From:	Detterman, Karel, Env. Health
To:	"Annie Lee"
Cc:	Wells; Robert Schultz; Tyler Houghton; Yoo, James
Subject:	RE: 3093 Broadway, Oakland - Monitoring Well Installation Fuel Leak Case No. RO0000199: GeoTracker Global ID T0600100406, Connell Oldsmobile, 3093 Broadway, Oakland, 94611
Date:	Monday, July 18, 2016 12:05:48 PM

Hello Annie:

I have re-reviewed the May 21, 2015 *Feasibility Study and Corrective Action Plan* (FS/CAP) and the July 30, 2015 *Final Enhanced Bioremediation Pilot Study Report and Full Scale Implementation Plan*. It appears appropriate to install MW-22 as originally proposed in the approved FS/CAP, as the volatile organic (VOC) concentrations for total petroleum hydrocarbons as gasoline (TPHg), diesel (TPHd), benzene, and naphthalene were elevated in MW-18 during the May 2015 sampling round. At this juncture, it is critical to build a thorough record of groundwater sampling results to document the success of the post-corrective action activities to support eventual case closure.

I will approve the ACPWA drilling permit on the condition that the five monitoring wells, MW-20 through MW-24 are installed as proposed in the FS/CAP.

Thank you,

Karel Detterman, PG
Hazardous Materials Specialist
Alameda County Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502
Direct: 510.567.6708
Fax: 510.337.9335
Email: karel.detterman@acgov.org

PDF copies of case files can be downloaded at:

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

From: Annie Lee [mailto:ALee@Langan.com]
Sent: Friday, July 15, 2016 9:55 AM
To: Detterman, Karel, Env. Health
Cc: Wells; Robert Schultz; Tyler Houghton
Subject: RE: 3093 Broadway, Oakland - Monitoring Well Installation

Hi Karel,

I just left you a voice message, but have you gotten an opportunity to look at this old work plan and approve our scope of work for the installation of 4 wells at 3093 Broadway in Oakland?

Please feel free to give me a call with any questions.

Thank you,

Annie Lee, PE
Project Engineer
Direct: 415.955.5285
Mobile: 415.341.2496
File Sharing Link

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From: Annie Lee
Sent: Thursday, July 07, 2016 5:04 PM
To: Detterman, Karel, Env. Health (Karel.Detterman@acgov.org)
Cc: wells@acpwa.org; Robert Schultz; Tyler Houghton
Subject: 3093 Broadway, Oakland - Monitoring Well Installation

Hi Karel,

We recently submitted a well permit to the ACPWA (Application Confirmation Id: 1467327084706) for the construction of four wells at the 3093 Broadway property in Oakland. As we understand it, they are only missing a work plan approval. This email clarifies that this well installation was previously presented and approved in a report submitted in May 2015, but are only now being installed as a result of delayed construction at the site.

These wells (MW-20, MW-21, MW-23 and MW-24) replace old wells that were destroyed prior to site demolition and grading activities. The construction of these four wells is described in Section 7.2 and the locations are shown on Figure 8 of the approved *Feasibility Study and Corrective Action Plan* dated 21 May 2015 (http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/5991447210/T0600100406.PDF).

Please note that MW-22, previously proposed in the former showroom area, will no longer be installed due to low concentrations of VOCs in the showroom, as demonstrated by the groundwater results collected from former wells MW-18 and MW-19. These groundwater results were presented in the *Final Enhanced Bioremediation Pilot Study Report and Full Scale Implementation Plan* dated 30 July 2015 (http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/9089317083/T0600100406.PDF).

We are currently planning on installing the wells on July 25 and 26. Please let me know if you have any questions regarding our upcoming work or if any additional information is needed for this well permit approval.

Thank you,

Annie Lee, PE
Project Engineer
Direct: 415.955.5285
Mobile: 415.341.2496
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Table 3
Groundwater Analytical Results – Petroleum Compounds
3093 Broadway
Oakland, California

Well ID	Date Sampled[1]	TPHg	TPHd	Benzene	Toluene	Ethyl-benzene	Xylenes	MTBE	1,2-DCA	Naphthalene	TBA
		µg/L									
AS-1B	05/22/14	**170**	–	**4.9**	**4.0**	< 2.5	6.5	< 2.5	< 2.5	< 2.5	490
MW-1	06/21/13	**51,000**	–	**2,300**	3,500	340	8,100	<120	–	–	–
MW-1	05/21/14	**60,000**	–	**4,300**	6,400	660	10,000	< 250	< 250	780	< 1,000
MW-1[3]	11/19/14	**69,000**	**9900**	**5,700**	4,100	690	13,000	< 250	-	–	–
MW-1	05/18/15	**31,000**	**10,000**	**2,300**	650	260	3,400	<50	<50	430	–
MW-2	05/22/14	< 50	–	< 0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-3	05/22/14	< 50	–	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-3[3]	11/19/14	< 50	52	0.63	< 0.50	< 0.50	1.0	< 5.0	–	–	–
MW-3	05/21/15	<50	**380**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	–
MW-4	06/21/13	**110,000**	–	**4,400**	15,000	1,700	13,000	<1,200	–	–	–
MW-4	05/20/14	**72,000**	–	**1,900**	7,300	1,400	9,400	< 250	< 250	1,100	< 1,000
MW-4	05/22/15	**66,000**	**14,000**	**1,400**	5,300	1,200	7,100	<250	<250	790	–
MW-5	05/22/14	< 50	–	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-5	05/22/15	<50	<50	<0.5	0.5	<0.5	1.4	<0.5	<0.5	<0.5	–
MW-6	06/21/13	**15,000**	–	**2,400**	300	370	680	<250	–	–	–
MW-6	05/20/14	**17,000**	–	**3,700**	530	830	840	< 50	< 50	200	490
MW-6[3]	11/19/14	**20,000**	**3,200**	**3,500**	400	900	970	< 250	–	–	–
MW-6	05/21/15	**18,000**	**4,100**	**2,400**	220	320	320	<100	<100	120	–
MW-7	05/20/14	< 50	–	< 0.50	< 0.50	< 0.50	0.54	< 0.50	< 0.50	< 0.50	< 2.0
MW-7	05/22/15	<50	<50	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	–
MW-8	05/21/14	70	–	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	9.7	< 2.5	310
MW-8	05/21/15	91	**130**	<0.5	<0.5	<0.5	<0.5	<0.5	**10**	<0.5	–
MW-9	05/20/14	< 50	–	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	100	< 2.5	640
MW-9[3]	11/19/14	**240**	83	**4.5**	2.2	< 0.5	5.2	< 5.0	–	–	–
MW-10	05/20/14	**88,000**	–	**5,000**	18,000	1,700	8,900	< 500	< 500	770	< 2,000
MW-13	05/22/14	< 50	–	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	6.2
MW-14	06/21/13	**36,000**	–	**1,100**	4,000	330	6,400	<250	–	–	–
MW-14	05/22/15	**5,700**	**1,500**	**250**	90	110	830	<5.0	<5.0	100	–
MW-15	06/21/13	**11,000**	–	**290**	**710**	120	2,200	<50	–	–	–
MW-15	05/21/14	**4,100**	–	**420**	19	220	230	< 17	< 17	–	< 67
MW-16A	05/21/14	**3,700**	–	**5.3**	3.7	7.4	31	< 2.5	< 2.5	11	27
MW-16B	06/21/13	**5,400**	–	**1,000**	330	56	170	<50	–	–	–
MW-16B	05/21/14	**15,000**	–	**11,000**	710	1,000	2,000	< 250	< 250	< 250	3,400
MW-17A	06/21/13	**20,000**	–	**1,300**	1,500	73	3,400	<250	–	–	–
MW-17A	05/21/14	**52,000**	–	**1,900**	3,500	970	10,000	< 50	< 50	830	< 200
MW-17B	05/21/14	< 50	–	< 0.50	< 0.50	< 0.50	1.1	< 0.50	< 0.50	< 0.50	< 2.0
MW-18	05/21/15	**3,200**	**2,000**	**240**	<5.0	42	26	<5.0	74	14	–
MW-19	05/22/15	<50	<50	<0.5	<0.5	<0.5	0.7	<5.0	1.9	<0.5	–
RW-2	05/20/14	**3,600**	–	**220**	330	140	780	< 10	< 10	38	49
RW-2	06/21/13	**4,000**	–	**180**	350	65	530	<50	–	-	–
RW-3A	05/22/15	**20,000**	**5,000**	**1,100**	190	170	2,700	<25	<25	260	–
RW-3B	05/22/15	**190**	**2,600**	<0.5	<0.5	<0.5	**0.9**	<0.5	<0.5	<0.5	–
RW-4	05/21/14	**11,000**	–	**200**	670	310	1,700	< 17	< 17	170	< 67
RW-5	05/21/14	**14,000**	–	**880**	440	320	2,200	< 50	< 50	250	< 200
Drinking Water ESLs[2]		100	100	1.0	150	300	1,800	5.0	0.5	6.1	12

Notes:

Bolded values exceed drinking water Environmental Screening Level (ESLs).

[1] Compilation of groundwater data collected for the site, June 2013 through May 2015.

[2] Drinking Water ESLs = Table F-3 - Summary of Drinking Water Screening Levels, as established by the San Francisco Regional Water Quality Control Board, December 2013.

< 50 - Analyte was not detected at or above the laboratory reporting limit (50 µg/L)

– = Not analyzed

1,2-DCA = 1,2-dichloroethane

MTBE = methyl-t-butyl ether

TBA =t-butyl alcohol

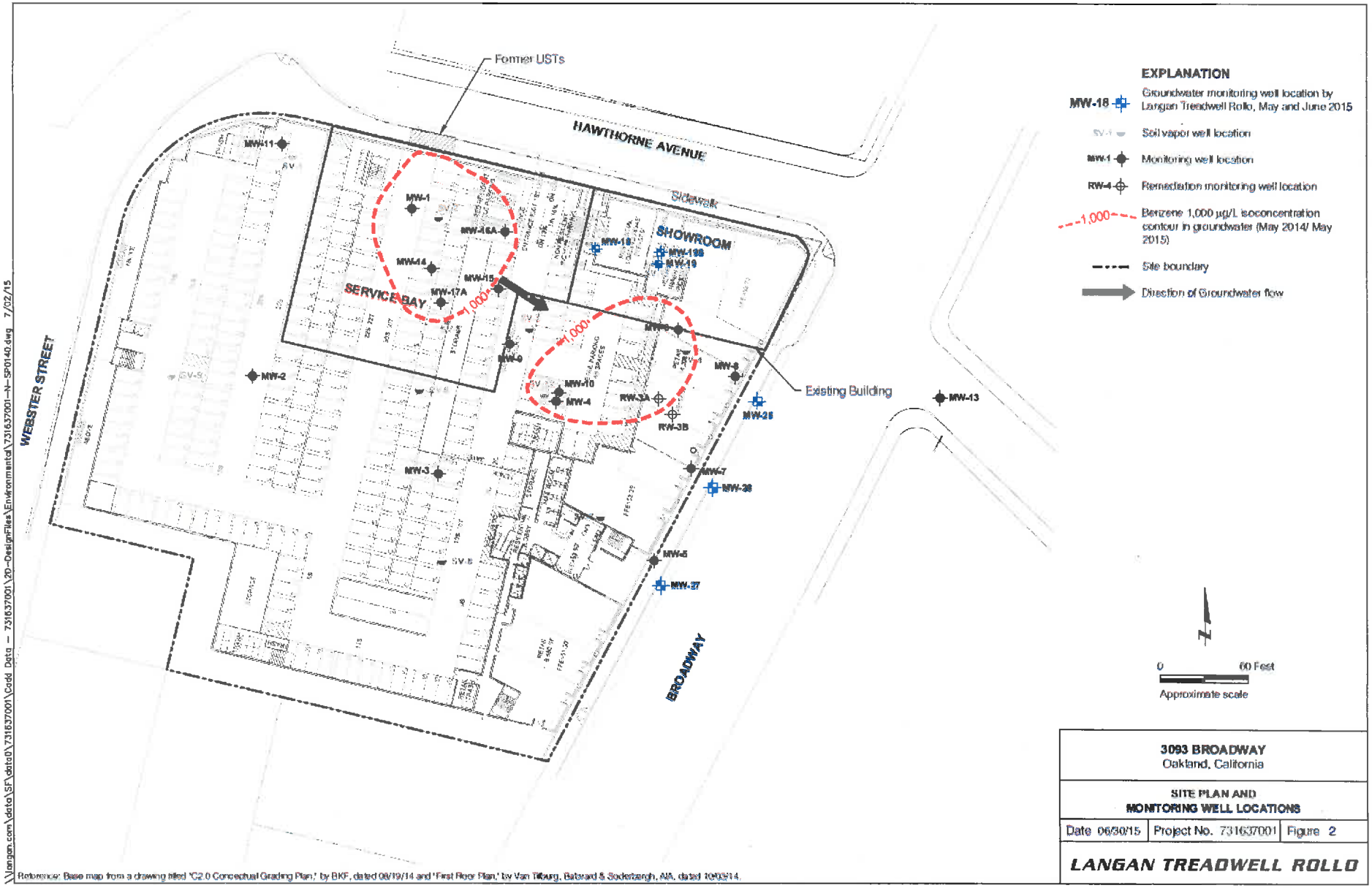
TPHd = total petroleum hydrocarbons as diesel analyzed by EPA Method 8015B

TPHg = total petroleum hydrocarbons as gasoline analyzed by EPA Method 8015B unless otherwise indicated

All volatile organic compounds were analyzed using EPA method 8260B

µg/L = micrograms per liter

[3] TPHg, benzene, toluene, ethylbenzene, xylenes, and MTBE analyzed using EPA Method 8021B/ 8015Bm



Reference: Base map from a drawing titled "C2.0 Conceptual Grading Plan," by BKF, dated 08/19/14 and "First Floor Plan," by Van Tilburg, Banvard & Soderbergh, AIA, dated 10/03/14.

3093 BROADWAY
Oakland, California

SITE PLAN AND MONITORING WELL LOCATIONS

Date 06/30/15	Project No. 731637001	Figure 2

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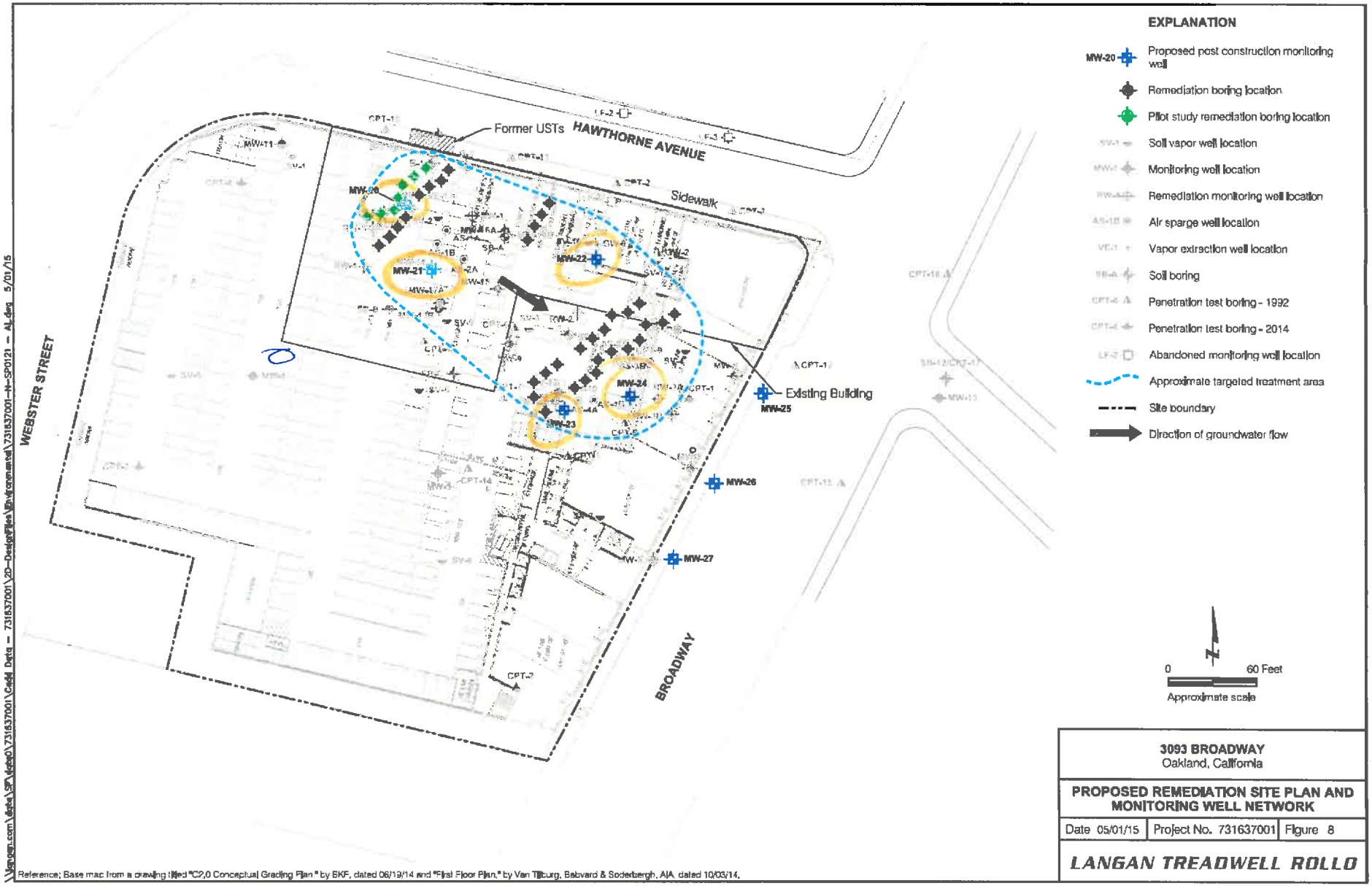
EXPLANATION
MW-20 Proposed post construction monitoring well
Remediation boring location
Pilot study remediation boring location
Soil vapor well location
Monitoring well location
Remediation monitoring well location
Air sparge well location
Vapor extraction well location
Soil boring
Penetration test boring - 1992
Penetration test boring - 2014
Abandoned monitoring well location
Approximate targeted treatment area
Site boundary
Direction of groundwater flow
HAWTHORNE AVENUE
WEBSTER STREET
BROADWAY
Sidewalk
Former USTs
Existing Building
MW-20
MW-21
MW-22
MW-23
MW-24
MW-25
MW-26
MW-27
0
60 Feet
Approximate scale
3093 BROADWAY
Oakland, California
PROPOSED REMEDIATION SITE PLAN AND MONITORING WELL NETWORK
Date 05/01/15
Project No. 731637001
Figure 8
LANGAN TREADWELL ROLLO
Reference: Base map from a drawing titled "C2.0 Conceptual Grading Plan" by BKF, dated 06/13/14 and "First Floor Plan," by Van Tilburg, Banvard & Soderbergh, AIA, dated 10/03/14.