

James P. Bowers, PE  
R. William Rudolph, Jr., PE

3603

January 21, 1993  
SCI 430.014

Ms. Jennifer Eberle  
Alameda County Health Care Services Agency  
80 Swan Way, Room 200  
Oakland, California 94621

**Request to Modify Groundwater  
Monitoring Program  
Floor Drain Sump  
13th and Jefferson Streets  
Oakland, California**

Dear Ms. Eberle:

On behalf of the City of Oakland Redevelopment Agency, Subsurface Consultants, Inc. (SCI) requests to modify the groundwater monitoring program for the referenced site. Specifically, we request that the monitoring of Wells 47, 54 and 59 be terminated. We request that only Well 48 be monitored in the future. The basis for our request is presented below. Well locations are shown on the attached Plate 1.

**Background**

SCI previously documented the removal of a concrete floor drain sump and associated contaminated soil in a report dated September 24, 1990. A groundwater contamination assessment report by SCI dated July 8, 1991, presents monitoring well installation details.

Soil contamination resulting from underground gasoline storage tanks near the intersection of 13th and Jefferson Streets also occurred in the area. Remediation activities for the gasoline contamination are detailed in our report dated December 6, 1990. Analytical test results from previous quarterly groundwater sampling events for the gasoline contamination were most recently presented in a letter dated December 4, 1992.

new info

On December 18, 1992, Well 49 was destroyed by HEW Drilling Company in accordance with Alameda County, Zone 7 Water Agency requirements. The details of the well destruction are presented in a SCI letter dated January 11, 1993. It was necessary to abandon the well because of construction activities in the area, associated with the City Center Garage West project.

■ **Subsurface Consultants, Inc.**

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### Quarterly Monitoring

Groundwater monitoring for the sump release has been performed quarterly over the past two years. Groundwater level measurements are summarized in Table 1. Groundwater surface contours for the latest event, November 3, 1992, are shown on Plate 1. Groundwater flow patterns have remained relatively consistent during recent monitoring events. → not

Analytical testing was performed by Curtis & Tompkins, Ltd., a State of California Department of Health Services certified analytical laboratory for the tests performed. Water samples were analytically tested for volatile organic chemicals (EPA 5030/8010). Water samples from the wells have also been analyzed in the past for a variety of hydrocarbons, including total volatile hydrocarbons (EPA 8015/5030), total extractable hydrocarbons (EPA 8015/3550), hydrocarbon oil and grease (SMWW 17:5520 E&F) and benzene, toluene, xylene and ethylbenzene (EPA 8020). In our June 24, 1992 letter, we requested that hydrocarbon testing be eliminated from the monitoring program because these compounds had not been detected for at least the previous six quarters. The results of the analyses are summarized in Tables 2 and 3.

### Request for Monitoring Plan Modification

Volatile organic chemicals have not been detected in the monitoring wells at the site during at least the past six (6) quarterly monitoring events at concentrations above reporting limits, except for 1,2 dichloroethane (DCA) in Well 48. Initially, the DCA concentration in Well 48 was 60 ug/L. Concentrations have steadily decreased with time. During the past two quarters, DCA was not detected in Well 48 at concentrations above reporting limits. Based on the analytical data, we conclude that soil remediation was successful and no significant sources of volatile organic chemical or hydrocarbon contamination appear to remain in the area.

As previously stated, we propose that we cease the monitoring of Wells 47, 54 and 59 at this time. Because DCA was detected in Well 48 within the previous four quarters, we will continue to monitor this well on a quarterly basis for volatile organic chemicals. ← not this one

Our next sampling event is scheduled for February 10, 1993. We would appreciate a response to our proposed monitoring program modification prior to this date.

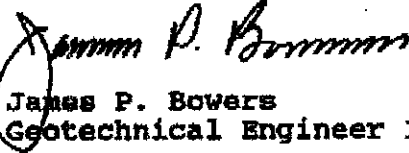
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If you need additional information or have any questions, please call.

Yours very truly,

Subsurface Consultants, Inc.



James P. Bowers  
Geotechnical Engineer 157 (expires 3/31/96)

MK:JPB:egh

Attachments: Table 1 - Groundwater Elevation Data  
Table 2 - Petroleum Hydrocarbon Concentrations in Groundwater  
Table 3 - Volatile Organic Chemical Concentrations in Groundwater  
Plate 1 - Site Plan

cc: Ms. Julie Carver  
Environmental Affairs

Ms. Lois Parr  
Oakland Redevelopment Agency

Table 1. Groundwater Elevation Data

Well	Date	TOC <sup>1</sup> Elevation (ft)	Groundwater Depth <sup>2</sup> (ft)	Groundwater Elevation (ft)
MW-47	09/24/90	100.50	27.28	73.22
	10/04/90		27.32	73.18
	12/03/90		27.38	73.12
	01/21/91		27.17	73.33
	03/13/91		26.85	73.65
	04/03/91		26.38	74.12
	06/13/91		28.39	72.11
	09/10/91		27.08	73.42
	12/12/91		27.95	72.55
	04/17/92		26.18	74.32
	07/28/92		26.48	74.02
	11/03/92		26.86	73.64
	MW-48		07/18/90	102.40
10/04/90		29.29	73.11	
12/03/90		29.28	73.12	
01/21/91		29.03	73.37	
03/13/91		28.72	73.68	
04/03/91		28.24	74.16	
06/13/91		29.47	72.93	
09/10/91		28.94	73.46	
12/12/91		30.39	72.01	
04/17/92		28.07	74.33	
07/28/92		28.32	74.08	
11/03/92		28.74	73.66	
MW-49		12/03/90	101.73	
	01/21/91	28.20		73.53
	03/13/91	27.79		73.94
	04/03/91	27.28		74.45
	06/13/91	27.66		74.07
	09/10/91	28.04		73.69
	12/12/91	30.45		71.28
	04/17/92	27.26		74.64
	11/03/92	27.84		73.89
MW-51	10/04/90	102.64	28.57	74.07
	12/03/90		28.57	74.07
	01/21/91		28.44	74.20
	03/13/91		27.76	74.88
	04/03/91		27.32	75.32
	06/13/91		28.82	73.82
	09/10/91		28.00	74.64
MW-52	10/04/90	102.44	28.41	74.03
	12/03/90		28.38	74.06
	01/21/91		28.24	74.20
	03/13/91		27.57	74.87
	04/03/91		27.16	75.28
	06/13/91		29.41	73.03
	09/10/91		27.85	74.59
MW-53	09/24/90	101.28	27.44	73.84
	10/04/90		27.50	73.78
	12/03/90		27.46	73.82
	01/21/91		28.00	73.28
	03/13/91		27.00	74.28
	06/13/91		27.61	73.67
	08/12/91		Well Abandoned	

Table 1. Groundwater Elevation Data (continued)

<u>Well</u>	<u>Date</u>	<u>TOC<sup>1</sup> Elevation (ft)</u>	<u>Groundwater Depth<sup>2</sup> (ft)</u>	<u>Groundwater Elevation (ft)</u>		
MW-54	09/24/90	100.78	27.01	73.77		
	10/04/90		27.30	73.48		
	12/03/90		27.01	73.77		
	01/21/91	101.92 <sup>3</sup>	27.28	74.64		
	03/13/91		27.40	74.52		
	06/13/91		28.93	72.99		
	09/10/91		27.66	74.26		
	12/12/91		28.88	73.04		
	04/17/92		26.82	75.10		
	11/03/92		27.54	74.38		
	MW-59		02/12/91	100.37	27.45	72.92
			03/13/91		27.60	72.77
04/03/91		27.35	73.01			
06/13/91		28.01	72.36			
09/10/91		28.00	72.37			
12/12/91		28.53	71.84			
04/17/92		26.91	73.46			
07/28/92		27.27	73.10			
11/03/92		27.56	72.81			

- <sup>1</sup> Top of Casing  
<sup>2</sup> Depth measured below top of casing  
<sup>3</sup> Well head damaged and repaired

Assumed datum: The elevation of the FG&E manhole in Martin Luther King, Jr. Way, near the northwest corner of the block, was assumed to have an elevation of 100 feet (see Plate 1)

**Table 3.  
Halogenated Volatile Organic Chemical  
Concentrations in Groundwater**

<u>Well</u>	<u>Date</u>	<u>1,2 DCA<sup>1</sup> (ug/L)<sup>2</sup></u>	<u>1,2 DCE<sup>2</sup> (ug/L)</u>	<u>Chloroform (ug/L)</u>	<u>Other EPA 8010 (ug/L)</u>
MW-29	01/04/91	ND <sup>4</sup>	ND	ND	ND
MW-31	01/04/91	ND	ND	10	ND
MW-45	01/04/91	ND	ND	ND	ND
MW-46	01/04/91	ND	ND	ND	ND
MW-47	12/03/90	ND	11	ND	ND
	01/04/91	16	ND	ND	ND
	03/13/91	6.7	ND	ND	ND
	06/13/91	ND	ND	ND	ND
	09/11/91	ND	ND	ND	ND
	12/12/91	ND	ND	ND	ND
	04/17/92	ND	ND	ND	ND
	07/28/92	ND	ND	ND	ND
MW-48	11/03/92	ND	ND	ND	ND
	10/04/90	60	ND	ND	ND
	12/03/90	31	ND	ND	ND
	01/04/91	15	ND	ND	ND
	03/13/91	30	ND	ND	ND
	06/19/91	6.1	ND	ND	ND
	09/11/91	5.3	ND	ND	ND
	12/12/91	16	ND	ND	ND
	04/17/92	1	ND	ND	ND
	07/28/92	ND	ND	ND	ND
	11/03/92	ND	ND	ND	ND
MW-49	12/03/90	ND	ND	ND	ND
	03/03/91	ND	ND	ND	ND
	06/13/91	5.0	ND	ND	ND
	09/11/91	ND	ND	ND	ND
	12/12/91	ND	ND	ND	ND
	04/17/92	ND	ND	ND	ND
MW-51	12/04/90	ND	ND	ND	ND
	06/13/91	ND	ND	1.0	ND
MW-52	12/04/90	ND	ND	1.3	ND
	06/13/91	ND	ND	1.0	ND
MW-53	10/04/90	ND	ND	1.2	ND
	12/04/90	ND	ND	1.9	ND
	03/13/91	ND	ND	2.0	ND
	06/13/91	ND	ND	8.0	ND
	08/12/91	Well abandoned			
MW-54	10/04/90	ND	ND	1.6	ND
	12/04/90	ND	ND	1.5	ND
	01/04/91	ND	ND	ND	ND
	03/13/91	ND	ND	ND	ND
	06/13/91	ND	ND	1.0	ND
	11/03/92	ND	ND	ND	ND

lapse →

**Table 3. Halogenated Volatile Organic Chemical Concentrations in Groundwater (continued)**

<u>Well</u>	<u>Date</u>	<u>1,2 DCA<sup>1</sup></u> <u>(ug/L)<sup>3</sup></u>	<u>1,2 DCE<sup>2</sup></u> <u>(ug/L)</u>	<u>Chloroform</u> <u>(ug/L)</u>	<u>Other</u> <u>EPA 8010</u> <u>(ug/L)</u>
MW-59	03/13/91	ND	ND	ND	ND
	04/03/91	ND	ND	ND	ND
	09/11/91	ND	ND	ND	ND
	12/12/91	ND	ND	ND	ND
	04/17/92	ND	ND	ND	ND
	07/28/92	ND	ND	ND	ND
	11/03/92	ND	ND	ND	ND

<sup>1</sup> 1,2 Dichloroethane

<sup>2</sup> 1,2 Dichloroethene

<sup>3</sup> Micrograms/liter = parts per billion

<sup>4</sup> None detected, see test reports for detection limits

Table 2. Petroleum Hydrocarbon Concentrations in Groundwater

Well	Date	O&G <sup>1</sup> (ug/L)	TVH <sup>2</sup> (ug/L)	TEH <sup>3</sup> (ug/L)	B <sup>4</sup> (ug/L)	X <sup>5</sup> (ug/L)	X <sup>6</sup> (ug/L)	E <sup>7</sup> (ug/L)
MW-47	04/06/90	--	ND <sup>8</sup>	--	ND	ND	ND	ND
	10/04/90	--	--	--	ND	ND	ND	ND
	12/03/90	--	ND	--	ND	ND	ND	ND
	03/13/91	--	ND	--	ND	ND	ND	ND
	06/13/91	--	ND	--	ND	ND	ND	ND
	09/11/91	--	ND	--	ND	ND	ND	ND
	12/12/91	--	ND	--	ND	ND	ND	ND
	04/17/92	--	--	--	ND	ND	ND	ND
MW-48	04/06/90	--	ND	--	ND	ND	ND	ND
	07/18/90	ND	ND	ND	ND	ND	ND	ND
	10/04/90	--	--	110	ND	ND	ND	ND
	12/03/90	ND	ND	ND	ND	ND	ND	ND
	03/13/91	ND	ND	ND	ND	ND	ND	ND
	09/11/91	ND	ND	ND	ND	ND	ND	ND
	12/12/91	ND	ND	ND	ND	ND	ND	ND
	04/17/92	ND	--	--	ND	ND	ND	ND
MW-49	04/06/90	--	ND	--	ND	ND	ND	ND
	12/03/90	--	ND	--	ND	ND	ND	ND
	03/13/91	--	ND	--	ND	ND	ND	ND
	06/13/91	--	ND	--	ND	ND	ND	ND
	09/11/91	--	ND	--	ND	ND	ND	ND
	12/12/91	--	ND	--	ND	ND	ND	ND
	04/17/92	--	--	--	ND	ND	ND	ND
MW-51	04/06/90	--	ND	--	ND	ND	ND	ND
	10/04/90	--	--	--	ND	ND	ND	ND
	12/04/90	--	ND	--	ND	ND	ND	ND
	03/13/91	--	ND	--	ND	ND	ND	ND
	06/13/91	--	ND	--	ND	ND	ND	ND
	09/11/91	--	ND	--	ND	ND	ND	ND
MW-52	04/06/90	--	ND	--	ND	ND	ND	ND
	10/04/90	--	--	--	ND	ND	ND	ND
	12/04/90	--	ND	--	ND	ND	ND	ND
	03/13/91	--	ND	--	ND	ND	ND	ND
	06/13/91	--	ND	--	ND	ND	ND	ND
	09/11/91	--	ND	--	ND	ND	ND	ND
MW-53	09/21/90	--	ND	--	ND	ND	ND	ND
	10/04/90	--	ND	--	ND	ND	ND	ND
	12/04/90	--	ND	--	ND	ND	ND	ND
	03/13/91	--	ND	--	ND	ND	ND	ND
	06/11/91	--	ND	--	ND	ND	ND	ND
	08/12/91	Well Abandoned						
MW-54	09/21/90	--	1700	--	ND	1.5	20	1.9
	10/04/90	--	1300	--	ND	0.7	12	28
	12/04/90	--	ND	--	ND	ND	ND	ND
	03/13/91	--	ND	--	ND	ND	ND	ND
	06/13/91	--	ND	--	ND	ND	ND	ND
	09/11/91	--	ND	--	ND	ND	ND	ND
	12/12/91	--	ND	--	ND	ND	ND	ND
	04/17/92	--	--	--	ND	ND	ND	ND
MW-59	03/13/91	--	ND	--	ND	ND	ND	ND

<sup>1</sup> Oil and Grease

<sup>2</sup> Total Volatile Hydrocarbons

<sup>3</sup> Total Extractable Hydrocarbons

<sup>4</sup> Benzene

<sup>5</sup> Toluene

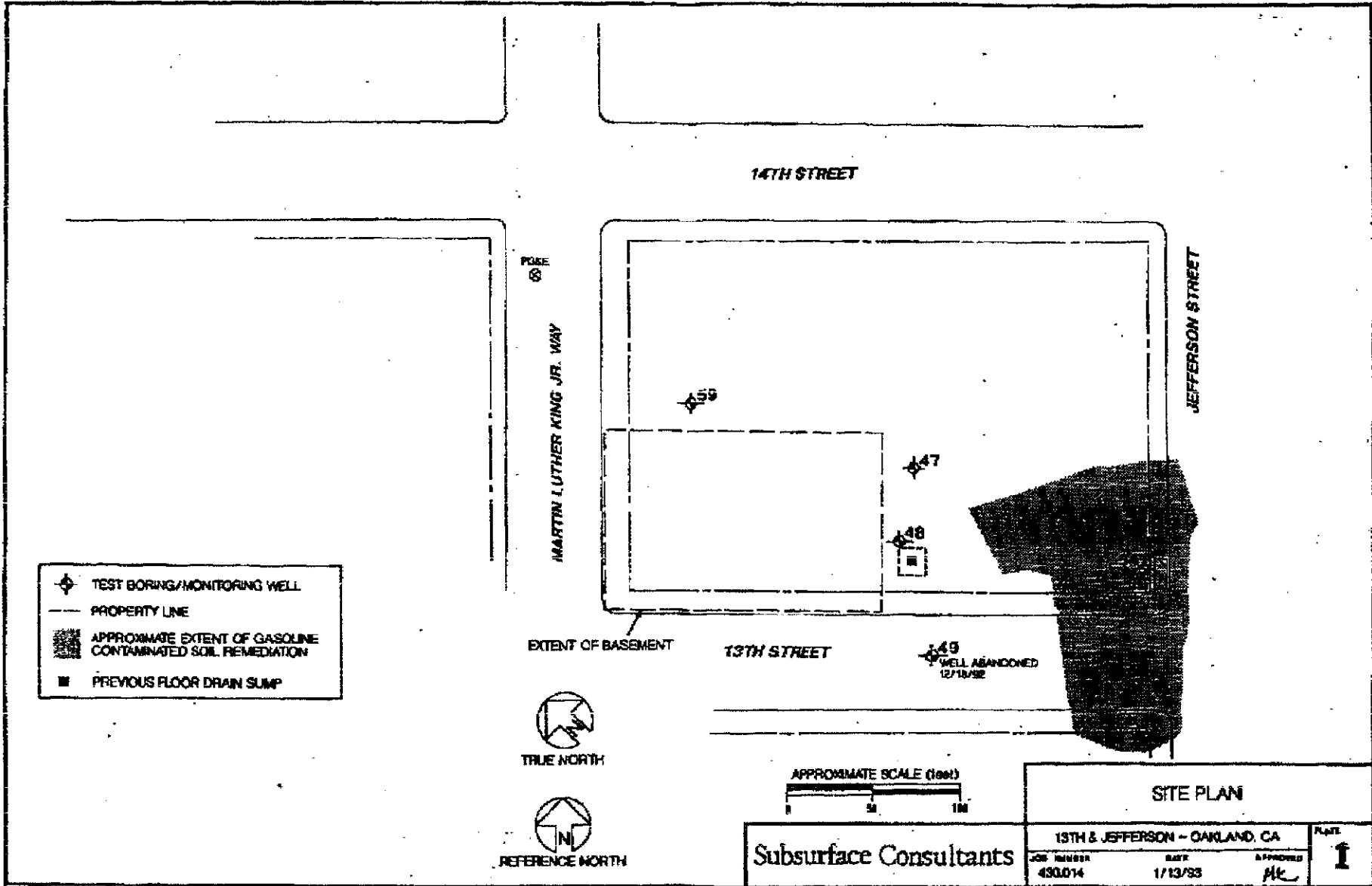
<sup>6</sup> Xylene

<sup>7</sup> Ethylbenzene

<sup>8</sup> ND = Non-detectable, see analytical test reports for detection limits

<sup>9</sup> -- Not tested





- ◆ TEST BORING/MONITORING WELL
- PROPERTY LINE
- APPROXIMATE EXTENT OF GASOLINE CONTAMINATED SOIL REMEDIATION
- PREVIOUS FLOOR DRAIN SUMP



<b>SITE PLAN</b>		
13TH & JEFFERSON - OAKLAND, CA		
JOB NUMBER 430.014	DATE 1/13/93	APPROVED <i>AK</i>
		PLATE <b>1</b>

**Subsurface Consultants**