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By Alameda County Environmental Health 9:57 am, Aug 04, 2017

July 25, 2017

Mr. Mark Detterman
Alameda County Health Agency
1131 Harbor Bay Parkway, #250
Alameda, CA 94502

RE: Former Paco Pump Site, 9201 San Leandro Street, Oakland, CA
Case #: RO 000320

Dear Mr. Detterman,

Thank you for meeting with us on April 15, 2016 regarding the former Paco Pump site.

This work plan and summary presents the issues discussed at the meeting and our understanding of the resolution of said issues. This work plan also is meant to address your April 19, 2017 letter. Figure 1 illustrates the location of each area discussed.

1. Area 5 - Vicinity of well MW-4 in eastern building

Issues: Elevated hydrocarbon concentrations in soil gas in former soil vapor sampling point SV6; potential former UST near northeast corner of former building and dissolved hydrocarbon concentration in well MW-4.

Proposed Tasks:

- Resampling of soil gas probes SV-6, SV-7, SV-8;
- Collection of two indoor air samples in the eastern building, including one location near SV-6;
- Collection of three grab groundwater samples aligned in a north-south transect between MW-4 and the western edge of the eastern building.
 - This includes logging borings per the USCS, and collecting one groundwater grab sample per boring.
 - Grab groundwater samples will be collected by advancing a macro-core direct push rod to a maximum depth of 20 feet; actual depth and screened interval will be determined by a field geologist. A 3/4-inch temporary well casing and screen will be

placed in the boring. A groundwater sample will be collected with a disposable bailer or a peristaltic pump with disposable tubing. Temporary well screens will be placed in a manner consistent with MW-4.

- o Grab groundwater samples will be analyzed for volatile organic compounds and total petroleum hydrocarbons as diesel and gasoline.

These tasks are designed to address potential vapor intrusion concerns and potential dissolved hydrocarbons in groundwater in the western part of the eastern building.

2. Area 4 - Former UST Area, vicinity of wells MW-3

In November of 2016, Apex-SGI contracted with Subdynamic Locating Services, Inc. to perform a geophysical survey. The survey was conducted to locate and verify the presence of UST(s) within Area 4. Ground Penetrating Radar (GPR), metal detection, and line locating techniques were employed to establish the location of UST(s). No GPR signatures consistent with UST presence or backfill were found. There were no UST(s) detectable during the geophysical survey, therefore it is assumed that either the UST(s) were removed or were not present on the property. An attempt to find monitoring wells MW-3 and E-8 was also made at the time of the geophysical survey. Wells MW-3 and E-8 were not found during the geophysical survey, and therefore, will need to be replaced.

In February of 2017, Apex-SGI contracted with Cornerstone Environmental Contractors of Concord, California to pothole two potholes in order to confirm the lack of UST presence. Potholes were no more than 4 feet deep. Soils were found to be similar to that of native with various buried debris. Slight visual staining was visible in soil. There were no olfactory signs of contamination in these potholes. No UST(s) were found, nor was there evidence of UST backfill (pea-gravel or otherwise) in these potholes. Potholes were backfilled with clean fill. Wastes from these potholes was stockpiled, covered and analyzed and subsequently found to be non-hazardous waste.

Issues: Residual petroleum hydrocarbon groundwater and soil concentrations and potential vapor intrusion at the south end of western building.

Proposed Tasks:

- Replacement of former monitoring wells MW-3 and E-8;
- Indoor air testing from two locations in the western building;
- Install additional downgradient well (proposed well MW-13; discussed in point number 5 below);
- If the new downgradient well is significantly contaminated and indoor air testing fails, then excavate and dispose contaminated soil to groundwater near MW-3/Formal UST, backfilling with clean fill to remove accessible secondary source of hydrocarbons.

3. Area 4 – Vicinity of Wells E-3, E-5, E-2, E-6, Southern End of Western Building

Issue: Elevated dissolved TPH-motor oil detected during previous groundwater monitoring events.

Comments:

- Potential vapor intrusion;
- The TPH-motor oil concentration in well E-3 (590,000 µg/l) decreases very rapidly downgradient to well E-5 (11,000 µg/l) (located about 12 feet to the west), and decreases again downgradient to wells E-2 (720 µg/L) and E-6 (750 µg/l), each located another 15 feet west. Concentrations at boundary sentinel monitoring wells MW-9 (non-detect at <300 µg/L) and MW-10 (1,300 µg/l) located another 65 to 75 feet downgradient, respectively, are both estimated values below the laboratory reporting limit. This steep decrease indicates a rapid lateral attenuation with no significant risk of off-site impact;
- Soil concentrations of hydrocarbons reported during drilling of wells E-2, E-3, E-5, and E-6 indicate a possible source remaining in the area.
- If a source of TPH-motor oil is/was located in the vicinity of well E-6, it likely predates the building construction (pre-1946, per aerial photos), confirming the limited migration of hydrocarbons over a more than 70-year period.

Proposed Tasks:

- No additional subsurface investigation;
- Collection of two indoor air samples to evaluate vapor intrusion risk in the western building.

4. Area 2 Soil

Issue: Soil samples taken in the vicinity of wells MW-10 and MW-11 in September 2014 contained PCBs above the ESL for commercial/industrial worker of 1.0 mg/kg.

Proposed Tasks:

- Sampling of soil in a grid pattern (up to six borings) in the alley between the fence and building, encompassing the area approximately between MW-10 to MW-5, ranging in depth from one (1)-foot bgs to the top of groundwater at approximately six (6) to nine (9) feet bgs. Total depth would be dependent upon the groundwater depth at the time of sampling.
- Evaluate the volume of soil with PCBs greater than the San Francisco Regional Water Quality Control Board (SF RWQCB) environmental screening level (ESL) for commercial/industrial worker exposure of 1.0 mg/kg. Based on the findings, we will propose either 1) full soil excavation, or 2) shallow soil excavation and a deed restriction for deeper soil.

5. Area 2 – Wells MW-9, MW-12

Issue: Potential data gap between groundwater migration sentinel wells MW-9 and MW-12.

Proposed Task:

- Install a new well (MW-13) mid-point between MW-9 and MW-12 to fill the gap.

- Take soil samples every five feet for TPH-d and TPH-mo analysis.
- Develop well in a timely manner, so that it may be incorporated in to the next groundwater sampling event.

6. Area of Former Oil Soil, SW corner

Issue: Surface staining of soil in the eastern portion of Area 2 was noted by ACEH in 2014. Subsequently, the stained soil was removed by the current owner; SGI was not part of the removal, but in September 2014, SGI performed sampling in the area where staining had previously been noted, finding TPHd and TPHmo in samples taken from one (1) and two-and-a-half (2.5) feet below ground surface (bgs), all at levels below the applicable RWQCB ESL. Concentrations were highest in the shallow samples, decreasing with depth.

Proposed Tasks:

- None.

7. Deed Restriction and Soil Management Plan

A deed restriction limiting certain types of land uses and preparation of an accompanying Soil Management Plan will be prepared for the Site encompassing known environmental issues.

Semi-Annual Groundwater Monitoring and Sampling

Though not discussed directly at the meeting, semi-annual groundwater monitoring will continue for at least one more event. The next event is scheduled for the 3rd Quarter, 2017.

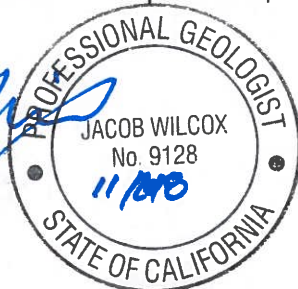
Summary

We believe the list of issues/concerns and proposed tasks are in line with our discussion on April 15, 2016, and that the proposed tasks will bring site conditions to a no-further-action status.

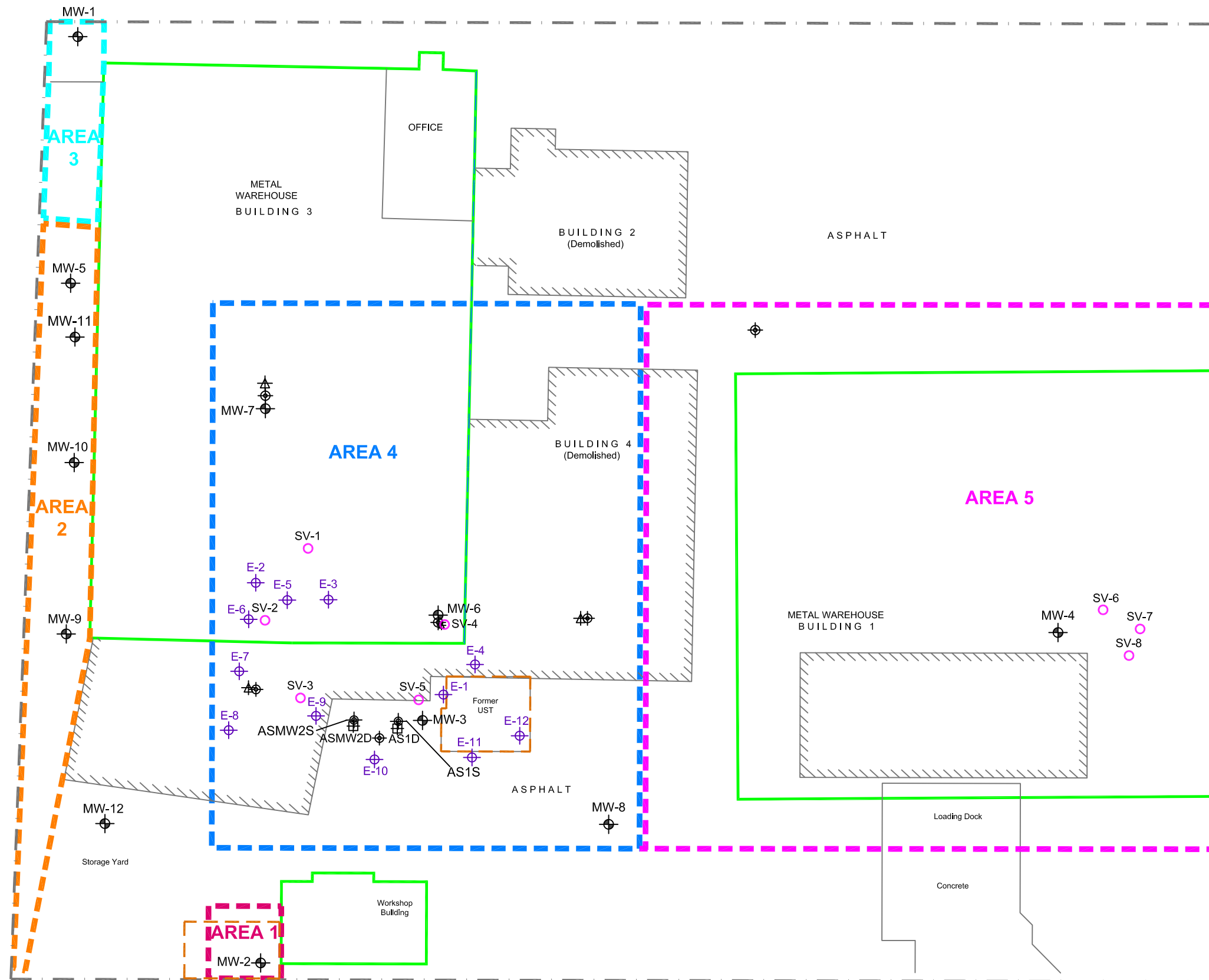
Upon agreement with the above, we expect to complete the repair of damaged wells and installation of new monitoring well MW-13 will proceed almost immediately so they can be incorporated into the next semi-annual monitoring event.

Sincerely,
The Source Group, Inc., a division of Apex Companies, LLC,








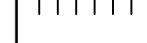
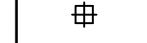

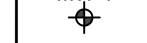



Jacob Wilcox, PG
Senior Geologist



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LEGEND

-  Site Boundary
-  Project Areas of Concern
-  Area of Excavation
-  Building Outline
-  Former Buildings
-  Railroad Tracks
-  AS1D Deep Groundwater Air Injection or Air Injection Monitoring Well by LFR January 2009
-  AS1S Shallow Groundwater Air Injection or Air Injection Monitoring Well LFR January 2009
-  MW-1 Groundwater Monitoring Well
-  SV-6 Soil Vapor Probe by SGI 2013
-  E-1 Groundwater Monitoring Well by SGI 2010
-  SVMW3 Vadose Well by LFR January 2009
-  Membrane Interface Probe by LFR January 2009
-  Grab Groundwater Sample Location by LFR January 2009

SITE PLAN

FORMER PACO PUMPS SITE
9201 SAN LEANDRO STREET
OAKLAND, CALIFORNIA

PROJECT NO.	DATE	DRAWN BY:	APP. BY:
04-PFT-005	05/09/2017	ZA	ST

0 40 80
APPROXIMATE HORIZONTAL SCALE IN FEET



3478 BUSKIRK AVENUE, SUITE 100
PLEASANT HILL, CA 94523



FIGURE
1