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Alameda County
Environmental Health

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Ms. Barbara Jakub
Alameda County Department of Environmental Health
1131 Harbor Bay Parkway
Alameda, California 94502

ENVIRONMENT

Subject:
Work Plan for Free Product Delineation
UPS Oakland Hub
8400 Pardee Drive, Oakland, CA 94621
Global ID T0600100939; State ID # 583; EPA ID # CAD 09707509

Date:
September 5, 2012

Contact:
Hugh Devery

Phone:
404.952.1604

Email:
Hugh.Devery@arcadis-us.com

Dear Ms. Jakub:

On behalf of United Parcel Service (UPS), ARCADIS U.S., Inc. (ARCADIS) is presenting this Work Plan for the delineation of free product at the UPS Oakland Hub (Site). Between January 25, 2012 and January 27, 2012, three monitoring wells (MW-12, MW-13, and MW-14) and six injections wells (INJ-1 through INJ-6) were installed. The injection wells are now referred to as IW-1 through IW-6. Free product was later discovered in monitoring well MW-12 and injection well IW-1. ARCADIS proposes installing additional monitoring wells to delineate the extent of free product and to incorporate into the injection plan as part of the network of radius of influence (ROI) wells requested by Alameda County Department Environmental Health (ACEH) in a correspondence dated July 19, 2012. The location of the site and the surrounding properties are illustrated on **Figures 1** and **2**, respectively. The area of concern is to the northeast of the former underground storage tank (UST) area located in the southeast portion of the subject property as shown on **Figure 3**.

Monitoring Well Installation

ARCADIS will supervise the installation of five monitoring wells in an attempt to delineate the extent of the free product. The additional monitoring wells will be installed approximately 15 feet northeast of IW-1, 15 feet northeast of IW-2, 10 feet east of IW-2, 18 feet west of IW-1, and 30 feet south-southwest of MW-12. With the addition of these monitoring wells, a radial network of wells will be in place to determine an ROI between 10 and 25 feet. The proposed monitoring wells will be MW-15, MW-16, MW-17, MW-18, and MW-19. Although not originally planned for this purpose, these new monitoring wells will also assist in the delineation of the dissolved TPH-DRO and residual free product plumes. Monitoring wells will be constructed utilizing a 0.010-inch slotted PVC well screen with a 2-inch PVC riser. To account for fluctuations in the groundwater table the well screen will be installed five to fifteen feet below ground surface (bgs). **Figure 4** shows a schematic of the monitoring well construction details. The proposed locations of the monitoring wells are shown on **Figure 5**. The site hazard form and the drilling permit

for the advancement of the soil borings will be included under separate cover.

Prior to commencement of drilling activities the necessary permits will be acquired from the ACDEH. Site utilities will be located by notifying Underground Service Alert (USA). Additionally, the first five feet of each soil boring will be cleared with a hand auger to insure the protection of underground utilities and facility drawings will be reviewed.

Free Product Gauging and Groundwater Monitoring

The newly installed monitoring wells will be included in the future groundwater monitoring events. Following each of the subsequent quarterly groundwater monitoring events, a letter report will be prepared.

A California registered civil engineer or a California registered professional geologist will supervise the activities conducted under this Work Plan.

If you have any questions, or require additional information, please feel free to contact Hugh Devery at 404.952.1604. Send any correspondence regarding this project to Mr. Paul Harper of UPS at the address provided below. Please copy ARCADIS on any such correspondence.

Sincerely,

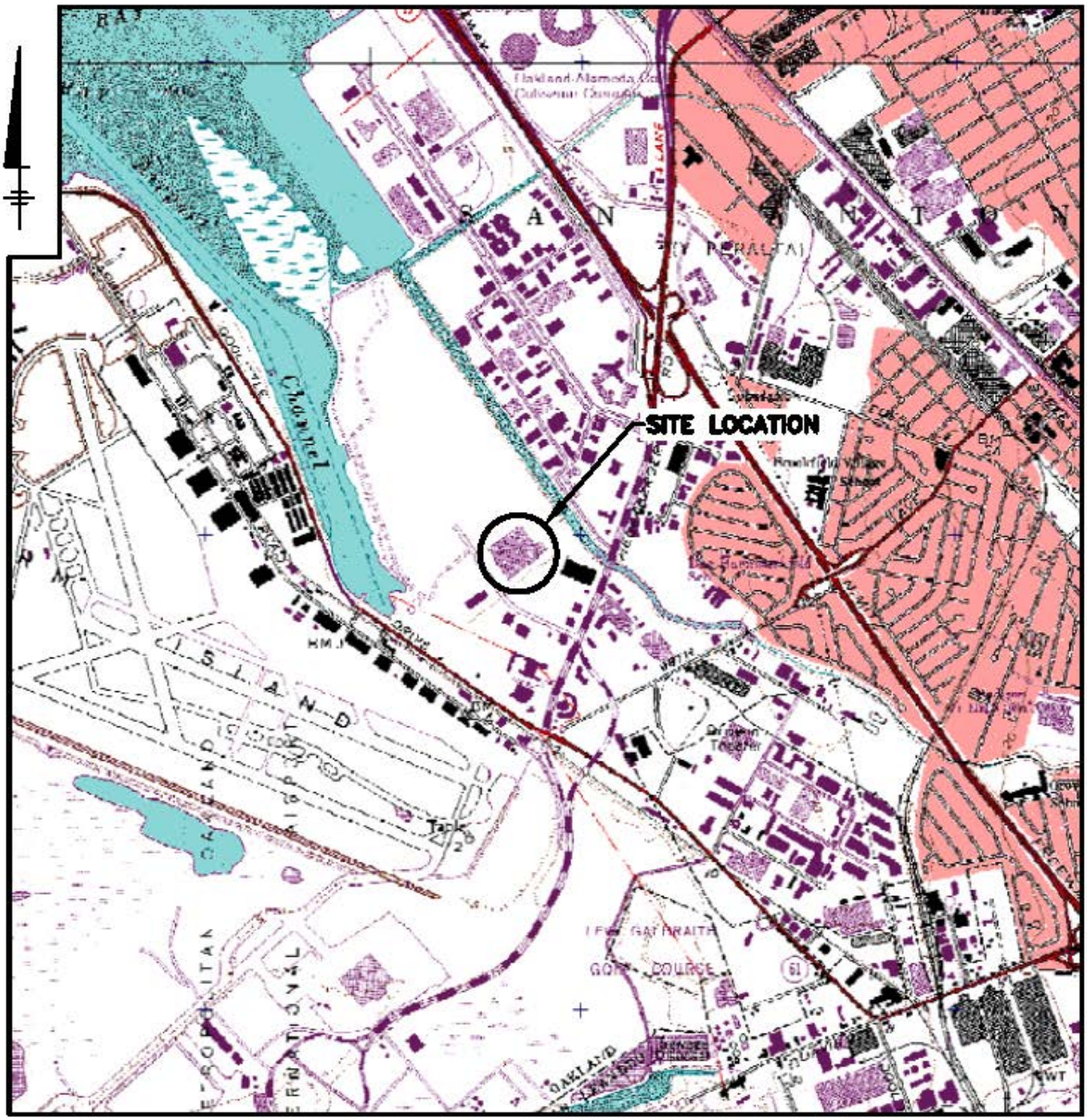
ARCADIS U.S., Inc.

REGISTERED GEOLOGIST
HOLLIS E. PHILLIPS
HEP
No. 6887
STATE OF CALIFORNIA

Hugh Devery
Principal-in-Charge

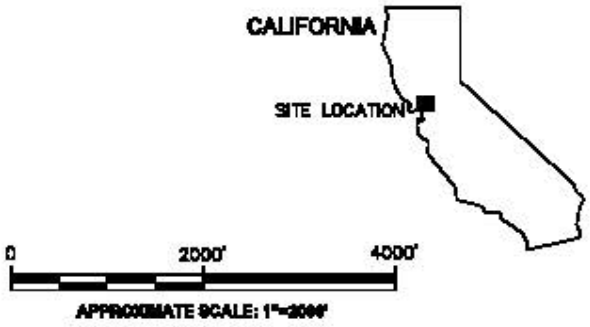
Hollis Phillips, P.G.
Principal Geologist
California P.G. No. 6887

Copies:
Mr. Paul Harper – UPS Corporate Plant Engineering, 55 Glenlake Parkway NE, Atlanta, GA 30328
Mr. Douglas Herman – Port of Oakland
File



NOTES:

1. Base Map Source: USGS 7.5 Min. Topo. Quad., San Leandro, Calif.(1993)
2. Property Location is Approximate Only.



UPS-OAKLAND HUB
8400 PARDEE DRIVE, OAKLAND, CALIFORNIA
WORK PLAN

SITE LOCATION MAP

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FIGURE
1

LEGEND

1. COMCAST
2. FRANCESLO'S RESTAURANT
3. HARLEY DAVIDSON DEALERSHIP
4. PARK PLACE PLAZA HOTEL
5. BRUCE'S TIRE INC.
6. SHELL SERVICE STATION
7. 76 SERVICE STATION
8. ALAMEDA COUNTY VOCATIONAL
9. CARPENTER FUND ADMINISTRATION OFFICE
10. INDEPENDANT INSTITUTE

OFFICE BUILDING

PUBLIC AGENCY

INDUSTRIAL LIGHT/MANUFACTURING, COMMERCIAL, WAREHOUSE

0 500' 1000'

APPROXIMATE GRAPHIC SCALE

UPS-OAKLAND HUB
8400 PARDEE DRIVE, OAKLAND, CALIFORNIA
WORK PLAN

SURROUNDING PROPERTIES MAP

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FIGURE
2

LEGEND

- MONITORING WELL
- TEMPORARY VACUUM TEST WELL
- PHASE I INJECTION WELL
- ABANDONED MONITORING WELL
- SOIL BORING LOCATION (2010)
- PROPERTY BOUNDARY
- UNDERGROUND ELECTRICAL LINE
- STORM WATER/SEWER LINE
- WATER/FIRE SERVICE/IRRIGATION
- ELECTRIC/WATER LINE
- CATCH BASIN/STORM DRAIN
- LIGHT POST/ POWER POLE

0 50' 100'

GRAPHIC SCALE

UPS-OAKLAND HUB
8400 PARDEE DRIVE, OAKLAND, CALIFORNIA
WORK PLAN

SITE MAP

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FIGURE
3

CITY:TAMPA DIV/GROUP:85 DB:JAR LD:(Opt) PIC:(Opt) PM:(Reqd) TM:(Opt) LYR:(Opt)ON=*;OFF=*REF*
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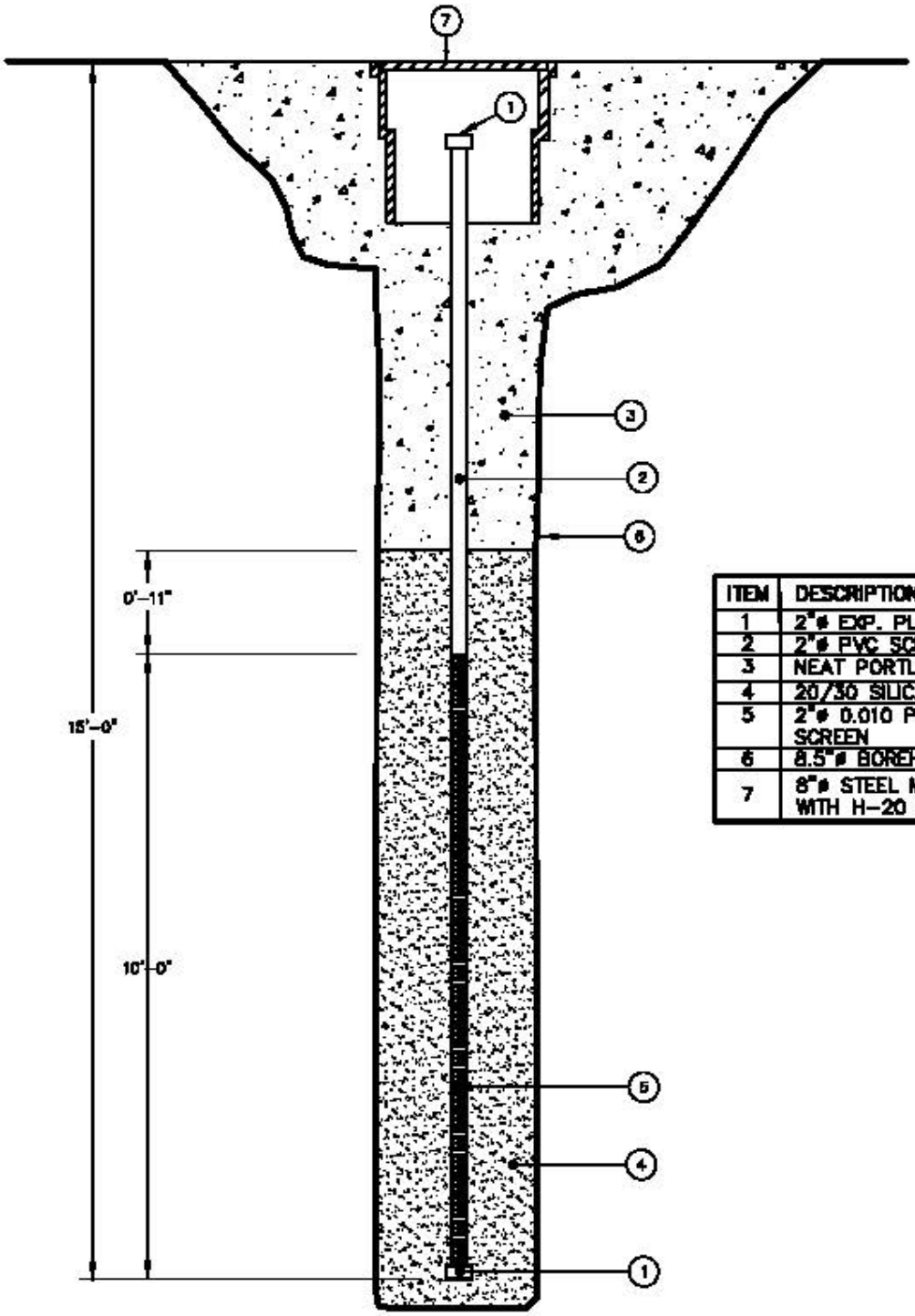

ITEM	DESCRIPTION
1	2"ø EXP. PLUG
2	2"ø PVC SCH 40 RISER
3	NEAT PORTLAND CEMENT/GROUT
4	20/30 SILICA SAND
5	2"ø 0.010 PVC SLOT WELL SCREEN
6	8.5"ø BOREHOLE
7	8"ø STEEL MANHOLE VAULT WITH H-20 RATED COVER

BLS = BELOW LAND SURFACE
PVC = POLYVINYL CHLORIDE
SCH = SCHEDULE
EXP = EXPANSION

DRAWING IS NOT TO SCALE

UPS-OAKLAND HUB
8400 PARDEE DRIVE, OAKLAND, CALIFORNIA
WORK PLAN

INJECTION WELL / MONITORING WELL CONSTRUCTION DETAIL

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FIGURE
4

LEGEND

- MONITORING WELL
- TEMPORARY VACUUM TEST WELL
- PHASE I INJECTION WELL
- ABANDONED MONITORING WELL
- SOIL BORING LOCATION (2010)
- PROPERTY BOUNDARY
- UNDERGROUND ELECTRICAL LINE
- STORM WATER/SEWER LINE
- WATER/FIRE SERVICE/IRRIGATION
- ELECTRIC/WATER LINE
- CATCH BASIN/STORM DRAIN
- LIGHT POST/ POWER POLE
- PROPOSED MONITORING WELL

0 50' 100'

GRAPHIC SCALE

UPS-OAKLAND HUB
8400 PARDEE DRIVE, OAKLAND, CALIFORNIA
WORK PLAN

PROPOSED MONITORING WELL LOCATIONS

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FIGURE
5

CITY:TAMPA DIV/GROUP:85 DB:JAR LD:(Opt) PIC:(Opt) PM:(Reqd) TM:(Opt) LYR:(Opt)ON=*;OFF=*REF*
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