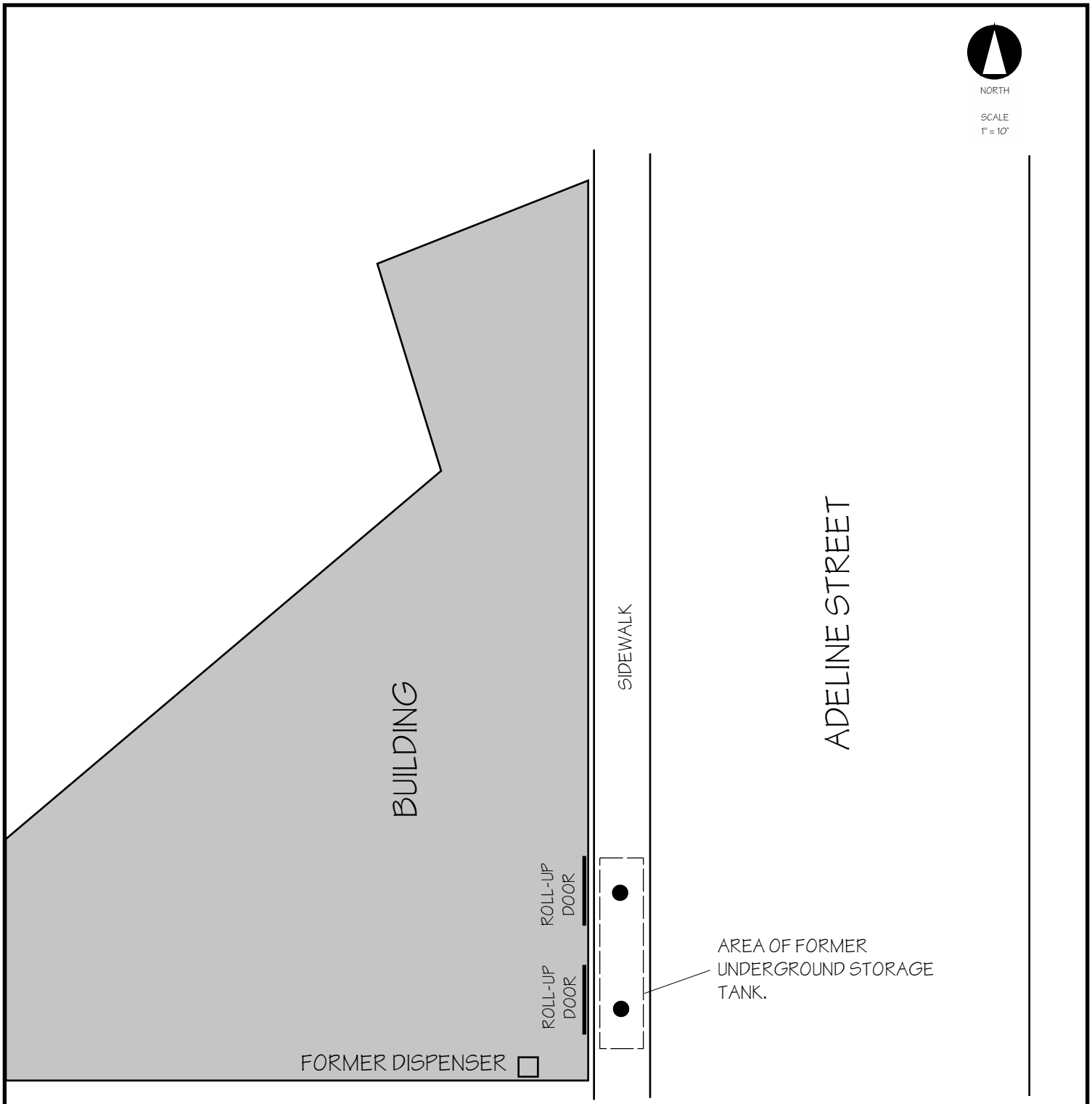
FIGURES

NORTH



SITE LOCATION MAP	
Former Red Top Electric Site 4377 Adeline Street Emeryville, California	
AQUA SCIENCE ENGINEERS, INC.	Figure 1



PROPOSED SOIL BORING LOCATION MAP

Former Red Top Electric Site
4377 Adeline Street
Emeryville, California

AQUA SCIENCE ENGINEERS, INC. | Figure 2