WellTest, Inc.
Contractor License No. 843074

December 17, 2014

Mr. Mark Detterman
Alameda County LOP
1131 Harbor Bay Pkwy.
Alameda, California 94502

Re: Soil and Water Investigation Work Plan (Report #4349)
Four Seasons Cleaners, 13778 Doolittle Avenue, San Leandro, California

Dear Mr. Detterman:

At the request of Mr. Ernie Lee, WellTest, Inc. (WTI) has prepared this work plan for additional site assessment work at the referenced site. The objective of the proposed work is to further define the extent of subsurface contamination recently identified in a *Limited Phase II Soil, Water, and Soil Vapor Investigation* completed by PIERS Environmental Services, Inc. (PIERS) at the site. The results of the PIERS investigation indicated that the soil, soil-gas, and groundwater at the site have been impacted by tetrachloroethylene (PCE) and its breakdown products trichloroethene (TCE) and cis-1, 2-dichloroethen (cis-1,2DCE). The likely source of the identified impacts is the on-site dry cleaner which, reportedly, historically used and stored these solvents. WTI presents supplemental tasks to further delineate the extent of solvent contamination in the soil and groundwater at the site. The extent of contaminated soil-gas will be addressed in future investigations once this current investigation is completed and WTI has a better understanding of the scope and extent of the subsurface soil and water contamination at the site.

Site Description

The site is located in a mixed commercial and residential area of San Leandro, California. The site parcel is approximately five acres and is improved with a multi-tenant strip mall and separate restaurant building. The dry cleaning unit is located within the strip mall and is associated with 13778 Doolittle Drive. The site lies at an elevation of approximately 15 feet above sea level and is relatively flat. The property is bounded by Doolittle Drive to the west, Fairway Drive to the north, Catalina Drive to the east and a commercial property to the south (Figures 1 and 2).

Proposed Work

WTI proposes to collect soil and grab-groundwater samples from a series of up to eight (8) temporary borings in the areas where PCE was previously detected and in the assumed downgradient (i.e. westerly) direction in an attempt to further define the extent of contamination. The following tasks will be completed to accomplish the objectives of this work plan:

Task 1 Project Setup and Management: Work performed under Task 1 includes all client and agency contact tasks to obtain Work Plan approval, access agreements (if any), including marking the site, arranging for utility locating services and scheduling all field activities. Additionally, WTI will obtain the required drilling permit from the Alameda County Public Works Agency (ACPWA).

Task 2 **Temporary Direct Push Borings:** WTI will advance up to eight (8) borings (DP- 1 through DP-8) at the proposed locations shown on Figure 3. Soil borings will be drilled by a C57 licensed driller under the direction of a licensed State of California Professional Geologist. The Geoprobe™ will direct-push (hammer) a 2-inch diameter steel Macro-Core barrel until groundwater is first encountered (estimated 10 to 12 ft bgs). The core barrels will be lined with clear plastic disposable tubing to facilitate continuous soil coring and soil logging for description. Soils will be logged using the United Soil Classification System (USCS). A minimum of one (1) soil sample from each boring will be retained for laboratory analysis.

Task 3 **Construction and Sampling of Temporary Wells:** Once groundwater is encountered in each of the borings, and a sufficient amount is present for sampling, the Macro-Core will be removed from the boring, and a temporary flush threaded, ¾-inch schedule 40 polyvinyl chloride (PVC) casing will be placed within the boring. The bottom cap will be flush threaded, and based on previously observed conditions, the screened casing will be 0.010-inch slots. Groundwater samples will then be collected from the temporary casing using a check-valve system attached to poly-tubing. See Attachment A for a more detailed description of the field methods.

Task 4 **Backfilling of Borings:** Once all soil and grab groundwater samples are collected from the borings, each boring will be backfilled from the bottom of the boring to ground surface with neat cement grout, per the requirements outlined in the ACPWA permits. The neat cement grout will be composed of a mix consistency of one 94 pound bag of Portland cement to five gallons of water. An inspector from the ACPWA will be on-site to witness the grouting process.

Task 5 **Laboratory Analyses – Soil and Groundwater Samples:** Grab-groundwater samples collected from each of the temporary borings and a minimum of one soil sample from each boring will be analyzed at a California State-certified laboratory for the presence of volatile organic compounds by EPA Analytical Test Method SW8260b.

Task 6 **Technical Report:** WTI will prepare a report documenting the additional site assessment work. The report will include the following: 1) A description of the soil and groundwater sampling methods; 2) A description of boring and sampling point installation methods; 3) Boring logs; 4) Data tables; 5) A map showing exploratory boring locations; 6) Laboratory reports and chain-of-custody records; 7) A discussion of the results of the study, and if objectives of this work plan were satisfied; and 8) WTI's conclusions and recommendations. The report will be signed by a State of California Professional Geologist. It is anticipated that the report will be submitted to the Alameda County LOP on or before early February 2015.

Timeline

The following is an estimated timeline to complete the tasks outlined within this work plan:

Task 1 – Will be completed within two (2) weeks of regulatory approval of this work plan.

Tasks 2, 3, and 4 – Will take place pending completion of Task 1 and scheduling availability of a drill rig (estimated 2 weeks following completion of Task 1).

Task 5 – Will be completed within two (2) weeks of completion of Tasks 2 and 3.

Task 6 – Will be prepared within two weeks of receipt of the analytical data (Task 4).

Certification,

This report has been reviewed and approved by the responsible party. A copy of the transmittal letter is provided as Attachment B. If you have any questions, please contact WTI at (408) 287-2175.

Sincerely:
WellTest, Inc

William R. Dugan, P.G.
Professional Geologist (CA# 6253)

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Distribution List

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List of Acronyms

Bgs	below ground surface
BTEX	Benzene, Toluene, Ethylbenzene, Xylenes
btoc	Below top of casing
1,2-DCA	1,2-Dichloroethane
DHS	State of California Department of Health Services
DO	Dissolved oxygen
DTW	Depth to water
DWR	Department of Water Resources
DIPE	Di-isopropyl ether
ELAP	Environmental Laboratory Accreditation Program
EC	Electrical conductivity
EDB	1,2-dibromoethane
ETBE	Ethyl tert butyl ether
Eth	Ethanol
ft	foot or feet
ft/ft	feet per feet
FTU	Field Turbidity Unit
GW	Groundwater
MCL	Maximum Contaminant Level
Meth	Methanol
MSL	Mean Sea Level
MTBE	Methyl-t-butyl-ether
mg/L	milligram per liter
mV	millivolts
MW	Monitoring Well
NGVD	National Geodetic Vertical Datum of 1929
NA	Not Analyzed
NM	Not Measured
ORP	Oxidation reduction potential
P.G.	Professional Geologist
ppmv	parts per million by volume
QA/QC	Quality Assurance/Quality Control
SCCDEH	Santa Clara County Department of Environmental Health
SCVWD	Santa Clara Valley Water District
TAME	Tert amyl methyl ether
TBA	Tert butyl alcohol
TDS	Total dissolved solids
TOC	Top of casing
TPHg	Gasoline range (C6-C12) Volatile hydrocarbons as gasoline
ug/L	micrograms per liter
uS	micro Siemens
UST	Underground storage tank
VOC	Volatile Organic Compound
WELLTEST	WellTest, Inc.
°F - °C	degrees Fahrenheit - degrees Celsius

TABLES

TABLE 1
SUMMARY OF HISTORICAL SOIL VAPOR ANALYTICAL DATA
13778 DOOLITTLE AVE.
SAN LEANDRO, CALIFORNIA

Sample ID	Sample Depth (ft)	Sample Date	PCE ($\mu g/m^3$)	TCE ($\mu g/m^3$)	cis-12DCE ($\mu g/m^3$)	VC ($\mu g/m^3$)	Other VOCs ($\mu g/m^3$)	He MOL %	O_2 MOL %
S1 Air	0.5	08/10/14	**63,000**	**890**	ND<320	ND<210	All ND	---	---
S2 Air	0.5	08/10/14	**240,000**	**16,000**	ND<960	ND<620	All ND	---	---
S3 Air	0.5	08/10/14	**4,500,000**	**92,000**	ND<20,000	ND<13,000	All ND	---	---
CHHSL Comm/Ind.			**1,600**	**4,400**	**120,000**	**95**	**varies**	**NA**	**NA**
ESLs Comm/Ind.			**2,100**	**3,000**	**NA**	**160**	**varies**	**NA**	**NA**

Notes:

--- = Parameter not analyzed NA = parameter not established Other VOCs = all other constituents of test method TO-15

<0.5 / ND = Not present at or above reporting detection limit

ug/m^3 = micrograms per cubic meter = ppmv

ESLs = Environmental Screening Levels, May 2013

CHHSL Comm/Ind. = California Human Health Screening Level, January 2005

TCE = Trichloroethene

PCE = Tetrachloroethane

cis-12DCE = cis-1,2,Dichloroethene

VC = Vinyl Chloride

TABLE 2
SUMMARY OF HISTORICAL SOIL ANALYTICAL DATA
13778 DOOLITTLE AVE
SAN LEANDRO, CALIFORNIA

Sample ID	Sample Depth (ft.)	Sample Date	TPHd (mg/Kg)	PCE (mg/Kg)	TCE (mg/Kg)	cis-12DCE (mg/Kg)	VC (mg/Kg)	Other VOCs (mg/Kg)
S1 d 0.5'	0.5	08/10/14	**3.2**	**0.056**	ND	ND	ND	All ND
S2 d 0.5'	0.5	08/10/14	**2.6**	**0.045**	ND	ND	ND	All ND
S3 d 0.5'	0.5	08/10/14	**2.1**	**0.1**	ND	ND	ND	All ND
S3 d 2'	2.0	08/10/14	ND<1.0	**20**	ND	ND	ND	All ND
S3 d 5'	5.0	08/10/14	ND<1.0	**2.4**	ND	ND	ND	All ND
Residential ESL			**100**	**0.55**	**0.46**	**0.190**	**0.032**	**varies**
Comm./Industrial ESL			**500**	**0.70**	**0.46**	**0.190**	**0.032**	**varies**

Notes:

--- = Parameter not analyzed
<0.5 / ND = Not present at or above reporting detection limit
mg/Kg = micrograms per kilogram = parts per million = ppm
ESLs = Environmental Screening Levels shallow soil (potential source of drinking water): Summary Table A, May 2013
TPHd = Total Petroleum Hydrocarbons as diesel
PCE = Tetrachloroethene
TCE = Trichloroethene
cis-12DCE = cis-1,2,Dichloroethene
VC = Vinyl Chloride

TABLE 3
SUMMARY OF HISTORICAL GROUNDWATER ANALYTICAL DATA
13778 DOOLITTLE AVE
SAN LEANDRO, CALIFORNIA

Sample ID	Sample Date	TPHd (µg/L)	PCE (µg/L)	TCE (µg/L)	cis-12DCE (µg/L)	VC (µg/L)	Other VOCs (µg/L)
S-3	08/10/14	ND<50	750	51	7.6	ND<7.1	All ND
ESLs		100	5.0	5.0	6.0	0.5	varies

Notes:

--- = Parameter not analyzed
<0.5 / ND = Not present at or above reporting detection limit
µg/L = micrograms per liter = parts per billion = ppb
ESLs = Environmental Screening Levels Groundwater (potential source of drinking water): Summary Table A, May 2013
PCE = Tetrachloroethene
TCE = Trichloroethene
cis-12DCE = cis-1,2,Dichloroethene
VC = Vinyl Chloride
TPHd = Total Petroleum Hydrocarbons as diesel

FIGURES

SOURCE: USGS 1:24,000 SCALE SERIES, SAN LEANDRO QUAD

APPROX. SCALE

0 0.75 1.5 MI

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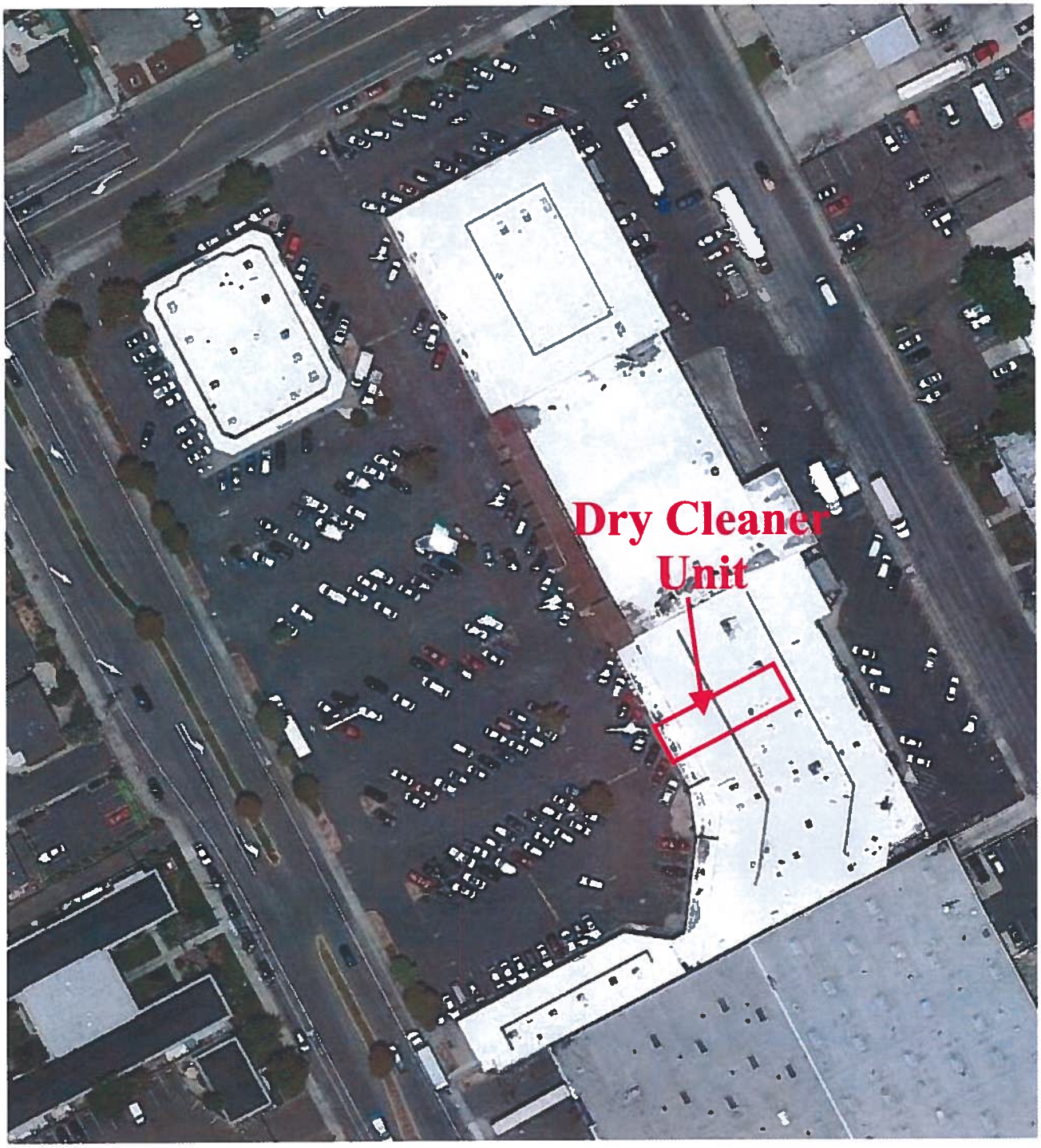
13778 DOOLITTLE AVE.
SAN LEANDRO, CALIFORNIA

SITE VICINITY MAP

FIGURE

1



SOURCE: Google Earth, 2014.

APPROX. SCALE

0 75 150 ft.

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13778 DOOLITTLE AVE.
SAN LEANDRO, CALIFORNIA

AERIAL PHOTOGRAPH
OF SITE AREA

FIGURE

2

SOURCE: Google Earth, 2014.

APPROX. SCALE

0 75 150 ft.

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13778 DOOLITTLE AVE.
SAN LEANDRO, CALIFORNIA

AERIAL PHOTOGRAPH
SHOWING PROPOSED BORING LOCATIONS

FIGURE

3

ATTACHMENT A

Field Methods and Procedures

Direct-Push Drilling, Sampling and Borehole Sealing Procedures

ATTACHMENT A
Direct-Push Drilling, Sampling and Borehole Sealing Procedures
13778 Doolittle Drive, San Leandro, California

Sampling – Soil

A Geoprobe 5400 rig (or equivalent) will be used to direct-push (hammer) the proposed temporary borings. A summary of the tooling (or equivalent tooling) and sampling methods can be obtained at the following website: http://www.geoprobe.com/products/tools/soil_sampling/dt22desc.htm

Sampling – Groundwater (Small Diameter Wells)

PVC casing will be installed within the outer drive rods, or within open boreholes installed with a Macro-Core system. Groundwater samples were collected from within the ¾-inch diameter temporary well using the following protocol:

- Before purging, the water level within the well will be allowed to stabilize, and then water levels will measured with an electronic interface tape.
- To prevent potential cross-contamination between wells, all measuring, purging, and sampling equipment will be washed in an Alconox® detergent solution, rinsed with tap water, and then will be rinsed with distilled water.
- A Micro Flow System foot-valve system attached to single-use 3/8-inch O.D. polyethylene tubing will be used to purge each cased-boring. The foot-valve can deliver a sample from as deep as 75 feet and flow rates with this system are usually less than 1/2 gallon per minute.
- Temperature, conductivity, and pH will be measured and recorded while purging each cased-boring. The temporary well will purged until approximately three well volumes of water have been removed or when these parameters have stabilized. The samples will be labeled and placed in a refrigerated chest. Chain-of-custody documents and a travel blank will accompany the samples to the laboratory.
- Samples will be collected with either a clean disposable bailer or with the foot-valve system.
- Samples will be transported to the laboratory were analyzed within the specified holding time.
- Groundwater produced during purging and sampling will be placed in a 55-gallon drum and will remain the responsibility of the client to properly dispose.

Water samples will placed into laboratory-supplied, properly-preserved containers. The amount of sample collected will be pre-approved the contract laboratory and were appropriate for the analysis being requested. All samples will be labeled and placed in a refrigerated cooler and accompanied by the chain-of-custody document. Samples transported to the laboratory will be analyzed within the specified analytical test holding time.

ATTACHMENT B

Client Authorization Letter

December 17, 2014

Mr. Mark Detterman
Alameda County LOP
1131 Harbor Bay Pkwy.
Alameda, California 94502

Re: Soil and Water Investigation Work Plan (Report #4349)
Four Seasons Cleaners, 13778 Doolittle Avenue, San Leandro, California

Dear Mr. Detterman:

Attached for your review is a technical report (Soil and Water Investigation Work Plan) for the above-referenced case. The report was prepared by WellTest, Inc. at my request.

I declare under the penalty of perjury that information and/or recommendations contained in the attached report are true and correct, to the best of my knowledge.

If you should have any questions or comments, please do not hesitate to contact me, or the WellTest project manager, Bill Dugan at (408) 287-2175.

Sincerely,

Mr. Ernie Lee
Marina Faire Shopping Center
3271 S. Highland Dr., Ste. #704
Las Vegas, NV 89109