Appendix B
Water Level Data

INDUSTRIAL LIGHT METALS SITE

Water Level Summary Table – Time Series

DEL AMO STUDY AREA

Time Series Groundwater Contour Maps

Vertical Gradient Summary Table

INDUSTRIAL LIGHT METALS SITE

Water Level Summary Table – Time Series

TABLE 4.2

WATER-LEVEL ELEVATIONS
FORMER ILM FACILITY
TORRANCE, CALIFORNIA

WELL	DATUM ELEVATION (ft msl)	DATE	DTW (ft)	WL (ft msl)
P-1	52.50	8/30/94	69.50	-17.00
		10/19/94	69.05	-16.55
		12/29/94	68.94	-16.44
		1/12/95	69.02	-16.52
		3/16/95	68.90	-16.40
		4/28/95	68.67	-16.17
		5/18/95	68.61	-16.11
		6/16/95	68.56	-16.06
		7/11/95	68.58	-16.08
		8/28/95	68.33	-15.83
		9/12/95	68.36	-15.86
		10/12/95	68.37	-15.87
		11/13/95	68.36	-15.86
		12/18/95	68.93	-16.43
		1/15/96	68.87	-16.37
		3/11/96	68.00	-15.50
		4/22/96	68.01	-15.51
		5/21/96	68.02	-15.52
		6/17/96	67.52	-15.02
	56.53	7/24/96	72.62	-16.09
		8/14/96	71.54	-15.01
		9/9/96	71.51	-14.98
		7/7/97	70.67	-14.14
	55.21	3/1/99	69.16	-13.95
		7/12/99	68.14	-12.93
P-2	55.31	8/30/94	65.41	-10.10
		10/19/94	68.05	-12.74
		12/29/94	65.03	-9.72
		1/12/95	65.08	-9.77
		3/16/95	64.12	-8.81
		4/28/95	64.08	-8.77
		5/18/95	64.13	-8.82
		6/16/95	64.29	-8.98
		7/11/95	64.31	-9.00
		8/28/95	63.44	-8.13
		9/12/95	63.45	-8.14
		10/12/95	63.45	-8.14
		11/13/95	63.44	-8.13
		12/18/95	64.16	-8.85
		1/15/96	64.10	-8.79

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TABLE 4.2

WATER-LEVEL ELEVATIONS
FORMER ILM FACILITY
TORRANCE, CALIFORNIA
(Continued)

WELL	DATUM ELEVATION (ft msl)	DATE	DTW (ft)	WL (ft msl)
P-2 (Cont'd)		3/11/96	64.56	-9.25
		4/22/96	64.53	-9.22
		5/21/96	64.54	-9.23
		6/17/96	64.42	-9.11
	58.91	7/24/96	68.61	-9.70
		8/14/96	NR*	–
		9/9/96	68.39	-9.48
		7/7/97	67.84	-8.93
	59.11	3/1/99	67.35	-8.24
		7/12/99	67.35	-8.24
P-3	55.94	8/30/94	68.57	-12.63
		10/19/94	68.25	-12.31
		12/29/94	68.46	-12.52
		1/12/95	68.36	-12.42
		3/16/95	68.11	-12.17
		4/28/95	67.87	-11.93
		5/18/95	67.80	-11.86
		6/16/95	67.78	-11.84
		7/11/95	67.80	-11.86
		8/28/95	67.70	-11.76
		9/12/95	67.71	-11.77
		10/12/95	67.72	-11.78
		11/13/95	67.72	-11.78
		12/18/95	68.14	-12.20
		1/15/96	68.08	-12.14
		3/11/96	67.68	-11.74
		4/22/96	NR*	–
		5/21/96	NR*	–
		6/17/96	67.46	-11.52
	59.97	7/24/96	NR*	–
		8/14/96	71.44	-11.47
		9/9/96	71.42	-11.45
		7/7/97	71.22	-11.25
	59.87	3/1/99	70.38	-10.51
		7/12/99	70.71	-10.84
P-4	56.20	8/30/94	72.20	-16.00
		10/19/94	71.76	-15.56
		12/29/94	71.68	-15.48
		1/12/95	71.72	-15.52
		3/16/95	71.45	-15.25
		4/28/95	71.02	-14.82

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TABLE 4.2

WATER-LEVEL ELEVATIONS
FORMER ILM FACILITY
TORRANCE, CALIFORNIA
(Continued)

WELL	DATUM ELEVATION (ft msl)	DATE	DTW (ft)	WL (ft msl)
P-4 (Cont'd)	56.20 (Cont'd)	5/18/95	70.94	-14.74
		6/16/95	70.98	-14.78
		7/11/95	70.97	-14.77
		8/28/95	70.89	-14.69
		9/12/95	70.91	-14.71
		10/12/95	70.91	-14.71
		11/13/95	70.94	-14.74
		12/18/95	70.89	-14.69
		1/15/96	70.84	-14.64
		3/11/96	70.74	-14.54
		4/22/96	70.72	-14.52
		5/21/96	70.71	-14.51
		6/17/96	NR	--
	60.54	7/24/96	74.78	-14.24
		8/14/96	74.70	-14.16
		9/9/96	74.67	-14.13
		7/7/97	74.04	-13.50
		10/97	well abandoned	–
P-5	51.84	8/30/94	68.58	-16.74
		10/19/94	68.25	-16.41
		12/29/94	68.20	-16.36
		1/12/95	68.14	-16.30
		3/16/95	66.90	-15.06
		4/28/95	66.18	-14.34
		5/18/95	66.13	-14.29
		6/16/95	66.34	-14.50
		7/11/95	66.37	-14.53
		8/28/95	66.66	-14.82
		9/12/95	66.64	-14.80
		10/12/95	66.67	-14.83
		11/13/95	66.66	-14.82
		12/18/95	66.93	-15.09
		1/15/96	66.86	-15.02
		3/11/96	66.50	-14.66
		4/22/96	NR*	–
		5/21/96	NR*	–
		6/17/96	66.07	-14.23
	55.88	7/24/96	70.00	-14.12
		8/14/96	69.92	-14.04
		9/9/96	69.88	-14.00
		7/7/97	69.03	-13.15(1)

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TABLE 4.2

WATER-LEVEL ELEVATIONS
FORMER ILM FACILITY
TORRANCE, CALIFORNIA
(Continued)

WELL	DATUM ELEVATION (ft msl)	DATE	DTW (ft)	WL (ft msl)
P-5 (Cont'd)	55.04 (Cont'd)	3/1/99	67.13	-11.25(1)
		7/12/99	67.02	-11.98
P-6	54.18	3/16/95	71.70	-17.52
		4/28/95	71.48	-17.30
		5/18/95	71.39	-17.21
		6/16/95	71.38	-17.20
		7/11/95	71.41	-17.23
		8/28/95	71.18	-17.00
		9/12/95	71.19	-17.01
		10/12/95	71.20	-17.02
		11/13/95	NR	–
		12/18/95	71.74	-17.56
		1/15/96	71.68	-17.50
		3/11/96	70.65	-16.47
		4/22/96	70.51	-16.33
		5/21/96	NR	–
		6/17/96	70.22	-16.04
	58.13	7/24/96	74.22	-16.09
		8/14/96	73.91	-15.78
		9/9/96	73.98	-15.85
		7/7/97	73.09	-14.96
		10/97	well abandoned	–
P-6B	55.83	3/1/99	69.32	-13.49
		7/12/99	69.43	-13.60
P-7	53.41	3/16/95	71.27	-17.86
		4/28/95	71.02	-17.61
		5/18/95	70.96	-17.55
		6/16/95	70.94	-17.53
		7/11/95	71.00	-17.59
		8/28/95	71.71	-18.30
		9/12/95	71.73	-18.32
		10/12/95	71.73	-18.32
		11/13/95	73.19	-19.78
		12/18/95	71.30	-17.89
		1/15/96	71.25	-17.84
		3/11/96	70.32	-16.91
		4/22/96	70.17	-16.76
		5/21/96	70.53	-17.12
		6/17/96	69.92	-16.51

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TABLE 4.2

WATER-LEVEL ELEVATIONS
FORMER ILM FACILITY
TORRANCE, CALIFORNIA
(Continued)

WELL	DATUM ELEVATION (ft msl)	DATE	DTW (ft)	WL (ft msl)
P-7 (Cont'd)	57.34	7/24/96	74.92	-17.58
		8/14/96	73.79	-16.45
		9/9/96	73.75	-16.41
		7/7/97	72.79	-15.45
	53.92	3/1/99	67.75	-13.83
		7/12/99	67.86	-13.94
P-8	56.32	3/16/95	74.29	-17.97
		4/28/95	74.05	-17.73
		5/18/95	73.97	-17.65
		6/16/95	73.91	-17.59
		7/11/95	73.93	-17.61
		8/28/95	73.64	-17.32
		9/12/95	73.66	-17.34
		10/12/95	73.65	-17.33
		11/13/95	73.73	-17.41
		12/18/95	72.20	-15.88
		1/15/96	72.14	-15.82
		4/22/96	73.00	-16.68
		5/21/96	73.01	-16.69
		6/17/96	72.52	-16.20
		7/24/96	76.58	-20.26
		8/7/96	well abandoned	–
P-9	56.38	3/16/95	70.10	-13.72
		4/28/95	69.92	-13.54
		5/18/95	69.90	-13.52
		6/16/95	68.91	-12.53
		7/11/95	68.93	-12.55
		8/28/95	69.80	-13.42
		9/12/95	69.81	-13.43
		10/12/95	69.80	-13.42
		11/13/95	69.66	-13.28
		12/18/95	68.85	-12.47
		1/15/96	68.79	-12.41
		3/11/96	69.76	-13.38
		4/22/96	69.68	-13.30
		5/21/96	NR	–
		6/17/96	69.54	-13.16

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TABLE 4.2

WATER-LEVEL ELEVATIONS
FORMER ILM FACILITY
TORRANCE, CALIFORNIA
(Continued)

WELL	DATUM ELEVATION (ft msl)	DATE	DTW (ft)	WL (ft msl)
P-9 (Cont'd)	60.48	7/24/96	73.72	-13.24
		8/14/96	73.55	-13.07
		9/9/96	73.52	-13.04
		7/7/97	72.66	-12.18
		10/97	well abandoned	–
P-9B	57.54	3/1/99	69.62	-12.08
		7/12/99	68.51	-10.97
P-10	57.31	3/16/95	69.60	-12.29
		4/28/95	69.40	-12.09
		5/18/95	69.32	-12.01
		6/16/95	69.26	-11.95
		7/11/95	69.30	-11.99
		8/28/95	68.98	-11.67
		9/12/95	68.98	-11.67
		10/12/95	68.98	-11.67
		11/13/95	68.97	-11.66
		12/18/95	69.33	-12.02
		1/15/96	69.27	-11.96
		3/11/96	68.73	-11.42
		4/22/96	68.75	-11.44
		5/21/96	68.74	-11.43
		6/17/96	68.66	-11.35
	61.08	7/24/96	72.58	-11.50
		8/14/96	72.55	-11.47
		9/9/96	72.52	-11.44
		7/7/97	72.42	-11.34
	57.64	3/1/99	68.83	-11.19
		7/12/99	68.10	-10.46
P-11	56.06	12/18/95	66.20	-10.14
		1/15/96	66.15	-10.09
		3/11/96	66.30	-10.24
		4/22/96	66.28	-10.22
		5/21/96	66.27	-10.21
		6/17/96	66.14	-10.08
	59.89	7/24/96	70.35	-10.46
		8/14/96	70.12	-10.23
		9/9/96	70.08	-10.19
	63.83	7/7/97	73.63	-9.80
		10/97	well abandoned	–

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TABLE 4.2

WATER-LEVEL ELEVATIONS
FORMER ILM FACILITY
TORRANCE, CALIFORNIA
(Continued)

WELL	DATUM ELEVATION (ft msl)	DATE	DTW (ft)	WL (ft msl)
P-12	56.00	12/18/95	71.10	-15.10
		1/15/96	71.04	-15.04
		3/11/96	70.96	-14.96
		4/22/96	70.93	-14.93
		5/21/96	70.72	-14.72
		6/17/96	70.55	-14.55
	59.95	7/24/96	75.00	-15.05
		8/14/96	74.62	-14.67
		9/9/96	74.48	-14.53
		7/7/97	73.52	-13.57
	59.73	3/1/99	72.16	-12.43
		7/99	well damaged	–
P-13	55.78	12/18/95	71.72	-15.94
		1/15/96	71.67	-15.89
		3/11/96	71.34	-15.56
		4/22/96	71.31	-15.53
		5/21/96	71.33	-15.55
		6/17/96	70.92	-15.14
	59.97	7/24/96	75.30	-15.33
		8/14/96	74.64	-14.67
		9/9/96	74.60	-14.63
		7/7/97	73.68	-13.71
		10/97	well abandoned	–
P-14	55.92	12/18/95	71.80	-15.88
		1/15/96	71.76	-15.84
		3/11/96	71.44	-15.52
		4/22/96	71.42	-15.50
		5/21/96	71.45	-15.53
		6/17/96	71.02	-15.10
	60.04	7/24/96	75.08	-15.04
		8/14/96	75.04	-15.00
		9/9/96	75.00	-14.96
	63.71	7/8/97	77.95	-14.24
		10/97	well abandoned	–
P-15	52.64	12/18/95	68.20	-15.56
		1/15/96	68.14	-15.50
		3/11/96	68.08	-15.44
		4/22/96	68.06	-15.42
		5/21/96	68.01	-15.37
		6/17/96	67.70	-15.06

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TABLE 4.2

WATER-LEVEL ELEVATIONS
FORMER ILM FACILITY
TORRANCE, CALIFORNIA
(Continued)

WELL	DATUM ELEVATION (ft msl)	DATE	DTW (ft)	WL (ft msl)
P-15 (Cont'd)	56.40	7/24/96	71.40	-15.00
		8/14/96	71.43	-15.03
		9/9/96	71.39	-14.99
		7/7/97	70.45	-14.05
		10/97	well abandoned	–
P-16A	56.43	12/18/95	73.40	-16.97
		1/15/96	73.36	-16.93
		3/11/96	73.12	-16.69
		4/22/96	72.93	-16.50
		5/21/96	72.95	-16.52
		6/17/96	72.61	-16.18
	60.49	7/24/96	76.60	-16.11
		8/14/96	76.59	-16.10
		9/9/96	76.58	-16.09
		7/7/97	75.59	-15.10
	52.76	3/1/99	66.50	-13.74
		7/12/99	66.72	-13.96
P-16B	56.51	12/18/95	73.59	-17.08
		1/15/96	73.53	-17.02
		3/11/96	73.16	-16.65
		4/22/96	73.01	-16.50
		5/21/96	73.02	-16.51
		6/17/96	72.73	-16.22
		7/24/96	NR*	–
		8/6/96	well destroyed	–
P-16C	60.44	8/14/96	76.58	-16.14
		9/9/96	76.52	-16.08
		7/7/97	75.61	-15.17
	52.35	3/1/99	66.20	-13.85
		7/12/99	66.43	-14.08
P-17	56.56	12/18/95	73.40	-16.84
		1/15/96	73.34	-16.78
		3/11/96	73.00	-16.44
		4/22/96	72.97	-16.41
		5/21/96	72.97	-16.41
		6/17/96	NR	--
	60.25	7/24/96	76.38	-16.13
		8/14/96	NR*	–
		9/9/96	NR*	–
		7/7/97	75.08	-14.83

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TABLE 4.2

WATER-LEVEL ELEVATIONS
FORMER ILM FACILITY
TORRANCE, CALIFORNIA
(Continued)

WELL	DATUM ELEVATION (ft msl)	DATE	DTW (ft)	WL (ft msl)
P-17 (Cont'd)	54.83	3/1/99	68.34	-13.51
		7/12/99	68.50	-13.67
P-18	56.44	12/18/95	73.60	-17.16
		1/15/96	73.54	-17.10
		3/11/96	73.28	-16.84
		4/22/96	73.04	-16.60
		5/21/96	73.08	-16.64
		6/17/96	NR	–
	60.16	7/24/96	NR	--
		8/14/96	76.36	-16.20
		9/9/96	76.32	-16.16
		7/7/97	75.29	-15.13
		10/97	well abandoned	–
P-19	53.93	12/18/95	71.09	-17.16
		1/15/96	71.03	-17.10
		3/11/96	70.80	-16.87
		4/22/96	70.60	-16.67
		5/21/96	70.61	-16.68
		6/17/96	70.27	-16.34
	57.75	7/24/96	74.63	-16.88
		8/14/96	74.09	-16.34
		9/9/96	74.06	-16.31
	62.85	7/7/97	78.11	-15.26
		10/97	well abandoned	–
P-20	52.00	12/18/95	67.78	-15.78
		1/15/96	67.72	-15.72
		3/11/96	67.58	-15.58
		4/22/96	67.56	-15.56
		5/21/96	67.58	-15.58
		6/17/96	67.14	-15.14
	55.94	7/24/96	72.16	-16.22
		8/14/96	71.10	-15.16
		9/9/96	71.06	-15.12
		7/7/97	70.24	-14.30
	55.30	3/1/99	68.28	-12.98
		7/12/99	68.37	-13.07
P-21	54.37	12/18/95	71.48	-17.11
		1/15/96	71.42	-17.05
		3/11/96	71.10	-16.73
		4/22/96	70.95	-16.58

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TABLE 4.2

WATER-LEVEL ELEVATIONS
FORMER ILM FACILITY
TORRANCE, CALIFORNIA
(Continued)

WELL	DATUM ELEVATION (ft msl)	DATE	DTW (ft)	WL (ft msl)
P-21 (Cont'd)	54.37 (Cont'd)	5/21/96	70.96	-16.59
		6/17/96	70.66	-16.29
	58.05	7/24/96	75.48	-17.43
		8/14/96	74.43	-16.38
		9/9/96	74.39	-16.34
	62.34	7/8/97	77.65	-15.31
		10/97	well abandoned	–
P-22	57.72	12/18/95	75.21	-17.49
		1/15/96	75.15	-17.43
		3/11/96	74.80	-17.08
		4/22/96	74.61	-16.89
		5/21/96	NR	–
		6/17/96	74.30	-16.58
	61.82	7/24/96	NR*	–
		8/14/96	78.17	-16.35
		9/9/96	78.13	-16.31
		7/7/97	77.24	-15.42
	54.49	3/1/99	68.39	-13.90
		7/12/99	68.64	-14.15
P-23	56.27	12/18/95	69.80	-13.53
		1/15/96	69.74	-13.47
		3/11/96	69.74	-13.47
		4/22/96	69.71	-13.44
		5/21/96	69.72	-13.45
		6/17/96	69.50	-13.23
	60.19	7/24/96	NR*	–
		8/14/96	73.34	-13.15
		9/9/96	73.30	-13.11
		7/7/97	72.74	-12.55
		10/97	well abandoned	–
P-24	56.05	12/18/95	70.50	-14.45
		1/15/96	70.43	-14.38
		3/11/96	70.22	-14.17
		4/22/96	70.20	-14.15
		5/21/96	70.22	-14.17
		6/17/96	70.90	-14.85
	60.14	7/24/96	72.80	-12.66
		8/14/96	73.88	-13.74
		9/9/96	73.84	-13.70
		7/7/97	73.17	-13.03

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TABLE 4.2

WATER-LEVEL ELEVATIONS
FORMER ILM FACILITY
TORRANCE, CALIFORNIA
(Continued)

WELL	DATUM ELEVATION (ft msl)	DATE	DTW (ft)	WL (ft msl)
P-24 (Cont'd)	59.89	3/1/99	72.00	-12.11
		7/12/99	72.00	-12.11
P-25	56.35	12/18/95	72.30	-15.95
		1/15/96	72.32	-15.97
		3/11/96	72.04	-15.69
		4/22/96	72.01	-15.66
		5/21/96	73.02	-16.67
		6/17/96	71.55	-15.20
	60.45	7/24/96	76.10	-15.65
		8/14/96	75.63	-15.18
		9/9/96	75.60	-15.15
		7/7/97	74.76	-14.31
		10/97	well abandoned	–

99-2001/Rpts/DrGrWaRcFa (12/28/99/rm)

(1) A sheen of petroleum hydrocarbon was detected. Water levels did not require correction. July 1997 was the first observation of the petroleum hydrocarbon sheen in this well.

Notes:

1. Well elevations for P-11, P-14, P-19, and P-21 were resurveyed on 8/15/97 following completion of onsite regrading activities.
2. Well elevations for all existing wells were resurveyed on 3/27/99, following 1998 site development.

ft	Feet
ft msl	Feet relative to mean sea level
DTW	Depth to static water
WL	Water-level elevation
NR	Water level not recorded
NR*	Erroneous datum - not included on hydrograph or ground water elevation figures
–	Computation not completed

TRC

TABLE 4.3

WATER-LEVEL ELEVATIONS
BRC PROPERTY, TORRANCE, CALIFORNIA

WELL	DATUM ELEVATION (ft msl)	DATE	DTW (ft)	WL (ft msl)
BL-1	58.34	3/4/99	70.75	-12.41
		7/12/99	70.72	-12.38
BL-2	58.15	3/3/99	71.47	-13.32
		7/12/99	71.32	-13.17
BL-3	59.33	3/3/99	73.22	-13.89
		7/12/99	73.16	-13.83
BL-4	55.04	3/2/99	69.55	-14.51
		7/12/99	69.47	-14.43
BL-5	55.18	3/4/99	67.70	-12.52
		7/12/99	67.71	-12.53
BL-6	54.70	3/1/99	67.62	-12.92
		7/12/99	67.53	-12.83
BL-7	55.19	3/1/99	68.76	-13.57
		7/12/99	68.63	-13.44
BL-8	57.13	3/2/99	71.40	-14.27
		7/12/99	71.42	-14.29

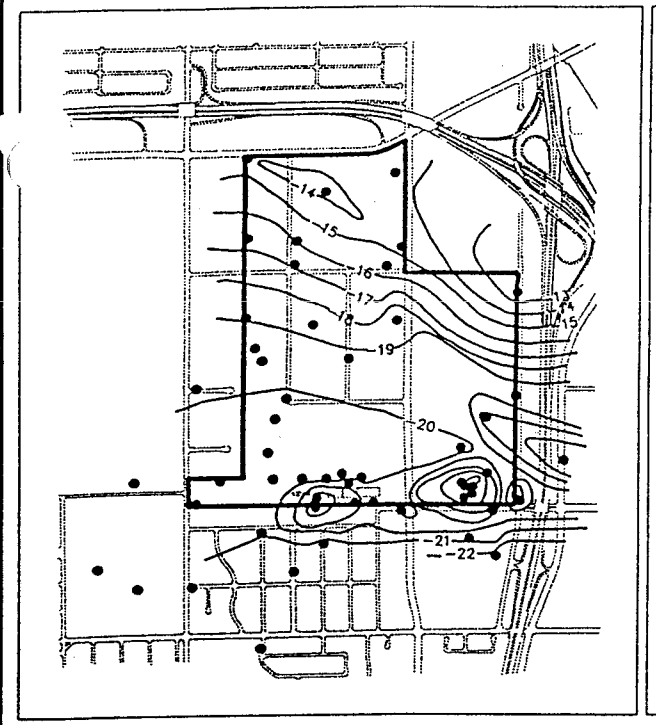
99-2101 (11/3/99/mc)

ft	Feet
ft msl	Feet relative to mean sea level
DTW	Depth to static water
WL	Water-level elevation
NR	Water level not recorded

TRC

DEL AMO STUDY AREA

Time Series Groundwater Contour Maps



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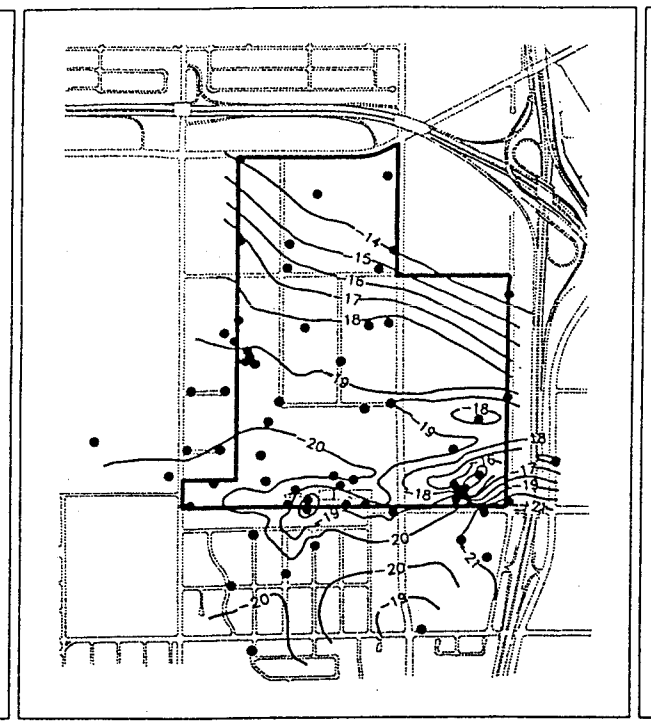
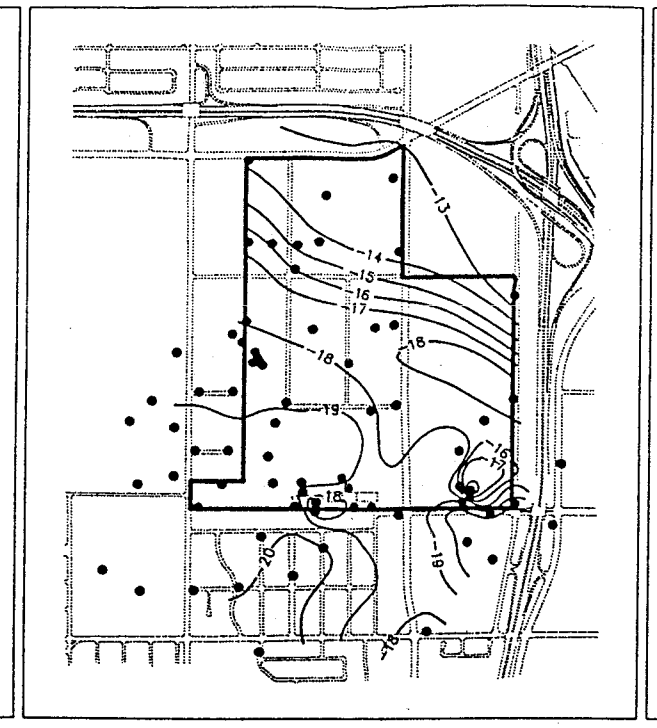


February 1994



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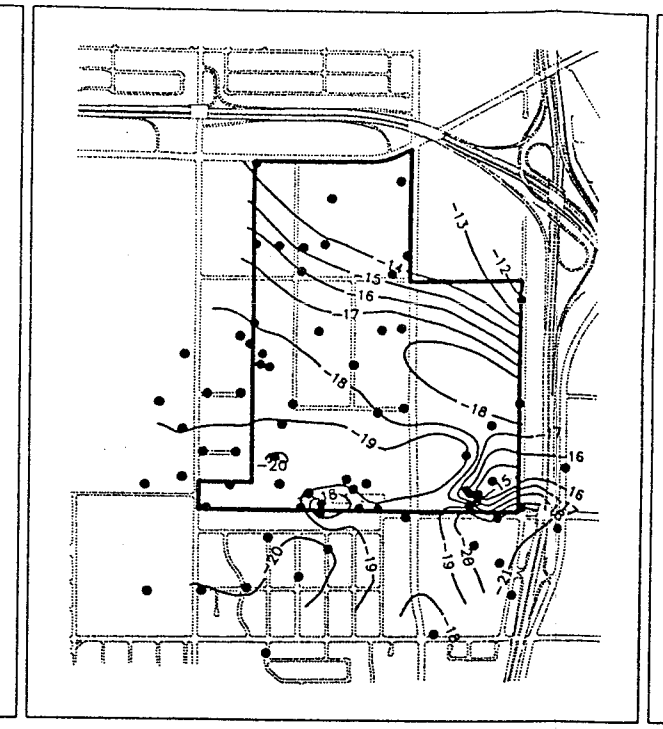
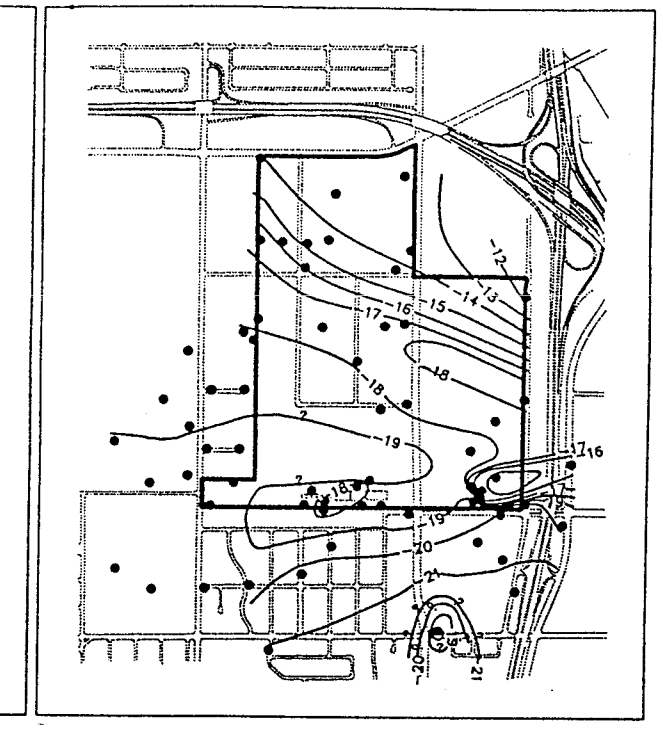


July 1994



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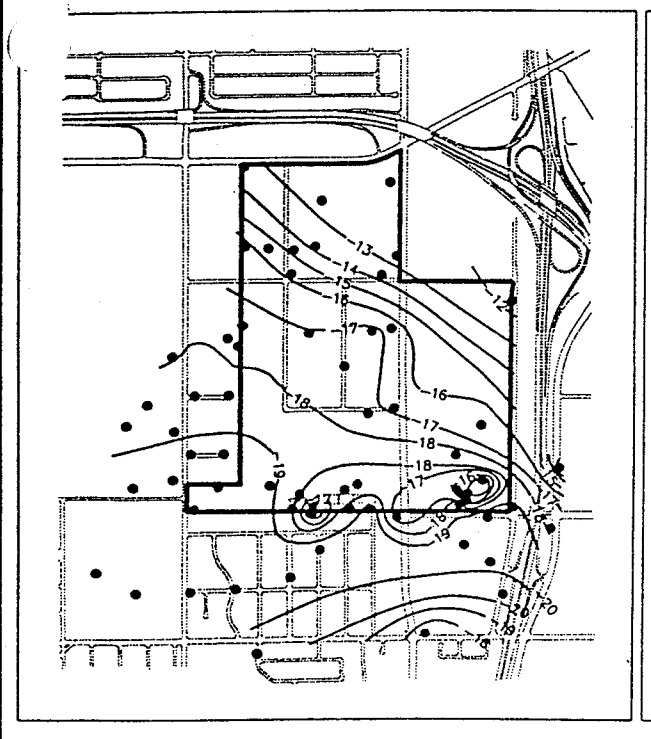
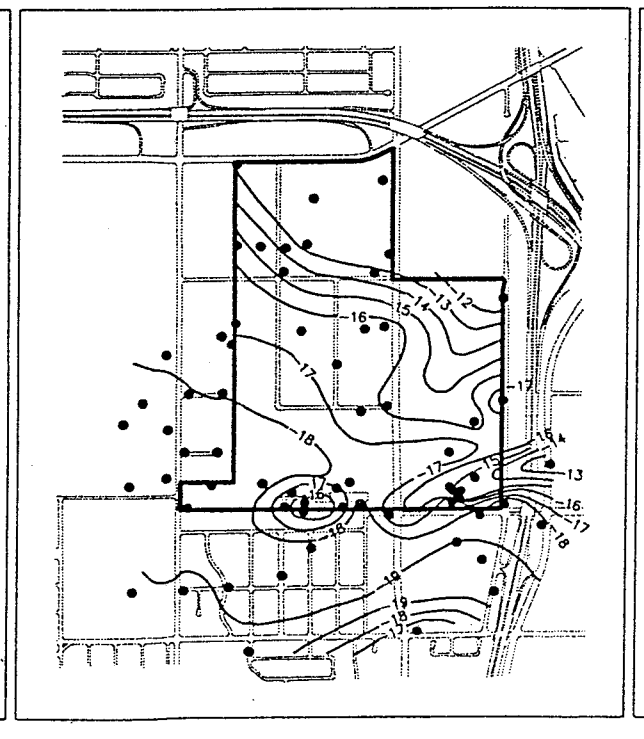
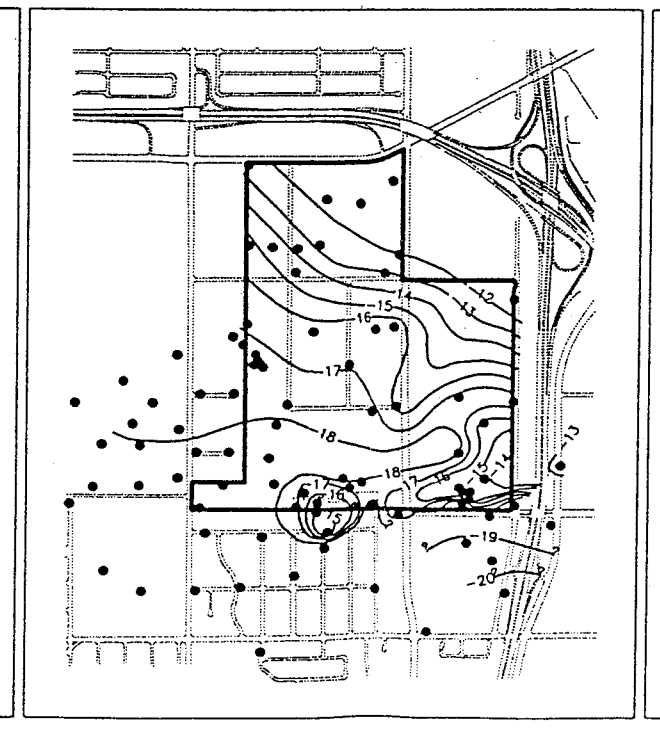


March 1995



June 1995



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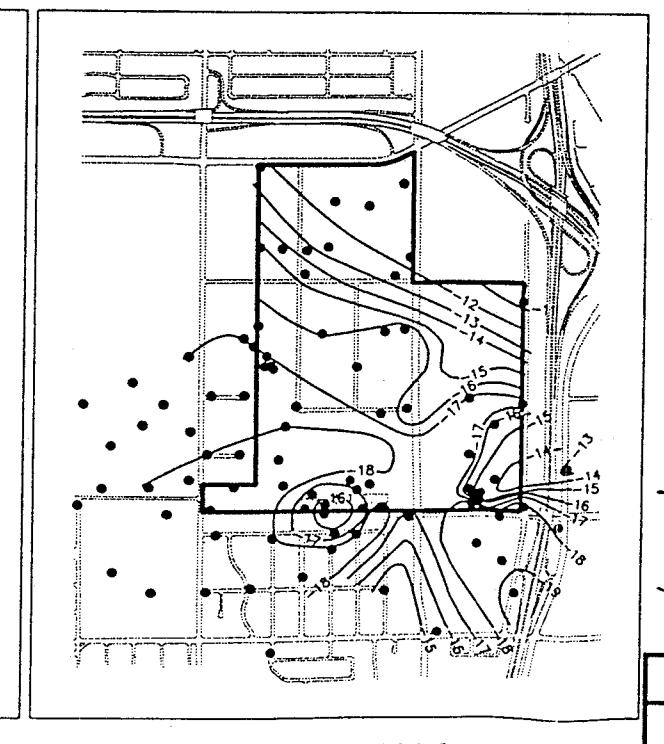
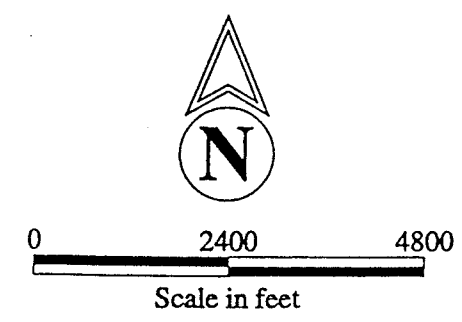


February 1996



EXPLANATION

- Water Table monitoring location
- Groundwater elevation contour (ft MSL)

FIGURE 4.1-4

Time - Series Groundwater Contours
Water Table Zone

Groundwater Remedial Investigation
Del Amo Study Area

DAMES & MOORE

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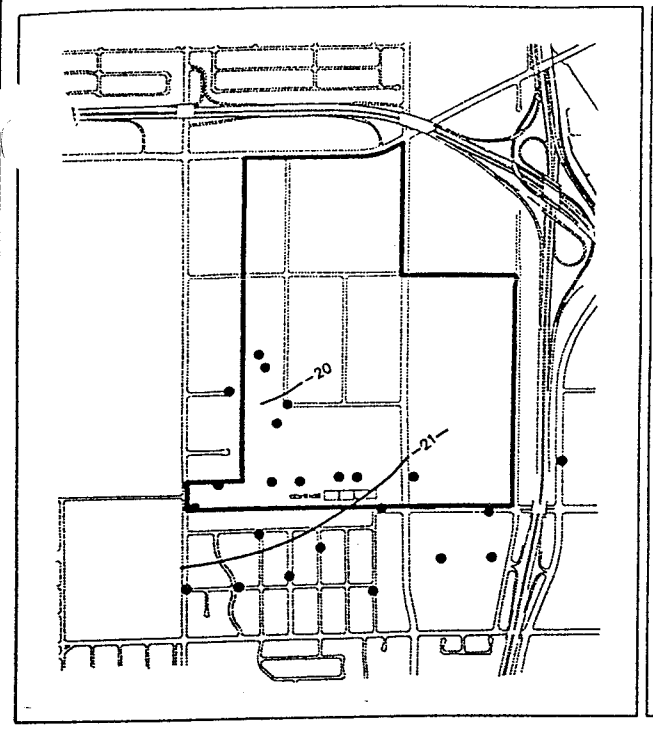
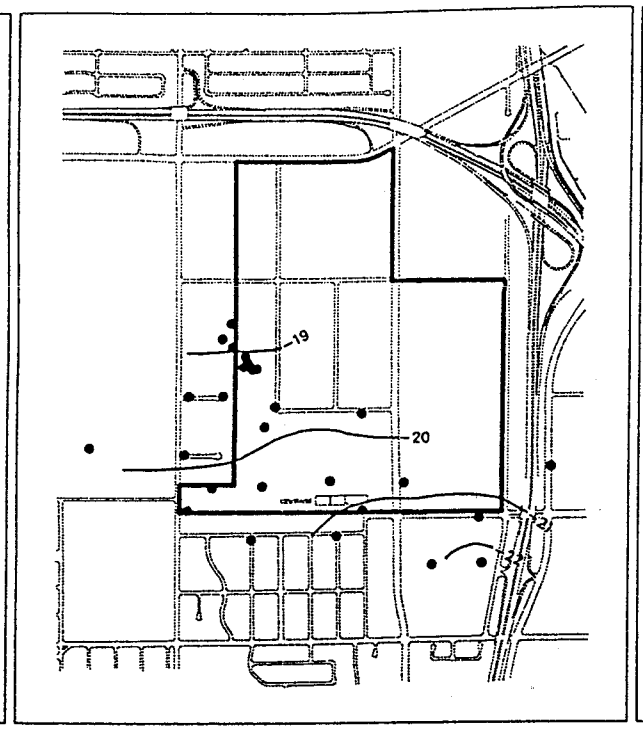
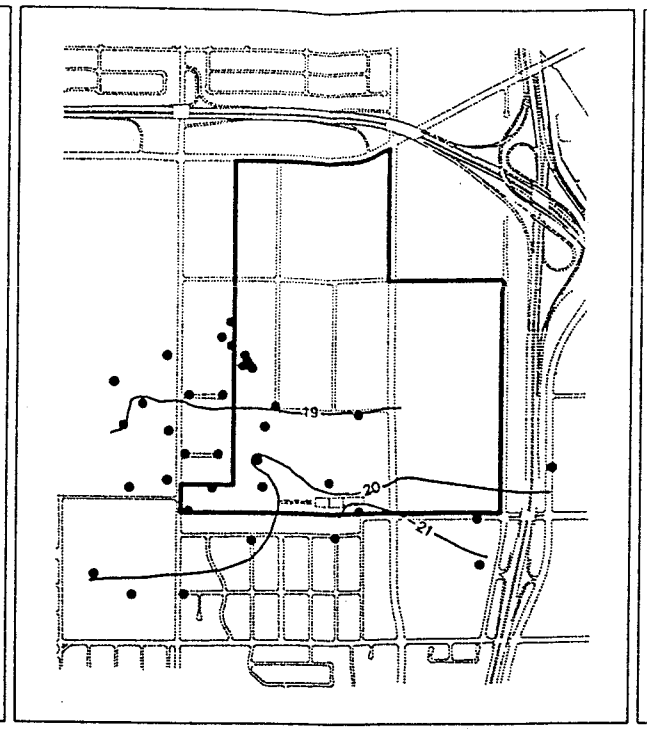
BOE-C6-0210518



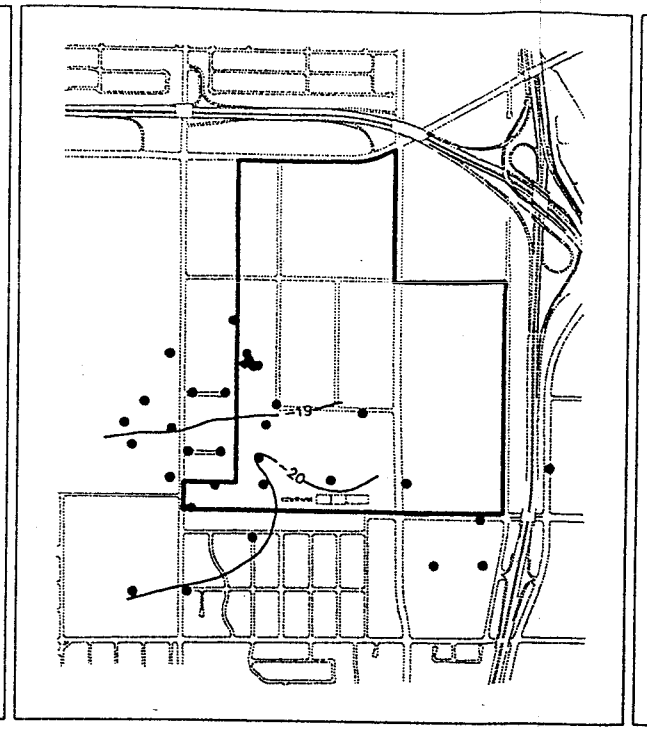
July 1993



February 1994



May 1994



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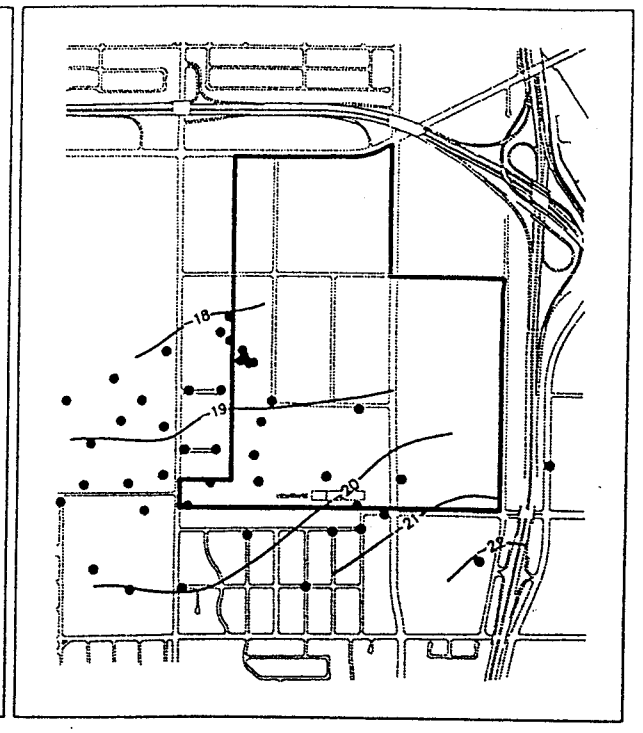

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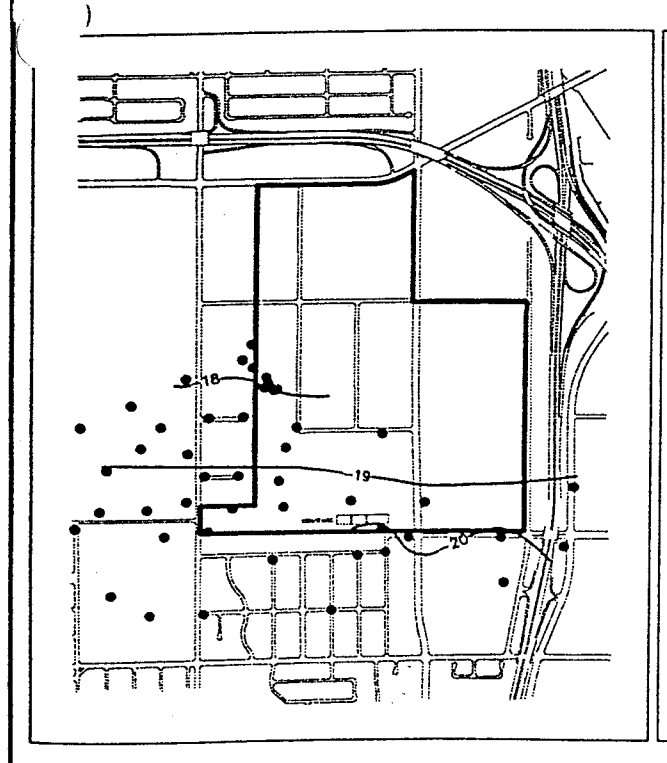

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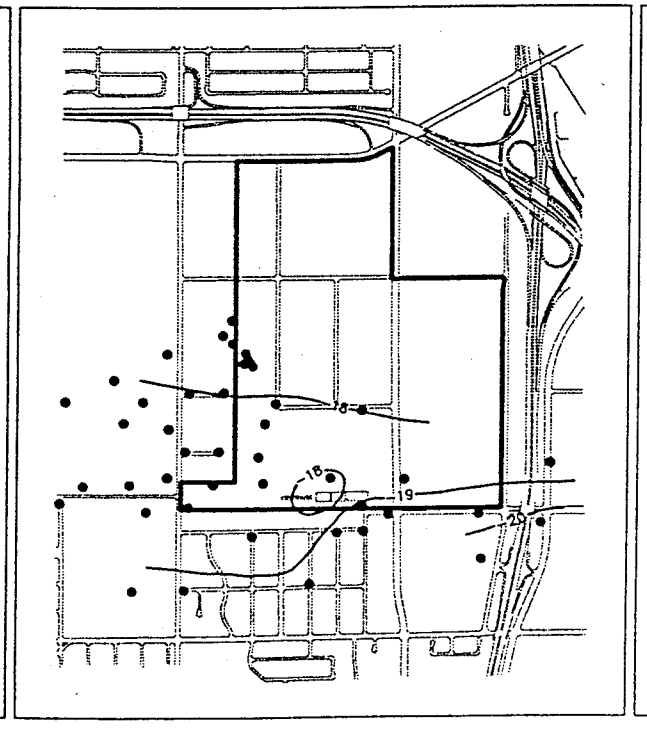
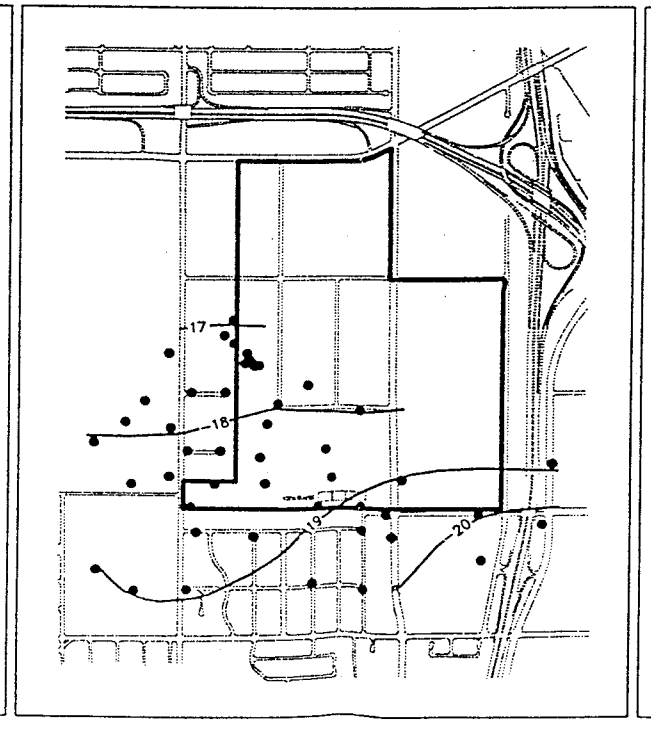


June 1995



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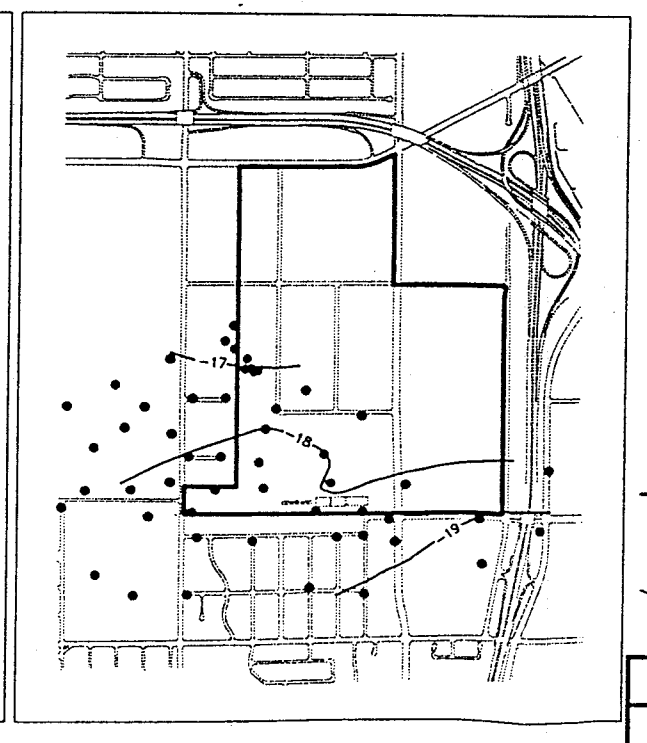

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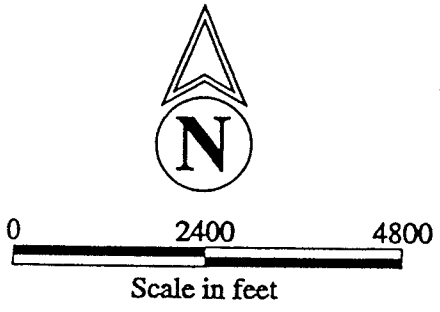

EXPLANATION

- MBFB monitoring location
- Groundwater elevation contour (ft MSL)

FIGURE 4.1-6

Time - Series Groundwater Contours
Middle Bellflower B Sand

Groundwater Remedial Investigation
Del Amo Study Area

DAMES & MOORE

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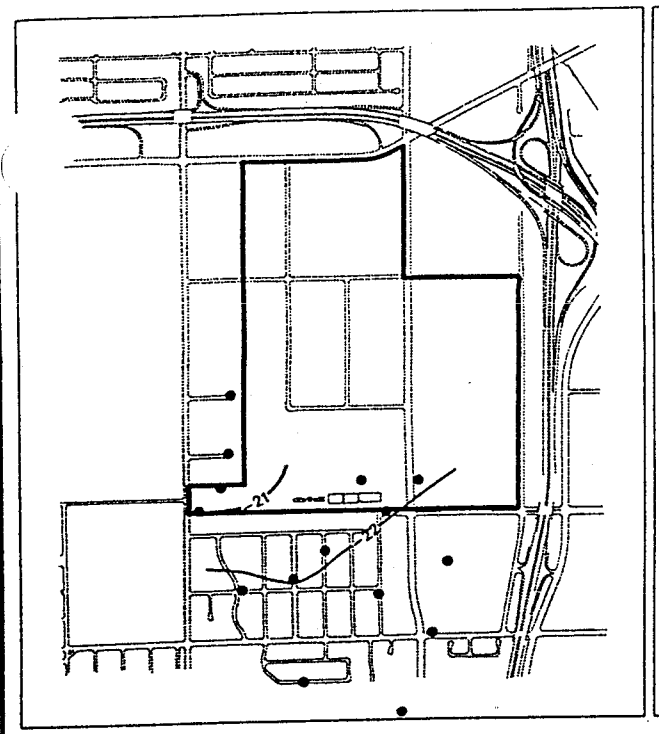
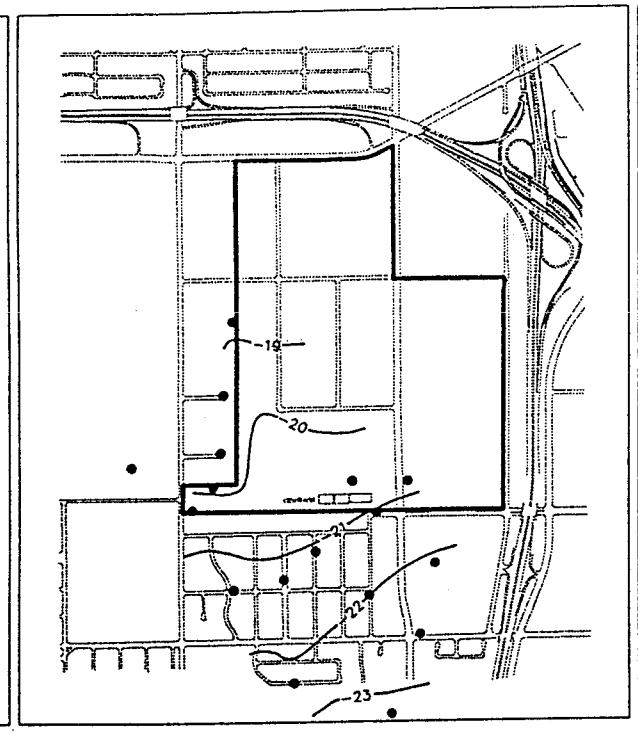
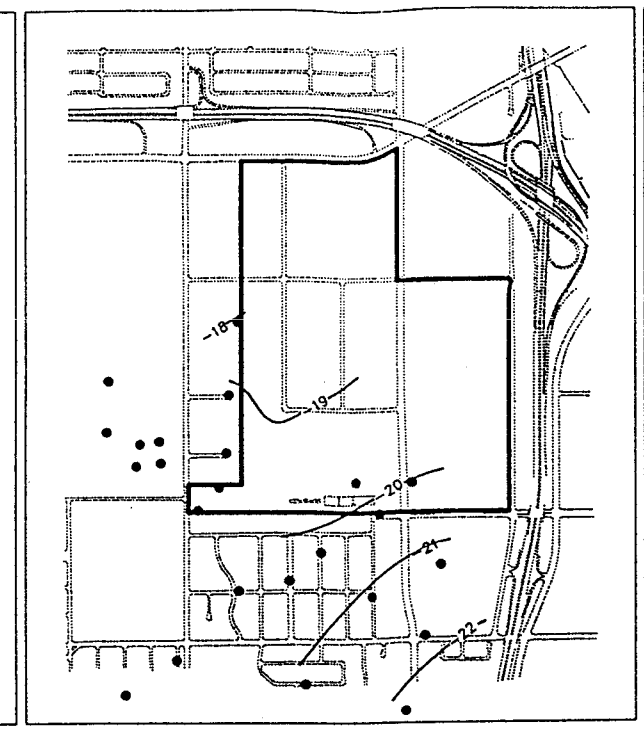
BOE-C6-0210519



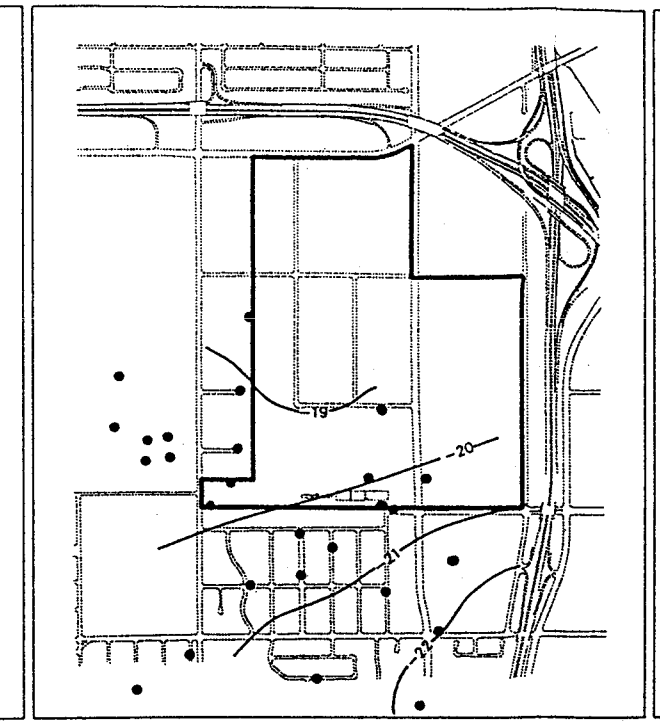
July 1993



February 1994



May 1994



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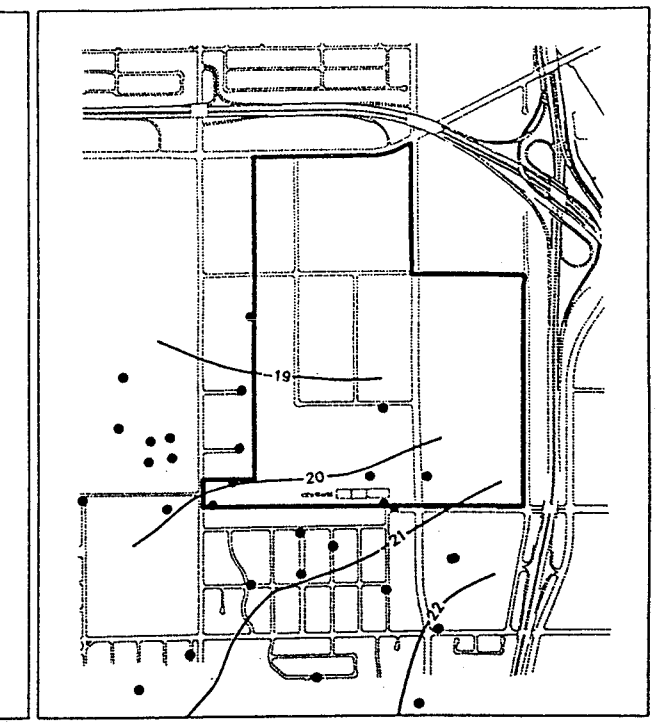

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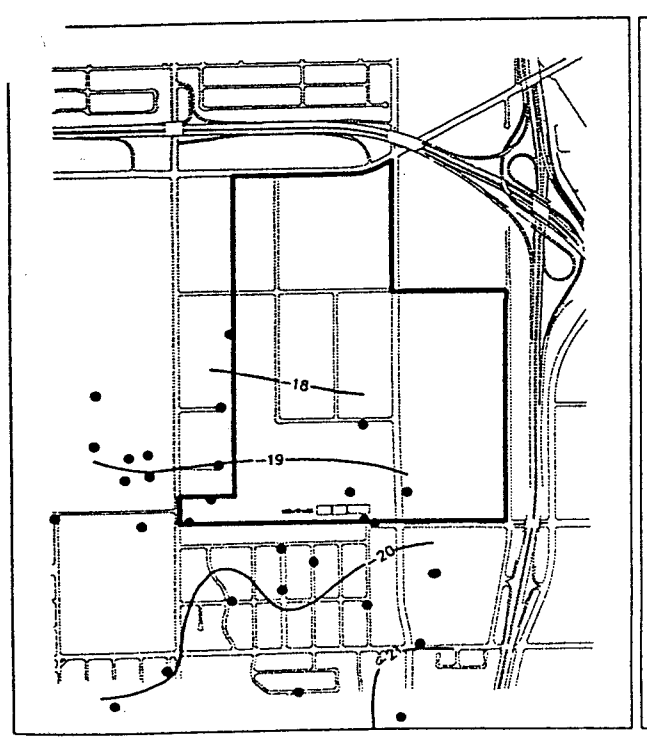
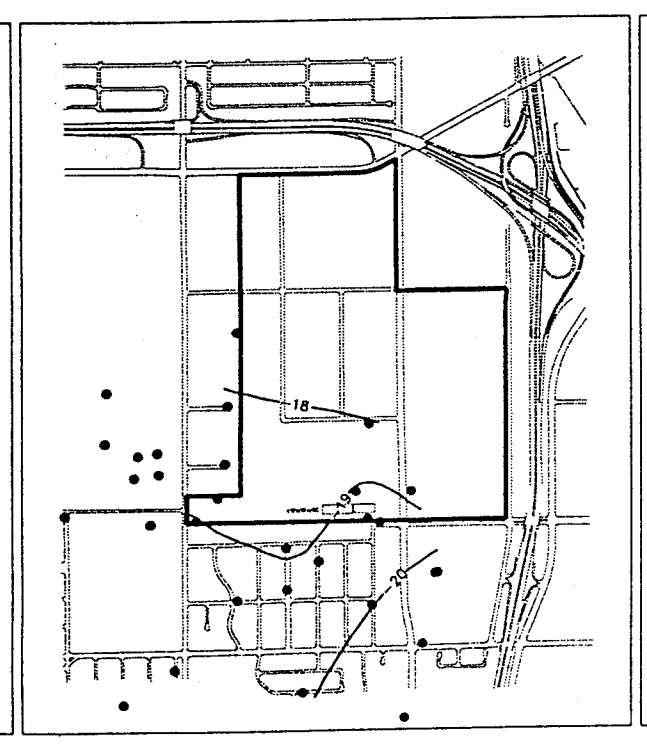
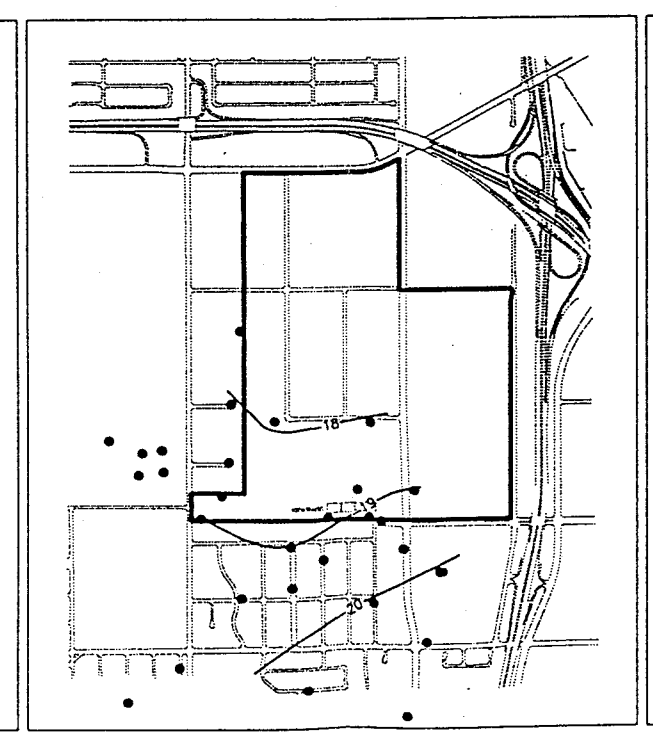


March 1995



June 1995



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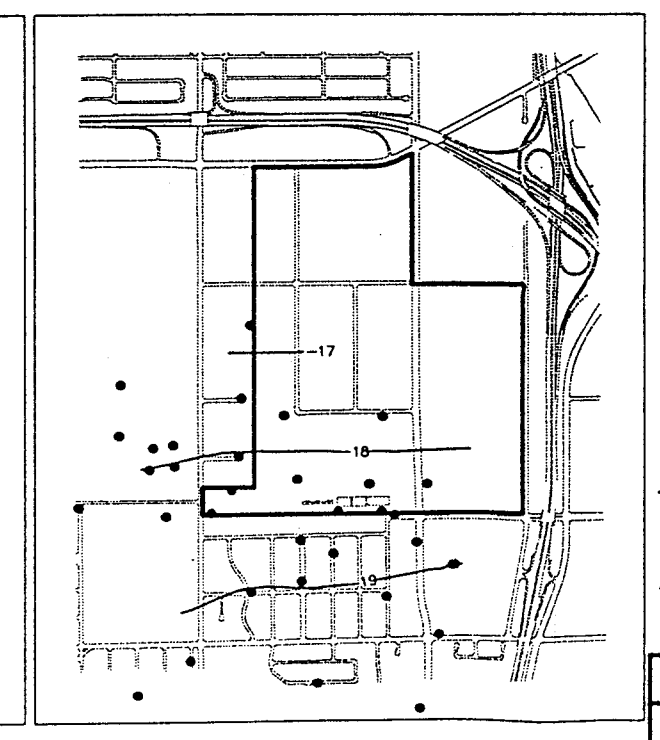

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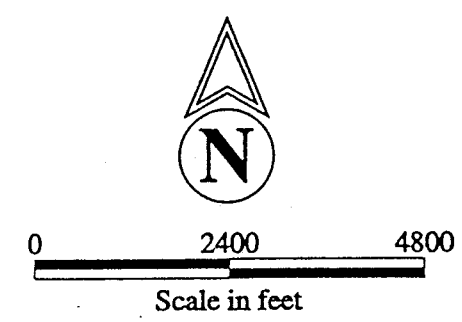

EXPLANATION

- MBFC monitoring location
- Groundwater elevation contour (ft MSL)

FIGURE 4.1-8

Time - Series Groundwater Contours
Middle Bellflower C Sand

Groundwater Remedial Investigation
Del Amo Study Area

DAMES & MOORE

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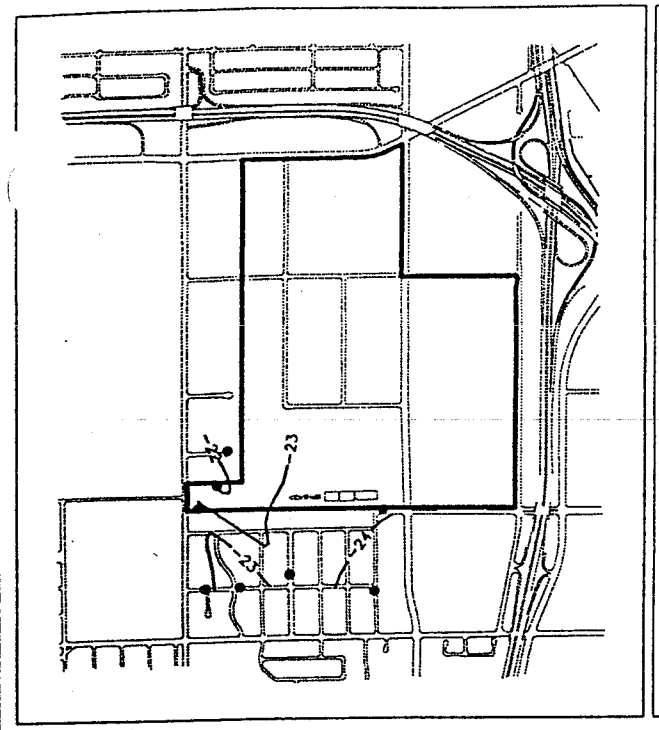
BOE-C6-0210520



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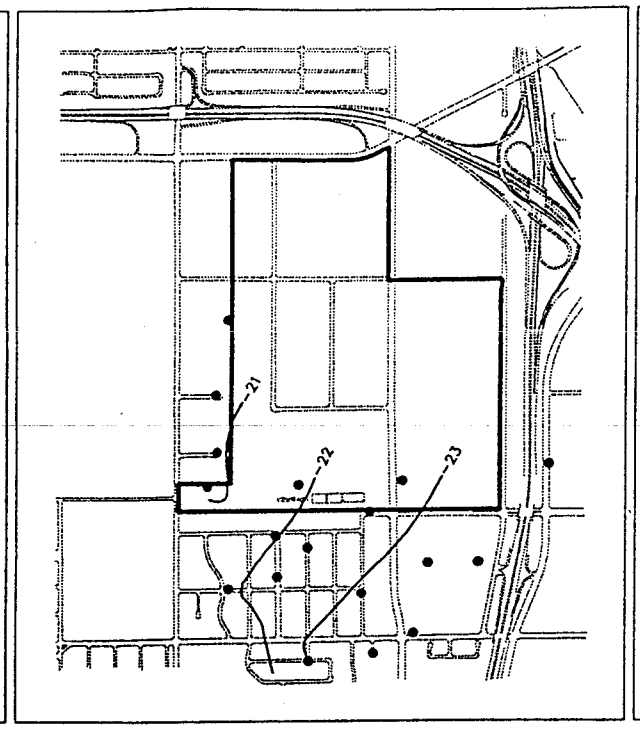

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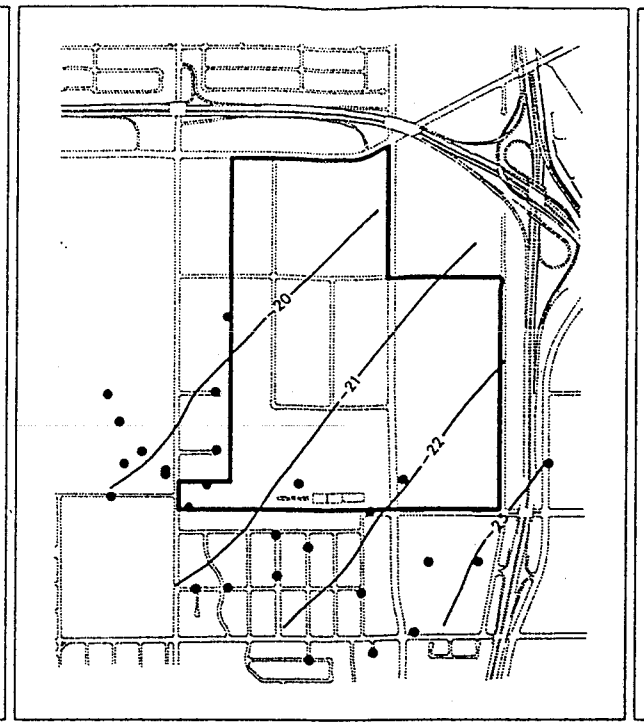

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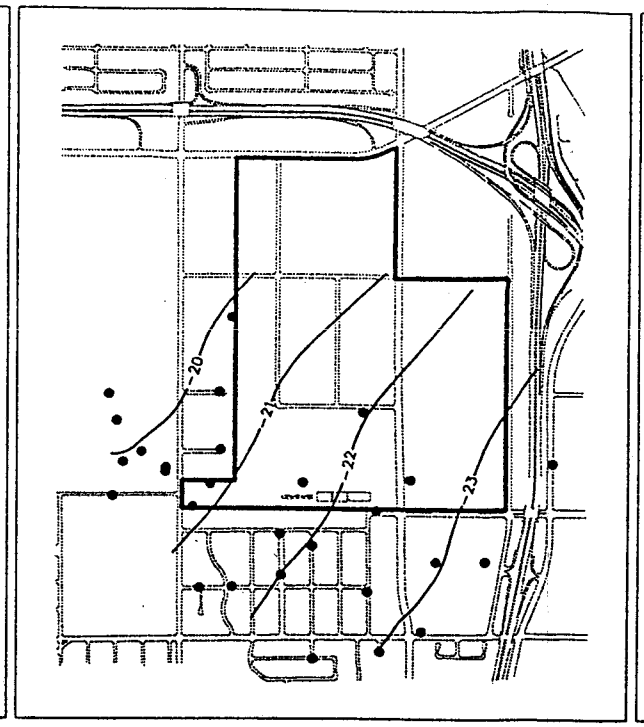

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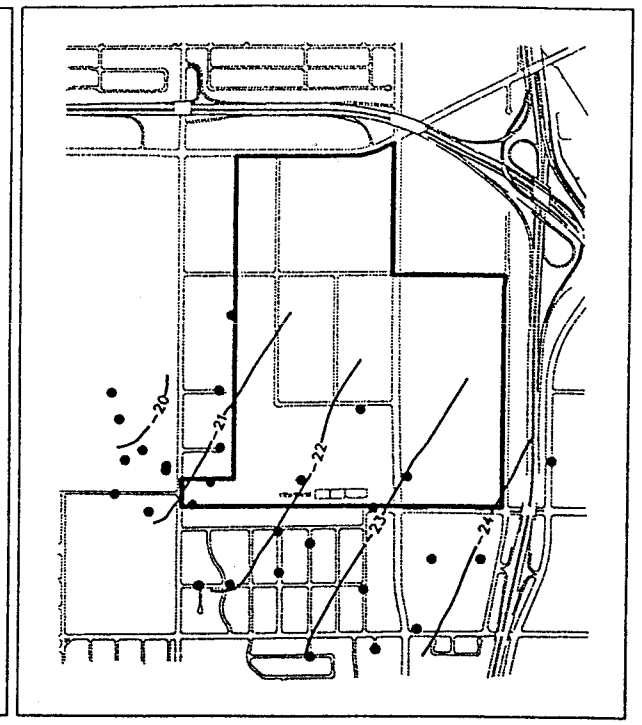

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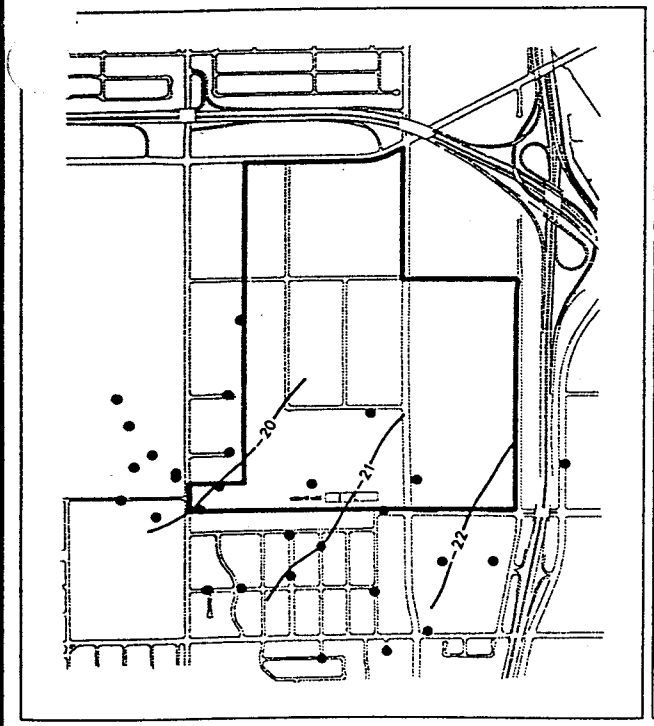

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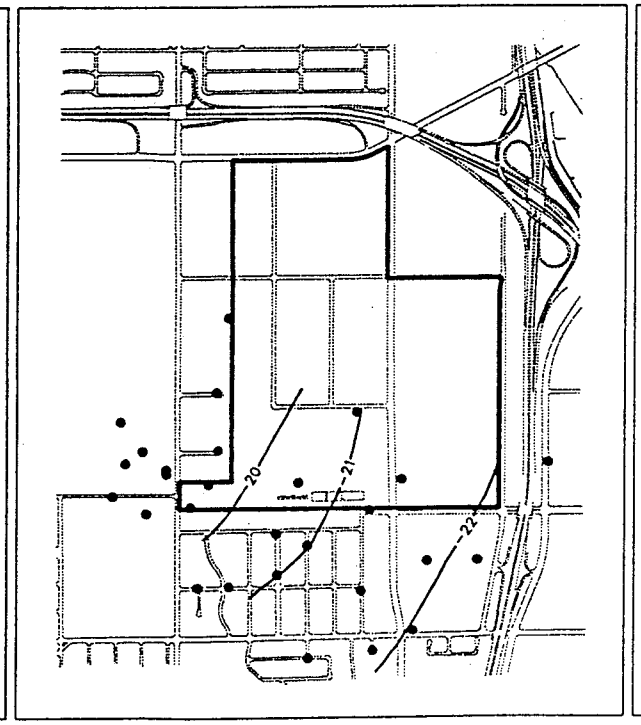
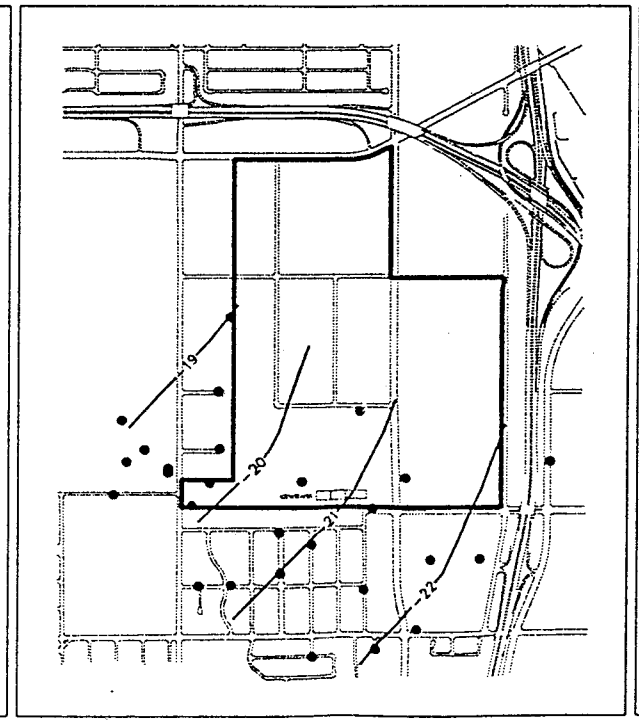


June 1995



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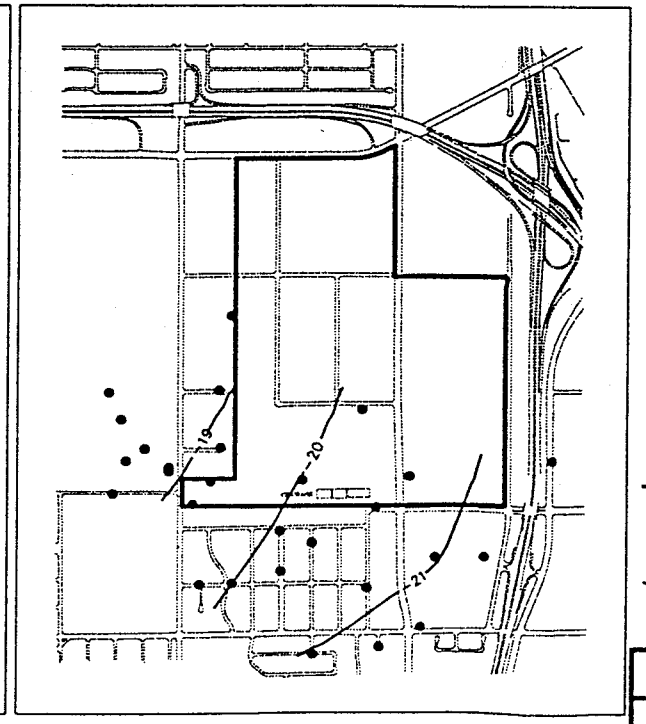
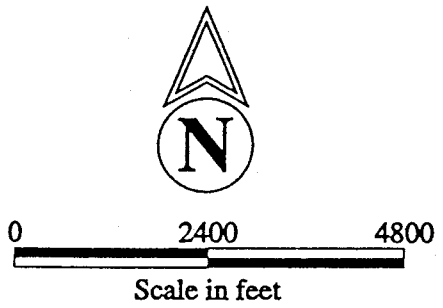


February 1996



EXPLANATION

- Gage monitoring location
- Groundwater elevation contour (ft MSL)

FIGURE 4.1-10

Time - Series Groundwater Contours
Gage Aquifer

Groundwater Remedial Investigation
Del Amo Study Area

DAMES & MOORE

C:\ADWG\00216\483\CESHYPLT.DWG USING: C:\ADWG\00216\446\SHYGAGPS, 09/19/96 at 14:57

BOE-C6-0210521

DEL AMO STUDY AREA

Vertical Gradient Summary Table

TABLE 4.1-2
VERTICAL GRADIENTS

HSU Pair	Monitoring Location Pair	Well Screen Midpoint Elevations (ft msl)	Vertical Gradient	Average Vertical Gradient
Water Table/MBFB	PZL0016/SWL0029	-23.01 / -42.04	-0.0095	-0.0234
	SWL0016/SWL0037	-22.73 / -56.70	-0.0212	
	SWL0015/SWL0019	-26.08 / -60.15	-0.0355	
	SWL0057/SWL0056	-21.95 / -50.61	-0.1888*	
	SWL0009/SWL0010	-24.66 / -85.03	-0.1002*	
	SWL0024/SWL0023	-26.12 / -67.94	0.0273	
MBFB/MBFC	SWL0029/SWL0030	-42.04 /- 68.53	-0.0023	-0.0027
	XMW-12/XBF-05	-27.63 / -86.42	-0.0029	
	XMW-27/XBF-19	-25.76 / -89.22	-0.0071	
	SWL0037/SWL0035	-56.70 / -95.42	-0.0026	
	SWL0050/SWL0055	**-41.95 / -87.15**	**+0.0049**	
	SWL0011/SWL0013	**-66.18 / -105.69**	**+0.0005**	
	XMW-13/XBF-06	-26.60 / -77.20	-0.0059	
	XMW-14/XBF-07	-24.56 / -68.65	-0.0071	
	SWL0052/SWL0053	-62.56 / -99.86	-0.0016	
MBFC/Gage Aquifer	SWL0030/SWL0031	-68.53 / -128.75	-0.0340	-0.0304
	XBF-05/XG-04	-86.42 / -133.56	-0.0242	
	XBF-19/XG-14	-89.22 / -133.62	-0.0286	
	SWL0035/SWL0036	-95.42 / -152.79	-0.0493	
	SWL0013/SWL0022	-105.69 / -153.29	-0.0500	
	XBF-06/XG-05	-77.20 / -127.65	-0.0200	
	XBF-07/XG-06	-68.65 / -126.21	-0.0158	
	XBF-14/XG-13	-78.72 / -139.78	-0.0192	
	SWL0040/XG-11	-92.15 / -166.59	-0.0275	
	SWL0027/SWL0026	-104.14 / -144.50	-0.0349	
Gage Aquifer/Lynwood Aquifer	XLG-02/XLW-01	-149.73 / -194.49	0.2634	-0.1870
	XG-01/XLW-05	-103.62 / -192.91	0.1325	
	XG-06/XLW-04	-126.21 / -192.54	0.1652	

Groundwater elevations used in vertical gradient calculaton from third sampling period, 1995 monitoring event (Table 4.1-1). Bolded Locations have an upward (positive) vertical gradient; all others are downward.

* Gradient values at these locations may not reflect natural conditions; water table elevations are anomalously high, possibly due to recharge from leaking water pipelines, sewers, or other unknown sources. Gradient values at these locations are not used in calculation of average value.

TABLE 4.2-1
SUMMARY OF CONSTANT RATE DISCHARGE TESTS
DEL AMO AQUIFER TESTING

Well ID	Test Date(s)	Pumping Rate, Q (gpm)	Time Pump On	Time Pump Off	Total Pumping Time (minutes)
Upper Bellflower Aquitard					
SWL0005	2/29/96	0.7	13:31:20	19:14:00	341
SWL0006	3/6/96	0.35	9:21:00	21:33:00	732
SWL0009	3/5/96	0.29	9:10:00	22:30:00	800
SWL0012	3/13/96	0.86	9:45:00	15:38:00	353
SWL0016	2/20/96	0.8	9:01:00	21:35:00	754
SWL0017	3/19/96	0.4	12:25:00	0:30:00	725
SWL0021	3/22/96	0.2	8:43:00	20:43:00	720
SWL0039	1/19/96	1.8	9:39:00	21:53:00	734
SWL0042	3/20/96	1.0	9:40:00	21:51:00	731
SWL0046	1/18/96	0.9	10:34:00	22:50:30	737
SWL0057	2/21/96	0.75	9:09:00	21:26:00	737
Middle Bellflower B Sand					
SWL0011	3/15/96	10.8	10:00:00	22:20:00	740
SWL0023	4/25/96-4/26/96	9.9	09:40:00	13:00:00	1,640
SWL0037	3/23/96	4.8	8:35:00	20:36:00	721
SWL0047	3/12/96	4.6	9:47:35	21:50:00	722
SWL0049	2/28/96	5.0	10:22:00	23:00:00	758
XMW-28	3/24/96	4.0	10:40:00	21:25:00	645
Middle Bellflower C Sand					
SWL0014	4/22/96	4.8	12:00:02	17:56:00	356
Gage					
XDA-1B	5/3/96	25.0	10:33:00	21:30:00	657

TABLE 4.2-2
SUMMARY OF AQUIFER TESTING RESULTS
THEIS RECOVERY METHOD
DEL AMO AQUIFER TESTING

Well ID	Transmissivity, T (ft^2/minute)	Aquifer Thickness, b (feet)	Hydraulic Conductivity, K (feet/day)
Upper Bellflower Aquitard			
SWL0005	0.02	17.6	1.6
SWL0006	0.025	21.6	1.7
SWL0009	0.004	24.1	0.2
SWL0012[1]	0.059	16.5	5.2
SWL0016	0.046	13.4	4.9
SWL0017	0.016	16.7	1.4
SWL0021	0.02	16	1.8
SWL0039	0.13	19.3	10
SWL0042	0.02	16.1	1.8
SWL0044[2]	0.001	13.8	0.1
SWL0046	0.023	11.4	2.9
SWL0057	0.053	16.3	4.7
Middle Bellflower B Sand			
SWL0011	0.77	63	18
SWL0023	0.96	65	21
SWL0037	0.50	61	12
SWL0047	0.35	58	9
SWL0049	0.42	12.1	50
XMW-28[3]	0.11	16.1	10

TABLE 4.2-2
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Well ID	Transmissivity, T (ft^2/minute)	Aquifer Thickness, b (feet)	Hydraulic Conductivity, K (feet/day)
Middle Bellflower C Sand			
SWL0014	1.1	58	27
XBF-5[4]	5.5	20	400
XBF-7[4]	1.3	10	190
XBF-9[4]	3.5	19.5	260
XBF-11[4]	2.8	65.1	62
XBF-13[4]	1.3	59.5	32
XBF-15[4]	5	43.5	170
Gage			
XDA-1B	0.98	62	23
XG-5[4]	1.5	61	35
XG-11[4]	1.3	52	31
XG-13[4]	0.92	36.5	36

1 Short pumping time; pumping was terminated at 353 minutes to avoid drawing water level below pump intake.

2 Results for match to head-ratio data from falling-head slug test

3 Well XMW-28 is a water table well that is screened partially in the upper Bellflower and partially in the middle Bellflower B Sand

4 Results from Hargis + Associates' reanalysis of constant discharge aquifer test data collected during Montrose RI/FS using the Theis recovery method (Hargis + Assoc., 1996b)

TABLE 4.2-3

SUMMARY OF AQUITARD VERTICAL HYDRAULIC CONDUCTIVITY RATIO METHOD TEST RESULTS

Aquifer/ Well	Aquitard/ Well	Time (minutes)	Upper-End Average K_v' (feet/day)	Lower-End Average K_v' (feet/day)
MBFB SWL0023	UBF SWL0024	170	4.9×10^{-1}	2.6×10^{-1}
		500	2.5×10^{-1}	1.4×10^{-1}
		Average	3.7×10^{-1}	2×10^{-1}
MBFC SWL0014	LBF SWL0043	60	9.6×10^{-1}	3.6×10^{-1}
		210	6.1×10^{-1}	2.3×10^{-1}
		Average	7.9×10^{-1}	3×10^{-1}
Gage XDA-1B	LBF SWL0043	72	5×10^{-2}	2×10^{-2}
		312	2×10^{-2}	9×10^{-3}
		Average	3.5×10^{-2}	1×10^{-2}

K_v' = vertical hydraulic conductivity of aquitard