Nowell, Keith, Env. Health

From: Smoley, Megan <Megan.Smoley@arcadis.com>
Sent: Monday, August 28, 2017 10:00 AM
To: Nowell, Keith, Env. Health
Subject: ACEH case file number RO14, GeoTracker Global ID T0600100213, 3201 35th Avenue, Oakland - Revised Figures with Comments
Attachments: CA11132_Figure2_ProposedSoilVaporProbeLocations.pdf; Revised CA11132_Figure9 _ProposedGroundwaterWellLocation.pdf

Mr. Nowell,

The purpose of this email is to respond to comments in ACDEH's August 21, 2017 conditional approval of the *Offsite Soil Vapor and Groundwater Investigation Work Plan* (Work Plan).

- Comment 1: Vapor Intrusion Along 35th Avenue
  - Soil probe locations were realigned/added in the attached Figure 2 to correspond with the three residential properties bordering 35th Avenue and located south of the site (3202, 3210 and 3214 35th Avenue). The locations of the three probes are approximately centered in front of the residential lots. Only one probe is now proposed at each of the three locations at a depth corresponding to the foundation of the residence at that property. As stated in Comment 3 of your letter, a foundation of 6 inches is assumed for structures having slab-on-grade construction, and perimeter footing is assumed to be embedded 1 foot below the base of the crawl space. Depths of each probe were determined by the results of the Property Foundation Survey completed by Arcadis and submitted to ACDEH on April 24, 2017. The probes will be installed at a depth of 5 feet below the bottom of the building foundations per the State Water Resources Control Board's Low-Threat Underground Storage Tank Case Closure Policy (LTCP).
    - SV-1 (3214 35th Avenue) – This property is also referred to as 3509 Suter Street. The first floor is raised, similar to the property at 3210 35th Avenue. A crawl space appears to be present at this residence. A depth was not confirmed by the property owner, so a crawl space of 2.5 feet is assumed (the depth of the crawl space confirmed by residence at 3210 35th Avenue. Assuming an additional 1 foot of perimeter footing beneath the crawl space, the foundation would be 3.5 feet below ground surface (bgs). Therefore, probe SV-1 will be installed at a depth of 8.5 feet bgs.
    - SV-2 (3210 35th Avenue) – The property owner responded to the survey and indicated the residence had a crawl space of approximately 2.5 feet. Assuming an additional 1 foot of perimeter footing beneath the crawl space, the foundation would be 3.5 feet bgs. Therefore, probe SV-2 will be installed at a depth of 8.5 feet bgs.
    - SV-3 (3202 35th Avenue) – The property owner confirmed that no basement was present, and Arcadis personnel did not observe evidence of a crawl space. The first floor was at ground surface. A 6-inch foundation is assumed for slab-on-grade construction. Therefore, probe SV-3 will be installed at a depth of 5.5 feet bgs.

- Comment 2: Vapor Intrusion along Suter Street
  - Two soil vapor probes (SV-4 and SV-5) were added to Figure 2 to assess potential vapor pathways to the residential property located at 3125 35th Avenue. This property was not included in Arcadis' April 2017 property foundation survey. Based on an initial review of the property foundation in Google Maps, the construction appears similar to 3210 35th Avenue, and probe depths were adjusted accordingly in Figure 2 (8.5 feet bgs). However, Arcadis will complete a foundation survey of this property, consisting of both mailing a letter to the property owner as well as a visual field survey. The final soil vapor probe depths

at 3125 35th Avenue will be determined based on the results of the property owner response and/or visual survey.

- Comment 3: Vapor Probe Sampling
  - Soil samples will be collected from each soil vapor probe boring to adequately characterize vadose zone conditions per the bioattenuation criteria in Scenario 4 (2 of 2) of the LTCP. The LTCP states that total petroleum hydrocarbons (TPH) must be measured in at least two depths within the 5-foot zone. The 5-foot zone is defined as the vertical distance between the foundation of an existing building and the soil vapor measurement. Two soil samples will be collected at each of the five locations during probe installation. The depths will be adjusted from the bottom of the building foundation. For the probe installed at 5.5 feet bgs, samples will be collected between 0.5 feet and 5.5 feet bgs. For the probes installed at 8.5 feet bgs, samples will be collected between 3.5 feet and 8.5 feet bgs.

- Comment 4: Groundwater Monitoring Well Locations
  - Arcadis understands that if MW-12 needs to be adjusted based on utility concerns, the adjustment is to be made in a northwesterly direction.
  - Figure 9 shows the adjusted location of well MW-13 to the west side of the Suter Street.

Additional Comments:

- In addition to the comments presented in ACDEH's letter, Mr. Keith Nowell of ACDEH requested that Arcadis investigate the status of a nearby irrigation well during a phone conversation between Mr. Nowell and Ms. Megan Smoley of Arcadis on August 23, 2017. According to Mr. Nowell's records, an irrigation well was identified at the property located at 3397 Arkansas Street. An irrigation well at this property (parcel 28-952-133) was identified during a previous well search conducted by Arcadis in June 2016 via the Alameda County Public Works Agency. The well was installed in August 1977 to a depth of 62 feet bgs. Arcadis will attempt to contact the property owner to investigate the current status of the well by mailing a letter as well as visiting the property during field activities associated with the Work Plan.

Thank you,
Megan

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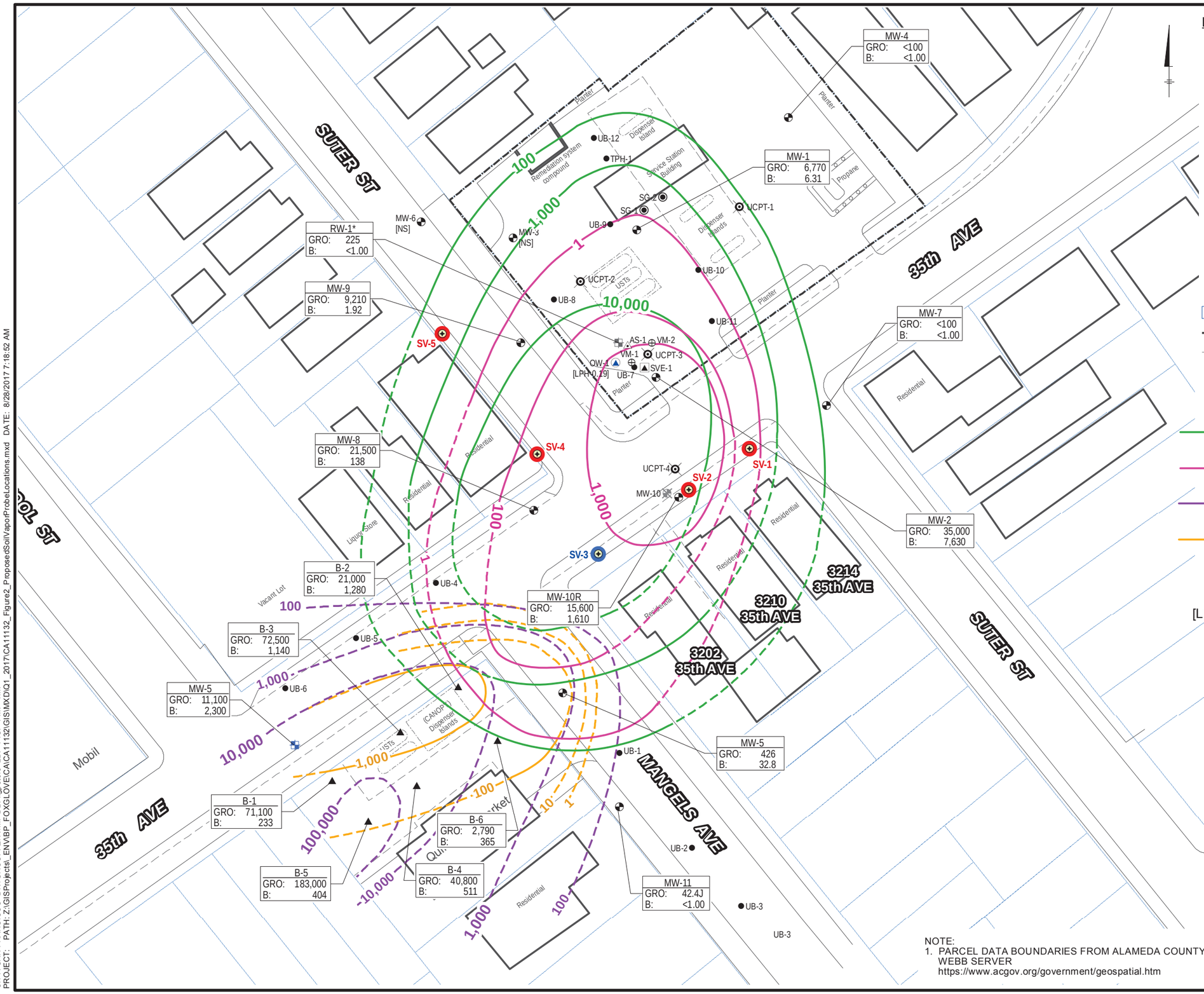

LEGEND:

- PROPOSED SOIL VAPOR PROBE (8.5 feet bgs)
- PROPOSED SOIL VAPOR PROBE (5.5 feet bgs)
- GROUNDWATER MONITORING WELL
- GROUNDWATER RECOVERY WELL
- EXXON-MOBIL WELL
- OBSERVATION WELL
- SOIL VAPOR EXTRACTION WELL
- SOIL VAPOR MONITORING WELL
- SOIL BORING (EXXON)
- SOIL BORING
- CPT/UVOST LOCATION
- SOIL GAS BORING
- AIR SPARGE WELL
- ABANDONED MONITORING WELL
- PROPERTY BOUNDARIES
- PROPERTY BOUNDARY
- CANOPY
- UNDERGROUND STORAGE TANKS

MW-1 (SAMPLE LOCATION ID)
GRO: 6,770 — CONCENTRATION IN MICROGRAMS PER LITER (µg/L)
B: 6.31 — ANALYTE

- GRO ISOCONCENTRATION CONTOUR (µg/L) ARCADIS; DASHED WHERE INFERRED
- BENZENE ISOCONCENTRATION CONTOUR (µg/L) ARCADIS; DASHED WHERE INFERRED
- GRO ISOCONCENTRATION CONTOUR (µg/L) QUIK STOP; DASHED WHERE INFERRED
- BENZENE ISOCONCENTRATION CONTOUR (µg/L) QUIK STOP; DASHED WHERE INFERRED

GRO	GASOLINE RANGE ORGANICS
B	BENZENE
[LPH-0.19]	LIQUID PHASE HYDROCARBONS - THICKNESS IN FEET
RW-1*	NOT USED FOR CONTOURING
ft bgs	FEET BELOW GROUND SURFACE

NOTE:
ARCADIS SAMPLES COLLECTED MARCH 1, 2017.
QUICKSTOP SAMPLES B-4 & B-6 WERE COLLECTED ON JULY 5, 2016. SAMPLES B-1, B-2, B-3, & B-5 WERE COLLECTED ON JULY 12, 2016.
EXXON MOBIL WELL MW-5 SAMPLE COLLECTED ON MARCH 27, 2017.

0 50 100
SCALE IN FEET

NOTE:
1. PARCEL DATA BOUNDARIES FROM ALAMEDA COUNTY WEBB SERVER
https://www.acgov.org/government/geospatial.htm

FORMER BP SERVICE STATION #11132
3201 35TH AVENUE
OAKLAND, CALIFORNIA

PROPOSED SOIL VAPOR PROBE LOCATIONS

ARCADIS Design & Consultancy for natural and built assets

FIGURE 2

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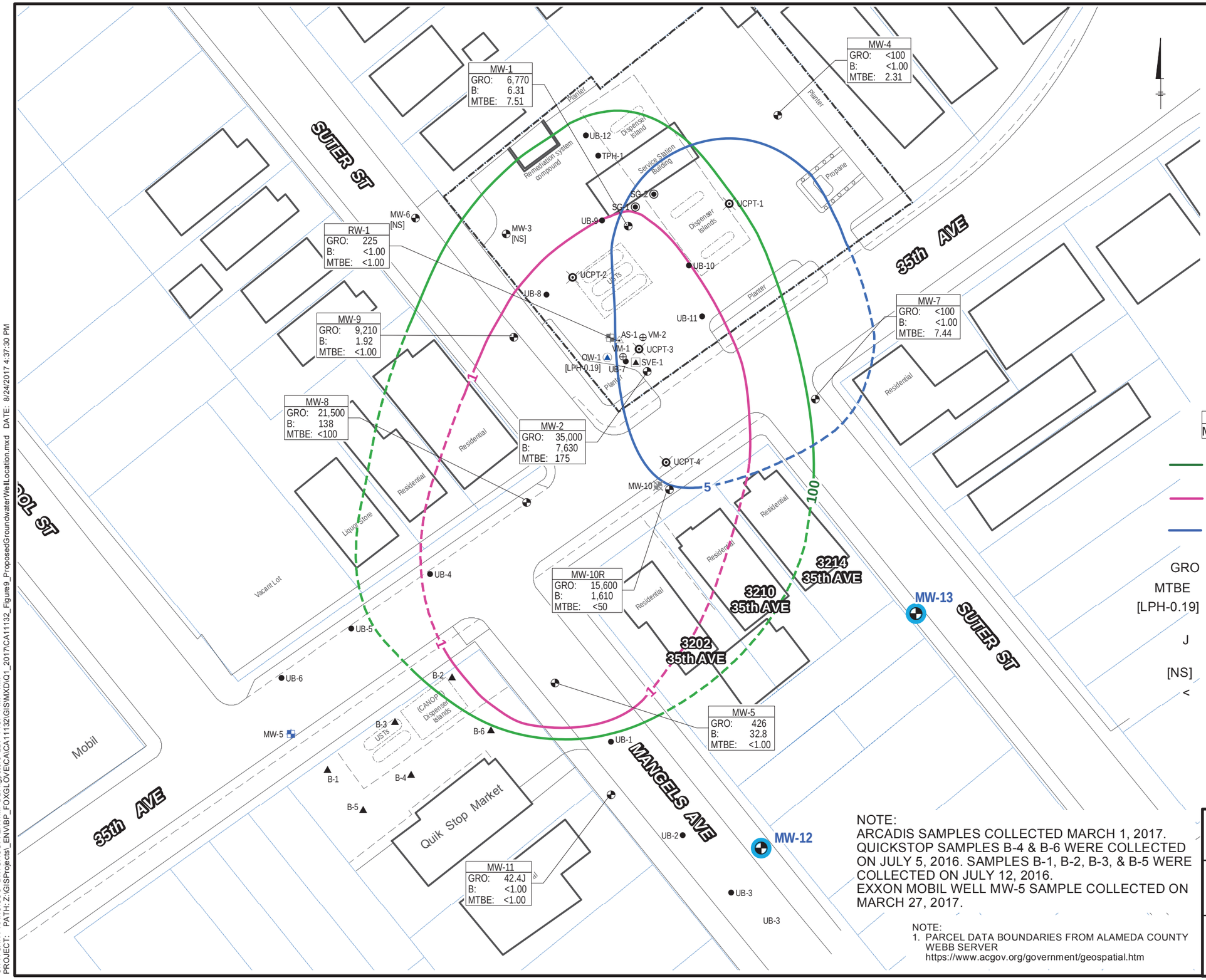

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FORMER BP SERVICE STATION #11132
3201 35TH AVENUE
OAKLAND, CALIFORNIA

PROPOSED GROUNDWATER WELL LOCATION

ARCADIS Design & Consultancy for natural and built assets

FIGURE
9

CITY: SAN FRANCISCO DIV/GROUP: ENV/IM DB: kgpeters LD: PIC: PM: TM:
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