Table 4

Summary of Constant Rate Aquifer Test Results - EW-5 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 Parameter Analysis (Y/N)	Transmissivity Recovery Phase (ft^2/day) [2]	Hydraulic Conductivity Recovery Phase ft/day)
	EW-1 PA	A	Newmark MCM	3,477	Y	Y	0.33	N	--	--	--	--	--	--	--
	EW-1 PB	B	Newmark LWBM	3,477	Y	Y	2.21	Y	Theis	61,900	79	0.00071	Y	49,600	64
Pumping Well:	EW-2 PA	A	Newmark UWBM	2,535	Y	Y	0.13	N	--	--	--	--	--	--	--
EW-5	EW-2 PB	W	Newmark LWBM	2,535	Y	Y	2.62	Y	Theis	57,600	74	0.00082	Y	52,700	68
	EW-3 PA	A	Newmark UWBM	1,862	Y	Y	0.4	N	--	--	--	--	--	--	--
Screen Interval:	EW-3 PB	W	Newmark LWBM	1,862	Y	Y	3.06	Y	Theis	51,700	66	0.00085	Y	49,300	63
Depth (ft bgs): 400-930	EW-4 PA	A	Newmark UWBM	1,041	Y	Y	0.62	N	--	--	--	--	--	--	--
Elevation (ft msl): 683-153	EW-4 PB	B	Newmark LWBM	1,041	Y	Y	3.61	Y	Theis (P)	55,100	71	0.00092	Y	45,500	58
	EW-5 PA	A	Newmark UWBM	1	Y	N	0.3	N	--	--	--	--	--	--	--
	EW-5 PB	W	Newmark LWBM	1	Y	N	15.29	Y	Cooper-Jacob	58,800	75	--	N	--	--
	EW-108 PA	A	Newmark UWBM or Muscoy(?)	5,437	Y	N	--	N	--	--	--	--	--	--	--
Test Start Date: January 13, 2003	EW-108 PB	W	Newmark LWBM	5,437	Y	Y	1.24	Y	Theis	78,800	101	0.0013	Y	62,400	80
	EW-112 PA	A	Muscoy	12,220	N	N	--	N	--	--	--	--	--	--	--
Average Discharge Rate(Q):	EW-112 PB	W	Muscoy	12,220	N	N	--	N	--	--	--	--	--	--	--
2,110 gpm	MW-10A	A	Newmark UWBM	3,500	Y	Y	0.65	N	--	--	--	--	--	--	--
	MW-10B	W	Newmark LWBM	3,500	Y	Y	1.81	Y	Theis	59,900	77	0.00068	Y	64,600	83
Pump On: 1/13/03 15:00	MW-10C	W	Newmark LWBM	3,500	Y	Y	2.01	Y	Theis	62,300	80	0.00061	Y	64,400	83
Pump Off: 1/17/03 14:00	MW-11A	W	Newmark LWBM	1,679	Y	Y	2.99	Y	Theis	55,700	71	0.00065	Y	57,200	73
	MW-11B	W	Newmark LWBM	1,679	--[3]	--	--	--	--	--	--	--	--	--	--
Duration Pumped:	MW-11C	B	Newmark LWBM	1,679	Y	Y	3.06	Y	Theis	71,100	91	0.00025	N	--	--
95 hrs.	MW-12A	A	Newmark UWBM	4,143	N	--	--	--	--	--	--	--	--	--	--
	MW-12B	W	Newmark LWBM	4,143	Y	Y	1.75	Y	Theis	59,600	76	0.00091	Y	49,700	64
Estimated	MW-12C	B	Newmark LWBM	4,143	Y	Y	1.86	Y	Theis	56,000	72	0.00085	Y	48,000	62
Saturated Thickness (ft):	MW-13A	A	Newmark UWBM	2,108	Y	Y	0.69	N	--	--	--	--	--	--	--
780	MW-13B	W	Newmark LWBM	2,108	Y	Y	2.98	Y	Theis	53,300	68	0.00075	N	--	--
	MW-13C	W	Newmark LWBM	2,108	Y	Y	3.00	Y	Theis	54,600	70	0.00074	N	--	--
	MW-14A	A	Newmark UWBM	906	Y	Y	0.15	N	--	--	--	--	--	--	--
	MW-14B	W	Newmark LWBM	906	Y	Y	2.94	Y	Theis (P)	45,600	58	0.0020	Y	30,600	39
	MW-14C	B	Newmark LWBM	906	Y	Y	3.48	Y	Theis (P)	49,600	64	0.0014	Y	42,800	55
	MW-15A	W	Newmark LWBM	1,204	Y	Y	3.65	Y	Theis (P)	59,000	76	0.00054	Y	47,500	61
	MW-15B	W	Newmark LWBM	1,204	Y	Y	3.75	Y	Theis (P)	52,700	68	0.00082	Y	46,600	60
	MW-15C	B	Newmark LWBM	1,204	Y	Y	3.89	Y	Theis (P)	51,300	66	0.00076	Y	44,100	57
	MW-128A	A	Muscoy	12,853	N	--	--	--	--	--	--	--	--	--	--
	MW-128B	W	Muscoy	12,853	N	--	--	--	--	--	--	--	--	--	--
	MW-128C	W	Muscoy	12,853	N	--	--	--	--	--	--	--	--	--	--
	MW-129A	A	Muscoy	13,036	N	--	--	--	--	--	--	--	--	--	--
	MW-129B	W	Muscoy	13,036	N	--	--	--	--	--	--	--	--	--	--
	MW-129C	W	Muscoy	13,036	N	--	--	--	--	--	--	--	--	--	--
	MW-130A	A	Muscoy (?)	10,118	N	--	--	--	--	--	--	--	--	--	--
	MW-130B	W	Muscoy (?)	10,118	N	--	--	--	--	--	--	--	--	--	--
	MW-130C	W	Newmark LWBM (?)	10,118	Y	Y	0.53	N	--	--	--	--	--	--	--

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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 Parameter Analysis (Y/N)	Transmissivity Recovery Phase (ft^2/day) [2]	Hydraulic Conductivity Recovery Phase ft/day)
	MW-135A	A	Muscoy	5,966	N	--	--	--	--	--	--	--	--	--	--
	MW-135B	W	Muscoy	5,966	Y	Y	0.7	N	--	--	--	--	--	--	--
Pumping Well:	MW-135C	W	Newmark LWBM (?)	5,966	Y	Y	1.37	Y	Theis	77,200	99	0.00075	Y	61,200	78
EW-5	MW-136A	A	Muscoy	7,803	N	--	--	--	--	--	--	--	--	--	--
	MW-136B	W	Muscoy	7,803	N	--	--	--	--	--	--	--	--	--	--
Screen Interval:	MW-136C	W	Muscoy	7,803	Y	Y	0.52	--	--	--	--	--	--	--	--
Depth (ft bgs): 400-930	MW-137A	A	Muscoy	10,001	N	--	--	--	--	--	--	--	--	--	--
Elevation (ft msl): 683-153	MW-137B	W	Muscoy	10,001	N	--	--	--	--	--	--	--	--	--	--
	MW-137C	W	Muscoy	10,001	N	--	--	--	--	--	--	--	--	--	--
	MW-138A	A	Muscoy	11,237	N	--	--	--	--	--	--	--	--	--	--
Test Start Date:	MW-138B	W	Muscoy	11,237	N	--	--	--	--	--	--	--	--	--	--
January 13, 2003	MW-138C	W	Muscoy	11,237	N	--	--	--	--	--	--	--	--	--	--
	MW-139A	A	Muscoy	12,885	N	--	--	--	--	--	--	--	--	--	--
Average Discharge Rate(Q):	MW-139B	W	Muscoy	12,885	N	--	--	--	--	--	--	--	--	--	--
2,110 gpm	MW-139C	W	Muscoy	12,885	N	--	--	--	--	--	--	--	--	--	--
	Garner Park-A (4S)	A	Muscoy	9,137	N	--	--	--	--	--	--	--	--	--	--
Pump On: 1/13/03 15:00	Garner Park-B (5S)	A	Muscoy	9,137	N	--	--	--	--	--	--	--	--	--	--
Pump Off: 1/17/03 14:00	Garner Park-C (6S)	W	Muscoy	9,137	N	--	--	--	--	--	--	--	--	--	--
	Meadowbrook Park-A (2S)	A	Newmark UWBM	5,642	N	--	--	--	--	--	--	--	--	--	--
Duration Pumped:	Meadowbrook Park-B (3S)	A	Newmark UWBM	5,642	N	--	--	--	--	--	--	--	--	--	--
95 hrs.	Meadowbrook Park-C (4S)	W	Newmark LWBM	5,642	Y	Y	2.63	Y	Theis	40,500	52	0.00047	Y	37,300	48
	Sierra High School-A (8S)	A	Newmark (?) WBM	2,299	N	--	--	--	--	--	--	--	--	--	--
Estimated	Sierra High School-B (7S)	W	Newmark (?) WBM	2,299	Y	N	2.74	Y	Cooper-Jacob	46,600	60	0.0017	N	--	--
Saturated Thickness (ft):	Sierra High School-C (6S)	W	Newmark (?) WBM	2,299	Y	N	3.07	Y	Cooper-Jacob	44,900	58	0.0013	N	--	--
780	Antil #1	NA	NA	4,885	N	--	--	--	--	--	--	--	--	--	--
	Baseline & California	W	Muscoy	14,748	N	--	--	--	--	--	--	--	--	--	--
	Gilbert Street	W	Newmark	2,924	NM	--	--	--	--	--	--	--	--	--	--
	Olive and Garner	W	Muscoy	9,169	NM	--	--	--	--	--	--	--	--	--	--
	7th Street	W	Newmark LWBM	2,015	Y	Y	3.27	Y	Theis	53,700	69	0.00070	Y	46,200	59
	10th and J	W	Muscoy	7,207	N	--	--	--	--	--	--	--	--	--	--
	11th and E	NA	NA	3,994	NM	--	--	--	--	--	--	--	--	--	--
	16th Street	W	Newmark LWBM	3,662	Y	Y	1.44	Y	Theis	66,000	85	0.00066	Y	64,900	83
	19th Street #2	W	Muscoy	14,873	NM	--	--	--	--	--	--	--	--	--	--
	Rialto #5	NA	NA	15,204	NM	--	--	--	--	--	--	--	--	--	--
									Distance versus Drawdown	49,600	64	0.0014	--	--	--
									Count	25	25	24	--	19	19
									Minimum	40,500	52	0.00025	--	30,600	39
									Maximum	78,800	101	0.0020	--	64,900	83
									Average	56,700	73	0.00091	--	50,800	65
									Geometric Mean	55,900	72	0.00083	--	49,900	64
									Standard Deviation	9,210	12	0.00041	--	9,580	12

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) Datalogger Malfunction; data currupted

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

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