Treadwell&Rollo

15 January 2010
Project 4954.01

Mr. Mark Detterman
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Subject: Groundwater Investigation Work Plan Addendum #2
Emeryville Industrial Court
5885 Hollis Street
Emeryville, California

Dear Mr. Detterman:

Treadwell & Rollo, Inc. (Treadwell & Rollo), on behalf of Wareham Development, has prepared this letter as a second addendum to our *Groundwater Investigation Work Plan* (Work Plan) dated 26 August 2009 which presented the scope of work and methodology for conducting additional soil sampling at 5885 Hollis Street in Emeryville, California (Site). This addendum describes the collection of soil samples to assess potential risk to maintenance or utility workers from residual benzo(a)pyrene in soil along the western portion of the Site.

The additional scope of this investigation was requested by Alameda County Environmental Health (ACEH) in a letter dated 24 December 2009. This scope was also discussed and verbally approved by Mark Detterman of ACEH in telephone conversations in January 2010.

BACKGROUND

The Site comprises the northern three-quarters of the block bounded by 59th Street to the north, Hollis Street to the east, and Peladeau Street to the west. In the southern one-quarter of the block, the Site adjoins the Conoco-Philips station and some commercial storefronts. The Conoco-Philips station is bounded by Powell Street to the south.

The Site was operated by the Union Oil Company of California as an above-ground bulk oil facility until 1964, after which it was operated as an industrial park with an underground fuel storage tank (UST) until it was redeveloped into the current office building in 2006. Numerous chemicals were used and stored on the Site during these previous operations. During redevelopment activities, soils at the Site were excavated to a depth of 12 to 15 feet below the ground surface (bgs) and removed from the Site.

Numerous environmental investigations and remedial activities have occurred at the Site since 1985 including Phase I environmental site assessments, soil over-excavation and removal, UST removal, several rounds of soil and groundwater investigation, and implementation of an approved soil management plan (SMP) during redevelopment activities. ACEH approved the completion of the SMP in a letter dated 22 January 2007.

The Conoco-Philips (CP) station on the southern adjacent property is under investigation for potential releases of petroleum hydrocarbons to soil and groundwater. Treadwell & Rollo reviewed the results of CP's *Report of CPT Delineation of Fuel Hydrocarbon Affected Soil and Groundwater* dated 24 August 2009. The results of the investigation at the adjacent property were considered while planning the scope of the additional investigation at the Site.

ADDITIONAL INVESTIGATION ACTIVITIES

This section presents a description of the field procedures to be used during the investigation. Selected subcontractors will assist with this work. A Treadwell & Rollo geologist or engineer will be present to coordinate on-site access, direct field work, record and interpret Site conditions, conduct health and safety monitoring of organic vapors, and provide technical assistance as required.

Pre-field Activities

Prior to conducting field work, soil boring permits will be obtained from the Alameda County Public Works Agency. An encroachment permit will be obtained from the City of Emeryville. Underground Service Alert will be called to mark the location of underground utilities in the vicinity of the borings a minimum of 48 hours prior to initiating field activities. A private utility locator will be retained to identify subsurface utilities at the Site.

Collection of Soil Samples and Analyses

Treadwell & Rollo will collect soil samples from two locations (HA-1 and HA-2) for the purpose of characterizing the extent of benzo(a)pyrene in shallow soil. The two borings (HA-1 and HA-2) will be advanced to a depth of two feet bgs in the planter area to the south of the existing building. After the hand auger has reached two feet, a slide hammer sampler fitted with a six-inch stainless steel liner will be used to collect a soil sample from each location. The locations of HA-1 and HA-2 are shown on Figure 1.

Treadwell & Rollo will also collect soil samples from boring locations TRCPT-1 and TRCPT-2 prior to drilling activities. Prior to advancing the CPT probe, each location will be hand augered to a depth of 5 feet. Soil samples will be collected during hand augering activities using a slide hammer sampler fitted with a six-inch stainless steel liner. Soil samples will be collected from depths of 2.5 feet and 5 feet bgs. The soil sample from 2.5 feet bgs will be held by the laboratory and analyzed if the sample from 5 feet bgs detects concentrations which exceed the construction worker ESLs.

Soil samples will be placed on ice for shipment to a California-certified analytical laboratory under appropriate chain-of-custody protocol, and analyzed for semivolatile organic compounds using EPA method 8270. All sampling equipment will be thoroughly cleaned with a detergent solution and rinsed with distilled water before each sampling event to prevent cross-contamination. A tremie pipe will be used to grout each hole upon completion.

Waste Containment

If necessary, waste generated by the sampling activities will temporarily be stored on-Site in sealed 5-gallon buckets for subsequent testing and proper disposal at an appropriate off-site disposal facility.

Data Evaluation and Reporting

At the completion of the field work, the data from the work described in the work plan, work plan addendum #1, and this subsequent addendum will be reviewed and Site conditions will be summarized in a written report. The investigation results will be presented in the report using figures, tables, and CPT logs to describe Site conditions. Data summary tables will present detected concentrations of analytes in groundwater. Treadwell & Rollo will provide recommendations based on the appropriate

commercial/industrial environmental screening levels. Based on the analytical results, Treadwell & Rollo will recommend closure of these Site-related issues or additional Site characterization. Data obtained from the additional field work summarized in this Work Plan Addendum will be shared with ConocoPhillips who is performing investigations at the adjacent property (1400 Powell Street)

SCHEDULE

It is anticipated that the investigation and laboratory analysis will be completed within approximately 3 weeks of regulatory approval. The schedule assumes that the regulatory approvals, subcontractor availability, weather, and investigation results cause no delays to the schedule.

We look forward to continuing working with you on this project. If you have any questions or require additional information, please call Matthew Hall at 415-955-9040 x267.

Sincerely yours,
TREADWELL & ROLLO, INC.

REGISTERED PROFESSIONAL ENGINEER
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49540102.MH

cc: Mr. Geoff Sears, Wareham Development Corporation, San Rafael CA

Attachment: Figure 1

FIGURE

5812 HOLLIS STREET

HOLLIS STREET

FORMER EXCAVATION EXTENT

59TH STREET

TR-39 Paint & Thinners

TR-40 Inks, Paints and Solvents

TR-41 Paints and Adhesives

TR-42

Loading Dock

Estimated Groundwater Flow Direction

TR-31

TR-1

5885 HOLLIS STREET

1400 POWELL STREET

DISPENSER ISLANDS

CPT-1

CPT-2

CPT-3

POWELL STREET

CHEVRON STATION (FORMER 76 STATION NO. 3737)

TR-24

TR-25

CPT-7

CPT-4

TR-6

TR-23

TRCPT-3

USTs

CPT-6

TR-GW

DW-14

CPT-5

TR-12

TR-16

HA-1

TR-15

TR-14

HA-2

TR-13

TRCPT-7

TRCPT-1

TRCPT-2

TRCPT-4

TRCPT-5

TRCPT-6

PELADEAU STREET

EXPLANATION

- Soil sample from area of requested VOC characterization
- Soil sample in area of residual benzo(a)pyrene in soil
- Historic Treadwell & Rollo groundwater sample location
- Proposed soil and groundwater sampling location for VOC's & PAH's
- Proposed additional CPT and soil and groundwater sampling location for dissolved petroleum hydrocarbon delineation
- CPT locations by Delta, 2009
- Proposed hand auger and soil sample locations

0 50 Feet

Approximate scale

Basemap: Google Earth 2009.

5885 HOLLIS STREET
Emeryville, California

PROPOSED SOIL AND GROUNDWATER SAMPLE LOCATIONS

Date 01/15/10	Project No. 4954.01	Figure 1

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