County of Santa Clara

Department of Environmental Health

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August 14, 2013

Mr. Pete Mizera (USTClosuresComments@Waterboards.ca.gov)
State Water Resources Control Board
1001 I Street, 16th Floor
Sacramento, California 95814

Subject: Comment Letter – Nguyen Property Case Closure Summary Petition

Fuel Leak Investigation at Nguyen Property, 960 South King Road, San Jose, CA, Case No. 14-230, SCVWDID No. 07S1E10H01f

Dear Mr. Mizera:

The Department of Environmental Health (DEH) received your Notice of Opportunity for Public Comment on the UST Case Closure Review Summary Report (State Closure Summary Report), signed on June 12, 2013 (received by the DEH on June 21, 2013). The public comment period closes on August 20, 2013. The DEH's comments are listed after the State Board's statements.

Issue 1

State Board Statement – *According to groundwater data, water quality objectives (WQOs) have been achieved or nearly achieved for all constituents except for MTBE in one source monitoring well.*

DEH Comment – Groundwater data shows that WQOs have not been achieved or nearly achieved. The most recent groundwater samples were collected in 2011. During that sampling groundwater from well STMW-3 contained 1,000 parts per billion TBA. No wells are located downgradient from this well. In addition, the grab groundwater sample collected from GP-1 contained 8,000 ppb TPH-g, 350 ppb MTBE and 130m ppb benzene.

The Groundwater Flow Direction Rose Diagram (Rose Diagram) illustrates the gradient direction from 2002 to 2010. The Rose Diagram shows that the historical gradient varies between west-southwest to northwest and that STMW-3 and GP-1 are located directly downgradient from the former USTs and pump islands.

For your convenience a copy of the Certified Analytical Report listing the groundwater sampling results from the 2011 event and the most recent Groundwater Flow Direction Rose Diagram

(Rose Diagram) which illustrated the gradient direction from 2002 to 2010 is attached to this Directive Letter.

Issue 2

State Board Statement – *According to data available in Geotracker, there are no supply wells regulated by the California Department of Public Health or surface water bodies within 250 feet of the defined plume boundary in files reviewed.*

DEH Comment – A groundwater production well is located approximately 290 feet to the west-southwest of the site's property line. This well is discussed in the Conduit Study – Nguyen Property (GeoRestoration, September 3, 2002) and is noted on the DEH groundwater production well data base (well number 07S01E10H004). According to historical gradient information presented in the Rose Diagram, the well is located in a downgradient direction from the site.

The three sampling points (STMW-3, GP-1, and IB-1) located in the western portion of the site indicate that the plume has moved beyond the sampling network. For example, when groundwater from STMW-3 was last sampled in 2011 it contained 1,000 ppb TBA. Only soil samples were collected from the soil boring for IP-1. The highest detections were from the samples collected at a depth of 14 feet below ground surface which is approximately 2 feet below groundwater. This indicates that the transport mechanism was by groundwater flow. No sampling points are downgradient of STMW-3 and IP-1. Consequently, the plume boundary is not defined and the distance from the edge of the plume, as defined by WQOs, cannot be determined. In addition, it is not possible to accurately determine if the active water production well which is located downgradient of the site is at risk.

Issue 3

State Board Statement – *The contaminant plume that exceeds water quality objectives is less than 100 feet in length. There is no free product, and the nearest water supply well or surface body is greater than 250 feet from the defined plume boundary.*

DEH Comment – As stated above, the DEH does not believe that the file supports the conclusion that the contaminant plume is defined. The DEH is concerned that the 2011 entire site file including data from the 2011 groundwater sampling event has not been included in the State's review. The table showing the most recent concentrations of petroleum constituents in groundwater is on page 8 of the State's Closure Summary Report. The table includes data up to 2010 and lists the highest TBA detection as 16 ppb. It should be noted that in 2011 groundwater samples were collected. The highest detected TBA was 1,000 ppb from the sample collected from well STMW-3. It appears that this data was not included in the State's analysis of the site conditions.

It is important to emphasize that a groundwater production well is located 290 feet from the property line in a downgradient direction according to the Rose Diagram. The DEH believes that it is reckless to assume that the downgradient extent of a plume is defined by a well with high

contaminant concentrations (i.e., 1,000 ppb TBA in well STMW-3).

Issue 3

State Board Statement – *Soil vapor intrusion is not required because the site is an active commercial petroleum fueling facility.*

DEH Comment – The LTCP exempts active commercial petroleum fueling facilities from assessment related to vapor intrusion to indoor air. In cases where contamination has migrated off-site, it may be appropriate to conduct soil vapor assessment in the portion of the plume outside the boundaries of the active commercial petroleum fueling facility. The groundwater plume is currently not defined. After the plume is defined, it will be necessary to determine if an off-site soil vapor assessment is required.

Issue 4

State Board Statement – *The case meets Policy Criterion 3b. A professional assessment of site-specific risk from exposure shows that maximum concentrations of petroleum constituents in soil will have no significant risk of adversely affecting human health.*

DEH Comment – A risk assessment is not present in the project file. The DEH is unclear who performed a risk assessment and made the determination that petroleum constituents in soil will have no significant risk of adversely affecting human health. Please provide a citation for the inferred risk assessment.

Issue 5

State Board Statement – *The extent of the plume with petroleum hydrocarbon constituents above water quality objectives has been defined by the analytical results of non-detect in two downgradient wells, MW-3 and MW-4 (STMW-3 and STMW-4).*

DEH Comment –Four sampling points are located downgradient of the former USTs and pump islands: STMW-3, STMW-4, GP-1 and IB-1. The most recent groundwater sampling event for STMW-3 was in 2011 (data attached). The groundwater sample collected from GP-1 contained 8,000 ppb TPH-g, 350 ppb MTBE and 130 ppb benzene. These two sampling points are located along the northern property line, upgradient of an apartment complex, and downgradient of the former USTs and pump islands. No sampling points are located downgradient of STMW-3 and GP-1.

Soil samples collected from IB-1 detected low to non-detectable concentrations of contaminants at 5 and 10 feet bgs. Much higher concentrations were detected at a depth of 14 feet bgs. The depth to groundwater is approximately 11 feet bgs. It appears that groundwater migrated in a westerly direction from the former USTs causing soil impact at IB-1. IB-1 is located upgradient of the water production well and downgradient from the former USTs and pump islands. No sampling points are located downgradient of IB-1.

The extent of the groundwater plume is not defined. Analytical detections from samples collected from STMW-3, GP-1 and IB-1 clearly indicate that the plume has migrated beyond the confines of the soil and groundwater sampling network and is not defined.

Issue 6

State Board Statement – *The Policy Criterion 1 by Class 1 lists 250 feet from the defined plume boundary as the distance necessary to provide an adequate buffer. In addition, the only detection of petroleum hydrocarbons in a monitoring well is in monitoring well MW-1 (STMW-1) in the source area.*

DEH Comment – The site data does not support the conclusion that the groundwater plume is defined. This issue is addressed in DEH the comments listed above. It is important to emphasize that the State's Closure Summary Report appears to not include the most recent groundwater data.

The DEH does not agree with the statement that "the only detection of petroleum hydrocarbons in a monitoring well is in monitoring well STMW-1 in the source area." The most recent sampling event took place in 2011. The highest detections were from the sample collected from STMW-3 which is located next to the downgradient property line. During that event 1,000 ppb TBA was detected. Sample results from STMW-3, GP-1 and IB-1 indicate that the groundwater plume has migrated beyond the sampling network. Consequently, the groundwater plume is not defined and the distance from the edge of the plume to the water production well cannot be measured.

Issue 7

State Board Statement – *The relative concentration of naphthalene in soil can be conservatively estimated using the published relative concentrations of naphthalene and benzene in groundwater. Taken from Potter and Simmons (1998), gasoline mixtures contain approximately 2 percent benzene and 0.25 percent naphthalene. Therefore, benzene can be directly substituted for naphthalene concentrations with a safety factor of eight.*

DEH Comment – In a letter to the State (DEH Comment Letter, Western States Oil Case Closure Summary Petition, July 8, 2013) the DEH provided comments on the State's determination that in soil, the concentration of naphthalene can be determined by the concentration of benzene. As of the date of this letter, the DEH has not received a response from the State.

If you have any questions, please feel free to contact the Site Mitigation Program's Manager Michael Balliet at (408) 918-1976 or the Environmental Health Geologist Gerald O'Regan at (408) 918-1974.

Sincerely,

Jim Blamey
Acting Director

Attachments: Groundwater Analytical Data, prepared by McCampbell Analytical, Inc., date sampled: May 8, 2011.
Groundwater Chemistry Map, prepared by WellTest, Inc., February 2 and 23, 2007 (Includes Groundwater Flow Direction Rose Diagram).

cc: Nathan King, Regional Water Quality Control Board – SF Bay (nking@waterboards.ca.gov)
George Cook, Groundwater Monitoring and Analysis Unit, Santa Clara Valley Water District (gcook@valleywater.org)
Geoff Blair, Environmental Services Department, City of San Jose (Geoffrey.Blair@sanjoseca.gov)
Bill Dugan, WellTest (dugan@welltest.biz)
File

McCampbell Analytical, Inc.
"When Quality Counts"
1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

Well Test, Inc.	Client Project ID: #2488; Nguyen Property	Date Sampled: 05/08/11
		Date Received: 05/11/11
1180 Delmas Avenue	Client Contact: Bill Dugan	Date Extracted: 05/12/11-05/14/11
San Jose, CA 95125	Client P.O.:	Date Analyzed 05/12/11-05/14/11

TPH(g) by Purge & Trap and GC/MS*

Extraction method SW5030B Analytical methods SW8260B Work Order: 1105316

Lab ID	Client ID	Matrix	TPH(g)	DF	% SS	Comments
001A	MW-1	W	880	1	97	b1
002A	STMW-3	W	120	1	110	b1
003A	STMW-4	W	63	1	110	b1

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	µg/L
	S	NA	NA

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

b1) aqueous sample that contains greater than ~1 vol. % sediment

DHS ELAP Certification 1644

AR Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
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1534 Willow Pass Road, Pittsburg, CA 94565-1701
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Well Test, Inc.	Client Project ID: #2488; Nguyen Property	Date Sampled: 05/08/11
1180 Delmas Avenue		Date Received: 05/11/11
	Client Contact: Bill Dugan	Date Extracted: 05/12/11-05/16/11
San Jose, CA 95125	Client P.O.:	Date Analyzed: 05/12/11-05/16/11

Oxygenates, MBTEX & Lead Scavengers by GC/MS*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1105316

Lab ID	1105316-001A	1105316-002A	1105316-003A		Reporting Limit for DF =1	
Client ID	MW-1	STMW-3	STMW-4			
Matrix	W	W	W			
DF	1	10	1		S	W
Compound	**Concentration**				ug/kg	µg/L
tert-Amyl methyl ether (TAME)	ND	ND<5.0	ND		NA	0.5
Benzene	16	7.1	2.9		NA	0.5
t-Butyl alcohol (TBA)	19	1000	ND		NA	2.0
1,2-Dibromoethane (EDB)	ND	ND<5.0	ND		NA	0.5
1,2-Dichloroethane (1,2-DCA)	ND	7.3	ND		NA	0.5
Diisopropyl ether (DIPE)	ND	ND<5.0	ND		NA	0.5
Ethylbenzene	5.1	ND<5.0	1.9		NA	0.5
Ethyl tert-butyl ether (ETBE)	ND	ND<5.0	ND		NA	0.5
Methyl-t-butyl ether (MTBE)	30	ND<5.0	ND		NA	0.5
Toluene	8.4	6.5	3.2		NA	0.5
Xylenes	43	31	15		NA	0.5
Surrogate Recoveries (%)						
%SS1:	79	95	94			
%SS2:	87	99	100			
%SS3:	84	94	98			
Comments	b1	b1	b1			

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis.

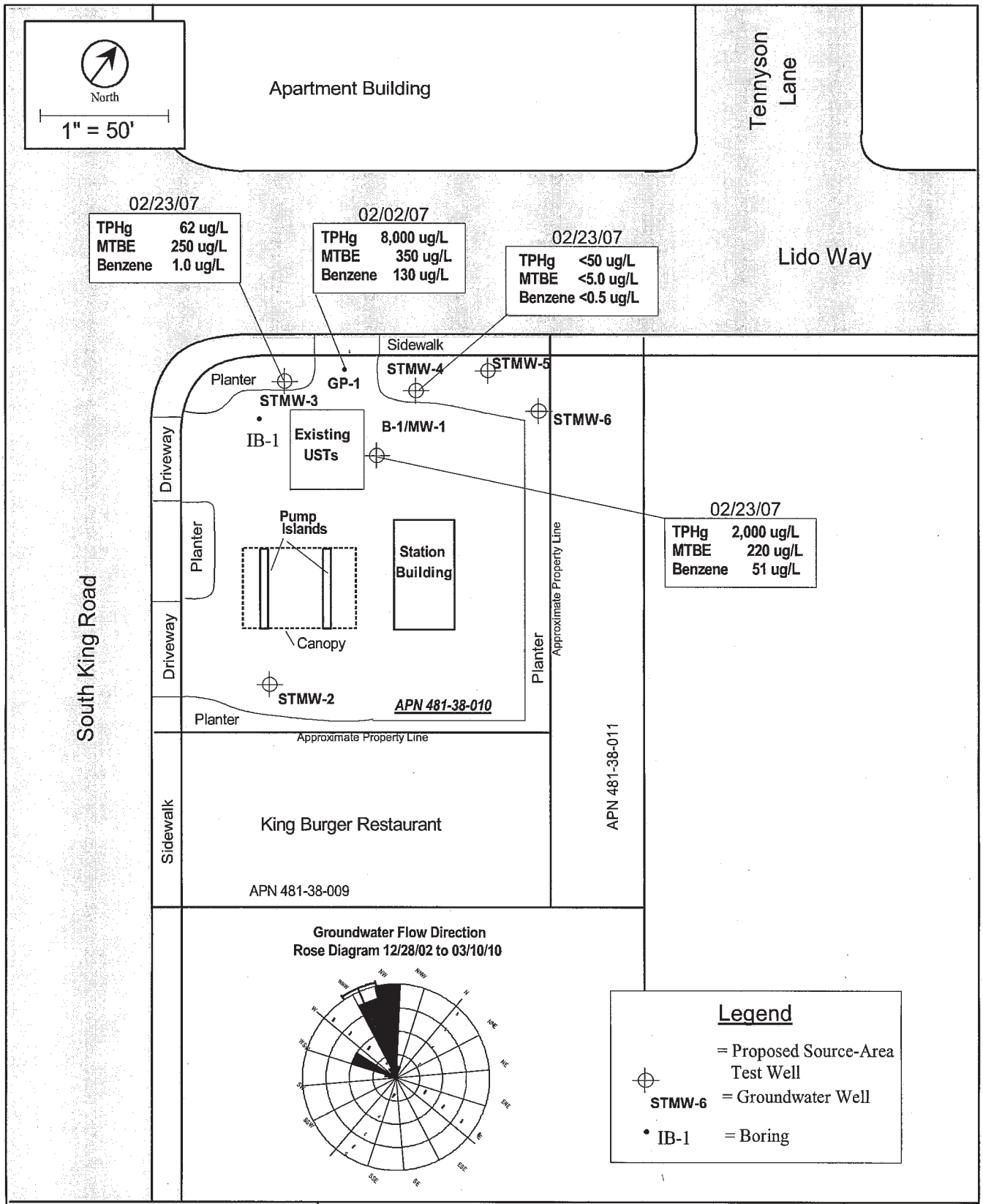
surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

%SS = Percent Recovery of Surrogate Standard
DF = Dilution Factor

b1) aqueous sample that contains greater than ~1 vol. % sediment

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager



WellTest, Inc.
P.O. Box 8548
San Jose, CA 95155

Groundwater Chemistry Map
(02/02/07 & 02/23/07)
Nguyen Property
960 South King Road
San Jose, California

FIGURE
5
Job#: 2751