

ENVIRONMENTAL
PROTECTION
96 APR 15 PM 2:48

R. William Rudolph, Jr., PE
Thomas E. Cundey, PE
Jeriann N. Alexander, PE

April 12, 1996
SCI 447.055

Mr. Gordon Hill
655 University Avenue, Suite 100
Sacramento, California 95825

Mr. Gordon Linden
150 La Salle Avenue
Piedmont, California 94611

Project Update
Free Product Recovery
3093 Broadway
Oakland, California

Dear Gentlemen:

This letter summarizes the results of free product recovery at the referenced site. On April 4, 1996, all the wells were checked for the presence of free product.. Free product was recovered from wells MW-4 and MW-6 by hand bailing. This event did not detect free product in MW-1. To date a total of approximately 115 gallons of product have been removed as summarized below. Product recovery data are presented on the attached Tables 1 and 2.

<u>Well</u>	<u>Product Thickness 4/4/96 (feet)</u>	<u>Product Removed 4/4/96 (gal)</u>	<u>Total Product Removed (gal)</u>
MW-1	0.00	0.00	8.38
MW-4	0.18	0.20	47.34
MW-6	5.68	5.00	<u>58.90</u>
		Total	114.52

■ **Subsurface Consultants, Inc.**

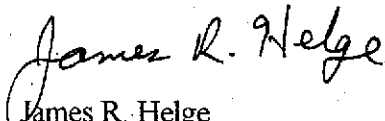
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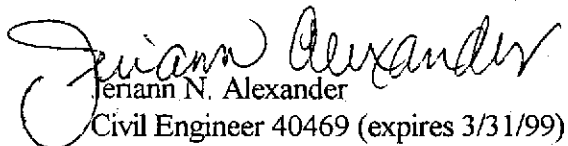
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The next free product recovery event will be performed the first week of May. If you have any questions, please call.

Yours very truly,

Subsurface Consultants, Inc.


James R. Helge
Environmental Scientist


Jeriann N. Alexander
Civil Engineer 40469 (expires 3/31/99)

JRH:JNA:sld

Attachment: Table 1. - Free Product Recovery
Table 2 - Groundwater and Free Product Elevation Data

cc: ✓ Ms. Susan Hugo
Senior Hazardous Materials Specialist
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway
Alameda, California 94502-6577

Mr. Jonathan Redding
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1221 Broadway, 21st Floor
Oakland, California 94612

Table 1
FREE PRODUCT RECOVERY

<u>Well</u>	<u>Removal Date</u>	<u>Product Removed (gallons)</u>	<u>Cumulative Product Removed (gallons)</u>
MW-1	12/23/91	2.00	2.00
	12/26/91	0.50	2.50
	1/13/92	1.00	3.50
	2/28/92	2.00	5.50
	11/9/93	0.50	6.00
	11/3/95	0.25	6.75
	11/30/95	0.25	7.00
	1/3/96	0.53	7.53
	2/2/96	0.75	8.28
	3/1/96	0.10	8.38
	4/4/96	0.00	8.38
MW-4	12/23/91	2.50	2.50
	12/26/91	6.00	8.50
	1/10/92	5.00	13.50
	2/28/92	4.00	17.50
	3/11/92	3.50	21.00
	3/13/92	3.50	24.50
	3/17/92	2.25	26.75
	3/18/92	2.50	29.25
	3/19/92	1.50	30.75
	3/23/92	4.00	34.75
	3/24/92	1.50	36.25
	3/25/92	1.00	37.25
	3/26/92	1.00	38.25
	3/27/92	0.50	38.75
	3/31/92	0.50	39.25
	4/1/92	0.25	39.50
	4/2/92	0.13	39.63
	4/6/92	0.13	39.76
	4/10/92	0.25	40.01
4/13/92	0.25	40.26	
4/20/92	0.13	40.39	

Table 1
FREE PRODUCT RECOVERY

<u>Well</u>	<u>Removal Date</u>	<u>Product Removed (gallons)</u>	<u>Cumulative Product Removed (gallons)</u>
MW-4	5/4/92	0.13	40.52
	5/18/92	0.13	40.65
	5/26/92	0.13	40.78
	6/1/92	0.06	40.84
	6/29/92	0.25	41.09
	7/29/92	1.11	42.20
	8/28/92	1.68	43.88
	4/3/93	0.13	44.01
	11/9/93	0.03	44.04
	8/30/95	1.75	45.79
	10/2/95	0.50	46.29
	11/3/95	0.25	46.54
	11/30/95	0.25	46.79
	1/3/96	0.05	46.84
	2/2/96	0.10	46.94
	3/1/96	0.20	47.14
4/4/96	0.20	47.34	
MW-6	12/23/91	7.50	7.50
	12/26/91	2.00	9.50
	1/10/92	1.00	10.50
	2/4/92	2.00	12.50
	2/28/92	3.00	15.50
	3/10/92	2.75	18.25
	3/12/92	2.00	20.25
	3/23/92	1.00	21.25
	3/30/92	0.50	21.75
	4/10/92	0.25	22.00
	4/13/92	0.13	22.13
	4/20/92	0.13	22.26
	5/4/92	0.13	22.39
	5/8/92	0.06	22.45
	5/26/92	0.13	22.58

Table 1
FREE PRODUCT RECOVERY

<u>Well</u>	<u>Removal Date</u>	<u>Product Removed (gallons)</u>	<u>Cumulative Product Removed (gallons)</u>
MW-6	6/1/92	0.06	22.64
	6/29/92	0.19	22.83
	7/29/92	0.60	23.43
	8/28/92	2.40	25.83
	12/2/92	(obstruction in well)	
	4/3/93	1.75	27.58
	11/9/93	0.83	28.41
	8/30/95	4.50	32.91
	10/2/95	4.0	36.91
	11/3/95	30.00	39.91
	11/30/95	2.50	42.41
	1/3/96	2.50	44.91
	2/2/95	5.00	49.90
	3/1/96	4.00	53.90
	4/4/96	5.00	58.90

Table 2
GROUNDWATER AND FREE PRODUCT ELEVATION DATA

<u>Well</u>	<u>TOC Elevation (feet)</u>	<u>Date</u>	<u>Groundwater Depth (feet)</u>	<u>Groundwater Elevation (feet)</u>	<u>Product Thickness (feet)</u>	<u>Product Elevation (feet)</u>
MW-1	94.48	10/3/90	26.40	68.08		
		3/5/91	27.46	67.02		
		3/18/91	26.88	67.60		
		4/12/91	25.49	68.99		
		12/23/91	26.86	67.62	1.15	68.77
		12/26/91	26.08	68.40	0.22	68.63
		1/13/92	26.53	67.95	0.66	68.61
		2/28/92	27.75	66.73	0.42	67.15
		5/18/92	24.75	69.73		
		6/29/92	25.09	69.39	0.04	69.43
		7/29/92	25.46	69.02	0.15	69.17
		8/28/92	25.56	68.92	0.29	69.21
		10/28/92	26.44	68.04		
		11/24/92	26.63	67.85		
		12/22/92	26.37	68.11		
		4/5/93	23.77	70.71		
		7/20/93	24.51	69.97	0.60	70.57
		11/9/93	26.06	68.42	1.17	69.59
		8/30/95	21.73	72.75	0.23	72.98
		9/15/95	21.88	72.61	0.15	72.75
		10/2/95	22.42	72.06	0.42	72.48
		11/3/95	23.10	72.74	0.76	73.50
		11/30/95	23.38	72.54	0.70	73.24
1/3/96	23.30	72.62	0.78	73.40		
2/2/96	22.96	72.28	0.84	74.12		
3/1/96	21.69	72.79	0.14	72.65		
4/4/96	21.11	73.67				
MW-2	94.81	3/5/91	27.86	66.95		
		3/18/91	27.46	67.35		
		4/12/91	26.98	67.83		
		5/18/92	26.50	68.31		
		6/29/92	26.80	68.01		
		7/29/92	27.08	67.73		
		8/28/92	27.33	67.48		
		10/28/92	27.65	67.16		
		11/24/92	27.91	66.90		
		12/22/92	27.74	67.07		
4/5/93	25.95	68.86				

Table 2
GROUNDWATER AND FREE PRODUCT ELEVATION DATA

<u>Well</u>	<u>TOC Elevation (feet)</u>	<u>Date</u>	<u>Groundwater Depth (feet)</u>	<u>Groundwater Elevation (feet)</u>	<u>Product Thickness (feet)</u>	<u>Product Elevation (feet)</u>
MW-2	94.81	7/20/93	25.59	69.22		
		11/9/93	26.72	68.09		
		8/30/95	25.75	69.06		
		10/2/95	25.10	69.71		
		11/3/95	25.73	69.02		
		11/30/95	25.34	69.41		
		1/3/96	25.32	69.43		
		2/2/96	25.10	69.65		
		3/1/96	24.05	70.76		
		4/4/96	23.41	71.49		
MW-3	90.08	3/6/91	23.17	66.91		
		3/18/91	22.76	67.32		
		4/12/91	22.51	67.57		
		5/12/92	23.17	66.91		
		6/29/92	22.90	67.18		
		7/29/92	22.17	67.91		
		8/28/92	22.28	67.80		
		10/28/92	22.67	67.41		
		11/24/92	23.01	67.07		
		12/22/92	22.91	67.17		
		4/5/93	22.11	67.97		
		7/20/93	23.93	66.15		
		11/9/93	23.14	66.94		
		8/29/95	20.61	69.47		
		10/2/95	21.18	68.90		
		11/3/95	20.74	69.60		
		11/30/95	20.68	69.66		
1/3/96	20.58	69.76				
2/2/96	20.43	69.91				
3/1/96	20.24	69.84				
4/4/96	18.50	71.58				
MW-4	88.84	3/5/91	23.79	65.05		
		3/18/91	22.30	66.54		
		4/12/91	21.85	66.99		
		12/23/91	22.63	66.22	0.98	67.19
		12/26/91	22.52	66.32	0.96	67.28
		1/10/92	22.74	66.10	0.99	67.09

Table 2
GROUNDWATER AND FREE PRODUCT ELEVATION DATA

<u>Well</u>	<u>TOC Elevation (feet)</u>	<u>Date</u>	<u>Groundwater Depth (feet)</u>	<u>Groundwater Elevation (feet)</u>	<u>Product Thickness (feet)</u>	<u>Product Elevation (feet)</u>
MW-4	88.84	2/28/92	22.00	66.84	0.67	67.51
		3/11/92	21.71	67.13	0.55	67.68
		3/13/92	21.56	67.28	0.49	67.77
		3/17/92	25.46	63.38	0.44	63.82
		3/18/92	21.38	67.47	0.44	67.90
		3/19/92	21.33	67.51	0.48	67.99
		3/23/92	21.29	67.55	0.42	67.97
		3/24/92	21.31	67.53	0.38	67.90
		3/25/92	21.17	67.67	0.36	68.04
		3/26/92	21.08	67.76	0.35	68.11
		3/27/92	20.92	67.92	0.26	68.18
		3/31/92	21.15	67.69	0.44	68.13
		4/1/92	20.90	67.94	0.24	68.18
		4/2/92	20.90	67.94	0.17	68.11
		4/10/92	20.91	67.93	0.33	68.26
		4/13/92	21.04	67.80	0.42	68.22
		4/20/92	20.74	68.10	0.19	68.29
		5/4/92	20.83	68.01	0.33	68.34
		5/18/92	21.33	67.51	0.23	67.74
		5/26/92	20.83	68.01	0.17	68.18
		6/1/92	20.85	67.99	0.19	68.17
		6/29/92	21.38	67.46	0.53	67.99
		7/29/92	21.69	67.15	0.56	67.71
		8/28/92	21.35	67.49	0.63	68.12
		10/28/92	22.48	66.36		
		11/24/92	22.60	66.24		
		12/22/92	22.47	66.37		
		4/3/93	20.11	68.73		
		7/20/93	20.48	68.36	0.52	68.88
		11/9/93	21.71	67.13	0.63	67.76
		8/30/95	19.90	68.94	2.20	71.14
		9/15/95	18.76	70.08	0.57	70.65
		10/2/95	19.17	69.67	0.65	70.32
11/3/95	19.45	69.39	0.44	69.83		
11/30/95	19.50	69.44	0.32	69.76		
1/3/96	19.31	69.53	0.20	69.73		
2/2/96	18.91	69.93	0.20	70.13		
3/1/96	18.25	70.59	0.19	70.78		
4/4/96	17.53	71.31	0.18	71.47		

**Table 2
GROUNDWATER AND FREE PRODUCT ELEVATION DATA**

<u>Well</u>	<u>TOC Elevation (feet)</u>	<u>Date</u>	<u>Groundwater Depth (feet)</u>	<u>Groundwater Elevation (feet)</u>	<u>Product Thickness (feet)</u>	<u>Product Elevation (feet)</u>
MW-5	84.84	3/18/91	26.31	58.53		
		3/12/91	26.41	58.43		
		5/18/92	26.75	58.09		
		6/29/92	26.73	58.11		
		7/29/92	26.66	58.18		
		8/28/92	26.90	57.94		
		10/28/92	26.39	58.45		
		11/24/92	26.83	58.01		
		12/22/92	27.33	57.51		
		4/3/93	26.62	58.22		
		7/20/93	26.60	58.24		
		11/9/93	27.24	57.60		
		8/30/95	27.46	57.38		
		10/2/95	26.85	57.99		
		11/3/95	26.67	58.87		
		11/30/95	27.05	58.49		
		1/3/96	26.60	59.04		
		2/2/96	26.70	59.14		
		3/1/96	26.00	58.84		
4/4/96	26.20	58.64				
MW-6	85.62	3/18/91	25.82	59.80		
		4/12/91	27.23	58.39		
		12/23/91	28.40	57.22	3.21	60.44
		12/26/91	27.25	58.37	1.67	60.04
		1/10/92	27.23	58.39	0.90	59.29
		2/4/92	27.71	57.91	2.04	59.95
		2/28/92	27.92	57.70	3.00	60.70
		3/10/92	27.16	58.46	2.06	60.53
		3/12/92	25.96	59.66	0.52	60.18
		3/13/92	25.70	59.92	0.21	60.13
		3/23/92	26.34	59.28	1.09	60.37
		3/30/92	25.73	59.89	0.35	60.25
		4/10/92	25.29	60.33	0.05	60.38
		4/13/92	25.52	60.10	0.21	60.31
		4/20/92	25.38	60.25	0.10	60.35
		5/4/92	25.40	60.22		
5/18/92	25.50	60.12	0.17	60.29		

Table 2
GROUNDWATER AND FREE PRODUCT ELEVATION DATA

<u>Well</u>	<u>TOC Elevation (feet)</u>	<u>Date</u>	<u>Groundwater Depth (feet)</u>	<u>Groundwater Elevation (feet)</u>	<u>Product Thickness (feet)</u>	<u>Product Elevation (feet)</u>
MW-6	85.62	5/26/92	25.46	60.16	0.13	60.29
		6/1/92	25.46	60.16	0.09	60.26
		6/29/92	25.59	60.03	0.14	60.17
		7/29/92	26.90	58.72	1.71	60.43
		8/28/92	25.09	60.53	2.62	63.15
		10/28/92	25.02	60.60		
		11/24/92	28.87	56.75		
		7/20/93	26.17	59.45		
		11/9/93	27.51	58.11	3.06	61.17
		8/30/95	28.00	57.62	7.96	65.58
		9/15/95	28.24	57.38	6.14	63.52
		10/2/95	28.39	57.23	6.13	63.36
		11/3/95	26.91	58.71	3.44	62.15
		11/30/95	27.58	58.04	4.41	62.45
		1/3/96	27.58	58.04	4.37	62.41
		2/2/96	27.96	57.68	5.15	62.83
		3/1/96	27.96	57.68	5.41	63.09
		4/4/96	27.69	57.93	5.69	63.62
MW-7	85.41	3/18/91	21.63	63.78		
		4/12/91	22.13	63.28		
		5/18/92	21.67	63.74		
		6/29/92	20.75	64.66		
		7/29/92	21.07	64.34		
		8/28/92	21.35	64.06		
		10/28/92	21.81	63.60		
		11/24/92	21.52	63.89		
		12/22/92	obstructed	-		
		4/3/93	20.08	65.33		
		7/20/93	19.59	65.82		
		11/9/93	20.65	64.76		
		8/30/95	18.78	66.63		
		10/2/95	18.73	66.68		
		11/3/95	19.23	66.18		
		11/30/95	19.47	65.94		
		1/3/96	18.52	66.89		
		2/2/96	17.83	67.58		
3/1/96	17.61	67.80				
4/4/96	17.28	68.13				

Table 2
GROUNDWATER AND FREE PRODUCT ELEVATION DATA

<u>Well</u>	<u>TOC Elevation (feet)</u>	<u>Date</u>	<u>Groundwater Depth (feet)</u>	<u>Groundwater Elevation (feet)</u>	<u>Product Thickness (feet)</u>	<u>Product Elevation (feet)</u>
MW-8	85.50	10/28/92	27.70	57.80		
		11/24/92	27.62	57.88		
		12/22/92	27.40	58.10		
		4/3/93	26.64	58.86		
		7/20/93	26.60	58.90		
		11/9/93	27.18	58.32		
		8/30/95	26.35	59.15		
		10/2/95	26.60	58.90		
		11/3/95	26.62	58.88		
		11/30/95	26.72	58.78		
		1/3/96	26.64	58.86		
		2/2/96	26.28	59.22		
		3/1/96	25.81	59.69		
		4/4/96	25.81	59.69		
MW-9	90.37	10/28/92	23.37	67.00		
		11/24/92	23.51	66.86		
		12/22/92	23.31	67.06		
		4/3/93	21.14	69.23		
		7/20/93	21.54	68.83		
		11/9/93	27.53	62.84		
		8/30/95	19.59	70.78		
		10/2/95	20.05	70.32		
		11/3/95	20.40	69.97		
		11/30/95	20.65	69.72		
		1/3/96	20.73	69.64		
		2/2/96	20.19	70.18		
		3/1/96	19.53	70.84		
		4/4/96	18.74	71.63		
MW-10	88.60	10/28/92	21.55	67.05		
		11/24/92	21.86	66.74		
		12/22/92	21.68	66.92		
		4/3/93	19.14	69.46		
		7/20/93	19.79	68.81		
		11/9/93	20.83	67.77		
		8/30/95	17.99	70.61		
		10/2/95	18.42	70.18		

Table 2
GROUNDWATER AND FREE PRODUCT ELEVATION DATA

<u>Well</u>	<u>TOC Elevation (feet)</u>	<u>Date</u>	<u>Groundwater Depth (feet)</u>	<u>Groundwater Elevation (feet)</u>	<u>Product Thickness (feet)</u>	<u>Product Elevation (feet)</u>
MW-10	88.60	11/3/95	18.82	69.78		
		11/30/95	19.03	69.57		
		1/3/96	18.96	69.64		
		2/2/96	18.55	70.05		
		3/1/96	17.81	70.79		
		4/4/96	17.11	71.49		
MW-11	102.06	11/24/92	33.65	68.41		
		12/22/92	33.37	68.69		
		4/5/93	31.03	71.03		
		7/20/93	31.90	70.16		
		11/9/93	32.60	69.46		
		8/29/95	28.92	73.14		
		10/2/95	29.48	72.58		
		11/3/95	29.73	72.33		
		11/30/95	30.26	71.80		
		1/3/96	30.06	72.00		
		2/2/96	29.67	72.39		
		3/1/96	28.74	73.32		
		4/4/96	28.13	73.93		
MW-13	84.06	11/24/92	26.05	58.01		
		12/22/92	25.08	58.98		
		4/5/93	24.64	59.42		
		7/20/93	24.29	59.77		
		11/9/93	24.23	59.83		
		8/29/95	23.30	60.76		
		10/2/95	23.78	60.28		
		11/3/95	23.73	60.33		
		11/30/95	23.80	60.26		
		1/3/96	23.95	60.11		
		2/2/96	23.70	60.36		
		3/1/96	23.36	60.70		
		4/4/96	23.27	60.79		

Reference datum: arbitrary benchmark established by Levine Fricke.

TOC = Top of casing

Groundwater depths are measured below TOC.