May 9, 2012

RECEIVED

4:14 pm, May 15, 2012

Alameda County
Environmental Health

Mr. Jerry Wickham, PG, CEG, CHG
Senior Hazardous Materials Specialist
Alameda County Health Care Services Agency
1131 Harbor Way Parkway, Suite 250
Alameda, CA 94502-6577

Subject: 3518 Fruitvale Avenue, Oakland, California

Dear Mr. Wickham:

I am in receipt of your letter of February 10, 2012 requiring submission of a Work Plan and a request for a check in the amount of $6,000 to provide regulatory oversight. First, let me thank you for your patience and the extension of time while I looked for a consultant to help me with this. As I may have explained to you, while I knew that the seller had conducted some sampling on the property in 2005 before I purchased it, I did not understand that there was any problem. The bank lent on the property. Now, I am facing severe financial hardship. I need to refinance the property or I will have to default on the property and the bank is requiring that we obtain a clearance on the property before they will provide us a new loan. So while I want to cooperate as much as possible with your office, I have very limited resources. Therefore, I request that you accept a payment of $2,000 for your oversight costs. I am hoping that this is acceptable, as I need money to pay for the required testing. To that end, please find a copy of the required Work Plan with this letter.

I understand that the contamination might not be that bad and we are optimistic that additional sampling will show that there is not a problem with the property. In accordance with the ACEH requirements: I declare under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge.

Please call me if you want to discuss this and thank you again for your understanding with current financial problems.

Sincerely,

Grace Chin
2 McLaren
San Francisco, California

WEST
Environmental Services & Technology
711 Grand Avenue, Suite 220
San Rafael, California 94901
415.460.6770 • Fax 415.460.6771
main@westenvironmental.com

May 9, 2012

Ms. Grace Chin
2 McLaren Avenue
San Francisco, CA 94121

Subject: Site Investigation Work Plan, Classic Touch Cleaners, 3518 Fruitvale Avenue, Oakland, California 94602-2327, ACEH SLIC Case No. RO0003096

Dear Ms. Chin:

Pursuant to your request, West Environmental Services & Technology, Inc. (WEST) has prepared this *Site Investigation Work Plan* ("Work Plan") for the property located at 3518 Fruitvale Avenue in Oakland, California ("the Site;" Figure 1). The Work Plan has been prepared in response to Alameda County Environmental Health's (ACEH) February 10, 2012 request for a work plan to address technical comments. Based on WEST's analysis of the Site conditions, we have developed the Work Plan to investigate soil conditions beneath the floor at the subject Site. Details of the Work Plan are presented below.

BACKGROUND

The Site is located in a commercial area of Oakland, California on the east side of Fruitvale Avenue near MacArthur Boulevard. A dry cleaner has operated in the approximately 2,500 square foot tenant space at the Site since approximately 1989. Investigations were conducted in 2005 by AllWest Environmental, Inc. (AllWest) that revealed the presence of the dry cleaner solvent tetrachloroethene (PCE) in soil and groundwater at the Site.

SITE GEOLOGY AND HYDROGEOLOGY

The Site is located on the westerly-sloping East Bay Plain, approximately two-miles northeast of the Oakland Estuary. Sausal Creek is located approximately 400-feet west of the Site and flows to the south-southwest. The Site located on alluvial fan and fluvial deposits associated with Sausal Creek (Iris, 2011).

Borings advanced at the Site revealed coarse grained soil comprised primarily of sands with gravel and clayey sands in the upper eight-feet. Beneath the coarse grained materials, low plasticity sandy clay was found to the depths explored (12-feet below ground surface). The sandy clay is underlain by water bearing sandy clay. Groundwater was encountered in two of the five borings advanced at the Site between 10-feet and 15-feet below ground surface. Groundwater flow direction is primarily to the southwest (Iris, 2011).

SUMMARY OF INVESTIGATIONS

Five borings were advanced at the Site in 2005 by AllWest in August 2005 to assess whether use of the dry cleaner solvent PCE had affected soil and/or groundwater at the Site. The borings were advanced inside the dry cleaner tenant space (AWB-2 to AWB-4), behind the tenant space

to the east (AWB-5) and within Fruitvale Avenue (AWB-1). The boring locations are depicted on Figure 2.

Interior Borings

The interior borings AWB-2 to AWB-4 were advanced to approximately 12-feet below surface with a limited access drill rig within approximately 3-feet of the existing dry cleaning machine. AllWest did not specify, but presumably wet-cored the concrete floor prior to collecting soil samples. Soil samples were collected from the interior borings at approximately 4-feet, 8-feet and 12-feet below ground surface for analysis of volatile organic compounds (VOCs) by United States Environmental Protection Agency (USEPA) Method 8260B.

The laboratory analysis of the interior soil samples revealed PCE up to 2,000 micrograms per kilogram (µg/kg) in the sample collected from boring AWB-2 at 4-feet below ground surface. The soil samples collected from 8-feet below ground surface and 12-feet below ground surface revealed lower concentrations of PCE at 160 µg/kg and 32 µg/kg, respectively. The laboratory analysis did not reveal the presence of other VOCs above the laboratory-reporting limits of 5.0 µg/kg to 250 µg/kg.

The samples collected from interior boring AWB-3 revealed lower concentrations of PCE at four-feet below ground surface at 520 µg/kg. The soil sample collected from AWB-3 at 8-feet below ground surface was reported to contain PCE at 75 µg/kg. The sample collected from AWB-3 at 12-feet below ground surface did not reveal the presence of PCE above the laboratory-reporting limit of 5.0 µg/kg.

The samples collected from boring AWB-4 revealed PCE at 1,100 µg/kg and 140 µg/kg in the samples collected from 4-feet and 8-feet below ground surface, respectively. A summary of the soil analytical results is presented in Table 1.

Exterior Borings

The exterior borings AWB-1 and AWB-5 were advanced to approximately 12-feet and 17-feet deep, respectively. Soil samples were collected from the exterior borings at approximately 4-feet below surface for laboratory analysis of VOCs. Groundwater samples were collected from approximately 11-feet and 16-feet below ground surface from borings AWB-1 and AWB-5, respectively, for analysis of VOCs using USEPA Method 8260B.

Boring AWB-1 was advanced to the southwest of the dry cleaner tenant space along the parking lane of Fruitvale Avenue. The soil and groundwater samples collected from AWB-1 did not reveal the presence of PCE above the laboratory-reporting limits of 5.0 µg/kg and 0.50 µg/l, respectively. A summary of the groundwater analytical results is presented in Table 2.

Boring AWB-5 was advanced outside the rear door of the tenant space. The soil sample collected from four-feet below ground surface was reported to contain PCE at 8.9 µg/kg (Table 1). The groundwater sample collected from AWB-5 at 11-feet below ground surface was reported to contain PCE at 2.6 micrograms per liter (µg/l).

DATA ANALYSIS

Investigations have revealed the presence of PCE in soil and groundwater at the Site. WEST performed a screening level assessment to evaluate potential risks to human health and the environment posed by the chemicals at the Site.

The screening level assessment consisted of identification of appropriate screening levels for each media; estimating exposure point concentrations, and a comparative analysis.

Screening Criteria

Based on the potential exposure pathways, applicable screening criteria were selected for chemicals in soil and groundwater. The screening criteria were selected to identify concentrations in environmental media that require further evaluation, trigger further investigation and provide an initial cleanup goal, as applicable. Concentrations above these criteria should not automatically trigger a response action. However, exceeding a screening level suggests that further evaluation of the risks potentially posed by Site contaminants is appropriate. Screening levels considered for this evaluation include the California Regional Water Quality Control Board – San Francisco Bay Region (Regional Board) Environmental Screening Levels (ESLs) as presented in its *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater* (Regional Board, 2008).

Regional Board ESLs

The Regional Board ESLs "are considered to be conservative [and] the presence of a chemical in soil, soil gas or groundwater at concentrations below the corresponding ESL can be assumed to not pose a significant long-term (chronic) threat to human health and the environment." While a chemical may be measured at concentrations above the Regional Board ESL, it "does not necessarily indicate that adverse impacts to human health or the environment are occurring, [it] simply indicates that a potential for adverse risk may exist and that additional evaluation is warranted."

Exposure Concentrations

For sites where an adequate number of data points are available, statistical methods can be used to estimate site-specific exposure point concentrations (CalEPA, 2005). The exposure point concentration is the lesser of the maximum-detected concentration and the 95 percent upper confidence limit (UCL) of the arithmetic mean of the sample data (Regional Board, 2008). Therefore, where appropriate, the exposure point concentrations for chemicals in soil have been calculated using the 95 percent UCL.

Using the complete data set for the Site, the 95 percent UCL of the mean concentration of PCE in soil remaining at the Site was calculated at 747 µg/kg using the United States Environmental Protection Agency (USEPA) ProUCL software, version 4.00.05 (USEPA, 2007).

Comparative Analysis

The laboratory analytical results for the soil and groundwater samples have been compared to the identified evaluation criteria to assist in identifying conditions of concern.

Soil Conditions

The soil analytical data revealed that PCE was present up to 2,000 µg/kg above the ESLs for protection of residential exposure of 370 µg/kg and for commercial exposures of 700 µg/kg. However, the 95 UCL of PCE soil concentrations was estimated at 747 µg/kg, which is consistent with the commercial ESL. Based on the current use of the Site, it does not appear that there are chemicals in soil beneath the commercial tenant space at concentrations that pose an unacceptable threat to human health or the environment.

Groundwater Conditions

Laboratory analysis of the groundwater samples revealed PCE up to 2.6 µg/l below the Regional Board ESLs of 5 µg/l for protection of groundwater as a drinking water source. Therefore, the presence of PCE in groundwater should not pose a threat to human health or the environment.

Data Gap Analysis

The investigations have generated data that adequately describe the nature and extent of PCE in soil and groundwater. The data indicate vertical attenuation of PCE in soil with a consistent order of magnitude decrease in concentration at each 4-foot sampling horizon. The data also indicate that concentrations at depth are protective of groundwater, which is consistent with the findings from the groundwater analyses. However, additional data are needed to characterize the exact nature of the source of the PCE. PCE typically will not permeate concrete at concentrations consistent with those found at the Site (Morrison, 2005). It is suspected that concrete wet coring could have mobilized PCE sorbed to the concrete floor. To further evaluate the nature of the potential PCE source to soil, additional soil samples will be collected from beneath the building to better define the nature of the contamination at the Site.

SAMPLING PLAN

The purpose of this investigation is to characterize the soil conditions beneath the floor of the building using dry-concrete coring techniques. The following tasks have been developed to conduct the investigations at the Site:

- Task 1: Health and Safety, Utility Clearance;
- Task 2: Soil Sampling;
- Task 3: Investigation-Derived Waste Management; and
- Task 4: Reporting

Task 1: Health and Safety, Utility Clearance

A Site-specific *Health and Safety Plan* ("*HASP*") will be prepared to address worker health and safety during investigation activities. The *HASP* will be prepared in accordance with the California Occupational Health and Safety Administration (CalOSHA) Title 8 §5192 Hazardous Waste Operations and Emergency Response and United States OSHA 29 CFR 1910.120, Hazardous Waste Operations and Emergency Responses. The *HASP* will be approved by the Project Manager, a Quality Assurance Reviewer and the onsite Safety Officer. The *HASP* will be read and signed by all onsite workers and Site visitors prior to entering the work area.

Pursuant to California Assembly Bill AB 73, Underground Services Alert (USA) will be contacted to locate and clear work areas for underground utilities at the Site. The work areas will also be cleared for underground utilities using a private underground utility locating contractor.

Task 2: Soil Sampling

Soil samples will be collected from the borings depicted on Figure 3. The soil sample collection methodology is summarized below.

Soil Sample Collection Methodology

Soil samples will be collected from borings advanced using handheld equipment. Prior to soil sampling, the concrete floor will be cored using a 4-inch diameter dry concrete coring bit. Following removal of the concrete core, soil cuttings will be removed from the underlying soil using a handheld auger. The soil cuttings will then be described on boring logs using the Unified Soil Classification System. The down-hole equipment will be decontaminated prior to reuse at each boring location.

The soil cuttings will also be field screened for total organic vapors using a photo-ionization detector (PID) equipped with a 10.6 electronic volt (eV) lamp and calibrated with 100 parts per million by volume (ppm_v) isobutylene gas for organic vapors using closed headspace techniques. The results of the field screening will be recorded on the boring logs. The soil samples will be collected at the target depths of 3-feet and 4-feet below ground surface using a 6-inch long 2-inch diameter stainless steel core barrel outfitted with a 6-inch long 1.5-inch diameter stainless steel liner insert. The core barrel will be advanced into the subsurface using a handheld slidehammer. Following sample collection, the stainless steel liner will be removed from the core barrel and the ends covered with Teflon sheets and plastic end caps.

The soil samples will then be labeled, placed in a chilled cooler and transported to K Prime, Inc., of Santa Rosa, California, a California Department of Public Health (CDPH) Environmental Laboratory Accreditation Program (ELAP) certified laboratory for chemical analysis following the chain-of-custody procedures outlined in ASTM D 4840. The soil samples will be analyzed for VOCs using USEPA Method 8260B.

Soil cuttings generated during boring advancement will be placed in United States Department of Transportation (USDOT) approved 55-gallon steel drums. The 55-gallon drums will be labeled and temporarily stored at the Site pending analytical review of the soil samples. The soil

cuttings will be disposed following receipt of the soil laboratory analytical data and acceptance by an appropriately licensed disposal facility. Following completion of soil sampling, the boreholes will be backfilled to the ground surface using a bentonite/Portland Type II cement grout. The borings will then be completed to match the existing ground surface.

Task 3: Investigation-Derived Waste Management

Investigation-derived wastes (IDWs), those materials generated during the process of sampling and investigation at the Site will be managed in accordance with applicable regulatory requirements. IDWs are anticipated to include concrete, soil cuttings, decontamination fluids, personal protective equipment (PPE) and disposable sampling equipment.

Management of IDW must comply with applicable regulations. Potential applicable regulations include the Resource Conservation and Recovery Act (RCRA), Clean Air Act (CAA), Clean Water Act (CWA), Safe Drinking Water Act (SDWA) and legally enforceable state regulations.

Waste generated during implementation of the work will be containerized in USDOT-approved containers, labeled and temporarily stored in a secure area at the Site. The containers will be labeled including USEPA generator ID, generator contact information, accumulation date and type of waste, e.g., purge water, solid waste and PPE. The IDWs will then be characterized to determine appropriate waste disposal options

Task 4: Reporting

Following the investigation, a report will be prepared that provides a summary of the background information; depicts sampling locations; and geological information based on lithologic logs of boreholes. The report will also include a tabularized summary of analytical data and methodologies used to collect and analyze the samples. The report will also present appropriate conclusions and recommendations for additional work, as necessary. Attachments to the report will include: laboratory data certificates; chain-of-custodies; and boring logs. The report will be prepared under the supervision of an appropriately qualified professional, e.g., California Professional Engineer and/or California Registered Geologist.

Please call me at 415/460-6770 extension 208 if you have any questions or wish to discuss this further.

Sincerely,

Peter M. Krasnoff, P.E.
Principal Engineer

cc: Jerry Wickham, ACEH

TABLE 1
SUMMARY OF SOIL ANALYTICAL RESULTS
3518 Fruitvale Avenue
Oakland, California

Sample ID	Sample Date	Sample Depth	Volatile Organic Compounds		
			PCE	TCE	1,2-DCE
			(µg/kg)	(µg/kg)	µg/kg
AWB-1	8/9/05	4	<5.0	<5.0	<5.0
AWB-2	8/9/05	4	2,000	<250	<250
		8	160	<5.0	<5.0
		12	32	<5.0	<5.0
AWB-3	8/9/05	4	520	<22	<22
		8	75	<25	<25
		12	<5.0	<5.0	<5.0
AWB-4	8/9/05	4	1,100	<250	<250
		8	140	<5.0	<5.0
AWB-5	8/9/05	4	8.9	<5.0	<5.0
95 UCL			747	--	--
ESLs - Residential Land Use			370	460	190
ESLs - Commercial Land Use			700	460	190

Notes:

PCE: Tetrachloroethene
TCE: Trichloroethene
1,2-DCE: cis-1,2-dichloroethene
ft: feet
µg/kg: micrograms per kilogram
95 UCL: 95 percent upper confidence level of the mean concentration calculated using USEPA ProUCL4.00
ESLs: Environmental Screening Levels as published by the California Regional Water Quality Control Board in its *Screening of Environmental Concerns at Sites with Contaminated Soil and Groundwater* (Revised May 2008)

TABLE 2
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
3518 Fruitvale Avenue
Oakland, California

Sample ID	Sample Date	Sample Depth	Chlorinated VOCs		
			PCE	TCE	1,2-DCE
		(ft)	(µg/l)	(µg/l)	(µg/l)
AWB-1W	8/9/05	16	<0.5	<0.50	<0.50
AWB-5W	8/9/05	11	2.6	<0.50	<0.50
ESLs			5.0	5.0	6.0

PCE: Tetrachloroethene
TCE: Trichloroethene
1,2-DCE: cis-1,2-dichloroethene
ft: feet
µg/kg: micrograms per kilogram
ESLs: Environmental Screening Levels as published by the California Regional Water Quality Control Board in its *Screening of Environmental Concerns at Sites with Contaminated Soil and Groundwater* (Revised May 2008)

0 FEET 200

Figure 1	**SITE LOCATION MAP**	WEST Environmental Services & Technology
May 2012	3518-3520 Fruitvale Avenue - Oakland, California	

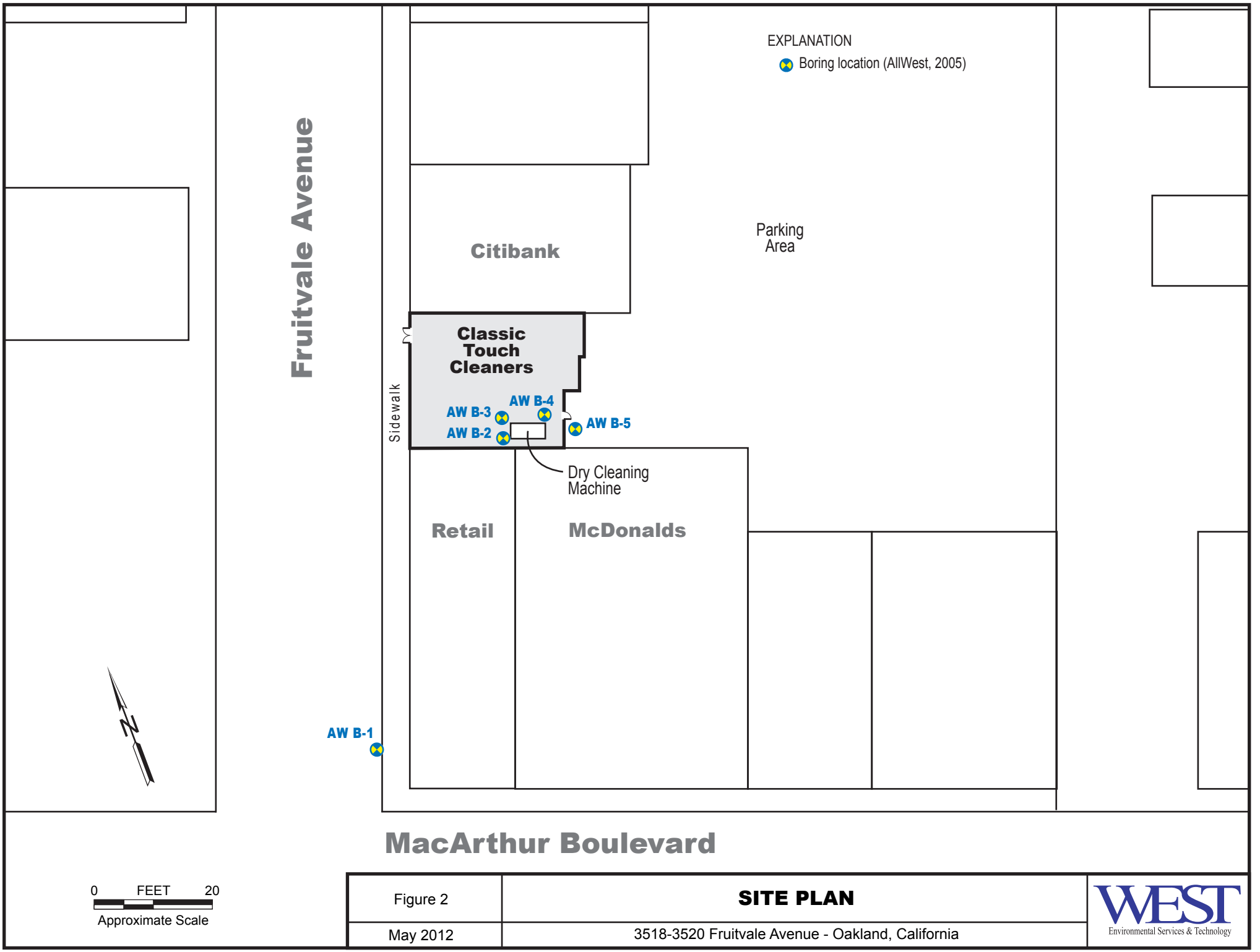

Figure 2	**SITE PLAN**	WEST Environmental Services & Technology
May 2012	3518-3520 Fruitvale Avenue - Oakland, California	

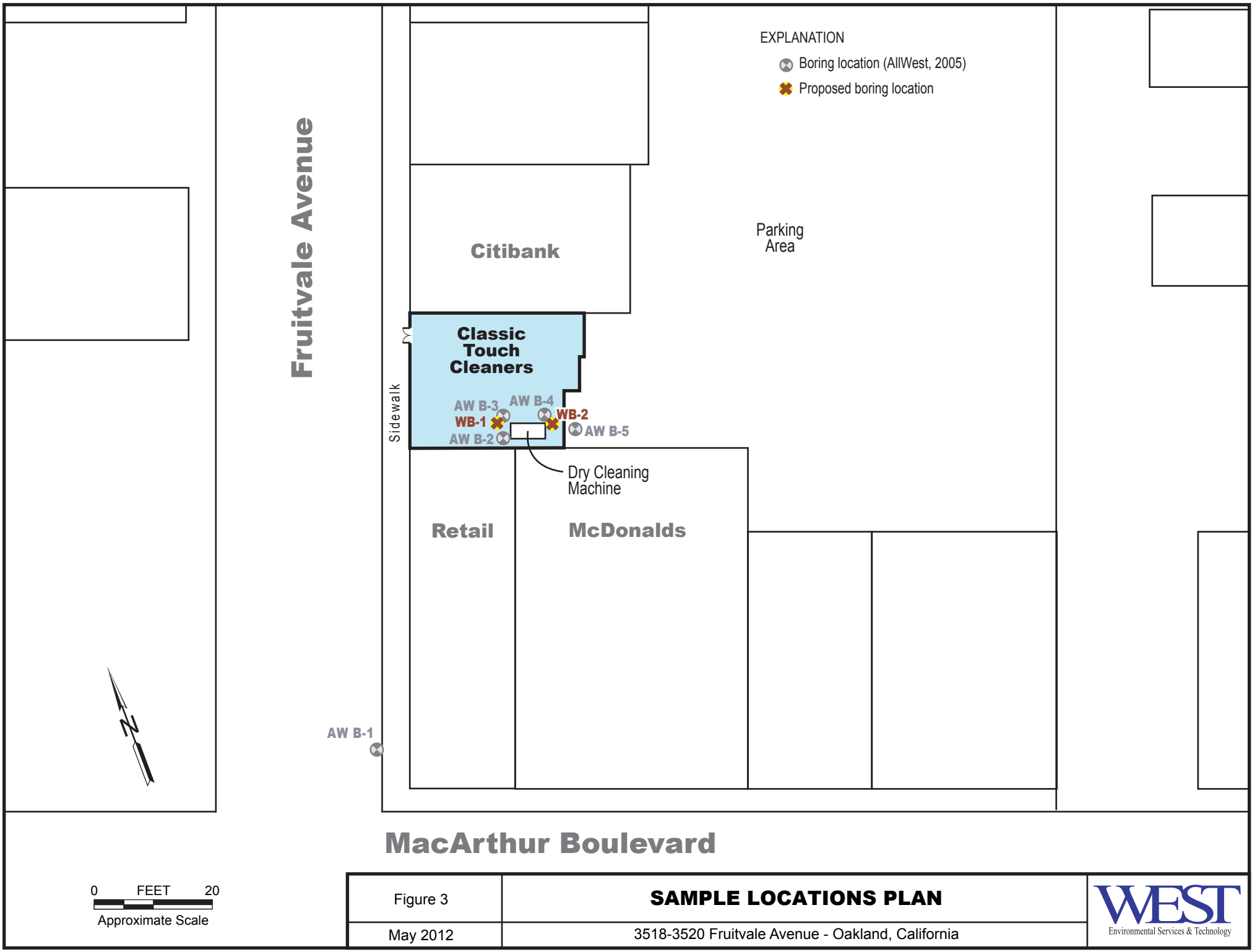

Figure 3	**SAMPLE LOCATIONS PLAN**	WEST Environmental Services & Technology
May 2012	3518-3520 Fruitvale Avenue - Oakland, California	