Detterman, Mark, Env. Health

From: Detterman, Mark, Env. Health
Sent: Thursday, August 13, 2015 5:17 PM
To: 'Carl J. Michelsen'
Cc: GrafCon; Dave Hopkins; Cunningham, Denise; Kamangar, Katia; Justin J. Patterson
Subject: RE: Summary of Conference Call

Carl,
Thanks for the summary. The reasoning appears sound. In regards to Buildings A & B, I would request the soil type for the entire 12 foot excavation depth be considered, and not just the upper 5 feet. One item that did not come up and I didn't think to request in the letter, is to request that all bores be logged. They always provide useful information and is a standard ACEH request.
Thanks; looking forward to seeing the data.

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PDF copies of case files can be downloaded at:

http://www.acgov.org/aceh/lop/ust.htm

From: Carl J. Michelsen [mailto:CMichelsen@pesenv.com]
Sent: Thursday, August 13, 2015 1:27 PM
To: Detterman, Mark, Env. Health
Cc: GrafCon; Dave Hopkins; Cunningham, Denise; Kamangar, Katia; Justin J. Patterson
Subject: Summary of Conference Call

Mark - Thanks for the phone call this morning with Tom and PES.

Per your request, the following provides a summary of our discussion regarding your Workplan conditional approval letter and the changes to the upcoming subsurface investigation:

1) The three proposed soil/soil vapor borings surrounding boring B4 will be moved in so that they are spaced at a distance of 20 feet from boring B4.
2) PES will collect a soil vapor sample from depths of 5 feet and 10 feet below ground surface adjacent to boring B4.
3) PES will ensure that enough soil sample is collected from each location to run a duplicate sample to be analyzed for total petroleum hydrocarbons (TPH) quantified as diesel and motor oil without silica gel cleanup.
4) PES will provide further details in the report to describe the soil gas sampling/leak detection methodology (e.g., per the DTSC 2012 Advisory - Active Soil Gas Investigations guidance). We also will include the tracer and oxygen concentrations on the report tables.
5) PES will add two new borings within the footprint of the planned parking garage on the northwestern portion of the site. One location will be located between the prior borings B31 and B32. The second boring will located between prior borings B28 and B29. Each boring will be advanced to approximately 13 feet below ground surface to collect a soil vapor sample.

6) Finally, as we discussed, PES completed 10 borings across the site. In most borings a dark brown clay is present in the 0-5 ft horizon from which the soil gas samples were collected. Using the SCS classification system that is used in the DTSC Johnson and Ettinger model, this clay would be classified as a clay (C). This is the soil type that was used in the J&E modeling from which the site specific screening level for PCE was derived in our February 12, 2015 report. Other materials are also occasionally present such as silt with sand, which in the SCS terminology would be called a silt loam (SIL) or loam (L). Use of these SCS soil types in the model yields a cancer risk of $1.3x10^{-6}$ or $1.4x10^{-6}$ for the 1,260 $\mu g/m^3$ PCE screening level used in the report; in other words essentially the same risk level as using the clay SCS soil type. In some locations a silty gravel with sand is present in the shallow horizon. However, despite the local presence of this more permeable material, no PCE was detected in the two samples (B8 and B11) where this soil type was encountered. Consequently, the use of clay as the soil type in the J&E model used to create the site-specific screening level was appropriate. Regardless of the screening level, vapor mitigation is being applied where PCE was detected in soil gas.

Attached please find a revised Plate 2 that shows the new boring locations described above.

Please let me know if you have any further questions, or if I missed something. We'll contact you as soon as we have locked in the date for the subsurface investigation.

Thanks,
Carl

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Principal Geochemist

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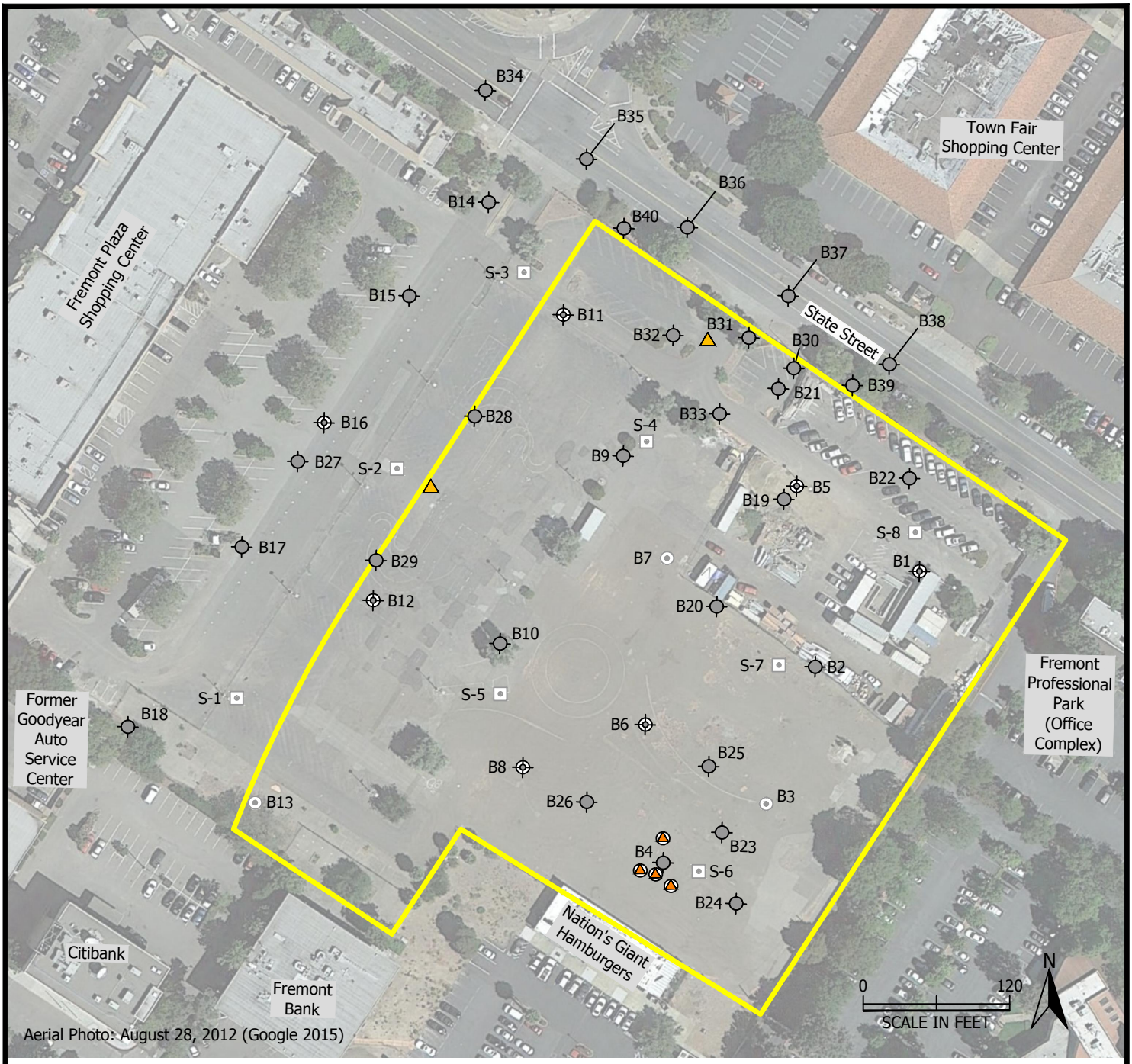

Explanation

- Approximate Property Boundary
- B17 — Soil Vapor Sampling Location (PES, 2014)
- B6 — Soil Vapor and Soil Sampling Location (PES, 2014)
- B13 — Soil Sampling Location (PES, 2014)
- S-1 — Soil Sampling Location (ENGEO, 2015)
- Proposed Soil and Soil Vapor Sample Location
- Proposed Soil Vapor Sample Location

PES Environmental, Inc.
Engineering & Environmental Services

Site Plan and Proposed Sample Locations
39155 and 39183 State Street
Fremont, California

PLATE 2

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JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE