CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

MEETING OF JULY 23-24, 2008

Truckee

ITEM: 14

SUBJECT: **REVIEW OF ORDER FOR TECHNICAL REPORTS PURSUANT TO WATER CODE SECTION 13267 FOR BIG TREE CLEANERS, TAHOE CITY, PLACER COUNTY**

CHRONOLOGY: This is a new item before the Water Board:

Nov. 2001	Administrative Civil Liability of $10,000 issued for failure to submit a technical report containing a workplan, schedule, and funding commitment for expanded remediation at the site.
Aug. 2002	Cleanup and Abatement Order (CAO) R6T-2002-0045 directed the responsible parties to conduct clean up actions for chlorinated hydrocarbons (dry cleaning solvents) in soil and groundwater.
June 3, 2008	Executive Officer issued Section 13267 order to submit workplans and reports for indoor air monitoring and additional groundwater investigation.

ISSUES: Should the Board affirm, modify, or withdraw the 13267 order issued by the Executive Officer for submitting technical reports for further site investigations?

DISCUSSION: The responsible parties for the Big Tree Cleaners in Tahoe City are requesting a Water Board review of the Executive Officer's order to submit technical reports for further investigations at the site.

Background

The Big Tree Cleaners is located in Tahoe City, Placer County. Big Tree Cleaners began dry cleaning in 1967 and discontinued dry cleaning operations in 1998. The Cleaners now operates a drop-off and pick-up service only. The Big Tree Cleaners shares building space with a laundromat and a realty office. The building is within 50 feet of adjacent buildings that include a motel, restaurant, and retail shops. Lake Tahoe is located approximately 400 feet to the southeast. Discharges of solvent compounds used in the earlier dry cleaning business resulted in soil and groundwater contamination. In 1997, soil contamination was identified beneath the center of the building.

According to the First Quarter 2008 monitoring report (Report) for the site, groundwater beneath the site contains up to 1,600 micrograms per liter (µg/L) PCE in well MW-6 (also known as DPE-6) in the perched zone down to 15 feet below ground surface (bgs) (Enclosure 1). Groundwater also contains up to 16 µg/L PCE in the lower confined zone down to at least 110 feet bgs. PCE concentrations in groundwater exceed the drinking water standard of 5 µg/L and adversely affect the municipal and domestic beneficial use designation of groundwater in for the Lake Tahoe Hydrologic Unit. In addition, PCE concentrations up to 3.6 milligrams per cubic meter (mg/m^3) were detected in soil gas vapor.

On June 3, 2008, the Water Board Executive Officer issued a Water Code section 13267 order to the TCN Company, William McClintock, Bessie Pomin, and David and Betty Lowry (collectively known as the responsible parties) (Enclosure 2). The order required that the responsible parties submit technical reports for conducting an indoor air survey and further groundwater investigation.

Groundwater Monitoring

From the Report's potentiometric maps, it would appear that the elevated concentrations of PCE in the area of well DPE-6 are not controlled from migration. When extraction is taking place at DPE-6, there should be localized control of migration, but without additional monitoring wells there is no way to know the extent of that control. There are no wells in the apparent downgradient direction (to the west or southwest) from DPE-6 or the apparent cross-gradient direction (to the north or northwest)

from DPE-6 to provide information on the extent of contamination or the effect of extraction from DPE-6 in those directions (Enclosure 3). The unidentified extent of PCE in groundwater poses an unacceptable nuisance and potential public health threat.

The responsible parties contend that wells located in the apparent downgradient or cross-gradient directions would likely be dry most or all of the year. However, without investigating the nature of groundwater in those areas, it is unknown whether that would be the case and what PCE concentrations might be there.

Water Board staff need to discuss the nature of groundwater and PCE contamination at the site with the responsible parties' consultant to better assess what additional investigation may be needed. The Executive Officer has suspended the requirements of the June 3, 2008 order for groundwater investigation until those discussions have occurred.

Air Monitoring

Water Board staff have relatively recently been assessing potential human health impacts from vapor intrusion into buildings from contaminated soil and groundwater at sites under Water Board oversight. An evaluation of the concentrations in soil vapor and groundwater at the Big Tree Cleaners site indicates assessment of indoor air quality is reasonable.

The order for air monitoring in the Big Tree Building and nearby buildings was based on the concentrations of PCE in soil vapor and groundwater beneath the site. PCE in soil vapor from a vapor extraction well (3.6 mg/m^3) and a dual-phase extraction well (53 mg/m^3) located approximately fifteen feet on either side of the Big Tree Building contained PCE above the San Francisco Bay Regional Water Quality Control Board's Environmental Screening Levels (ESLs) for vapor intrusion into commercial buildings of 1.4 mg/m^3 (Enclosure 4, Table E-2). Groundwater concentrations close to the Big Tree Building (1,600 $\mu g/L$) exceed the ESL for vapor intrusion into commercial buildings from groundwater of 420 $\mu g/L$ (Enclosure 4, Table E-1). Concentrations above the ESLs warrant additional investigation to assess indoor air.

The responsible parties contend that the remediation systems (vapor extraction and dual-phase extraction) at the site prevent

PCE vapors from entering on-site or nearby buildings. While the remediation systems may be reducing or eliminating PCE vapor movement into the buildings, there is no way to determine whether that is the case without additional investigation. Potential adverse human health impacts from PCE vapor intrusion cannot be ruled out unless monitoring of indoor air is conducted.

The Water Board's Executive Officer has suspended the requirements of the June 3, 2008 order for and indoor air quality survey pending the outcome of this Water Board meeting.

Responsible Parties Letter and Request for Review by the Water Board

The responsible parties' attorney submitted a June 19, 2008 response to the June 3, 2008 order for technical reports stating that further investigations were unnecessary and inappropriate (Enclosure 5). The letter requests the Water Board review the 13267 order. Water Board staff's reply is presented in Enclosure 6.

RECOMMEN-DATION: Affirm the portion of the June 3, 2008 Order requiring an indoor air survey.

Enclosure:

1. MW-6 data in Table 2, First Quarter 2008 Monitoring Report
2. June 3, 2008 section 13267 order
3. Figure 4A in First Quarter 2008 Monitoring Report
4. Environmental Screening Levels
5. June 19, 2008 response letter from Marc Zeppetello
6. July 2, 2008 reply from Water Board Executive Officer

LSD/clh T: Big Tree 13267 order GS

ENCLOSURE 1

Table 2. Summary of Groundwater Level Data and Analytical Results for Groundwater Samples

ID	SI	MP	DATE	WL	EL	Trans 1,2-DCE	CIS 1,2-DCE	TCE	PCE	1,1,1,2-PCA	VC
MW-6	5 -- 15	6269.70	23-Jun-04	6.28	0.00	ND	ND	2.6	200	ND	ND
MW-6	5 -- 15	6269.70	22-Sep-04	6.91	0.00	ND	ND	2.3	290	ND	ND
MW-6	5 -- 15	6267.96	20-Dec-04	3.55	0.00	ND	5.1	5.7	54	ND	ND
MW-6	5 -- 15	6267.97	11-Mar-05	9.45	0.00	ND	12	10	670	ND	ND
MW-6	5 -- 15	6267.97	1-Jun-05	4.71	0.00	ND	ND	5.9	510	ND	ND
MW-6	5 -- 15	6267.97	22-Sep-05	4.93	0.00	ND	ND	3.2	220	ND	ND
MW-6	5 -- 15	6267.97	6-Dec-05	3.28	0.00	ND	ND	1.5	26	ND	ND
MW-6	5 -- 15	6267.97	24-Mar-06	3.13	0.00	ND	9.1	9.0	95	ND	ND
MW-6	5 -- 15	6267.97	28-Jun-06	10.44	0.00	ND	3.4	2.1	120	ND	ND
MW-6	5 -- 15	6267.97	29-Sep-06	5.43	0.00	<2.0	<2.0	<2.0	150	<2.0	<2.0
MW-6	5 -- 15	6267.97	14-Dec-06	9.15	0.00	<10	<10	<10	680	<10	<10
MW-6	5 -- 15	6267.97	20-Mar-07	9.04	0.00	<10	<10	<10	820	<10	<10
MW-6	5 -- 15	6267.97	27-Jun-07	10.18	0.00	<5.0	<5.0	<5.0	300	<5.0	<5.0
MW-6	5 -- 15	6267.97	17-Sep-07	10.20	0.00	<1.0	<1.0	6.8	220	<1.0	<1.0
MW-6	5 -- 15	6267.97	14-Dec-07	9.20	0.00	<5.0	<5.0	<5.0	580	<5.0	<5.0
MW-6	5 -- 15	6267.97	26-Mar-08	10.00	0.00	<20	<20	<20	1,600	<20	<20
MW-7	25 -- 40	6256.10	14-Nov-98	28.39	0.00	ND	ND	ND	1.00	ND	ND
MW-7	25 -- 40	6256.10	28-Apr-99	28.11	0.00	ND	ND	ND	ND	ND	ND
MW-7	25 -- 40	6256.10	16-Jun-99	27.34	0.00	NS	NS	NS	NS	NS	NS
MW-7	25 -- 40	6256.10	18-Aug-99	27.57	0.00	ND	ND	ND	0.89	ND	ND
MW-7	25 -- 40	6256.10	3-Mar-00	27.92	0.00	ND	ND	ND	ND	ND	ND
MW-7	25 -- 40	6256.10	26-Jun-00	NM	UNK	NS	NS	NS	NS	NS	NS
MW-7	25 -- 40	6256.10	11-Sep-00	28.57	0.00	ND	ND	ND	ND	ND	ND
MW-7	25 -- 40	6256.10	18-Dec-00	NM	UNK	NS	NS	NS	NS	NS	NS
MW-7	25 -- 40	6256.10	19-Mar-01	29.84	0.00	ND	ND	ND	2.4	ND	ND
MW-7	25 -- 40	6256.10	12-Jun-01	NM	UNK	NS	NS	NS	NS	NS	NS
MW-7	25 -- 40	6256.10	10-Sep-01	31.15	0.00	ND	ND	ND	ND	ND	ND
MW-7	25 -- 40	6256.10	21-Dec-01	NM	UNK	NS	NS	NS	NS	NS	NS
MW-7	25 -- 40	6256.10	28-Mar-02	31.71	0.00	ND	ND	ND	ND	ND	NA
MW-7	25 -- 40	6256.10	27-Jun-02	31.02	0.00	NS	NS	NS	NS	NS	NS
MW-7	25 -- 40	6256.10	12-Sep-02	32.33	0.00	NA	NA	NA	ND	NA	NA
MW-7	25 -- 40	6256.10	6-Dec-02	32.93	0.00	NS	NS	NS	NS	NS	NS
MW-7	25 -- 40	6256.10	11-Mar-03	32.40	0.00	NA	NA	NA	ND	NA	NA
MW-7	25 -- 40	6256.10	20-Jun-03	31.29	0.00	NS	NS	NS	NS	NS	NS
MW-7	25 -- 40	6256.10	19-Sep-03	32.35	0.00	NA	NA	NA	ND	NA	NA

14-0006

ENCLOSURE 2

California Regional Water Quality Control Board
Lahontan Region

Linda S. Adams
Secretary for Environmental Protection

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Arnold Schwarzenegger
Governor

JUN 0 3 2008

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TCN Company
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Kenwood, CA 95452

David and Betty Lowry
PO Box 2947
Kings Beach, CA 96143-2947

Bessie Pomin
c/o Harry Pomin
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Reno, NV 89507

ORDER TO SUBMIT WORKPLANS FOR FURTHER INVESTIGATIONS, BIG TREE CLEANERS, 531 NORTH LAKE BOULEVARD, TAHOE CITY, PLACER COUNTY

Lahontan Regional Water Quality Control Board (Water Board) staff reviewed the First Quarter 2008 Quarterly Monitoring and Remediation Report (Report) submitted on your behalf by McGinley and Associates for the Big Tree Cleaners. The Report shows that tetrachloroethene (PCE) concentrations increased in groundwater to 1,600 micrograms per liter (µg/L) at monitoring well MW-6 from 380 µg/L in the prior quarter. All other monitoring wells on site show, in general, decreasing PCE concentration due to operation of the Dual-Phase Extraction (DPE) system. The depth to groundwater varies from 6 to 10 feet across the site. With regards to remediation, the Report states that DPE operation was directed solely to DPE-6 during the quarter and soil vapor extraction was directed solely to well located DPE-2. PCE concentrations up to 3.6 milligrams per cubic meter (mg/m^3) were reported in the samples collected from influent soil vapors.

Comments

Two issues in the Report concern me: (1) the spike in PCE concentrations at MW-6 and (2) the potential public nuisance for vapor intrusion in buildings.

Detected PCE concentration in MW-6 are the highest seen at the well location despite almost five years of cleanup activities at the site. The concentration implies that changes have occurred at the site. For PCE, a concentration of one percent solubility (about 1,500 µg/L) in groundwater typically indicates the presence of free product. Thus, PCE reported in MW-6 suggests free product of dense aqueous-phase liquid or DNAPL still remains at the site.

The second change concerns the undefined extent of PCE in groundwater. Monitoring well MW-6, located on the northern corner of the Big Tree Building, is considered to be cross gradient to the groundwater flow direction from the dry cleaners when the DPE system operates. No monitoring well is located on the northwest corner of the building, which would be downgradient to groundwater flow from the dry cleaners during DPE operation. Therefore, PCE concentrations in groundwater at the northwest corner may be greater than seen in MW-6. The recent increase of PCE concentrations at MW-6 could indicate preferential pathways in groundwater from the dry cleaners or another PCE source. In either case, further investigations are necessary to evaluate the extent of PCE in groundwater.

The second issue that concerns me is concentrations of chlorinated hydrocarbons in soil gas vapor could pose a threat to public health and safety. High levels of solvent compounds detected in soil gas samples within five feet of ground surface create a potential public nuisance for vapor intrusion in buildings, direct inhalation, and vapor migration in utility corridors. PCE concentrations reported in soil gas vapor exceed the environmental screening level (ESL)[1] of 1.4 mg/m^3. I am concerned about the potential public nuisance due to limited soil vapor extraction at the site and the lack of plume definition in the area of MW-6 . The situation warrants that you conduct indoor air surveys to evaluate vapor threats to human health.

Technical Reports Justification

I believe that, in light of the following facts, there is evidence to support requiring that technical reports be provided in this particular situation.

1. Concentrations of PCE reported in groundwater significantly exceed the California drinking water standard of 5 µg/L, making the groundwater unsuitable for drinking and other domestic and municipal uses. Groundwater in the area has a designated beneficial use of municipal and domestic water supply.

2. Concentrations of PCE reported in soil gas vapor exceed the ESL for commercial properties, making the soil a potential public health threat and nuisance. The site and adjacent properties are designated as commercial land use. The Water Board is the lead agency for such investigations where water quality is impacted or threatened, under a 2005 Memorandum of Agreement with the California Department of Toxic Substances Control (DTSC).

3. Further investigations are necessary to evaluate potential impacts to water quality and threats to public health and safety from soil vapor.

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[1] California Regional Water Quality Control Board, San Francisco Bay Region, November 2007, *Interim Final, Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater, Volume 1: Summary Tier 1 Lookup Tables*

Directives

Pursuant to Water Code section 13267 and Health and Safety Code chapter 6.7, you are required to submit the following technical reports to the Water Board:

1. **By June 30, 2008**, a workplan proposing an indoor air survey to evaluate the effects or threat of effects from chlorinated hydrocarbons upon public health and as a public nuisance. The workplan must propose collecting air samples in all buildings (on-site and adjacent) overlying the groundwater plume containing concentrations of 5 µg/L PCE or greater and within 50 feet of the estimated plume boundary indicated in the Report. The workplan must contain all components listed in the DTSC, December 2004, *Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air, Interim Final* (www.dtsc.ca.gov/AssessingRisk), or a similar guidance document. The workplan must be signed by a professional qualified to design and conduct air quality monitoring programs.

2. **By June 30, 2008**, a workplan proposing a groundwater investigation to define the full extent of the solvent plume in groundwater out to 1 µg/L for PCE and its breakdown products. The workplan must describe the manner and method for evaluating impacts to water quality. The workplan must be signed by a California licensed geologist or civil engineer.

3. **By July 30, 2008,** implement the workplan for indoor air survey, as accepted by Water Board staff.

4. **Within 24 hours of receiving the results of the indoor air survey**, submit a report indicating whether or not any samples exceed public health standards. If any results are greater than standards for public exposure, the report must include a proposal to: (a) implement immediate measures to reduce concentrations in building or eliminate use of buildings; and (b) implement additional remedial measures to address this indoor air quality risk

5. **By September 1, 2008,** submit a technical report describing the implementation and results of the indoor air survey. The report must be signed by a professional qualified to design and conduct air quality monitoring programs.

6. **By September 1. 2008,** implement the groundwater investigation workplan, as accepted by staff.

7. **By October 15, 2008,** submit a technical report describing the groundwater investigation. The report must be signed by a California licensed geologist or civil engineer.

I appreciate your attention in this matter. You may contact Lisa Dernbach of this office at (530) 542-5424 if you have any questions.

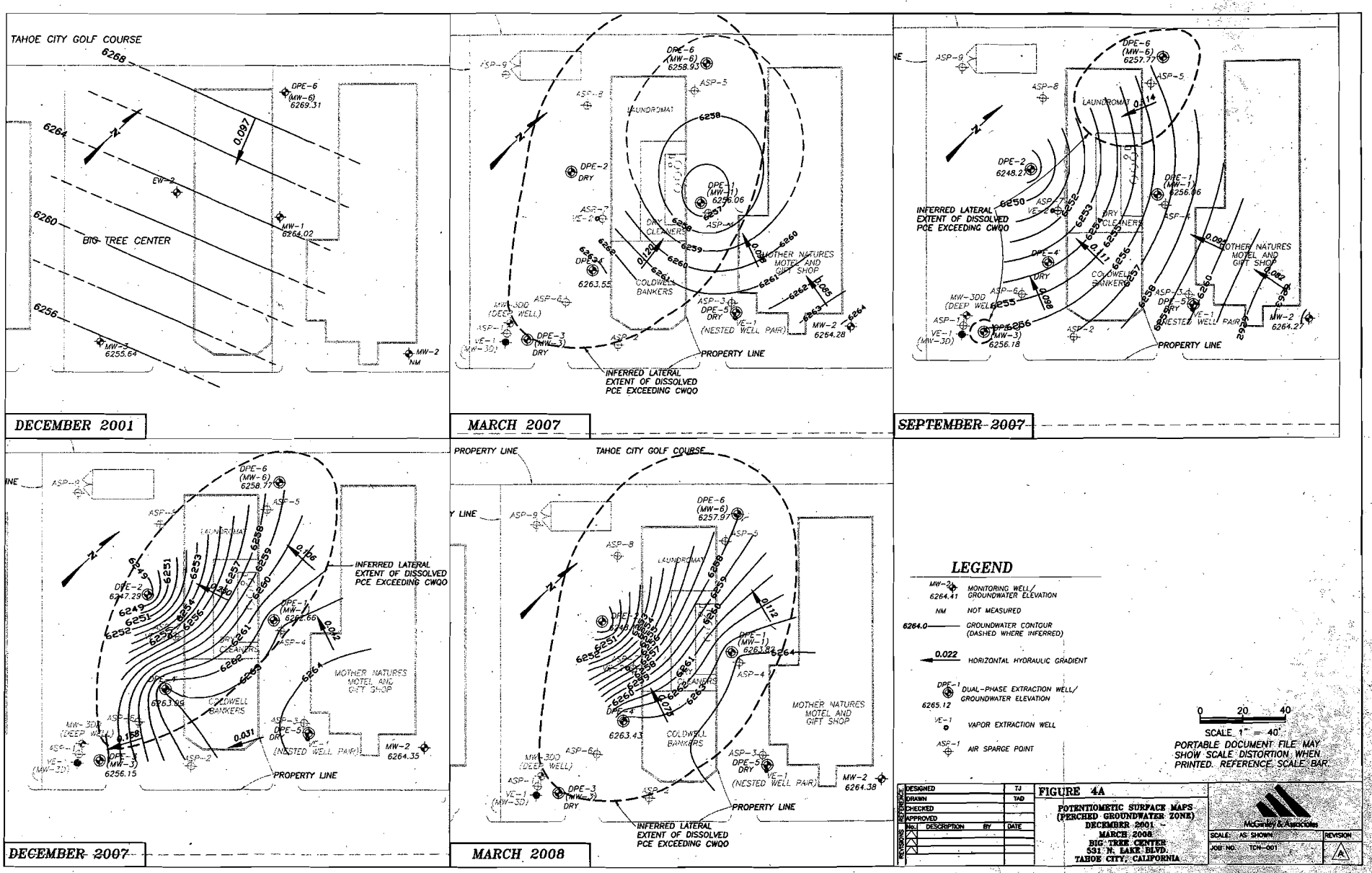
HAROLD J. SINGER
EXECUTIVE OFFICER

Enclosure: Section 13267 Notice

cc: Placer County Division of Environmental Health – Vicki Sandoval
Tahoe City Public Utility District – General Manager
Cox, Castle, & Nicholson LLP - Robert Infelise
Marc Zeppetello, Esq.
John P. Dwyer
McGinley & Associates - Joe McGinley
Porter Ski Store - Roger Kahn
Mother Nature Motel - Fred Wickman
Grand Central Building - Terry Dyer

LSD/clhT: Big Tree wrkpl order 5-27-08
[File Big Tree Cleaners]

ENCLOSURE 3


TAHOE CITY GOLF COURSE
BIG TREE CENTER
DECEMBER 2001
MARCH 2007
SEPTEMBER 2007
DECEMBER 2007
MARCH 2008
LAUNDROMAT
COLDWELL BANKERS
MOTHER NATURES MOTEL AND GIFT SHOP
PROPERTY LINE
INFERRED LATERAL EXTENT OF DISSOLVED PCE EXCEEDING CWQO
LEGEND
MW-2 6264.41 MONITORING WELL/ GROUNDWATER ELEVATION
NM NOT MEASURED
6264.0 GROUNDWATER CONTOUR (DASHED WHERE INFERRED)
0.022 HORIZONTAL HYDRAULIC GRADIENT
DPE-1 6265.12 DUAL-PHASE EXTRACTION WELL/ GROUNDWATER ELEVATION
VE-1 VAPOR EXTRACTION WELL
ASP-1 AIR SPARGE POINT
SCALE 1" = 40'
PORTABLE DOCUMENT FILE MAY SHOW SCALE DISTORTION WHEN PRINTED. REFERENCE SCALE BAR.
DESIGNED TJ
DRAWN TAD
CHECKED
APPROVED
REVISIONS
FIGURE 4A
POTENTIOMETIC SURFACE MAPS (PERCHED GROUNDWATER ZONE)
DECEMBER 2001
MARCH 2008
BIG TREE CENTER
531 N. LAKE BLVD.
TAHOE CITY, CALIFORNIA
McCarley & Associates
SCALE: AS SHOWN
JOB NO. TCN-001
REVISION
Z:\Projects\Drafting\TCN-001\DWG\TCN-001-04a.DWG 01/23/08 13:36 TAD

14-0013

ENCLOSURE 4

Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater

Prepared by:
California Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, California 94612

INTERIM FINAL - November 2007
(Revised May 2008)

14-0015

Table E-2. Shallow Soil Gas Screening Levels for Evaluation of Potential Vapor Intrusion Concerns (volatile chemicals only)

Chemcial	Physical State		Residential Exposure: Lowest Residential (µg/m³)	Residential Exposure: Carcinogenic Effects (µg/m³)	Residential Exposure: Noncarcinogenic Effects (µg/m³)	Commercial/Industrial Land Use: Lowest C/I (µg/m³)	Commercial/Industrial Land Use: Carcinogenic Effects (µg/m³)	Commercial/Industrial Land Use: Noncarcinogenic Effects (µg/m³)
Fluorene	V	S	2.9E+04		2.9E+04	8.2E+04		8.2E+04
Heptachlor	NV	S						
Heptachlor epoxide	NV	S						
Hexachlorobenzene	NV	S						
Hexachlorobutadiene	NV	S						
γ-Hexachlorocyclohexane (Lindane)	NV	S						
Hexachloroethane	NV	S						
Indeno(1,2,3-c,d)pyrene	NV	S						
Lead	NV	S						
Mercury (elemental)	V	S	1.9E+01		1.9E+01	5.3E+01		5.3E+01
Methoxychlor	NV	S						
Methylene chloride	V	L	5.2E+03	5.2E+03	8.3E+04	1.7E+04	1.7E+04	2.3E+05
Methyl ethyl ketone	V	L	1.0E+06		1.0E+06	2.9E+06		2.9E+06
Methyl isobutyl ketone	V	L	6.3E+05		6.3E+05	1.8E+06		1.8E+06
Methyl mercury	NV	S						
2-Methylnaphthalene	V	S						
tert-Butyl methyl ether	V	L	9.4E+03	9.4E+03	6.3E+05	3.1E+04	3.1E+04	1.8E+06
Molybdenum	NV	S						
Naphthalene	V	S	7.2E+01	7.2E+01	6.3E+02	2.4E+02	2.4E+02	1.8E+03
Nickel	NV	S						
Pentachlorophenol	NV	S						
Perchlorate	NV	S						
Phenanthrene	V	S	2.2E+04		2.2E+04	6.1E+04		6.1E+04
Phenol	NV	S						
Polychlorinated biphenyls (PCBs)	NV	S						
Pyrene	V	S	2.2E+04		2.2E+04	6.1E+04		6.1E+04
Selenium	NV	S						
Silver	NV	S						
Styrene	V	L	1.9E+05		1.9E+05	5.3E+05		5.3E+05
tert-Butyl alcohol	V	L						
1,1,1,2-Tetrachloroethane	V	L	3.2E+02	3.2E+02		1.1E+03	1.1E+03	
1,1,2,2-Tetrachloroethane	V	L	4.2E+01	4.2E+01	4.4E+04	1.4E+02	1.4E+02	1.2E+05
Tetrachloroethene	V	L	4.1E+02	4.1E+02	8.3E+04	1.4E+03	1.4E+03	2.3E+05
Thallium	NV	S						
Toluene	V	L	6.3E+04		6.3E+04	1.8E+05		1.8E+05

14-0016

Table E-1. Groundwater Screening Levels for Evaluation of Potential Vapor Intrusion Concerns (volatile chemicals only)

Chemical	Physical State		Residential Land Use (µg/L)	Commercial/Industrial Land Use (µg/L)
1,1-Dichloroethene	V	L	6.3E+03	1.8E+04
cis-1,2-Dichloroethene	V	L	6.2E+03	1.7E+04
trans-1,2-Dichloroethene	V	L	6.7E+03	1.9E+04
2,4-Dichlorophenol	NV	S		
1,2-Dichloropropane	V	L	2.8E+02	9.3E+02
1,3-Dichloropropene	V	L	5.3E+01	1.8E+02
Dieldrin	NV	S		
Diethyl phthalate	NV	S		
Dimethyl phthalate	NV	S		
2,4-Dimethylphenol	V	S	2.5E+06	7.1E+06
2,4-Dinitrophenol	NV	S		
2,4-Dinitrotoluene	NV	S		
1,4-Dioxane	NV	L		
Dioxin (2,3,7,8-TCDD)	NV	S		
Endosulfan	NV	S		
Endrin	NV	S		
Ethylbenzene	V	L	1.7E+05	1.7E+05
Fluoranthene	NV	S		
Fluorene	V	S	1.9E+03	1.9E+03
Heptachlor	NV	S		
Heptachlor epoxide	NV	S		
Hexachlorobenzene	NV	S		
Hexachlorobutadiene	NV	S		
γ-Hexachlorocyclohexane (Lindane)	NV	S		
Hexachloroethane	NV	S		
Indeno(1,2,3-c,d)pyrene	NV	S		
Lead	NV	S		
Mercury (elemental)	V	S	(Use soil gas)	(Use soil gas)
Methoxychlor	NV	S		
Methylene chloride	V	L	2.4E+03	8.1E+03
Methyl ethyl ketone	V	L	2.4E+07	6.8E+07
Methyl isobutyl ketone	V	L	3.0E+06	8.4E+06
Methyl mercury	NV	S		
2-Methylnaphthalene	V	S	2.6E+04	2.6E+04
tert-Butyl methyl ether	V	L	2.4E+04	8.0E+04
Molybdenum	NV	S		
Naphthalene	V	S	3.2E+03	1.1E+04
Nickel	NV	S		
Pentachlorophenol	NV	S		
Perchlorate	NV	S		
Phenanthrene	V	S	(Use soil gas)	(Use soil gas)
Phenol	NV	S		
Polychlorinated biphenyls (PCBs)	NV	S		
Pyrene	V	S	1.4E+02	1.4E+02
Selenium	NV	S		
Silver	NV	S		
Styrene	V	L	3.1E+05	3.1E+05
tert-Butyl alcohol			(Use soil gas)	(Use soil gas)
1,1,1,2-Tetrachloroethane	V	L	(Use soil gas)	(Use soil gas)
1,1,2,2-Tetrachloroethane	V	L	1.9E+02	6.4E+02
Tetrachloroethene	V	L	1.2E+02	4.2E+02
Thallium	NV	S		

14-0017

ENCLOSURE 5

BARG
COFFIN
LEWIS &
TRAPP
ATTORNEYS
LLP

RECEIVED
JUN 20 2008
By LSD

350 California Street
22nd Floor
San Francisco, CA
94104-1435
tel 415 228 5400
fax 415 228 5450
www.bcltlaw.com

June 19, 2008

VIA FACSIMILE AND FEDERAL EXPRESS

Harold J. Singer
Executive Officer
California Regional Water Quality Control Board
Lahontan Region
2501 Lake Tahoe Boulevard
South Lake Tahoe, CA 96150

Re: June 3, 2008 Request to Submit Workplans for Further Investigations,
Big Tree Cleaners, 531 North Lake Boulevard, Tahoe City, Placer County

Dear Mr. Singer:

I am writing on behalf of Harry Pomin, as a trustee of the Bessie B. Pomin Trust, William McClintock, and the TCN Company concerning your letter dated June 3, 2008 requesting the submission of workplans for further environmental investigations at 531 North Lake Boulevard in Tahoe City. As you may recall, the Bessie Pomin Trust is the owner and lessor, and TCN Company is the lessee, of the subject property, and Messrs. Pomin and McClintock have been working together cooperatively since 2001 to investigate and remediate environmental conditions at the property. In particular, their consultant, McGinley & Associates ("McGinley"), installed and has been operating a multi-technology treatment system, which includes dual-phase extraction, vapor extraction, and air sparging subsystems. As previously reported to the Lahontan Regional Water Quality Control Board ("Regional Board"), since the system was activated in 2003, it has recovered an estimated 459 pounds of Tetrachloroethene ("PCE") from groundwater and soil gas.

Messrs. Pomin and McClintock were disappointed that Regional Board staff did not provide them with an opportunity to address the concerns discussed in the June 3rd letter before it was issued. As you know, the letter requests the preparation and implementation of workplans for: (1) an indoor air survey to evaluate the potential vapor intrusion effects of the subsurface contamination; and (2) a further investigation to define the extent of the groundwater plume out to a concentration of 1 ug/L for PCE and its breakdown products. Notwithstanding the

submission of numerous quarterly monitoring and remediations reports prepared by McGinley over the past several years, the Regional Board staff has never previously provided any correspondence or other communication regarding potential concerns related to vapor intrusion or delineation of the groundwater plume to a PCE concentration of 1 ug/L.

In any event, upon reviewing the June 3rd letter and discussing the technical issues with McGinley, Messrs. Pomin and McClintock submit that the Regional Board staff's requests for an indoor air survey and further delineation of the groundwater plume would not provide useful information and, therefore, such investigations are unnecessary and inappropriate.

With respect to the request for an indoor air survey, the San Francisco Bay Regional Water Quality Control Board's guidance on screening for environmental concerns, cited in the June 3rd letter, recognizes that indoor air sampling can generate unreliable data due to the presence of volatile chemicals in ambient air from numerous sources, including auto emissions, consumer products, and dry-cleaned clothing.[1] This concern is particularly relevant at the subject property, given that a pick-up and drop-off dry cleaning service (that does not conduct dry cleaning operations on-site) is a tenant. Rather than relying on indoor air sampling, the San Francisco Bay Regional Board's Screening Guidance recommends a stepwise approach to vapor intrusion evaluation which focuses on the collection and evaluation of groundwater and soil gas data.[2]

Moreover, ongoing operation of the treatment system is effectively mitigating potential vapor intrusion by pulling volatile chemicals in the groundwater and vadose zone toward the dual-phase extraction and vapor extraction wells, thereby preventing such chemicals from entering on-site or nearby buildings. Operation of the treatment system is likely also resulting in elevated PCE soil gas concentrations at the extraction wells, in comparison to concentrations that would occur under steady-state conditions, if the treatment system ceased operation.

Messrs. Pomin and McClintock acknowledge the Regional Board staff's concern regarding the potential for vapor intrusion of volatile chemicals. However, it is premature to evaluate this issue at the present time, while the treatment system is operating and removing contaminant mass from groundwater and soil gas, particularly by an indoor air survey. We suggest that it may be appropriate to consider this issue in the future, in context of McGinley's and the Regional Board staff's evaluation of the site for closure.

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[1] San Francisco Bay Regional Water Quality Control Board, Interim Final Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater (November 2007) ("Screening Guidance") at 2-15 to 2-16, 2-19. *See also,* Cal EPA, Interim Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (December 15, 2004) at 23 (recognizing challenges to collecting indoor air samples to assess vapor intrusion risks "due to ambient pollution sources, consumer products, etc.").

[2] Screening Guidance at 2-15 to 2-19.

The Regional Board staff's request for further plume delineation appears to be based on a concern that there is no monitoring well located near the northwest corner of the building and that groundwater PCE concentrations in this area "may be greater than seen in MW-6." However, as discussed in McGinley's report for the first quarter 2008, the observed increase in the PCE concentration at DPE-6 (*i.e.*, MW-6) is likely the result of dual-phase extraction activities at this location – that is, due to effective operation of the treatment system. Moreover, as also previously reported, McGinley has found that the perched groundwater zone is discontinuous at the site. For this reason, McGinley anticipates that a monitoring well installed northwest of the building would be dry for most, if not all, of the year and, therefore, would be ineffective for further plume delineation.

McGinley's quarterly reports have consistently included figures delineating the PCE plume, in both the perched groundwater zone and the aquifer, at a concentration of 5 ug/L, which is both the California maximum contaminant level and the Regional Board's water quality objective for this substance. After failing to raise any concerns regarding McGinley's long-standing use of the 5 ug/L concentration for plume delineation, the Regional Board staff has provided no justification for requesting a further investigation to delineate the plume out to a concentration of 1 ug/L.

In that regard, although the June 3rd letter is characterized as an "order," the only specific authority cited for the Regional Board staff's requests is Water Code Section 13267. As you know, under Section 13267, the burden, including costs, of a requested investigation report is required to bear a reasonable relationship to the need for the report and the benefits to be obtained from the report. Messrs. Pomin and McClintock submit that, in light of the positive results being achieved by ongoing operation of the treatment system, the burdens of conducting the requested indoor air survey and further plume delineation would substantially outweigh the marginal benefits, if any, of such investigations.

In relation to the balancing required by Section 13267, you will recall that, in 2001, both the Regional Board and its staff expressed appreciation for the voluntary commitment of Messrs. Pomin and McClintock to work together to investigate and remediate the property within the constraints of their limited financial resources. Messrs. Pomin and McClintock have pursued this objective in good faith and would like to see this process through to site closure. The Regional Board staff's request for further investigations, at considerable additional expense, would seriously impair their ability to do so and may jeopardize the availability of funding for continued operation of the treatment system.

Messrs. Pomin and McClintock would be amenable to meeting with Regional Board staff if you believe that might facilitate resolution of these issues. Nevertheless, they also request that the ongoing and requested further investigations at the subject property be included as an agenda item for the Regional Board's meeting on July 23-24. We will provide copies of any written

materials summarizing our planned presentation to the Regional Board at least ten days prior to the meeting, or earlier upon request.

In light of our request to have this matter included on the Regional Board's agenda for its July 23-24 meeting, Messrs. Pomin and McClintock also respectfully request a 60-day extension of all due dates established in the June 3rd letter. Given that contaminants will continue to be removed from groundwater and soil gas by ongoing operation of the treatment system during this period, the requested extension will not result in any adverse impact to public health or the environment.

Finally, please be advised that Messrs. Pomin and McClintock will be submitting a petition for review of the Regional Board's June 3rd letter to the State Water Resources Control Board. We will, however, request that the petition be held in abeyance temporarily to provide an opportunity for resolution of Messrs. Pomin's and McClintock's concerns in cooperation with the Regional Board.

On behalf of Messrs. Pomin and McClintock, thank you for your consideration. Please contact me if you have any questions.

Sincerely yours,

Marc Zeppetello

Marc A. Zeppetello

MAZ/fmc

cc: Lisa Dernbach
Placer County Division of Environmental Health-Vicki Sandoval
Tahoe City Public Utility District-General Manager
McGinley & Associates-Joe McGinley
Porter's Building-Roger Kahn
Mother Nature Motel-Fred Wickman
Grand Central Building-Terry Dyer
William McClintock
Harry Pomin

ENCLOSURE 6

California Regional Water Quality Control Board
Lahontan Region

Linda S. Adams
Secretary for Environmental Protection

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COMMENTS ON YOUR JUNE 19, 2008 LETTER, AND SUSPENSION OF REQUIREMENTS TO SUBMIT WORKPLANS AND TECHNICAL REPORTS FOR FURTHER INVESTIGATIONS, BIG TREE CLEANERS, 531 NORTH LAKE BOULEVARD, TAHOE CITY, PLACER COUNTY

I have reviewed your June 19, 2008 letter responding to my June 3, 2008 Order for the responsible parties of the Big Tree Cleaners to submit workplans for further investigations and technical reports of those investigations. This letter provides comments on your letter and suspends the requirements for further investigations.

Your letter proposes that investigations to conduct indoor air surveys and further plume definition of solvents in groundwater are unnecessary and inappropriate. Your letter also questions whether my June 3, 2008 correspondence was an Order of the Water Board. You request (1) a meeting to discuss the matter with Board staff, (2) that the matter be placed as an agenda item for the Water Board's July 23-24 meeting, and (3) a 60-day extension of all due dates in my June 3, 2008 Order. Your letter further states that your clients intend to submit a petition for review to the State Water Resources Control Board.

Orders of the Water Board

Directives issued by a Water Board Executive Officer who has been delegated those authorities by the Water Board are indeed enforceable Orders. Water Code section 13267 broadly authorizes the Regional Water Boards to require dischargers to investigate water quality and to furnish technical and monitoring program reports. The Water Board has delegated all appropriate authorities to the Executive Officer, including the authority to order the submittal of technical reports pursuant to Water Code section 13267. As identified in past enforcement actions issued by the Water Board, violation of a section 13267 Order is fully enforceable under various legal provisions, including, but not limited to, administrative civil liability pursuant to Water Code section 13268.

Need for Reports and their Burden on the Dischargers

Regarding the burden, including cost, that compliance with the June 3, 2008 Order would entail, Water Board staff believe the burden is reasonable. The need for the reports was provided in the June 3, 2008 order under the heading *Technical Report Justification*. As was stated, the request for technical reports is reasonable considering the large increase of tetrachloroethene (PCE) concentrations in DPE-6 (MW-6), the lack of plume definition in that area, and elevated soil vapor concentrations at the site that may be resulting in a public nuisance inside the Big Tree Building and adjacent buildings.

Water Board Concerns with Reported Data and Information; Appropriateness of Additional Groundwater Investigation

I am concerned with certain data and information in monitoring and remediation reports for the site, and their implications for assessing the extent of the PCE plume and remediation effort effectiveness. Groundwater elevation data, your consultant's interpretation of that data, and remediation system operation information appear inconsistent, as discussed below.

Prior to remediation system operation, groundwater elevation data indicated flow was generally towards Lake Tahoe to the southeast, as expected. The *Groundwater Monitoring and Remediation Report – First Quarter 2008* (Report) indicates in Figure 4A that groundwater is flowing generally to the west to well DPE-2, when that well is not dry. However, the Report indicates that well DPE-2 is used as a vapor extraction well and not a groundwater extraction well and that all vapor extraction system vacuum was directed to well DPE-2. Vapor extraction activities would not significantly affect groundwater elevations (except, perhaps in the positive—slightly increasing groundwater elevation at the well compared to surrounding groundwater elevations). Yet, the potentiometric surface maps in Figure 4A show groundwater flowing to that well. Also, the Report indicates that all vacuum for the dual-phase vapor/groundwater extraction system was directed to well DPE-6 (MW-6). But, the potentiometric maps do not show the expected groundwater drawdown in that well.

From the Report's potentiometric maps, it would appear that the elevated concentrations of PCE in the area of well DPE-6 are not controlled from migration. When extraction is taking place at DPE-6, there should be localized control of migration, but without additional monitoring wells there is no way to know the extent of that control. There are no wells in the apparent downgradient direction (to the west or southwest) from DPE-6 or the apparent cross-gradient direction (to the north or northwest) from DPE-6 to provide information on the extent of contamination or the effect of extraction from DPE-6 in those directions. The unidentified extent of PCE in groundwater poses an unacceptable nuisance and potential public health threat. Your letter indicates that your consultant believes a well or wells installed in those directions would be dry for most or all of the year. However, without investigating the nature of groundwater in

those areas, it is unknown whether that would be the case and what PCE concentrations might be there.

Air Monitoring

The Water Board has relatively recently been assessing potential human health impacts from vapor intrusion into buildings from contaminated soil and groundwater at sites under Water Board oversight. An evaluation of the concentrations in soil vapor and groundwater at the Big Tree Cleaners site indicates that assessment of indoor air quality is clearly warranted.

My Order for air monitoring in the Big Tree Building and nearby buildings was based on the concentrations of PCE in soil vapor and groundwater beneath the site. PCE in soil vapor from a vapor extraction well (3.6 milligrams per cubic meter [mg/m^3]) and a dual-phase extraction well (53 mg/m^3) located approximately fifteen feet on either side of the Big Tree Building contained PCE above the San Francisco Bay Regional Water Quality Control Board's Environmental Screening Levels[1] (ESL) for vapor intrusion into commercial buildings of 1.4 mg/m^3. Groundwater concentrations close to the Big Tree Building (1,600 micrograms per liter [µg/L]) exceed the ESL for vapor intrusion into commercial buildings from groundwater of 420 µg/L. Concentrations above the ESLs warrant additional investigation to assess indoor air. The Water Board's evaluation of the threat of vapor intrusion into the buildings on site used the stepwise approach you reference.

Your letter indicates that the remediation systems (vapor extraction and dual-phase extraction) at the site prevent PCE vapors from entering on-site or nearby buildings. While the remediation systems may be reducing or eliminating PCE vapor movement into the buildings, there is no way to determine whether that is the case without additional investigation. Potential adverse human health impacts from PCE vapor intrusion cannot be ruled out unless monitoring of indoor air is conducted.

Suspension of Required Technical Reports, Meeting with Water Board Staff, and Review of the June 3, 2008 Order by the Water Board

Because you requested a meeting with staff to discuss the June 3, 2008 Order and your June 19, 2008 letter, and because you've requested the Water Board review the Order at its July 23 and 24, 2008 meeting, I'm hereby suspending the requirements of the Order pending the results of those meetings. A meeting with you and staff is scheduled for July 11, 2008.

Based on the information provided in reports submitted by your client, I believe that the indoor air monitoring is necessary and should proceed forthwith. However, I am willing to reconsider this position based on the discussions at the scheduled July 11, 2008

[1] California Regional Water Quality Control board, San Francisco Bay Region, November 2007, *Interim Final, Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater.*

meeting. If we cannot resolve this issue at the meeting, I will be asking the Water Board, at its July 23 and 24, 2008 meeting, to review this aspect of the Water Code section 13267 Order. You will be receiving a separate notice for this meeting.

Based on the comments in this letter on the groundwater issues, I believe additional discussion is needed between Water Board staff and your consultant regarding the nature of PCE in groundwater at the site, groundwater movement at the site, and the effect of your remediation system on the PCE and groundwater movement and remediation. If after discussions at the July 11, 2008 meeting and possibly additional analysis of the facts, we still have a disagreement on the need for the groundwater monitoring requirements of the Water Code section 1367 Order, I will consider the need for the Water Board to review the issue at a future meeting.

You may contact me at (530) 542-5412 or Lisa Dernbach at (530) 542-5424 if you have any questions.

Harold J. Singer

HAROLD J. SINGER
EXECUTIVE OFFICER

Cc: Harry Pomin
William McClintock
Placer County Division of Environmental Health – Vicki Sandoval
Tahoe City Public Utility District – General Manager
Cox, Castle, & Nicholson LLP - Robert Infelise
John P. Dwyer
McGinley & Associates - Joe McGinley
Mother Nature Motel - Fred Wickman
Grand Central Building - Terry Dyer

LSD/CLC/adw:T: Big Tree 13267 suspension
To be filed: SCP, Placer Co, T6S012