Table 5

Summary of Constant Rate Aquifer Test Results - EW-4 Pumping Test - *Trend-Corrected* Data

Newmark Plume Front Extraction Well Network

Newmark Groundwater Contamination Superfund Site - San Bernardino, California

Pumping Well and Pumping Parameters	Observation Well	Screen Elevation: Above(A); Within(W); Below (B); Pumping Well Screen	Hydrostratigraphic Unit Designation	Distance from Pumping Well (ft)	Drawdown Response Observed (Y/N)	Water-Level Trend Correction Performed (Y/N)	Maximum Drawdown (ft) [1]	Drawdown Data Suitable for Parameter Analysis (Y/N)	Method of Pumping Phase Analysis	Transmissivity Pumping Phase (ft^2/day)	Hydraulic Conductivity Pumping Phase (ft/day)	Storativity Pumping Phase	Recovery Data Suitable for Analysis (Y/N)	Transmissivity Recovery Phase (ft^2/day) [2]	Hydraulic Conductivity Recovery Phase ft/day)
	EW-1 PA	A	Newmark MCM	2,435	Y	Y	0.55	N	--	--	--	--	N	--	--
	EW-1 PB	W	Newmark LWBM	2,435	Y	Y	2.46	Y	Theis	51,000	65	0.00080	Y	57,800	74
Pumping Well:	EW-2 PA	A	Newmark UWBM	1,496	Y	Y	0.22	N	--	--	--	--	N	--	--
EW-4	EW-2 PB	W	Newmark LWBM	1,496	Y	Y	3.08	Y	Theis (P)	57,000	73	0.00058	Y	57,800	74
	EW-3 PA	A	Newmark UWBM	832	Y	Y	0.4	N	--	--	--	--	N	--	--
Screen Interval:	EW-3 PB	W	Newmark LWBM	832	Y	Y	3.68	Y	Theis (P)	61,500	79	0.00092	Y	51,400	66
Depth (ft bgs): 490-980	EW-4 PA	A	Newmark UWBM	1	Y	Y	0.73	N	--	--	--	--	N	--	--
Elevation (ft msl): 106-596	EW-4 PB	B	Newmark LWBM	1	Y	Y	5.95	Y	Cooper-Jacob	54,700	70	--	Y	52,200	67
	EW-5 PA	A	Newmark UWBM	1,041	Y	N	0.33	N	--	--	--	--	N	--	--
	EW-5 PB	W	Newmark LWBM	1,041	Y	N	3.45	Y	Theis (P)	50,800	65	0.00096	Y	49,000	63
Test Start Date:	EW-108 PA	A	Newmark UWBM or Muscoy(?)	4,439	Y	N	--	N	--	--	--	--	--	--	--
January 27, 2003	EW-108 PB	W	Newmark LWBM	4,439	Y	Y	1.51	Y	Theis	63,000	81	0.00094	Y	71,300	91
	EW-112 PA	A	Muscoy	11,188	N	--	--	--	--	--	--	--	--	--	--
Discharge (Q):	EW-112 PB	W	Muscoy	11,188	N	--	--	--	--	--	--	--	--	--	--
Q_1=1,930 gpm	MW-10A	A	Newmark UWBM	2,912	Y	Y	0.81	N	--	--	--	--	N	--	--
Q2=2,010 gpm	MW-10B	A	Newmark LWBM	2,912	Y	Y	1.92	Y	Theis	64,500	83	0.00064	Y	71,500	92
Pump On: 1/27/03 15:00	MW-10C	W	Newmark LWBM	2,912	Y	Y	1.89	Y	Theis	58,100	74	0.00062	Y	72,000	92
Pump Off: 1/31/03 14:00	MW-11A	W	Newmark LWBM	987	Y	Y	3.55	Y	Theis (P)	50,300	64	0.00088	Y	50,600	65
	MW-11B	W	Newmark LWBM	987	Y	Y	3.73	Y	Theis (P)	47,400	61	0.00069	Y	51,000	65
Duration Pumped:	MW-11C	B	Newmark LWBM	987	Y	Y	4.18	Y	Theis (P)	59,600	76	0.00014	Y	50,400	65
95 hrs.	MW-12A	A	Newmark UWBM	3,121	N	--	--	--	--	--	--	--	--	--	--
	MW-12B	W	Newmark LWBM	3,121	Y	Y	2.02	Y	Theis	50,200	64	0.00088	Y	52,700	68
Estimated	MW-12C	B	Newmark LWBM	3,121	Y	Y	2.13	Y	Theis	48,500	62	0.00081	Y	51,300	66
Saturated Thickness (ft):	MW-13A	A	Newmark UWBM	1,146	Y	Y	0.68	N	--	--	--	--	Y	89,500	115
780	MW-13B	W	Newmark LWBM	1,146	Y	Y	3.67	Y	Theis (P)	53,600	69	0.00072	Y	47,600	61
	MW-13C	W	Newmark LWBM	1,146	Y	Y	3.52	Y	Theis (P)	56,200	72	0.00067	Y	43,600	56
	MW-14A	A	Newmark UWBM	710	N	--	--	--	--	--	--	--	--	--	--
	MW-14B	W	Newmark LWBM	710	Y	Y	4.15	Y	Theis (P)	51,800	66	0.00081	Y	43,700	56
	MW-14C	B	Newmark LWBM	710	Y	Y	3.99	Y	Theis (P)	41,400	53	0.00090	Y	46,200	59
	MW-15A	W	Newmark LWBM	2,163	Y	Y	2.87	Y	Theis	50,700	65	0.00066	Y	53,300	68
	MW-15B	W	Newmark LWBM	2,163	Y	Y	2.97	Y	Theis	61,600	79	0.00062	Y	48,700	62
	MW-15C	B	Newmark LWBM	2,163	Y	Y	2.96	Y	Theis	50,700	65	0.00064	Y	48,600	62
	MW-128A	A	Muscoy	11,959	N	--	--	--	--	--	--	--	--	--	--
	MW-128B	W	Muscoy	11,959	N	--	--	--	--	--	--	--	--	--	--
	MW-128C	W	Muscoy	11,959	N	--	--	--	--	--	--	--	--	--	--
	MW-129A	A	Muscoy	12,026	N	--	--	--	--	--	--	--	--	--	--
	MW-129B	W	Muscoy	12,026	N	--	--	--	--	--	--	--	--	--	--
	MW-129C	W	Muscoy	12,026	N	--	--	--	--	--	--	--	--	--	--
	MW-130A	A	Muscoy (?)	9,213	N	--	--	--	--	--	--	--	--	--	--
	MW-130B	A	Muscoy (?)	9,213	N	--	--	--	--	--	--	--	--	--	--
	MW-130C	W	Newmark LWBM (?)	9,213	Y	Y	0.86	N	--	--	--	--	N	--	--

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Newmark Plume Front Extraction Well Network

Newmark Groundwater Contamination Superfund Site - San Bernardino, California

Pumping Well and Pumping Parameters	Observation Well	Screen Elevation: Above(A); Within(W); Below (B); Pumping Well Screen	Hydrostratigraphic Unit Designation	Distance from Pumping Well (ft)	Drawdown Response Observed (Y/N)	Water-Level Trend Correction Performed (Y/N)	Maximum Drawdown (ft) [1]	Drawdown Data Suitable for Parameter Analysis (Y/N)	Method of Pumping Phase Analysis	Transmissivity Pumping Phase (ft^2/day)	Hydraulic Conductivity Pumping Phase (ft/day)	Storativity Pumping Phase	Recovery Data Suitable for Analysis (Y/N)	Transmissivity Recovery Phase (ft^2/day) [2]	Hydraulic Conductivity Recovery Phase ft/day)
	MW-135A	A	Muscoy	4,925	U[3]	--	--	--	--	--	--	--	--	--	--
	MW-135B	W	Muscoy	4,925	U	--	--	--	--	--	--	--	--	--	--
Pumping Well:	MW-135C	W	Newmark LWBM (?)	4,925	Y	Y	1.66	Y	Theis	64,200	82	0.00073	Y	49,700	64
EW-4	MW-136A	A	Muscoy	6,761	U	--	--	--	--	--	--	--	--	--	--
	MW-136B	A	Muscoy	6,761	U	--	--	--	--	--	--	--	--	--	--
Screen Interval:	MW-136C	W	Muscoy	6,761	U	--	--	--	--	--	--	--	--	--	--
Depth (ft bgs): 490-980	MW-137A	A	Muscoy	8,960	U	--	--	--	--	--	--	--	--	--	--
Elevation (ft msl): 106-596	MW-137B	A	Muscoy	8,960	U	--	--	--	--	--	--	--	--	--	--
	MW-137C	W	Muscoy	8,960	U	--	--	--	--	--	--	--	--	--	--
	MW-138A	A	Muscoy	10,196	U	--	--	--	--	--	--	--	--	--	--
Test Start Date:	MW-138B	W	Muscoy	10,196	U	--	--	--	--	--	--	--	--	--	--
January 27, 2003	MW-138C	W	Muscoy	10,196	U	--	--	--	--	--	--	--	--	--	--
	MW-139A	A	Muscoy	11,843	N	--	--	--	--	--	--	--	--	--	--
Discharge (Q):	MW-139B	A	Muscoy	11,843	N	--	--	--	--	--	--	--	--	--	--
Q_1=1,930 gpm	MW-139C	W	Muscoy	11,843	N	--	--	--	--	--	--	--	--	--	--
Q2=2,010 gpm	Garner Park-A (4S)	A	Muscoy	8,118	N	--	--	--	--	--	--	--	--	--	--
Pump On: 1/27/03 15:00	Garner Park-B (5S)	A	Muscoy	8,118	N	--	--	--	--	--	--	--	--	--	--
Pump Off: 1/31/03 14:00	Garner Park-C (6S)	W	Muscoy	8,118	N	--	--	--	--	--	--	--	--	--	--
	Meadowbrook Park-A (2S)	A	Newmark UWBM	5,522	N	--	--	--	--	--	--	--	--	--	--
Duration Pumped:	Meadowbrook Park-B (3S)	A	Newmark UWBM	5,522	N	--	--	--	--	--	--	--	--	--	--
95 hrs.	Meadowbrook Park-C (4S)	W	Newmark LWBM	5,522	Y	Y	2.04	Y	Theis	40,000	51	0.00039	Y	43,200	55
	Sierra High School-A (8S)	A	Newmark (?) WBM	3,338	N	--	--	--	--	--	--	--	--	--	--
Estimated	Sierra High School-B (7S)	A	Newmark (?) WBM	3,338	Y	N	2.16	N	--	--	--	--	N	--	--
Saturated Thickness (ft):	Sierra High School-C (6S)	W	Newmark (?) WBM	3,338	Y	N	2.32	N	--	--	--	--	N	--	--
780	Antil #1	NA	NA	5,774	N	--	--	--	--	--	--	--	--	--	--
	Baseline & California	W	Muscoy	13,708	N	--	--	--	--	--	--	--	--	--	--
	Gilbert Street	W	Newmark	3,378	Y	Y	2.09	Y	Theis	67,800	87	0.00061	Y	61,000	78
	Olive and Garner	W	Muscoy	8,129	NM	--	--	--	--	--	--	--	--	--	--
	7th Street	W	Newmark LWBM	2,392	Y	Y	2.99	Y	Theis	63,100	81	0.00047	Y	50,900	65
	10th and J	W	Muscoy	6,171	NM	--	--	--	--	--	--	--	--	--	--
	11th and E	NA	NA	2,953	N	--	--	--	--	--	--	--	--	--	--
	16th Street	W	Newmark LWBM	3,317	Y	Y	1.55	Y	Theis	75,600	97	0.00058	Y	92,300	118
	19th Street #2	W	Muscoy	13,884	NM	--	--	--	--	--	--	--	--	--	--
	Rialto #5	NA	NA	16,825	NM	--	--	--	--	--	--	--	--	--	--
									Distance versus Drawdown	47,800	61	0.0014	--	--	--
									Count	25	25	24	--	26	26
									Minimum	40,000	51	0.00014	--	43,200	55
									Maximum	75,600	97	0.0014	--	92,300	118
									Average	55,400	71	0.00072	--	56,100	72
									Geometric Mean	54,800	70	0.00068	--	54,800	70
									Standard Deviation	8,250	11	0.00023	--	13,000	17

Notes:

NM - Not Monitored; NA - Not Available

(1) Maximum drawdown values were calculated from trend-corrected data for those wells where trend corrections were applied.

(2) All recovery phase analysis was performed using the Theis residual drawdown method

(3) Undetermined; unable to determine the presence or absence of a drawdown response due to interference caused by the start and stop of SBMWD Perris street well

(P) Hantush modification to the Theis method used to correct drawdown for partial penetration effects (Hantush, 1961a)

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