



groundwater resources inc.

A RESNA Company

1400 S. UNION AVE.
BAKERSFIELD, CALIFORNIA 93307

General Engineering Contractor
CLASS A License No. 609572

91 JUN 10 PM 1:38

RESNA

Environmental Solutions
Through Applied Science,
Engineering & Construction

June 4, 1991

~~Gil Wistar~~ - RW
Alameda County Department
of Environmental Health
80 Swan Way, Rm. 200
Oakland, CA 94621

Re: Scotsman Corp., Dublin CA
Groundwater Remediation

Dear Mr. Wistar:

In order to expedite groundwater remediation, Groundwater Resources, Inc (GRI) proposes to install two additional groundwater recovery wells at the above referenced site. The wells, designated RW-2 and RW-3, will be located between MW-1 and MW-5 (Plate 1). These wells will be constructed with six-inch PVC casing to a depth of 25 feet below grade (Plate 2). The wells will be screened from five feet below grade to 25 feet with 0.020" factory slotted casing. The annulus will be sealed from four feet below grade to the surface. The pneumatic pumps currently operating in MW-5 and MW-6 will be transferred to the new wells. These pumps are capable of removing water at a maximum rate of seven gallons per minute. The produced water will be treated with liquid phase carbon and deposited in the public sewer. Construction can begin when approval of the plan is received from your office.

As per your request, a list of the historic water elevations and hydrocarbon concentrations has been included along with the most recent isopleth maps. If you have further questions or require additional information, please give me a call at (805) 835-7700.

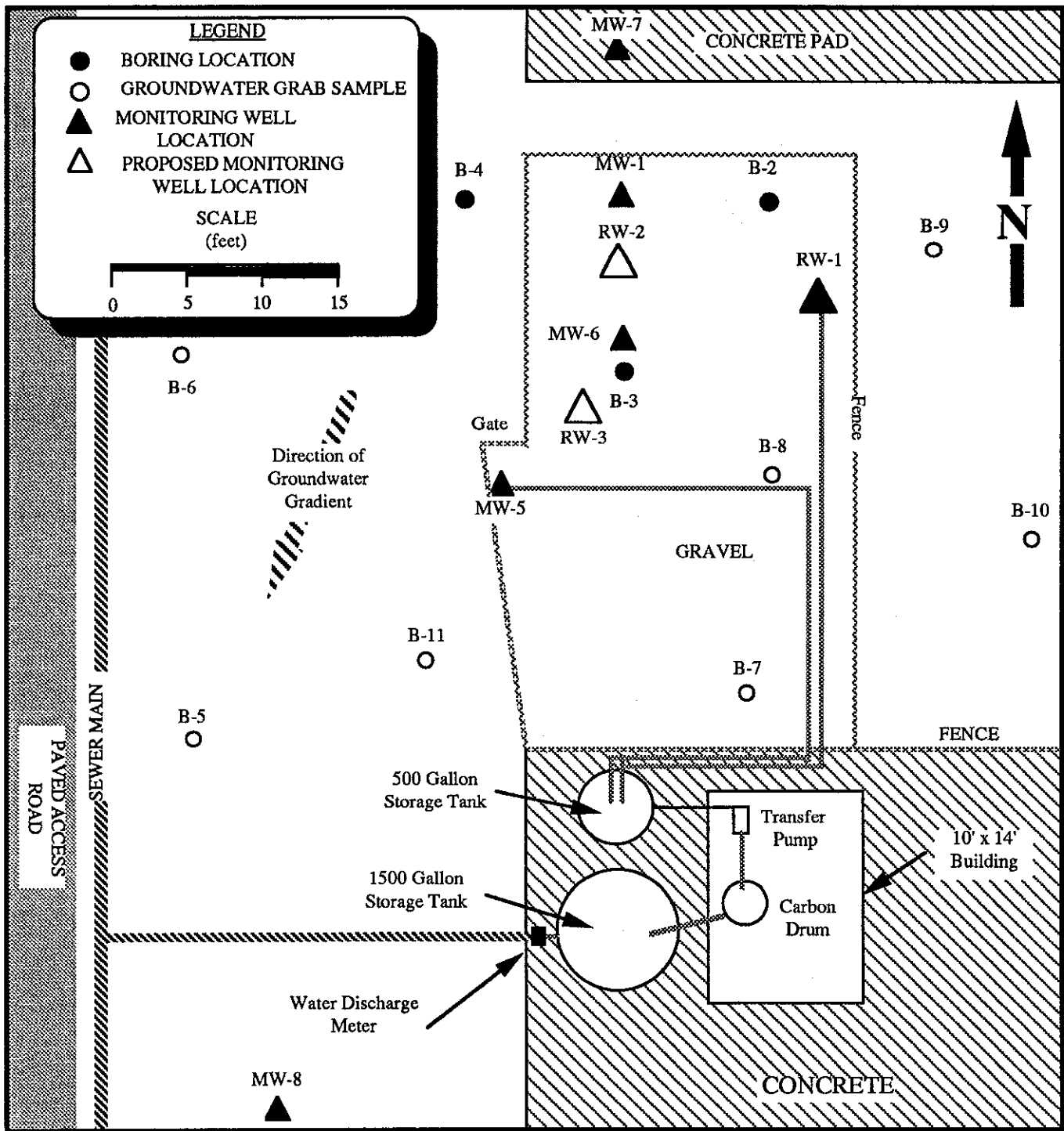
Sincerely,

Timothy C. Reed
Project Geologist

Encl.

cc: Ms. Amanda Howard, First Interstate Bank
Bud Gennoy, J.P. Gennoy Realty

Approved
6/13/91
Pasi

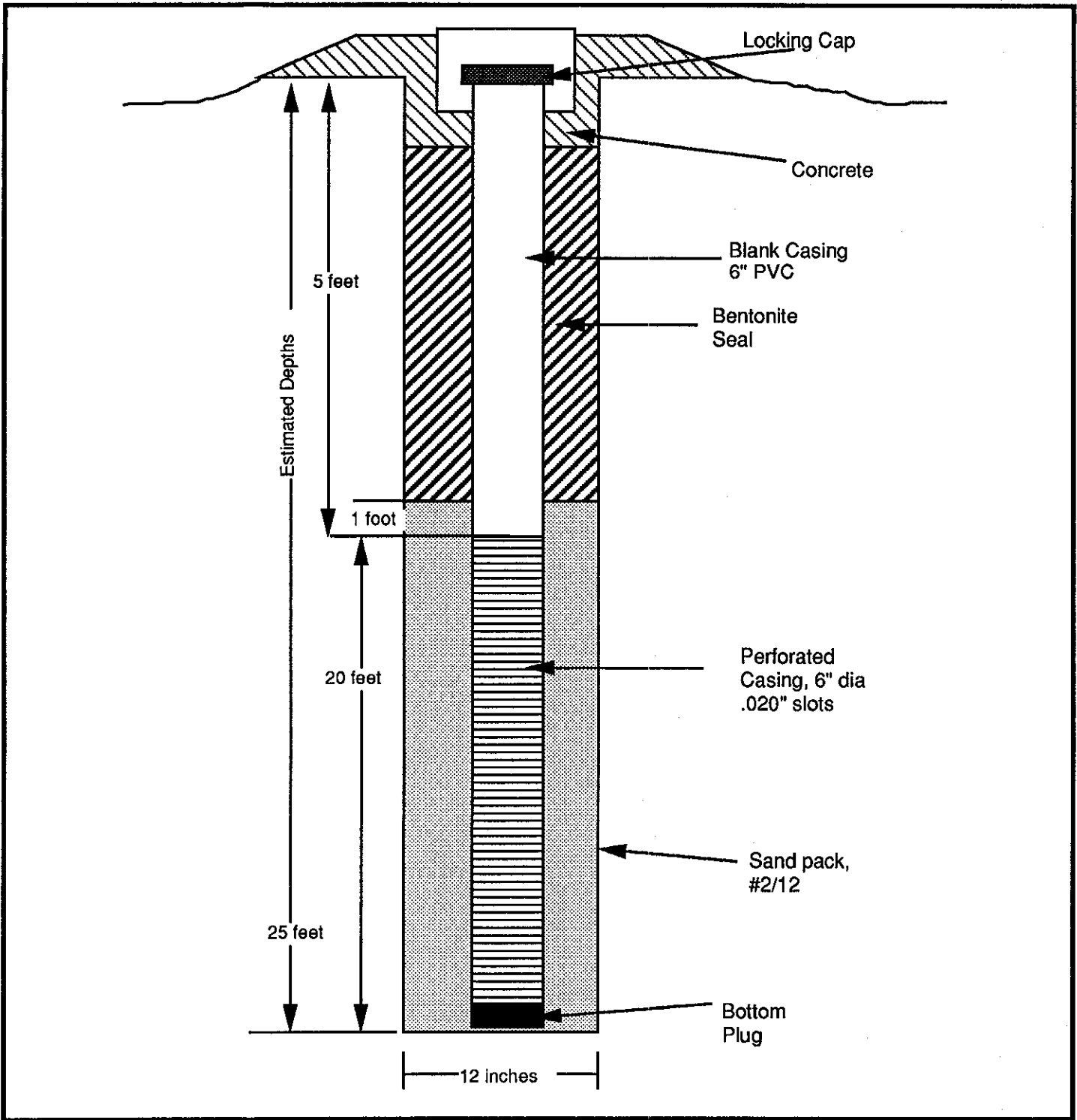


groundwater resources, inc.
environmental/geotechnical services
Project Number: 55018
6-4-91

SCOTSMAN CORP.
DUBLIN, CA.

**DETAIL OF WELLS AND
REMEDIATION EQUIPMENT
LOCATIONS**

PLATE
1



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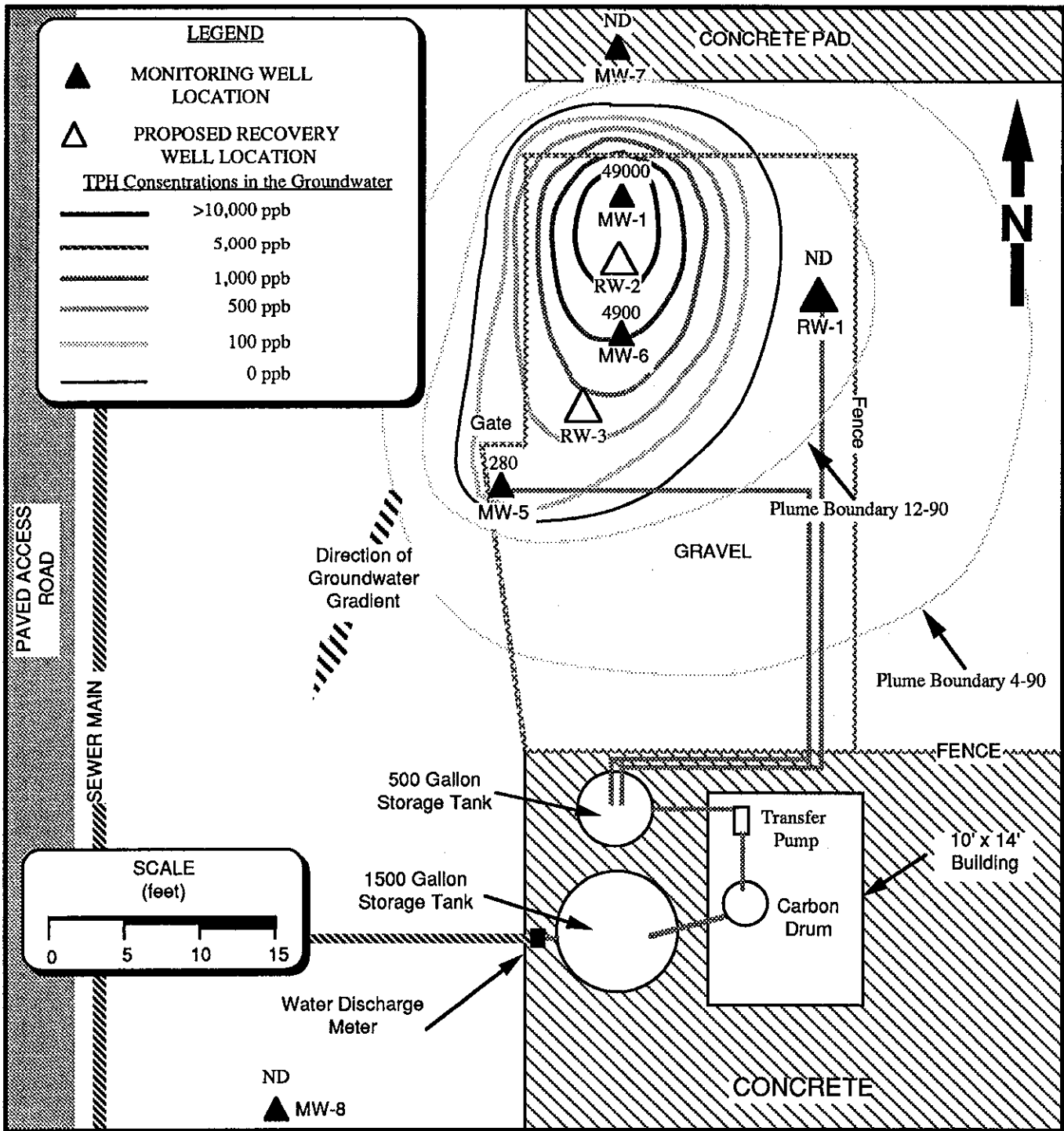
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**MONITORING WELL
DIAGRAM**

PLATE

2



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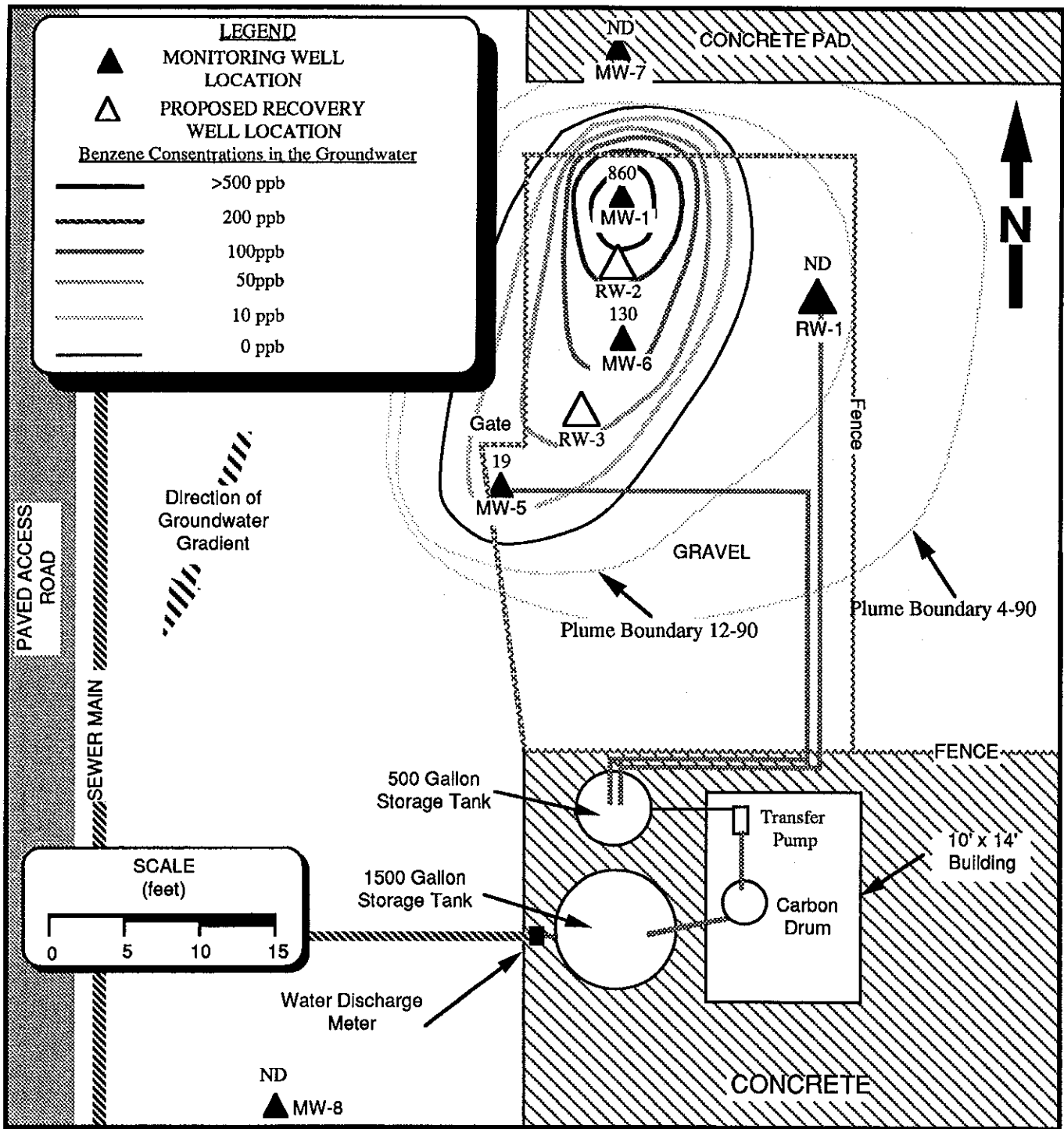
6-4-91

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**TOTAL PETROLEUM
 HYDROCARBON ISOPLETH MAP**
 February 20, 1991

PLATE

3



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 6-4-91

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BENZENE ISOPLETH MAP
 February 20, 1991

PLATE
4

WELL INFORMATION - SCOTSMAN COR

	A	B	C	D	E	F	G	H	I	J
1	PROJECT NUMBER: 55018									
2										
3	PROJECT NAME: SCOTSMAN									
4	6055 SCARLET CT									
5	DUBLIN, CALIFORNIA									
6	WELL	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8	RW-1
7										
8	WELL ELEVATION									
9		328.86	329.50	327.69	329.19		328.16			
10										
11	DEPTH TO WATER									
12	DATE									
13	7/13/89	5.84	5.69	4.14	6.12	5.30	5.05	5.34		
14	8/30/89	6.01	5.90	4.13		5.50	5.12	5.78		
15	11/16/89	5.44	5.36	3.65	6.03	5.14	4.63	5.36		
16	12/1/89		5.20	3.44			4.40		5.23	
17	12/26/89		5.46	3.65			4.97		5.52	
18	3/20/90		4.29	2.57		4.52	3.85	4.40	4.63	4.65
19	5/23/90	5.06	5.01	3.34	6.11	6.80	4.90	5.41	5.48	7.08
20	8/15/90	6.51				6.99	5.22	5.80		7.60
21	11/28/90	7.68	6.85	5.32	7.73		7.35	7.43	7.03	
22	2/20/91	6.40	6.06	4.38	7.82			6.14	6.07	6.32
23										
24	WATER ELEVATION									
25	DATE									
26	7/13/89	323.02	323.81	323.55	323.07		323.11			
27	8/30/89	322.85	323.60	323.56			323.04			
28	11/16/89	323.42	324.14	324.04	323.16		323.53			
29	12/1/89		324.30	324.25			323.76			
30	12/26/89		324.04	324.04			323.19			
31	3/20/90		325.21	325.12			324.31			
32	5/23/90		324.49	324.35			323.26			
33	8/15/90		329.50	327.69			322.94			
34	11/28/90	321.18	322.65	322.37	321.46		320.81			
35	2/20/91	322.46	323.44	323.31	321.37					

WELL INFORMATION - SCOTSMAN COR

	A	B	C	D	E	F	G	H	I	J
36	BENZENE (ppb)									
37	DATE									
38	5/26/89	900	15	4.6	0	270	6200	67		
39	3/21/90				0	880	96	0	0	42
40	8/16/90	110	0	0	0.52	74	1200	0	0	5.7
41	11/28/90	660			0	16	720	0	0	9.9
42	2/21/91	860	0	0	0	19	130	0	0	0
43										
44	TPH (ppb)									
45	DATE									
46	5/26/89	32000	52	0	0	1400	76000	1100		
47	3/21/90				0	5100	1600	270	0	590
48	8/16/90	8200	0	0	0	620	15500	0	0	110
49	11/28/90	26000			0	410	7400	0	0	220
50	2/21/91	49000	0	0	0	280	4900	0	0	220
51	DATE	WATER METER			MONTHLY TOTAL		CAV-OX TIME		GALLONS/HR	
52	5/8/90	540					493.3			
53	5/14/90	7700			7160		601.1		66.42	
54	5/18/90	12250			4550		679.3		58.18	
55	5/24/90	18690			6440		791		57.65	
56	6/11/90	39830			21140		1145		59.72	
57	6/14/90	43310			3480		1202.3		60.73	
58	6/21/90	51610			8300		1336.4		61.89	
59	8/15/90	51910			300		8.1			
60	8/29/90	73750			21840		246		91.80	
61	10/30/90	100630			26880		538.6		91.87	
62	11/2/90	102180			1550		554.8		95.68	
63	11/28/90	139430			37250		960.6		91.79	
64	12/27/90	177145			37715		1354.9		95.65	
65	1/21/91	179210			2065		1377.8		90.17	
66	2/20/91	183430			4220		1423.5		92.34	
67	3/21/91	190300			6870		1496.9		93.60	
68	4/11/91	196195			5895		1559.5		94.17	