August 7, 2017

Mr. Keith Nowell
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Subject: **Work Plan – Monitoring Well Installation Addendum**

Site: **76 Station No. 5191/5043**
449 Hegenberger Road
Oakland, California
Fuel Leak Case No. RO0000219

Dear Mr. Nowell;

I have read and acknowledge the content, recommendations and/or conclusions contained in the attached document or report submitted on my behalf to ACDEH's FTP server and the SWRCB's GeoTracker website.

If you have any questions or need additional information, please call:

Allen Faass
Facilities and Compliance Manager
4130 Cover St.
Long Beach, CA 90808
C: (949) 289-5286
F: (818) 688-8151
Allen.Faass@unitedpacific.com

Sincerely,

United Pacific

Allen Faass
Facilities and Compliance Manager

Attachment

Antea USA, Inc.
11010 White Rock Road, Suite 140
Rancho Cordova, California 94670 USA
www.anteagroup.com

August 7, 2017

Mr. Keith Nowell
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Subject: **Work Plan – Monitoring Well Installation Addendum**

Site: **76 Station No. 5191/5043**
449 Hegenberger Road
Oakland, California
Fuel Leak Case No. RO0000219

Dear Mr. Nowell,

In response to your letter dated June 2, 2017, Antea Group Is preparing to advance one additional offsite soil boring to a depth of 20 feet and collect soil samples a grab groundwater sample. This work is proposed as an addendum to the *Work Plan – Monitoring Well Installation* dated November 21, 2013 and modified by an approval email dated December 23, 2013. The purpose of this investigation is to provide off-site delineation of the methyl tertiary-butyl ether (MTBE) / tertiary-butyl alcohol (TBA) plume associated with the site. Soil boring SB-19 will be completed using the following method:

Permitting, Access Agreement, and Utility Clearance

Before commencing field activities Antea Group will update the Health and Safety Plan in accordance with state and federal requirements for use during investigation activities. A drilling permit will be obtained for the boring from the Alameda County Public Works Agency. Antea Group will obtain an access agreement from KW Fund 1 Hegenberger LP, the property owner of the offsite property (**Figure 1**). Prior to drilling, Underground Service Alert (USA) will be notified as required by law and a private utility locator will be employed to clear the proposed boring location for underground utilities. In addition, a hand auger will be used to clear the borehole location to a depth of 5 feet below ground surface (bgs) prior to drilling.

Complete Boring Advancement

Soil samples for B-19 will be obtained and analyzed at the same intervals as the previous off-site borings. The boring for the proposed soil boring, B-19 will be advanced to a total depth of approximately 20 feet bgs using a direct push technology. Direct push drilling produces continuous soil core that can be used to collect depth discrete samples. Soil samples will be screened for volatile organic compounds (VOC's) using a pre-calibrated photo-ionization detector (PID) every 5 feet at a minimum. Soil encountered during drilling will be closely evaluated for changes in moisture content and lithology. The soil core collected during drilling will be logged by a field geologist using the Unified Soil Classification System (USCS), working under the supervision of a California registered professional geologist.

Soil samples selected for analysis (from 5, 10, 15, and 20 feet bgs) from the soil boring will be properly labeled and stored on ice for shipment to a California state-certified laboratory. The selected samples will be analyzed for the presence of total petroleum hydrocarbons in the gasoling range (TPHg) , benzene, toluene, ethylbenzene, and total xylenes (collectively BTEX), MTBE, TBA, and ethanol by US Environmental Protection Agency (EPA) Method 8260B. A chain-of-custody will accompany the samples during transportation to the laboratory.

Temporary Well and Grab Groundwater Sampling

Upon completion of the soil boring, a 1-inch diameter pre-packed temporary well with 5 feet of screen will installed in the hole. Due to the low permeability of the soil (as observed in the other off-site wells), a groundwater sample will be obtained when sufficent water flows into the temporary well to fill the labratory's sampling containers. The grab groundwater sample will be collected using either a bailer or a peristaltic pump.

Grab groundwater samples collected for analysis from the soil boring will be analyzed for TPHg, BTEX, MTBE, TBA, and ethanol by EPA Method 8260B.

Temporary Well Removal, Backfill Boring, and Surface Completion

After the sampling of groundwater, the pre-packed well will be removed and soil boring SB-19 will be backfilled with neat cement from total depth to just below the surface under the supervision of an Alameda County Public Works Agency grout instector. The surface will be repaired with a concrete patch dyed to match the surounding asphalt.

Disposal of Drill Cuttings and Wastewater

Drill cuttings and decontamination water generated during boring advancement will be placed into properly labeled 55-gallon Department of Transportation (DOT) approved steel drums and temporarily stored on the station property. Samples of the drill cuttings and decontamination wastewater will be collected, properly labeled and placed on ice for submittal to a California-certified laboratory and analyzed for TPHg, BTEX, and MTBE by EPA Method 8260B, and CAM 17 Metals by EPA Method 6010. A chain-of-custody will accompany the samples during transportation to the laboratory. Subsequent to receiving the laboratory analytical results, the drummed drill cuttings, decontamination wastewater, and well development water will be profiled, transported, and disposed of at an approved facility.

Reporting

A summary of the soil boring advancement, temporary well installation, and sampling activities will be submitted in a report no later than 60 days after the field work has been completed. Additional information requested in ACDEH's June 2, 2017 letter will also be included in this report. Required electronic submittals will be uploaded to the State Geotracker database.

Sincerely,

Dacre Bush

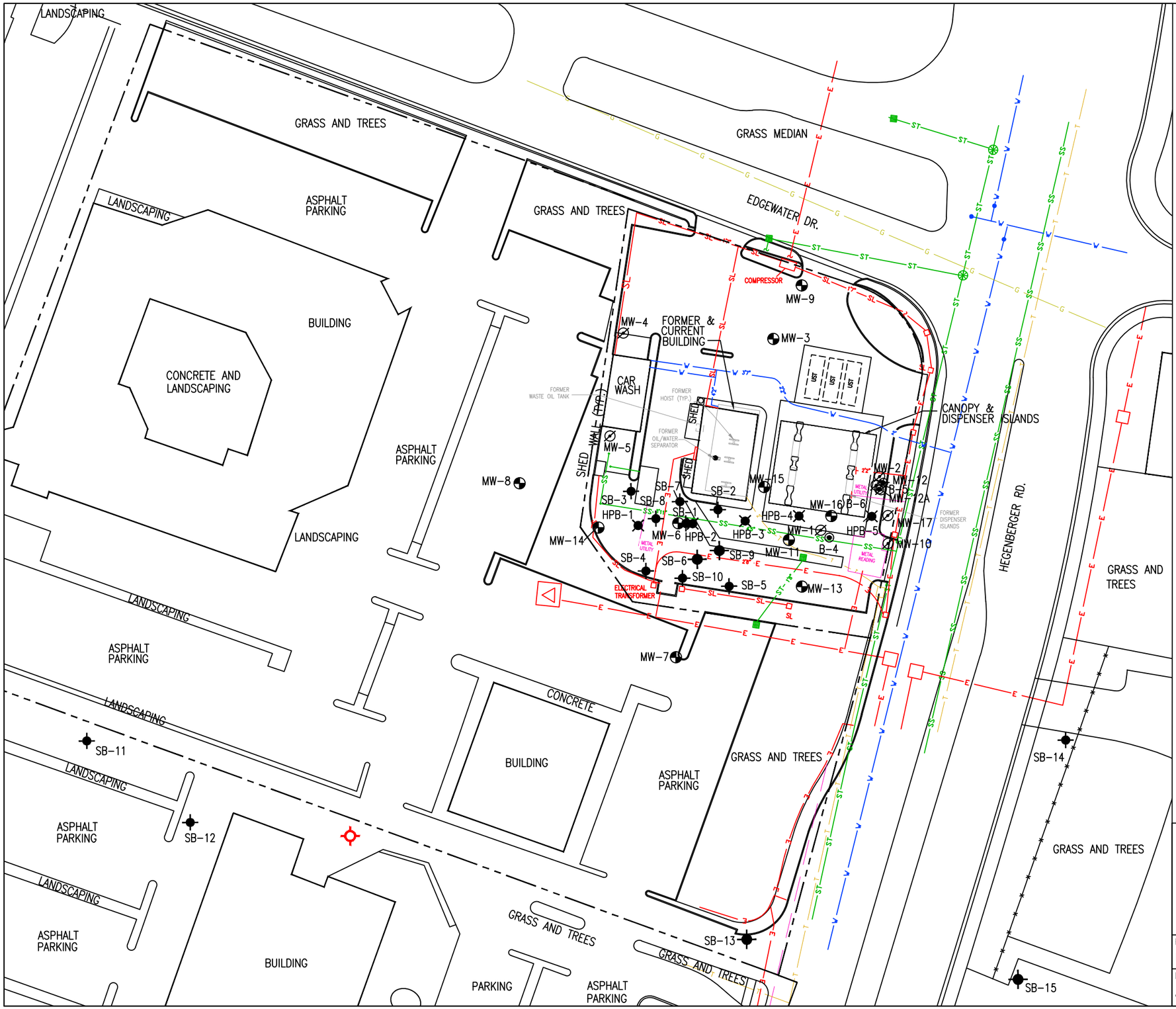
Dacre Bush
Consultant
dacre.bush@anteagroup.com
Antea Group

Licensed Approver:

Wendy Linck, PG
Senior Project Manager
California Registered Professional Geologist No. 6934
Antea Group

PROFESSIONAL GEOLOGIST
WENDY LINCK
NO. 6934
EXPIRES 4/30/18
STATE OF CALIFORNIA

Attachment – Figure 1



LEGEND

- APPROXIMATE PROPERTY BOUNDARY
- MW– MONITORING WELL
- MW– DESTROYED MONITORING WELL
- SB– SOIL BORING LOCATION (ANTEA GROUP 2013/2014/2015)
- HPB– SOIL BORING LOCATION (ANTEA GROUP 2012)
- B– BORING LOCATION

- T — TELEPHONE
- SS — SEWER
- W — WATER
- ST — STORM DRAIN
- E — ELECTRIC
- G — GAS
- SL — STREET LIGHT

- PROPOSED SOIL BORING LOCATION

North

0 60

SCALE IN FEET

ADAPTED FROM A MORROW SURVEY ON 5/23/11

FIGURE 1
SITE PLAN

76 STATION NO. 5191/5043
449 HEGENBERGER ROAD
OAKLAND, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
142705191	JF	JH
DATE	REVIEWED BY	FILE NAME
8/11/15	DD	5191-SiteS

anteagroup