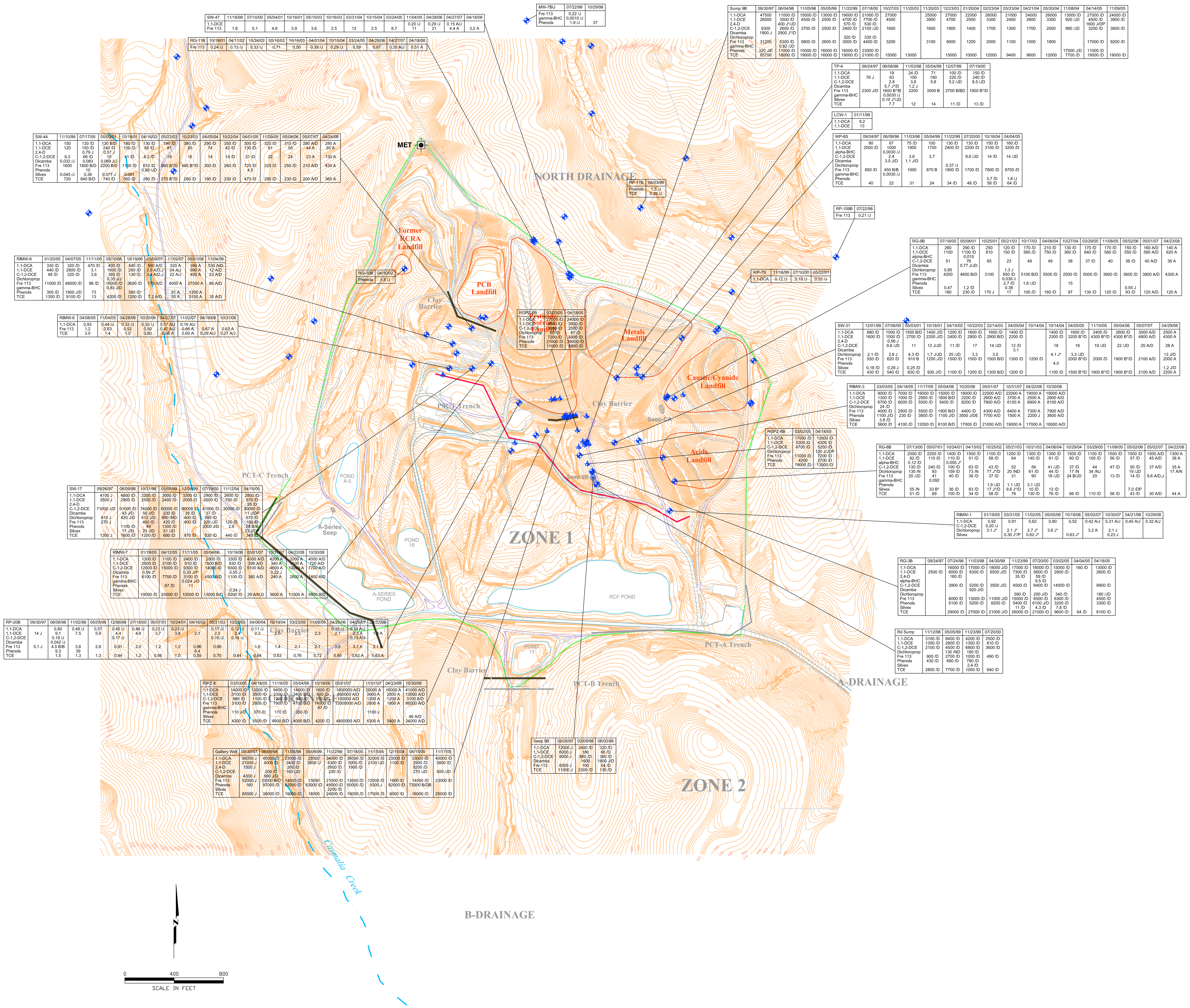

SW-47	11/18/99	07/10/00	05/04/01	10/18/01	05/15/03	10/16/03	03/31/04	10/15/04	03/24/05	11/04/05	04/28/06	04/27/07	04/18/08
1,1-DCE										0.20 /J	0.29 /J	0.15 A/J	
Fre 113	1.6	5.1	4.6	3.9	3.6	2.5	12	2.5	8.7	11	21	4.4 A	3.2 A

RG-11B	10/19/01	04/11/02	10/24/02	05/16/03	10/16/03	04/01/04	10/15/04	03/24/05	04/28/06	04/27/07	04/18/08
Fre 113	0.24 /J	0.13 /J	0.33 /J	0.71	0.50	0.39 /J	0.29 /J	0.59	0.67	0.35 A/J	0.51 A

MW-7BU	07/22/98	10/29/98
Fre 113	0.22 /J	
gamma-BHC	0.0010 /J	
Phenols	1.9 /J	37

Sump 9B	09/30/97	06/04/98	11/05/98	05/05/99	11/22/99	07/18/00	10/27/03	11/20/03	11/20/03	12/23/03	01/20/04	02/23/04	03/23/04	04/21/04	05/20/04	11/08/04	04/14/05	11/09/05
1,1-DCA	47500	11000 /D	15000 /D	13000 /D	19000 /D	21000 /D	27000		25000	27000	22000	26000	21000	24000	26000	13000 /D	27000 /D	24000 /D
1,1-DCE	26000	3500 /D	4500 /D	2500 /D	4700 /D	7700 /D	4500		3900	4700	2500	3300	2400	2600	3300	920 /JD	4500 /D	3900 /D
2,4-D		400 J*/JD			570 /D	530 /D											1600 J/DP	
C-1,2-DCE	9300	2600 /D	3700 /D	2500 /D	2400 /D	2100 /JD	1600		1600	1900	1400	1700	1300	1700	2000	980 /JD	3200 /D	3600 /D
Dicamba	1900 J	2900 J*/D																
Dichloroprop					320 /D	330 /D												
Fre 113	31200	5300 /D	5800 /D	2600 /D	3000 /D	4400 /D	3200		3100	5600	1200	2000	1100	1000	1800		17000 /D	9200 /D
gamma-BHC		0.82 /JD																
Phenols	320 J/E	11000 /D	10000 /D	16000 /D	16000 /D	23000 /D										17000 J/D	11000 /D	
TCE	85700	18000 /D	19000 /D	16000 /D	19000 /D	21000 /D	15000	13000		15000	10000	12000	9400	9600	12000	7700 /D	19000 /D	19000 /D

TP-4	09/24/97	06/08/98	11/03/98	05/04/99	12/07/99	07/19/00
1,1-DCA		19	24 /D	71	100 /D	150 /D
1,1-DCE	76 J	63	100	190	220 /D	240 /D
C-1,2-DCE		2.8	3.8	5.8	5.2 /JD	8.5 /JD
Dicamba		5.7 J*/D	1.2 J			
Fre 113	2300 J/D	1600 B*/B	2200	3500 B	2700 B/BD	1900 B*/D
gamma-BHC		0.0030 /J				
Silvex		0.10 J*/JD				
TCE		7.7	12	14	11 /D	13 /D

LCW-1	01/11/99
1,1-DCA	9.2
1,1-DCE	13

WP-8S	09/24/97	06/08/98	11/03/98	05/04/99	11/22/99	07/20/00	10/18/04	04/04/05
1,1-DCA	90	67	75 /D	100	130 /D	130 /D	150 /D	160 /D
1,1-DCE	2500 /D	1000	1900	1700	2400 /D	2200 /D	3100 /D	3200 /D
alpha-BHC		0.0030 /J						
C-1,2-DCE		2.4	3.6	3.7		9.6 /JD	14 /D	14 /JD
Dicamba		3.5 J/D	1.1 J/D					
Dichloroprop					0.37 /J			
Fre 113	850 /D	450 B/B	1000	870 B	1800 /D	1700 /D	7800 /D	9700 /D
gamma-BHC		0.0030 /J						
Phenols							3.7 /D	1.8 /J
TCE	40	22	31	24	34 /D	48 /D	58 /D	64 /D

RP-17B	06/03/98
Phenols	1.5 /J
TCE	0.26 /J

RP-109B	07/22/98
Fre 113	0.21 /J

RG-9B	07/18/00	05/08/01	10/25/01	05/21/03	10/17/03	04/06/04	10/27/04	03/29/05	11/08/05	05/02/06	05/01/07	04/23/08
1,1-DCA	260	290 /D	250	120 /D	170 /D	210 /D	130 /D	170 /D	170 /D	150 /D	160 A/D	140 A
1,1-DCE	1100	1100 /D	810	150 /D	580 /D	750 /D	360 /D	640 /D	580 /D	550 /D	580 A/D	620 A
alpha-BHC		0.015										
C-1,2-DCE	51	76	65	23	49	49	38	37 /D	40	36 /D	40 A/D	36 A
Dicamba		0.77 /J/JD										
Dichloroprop	0.85			1.3 J								
Fre 113	4200	4600 B/D	3100	850 /D	5100 B/D	5500 /D	2500 /D	5000 /D	3900 /D	3600 /D	3900 A/D	4300 A
gamma-BHC				0.030 J								
Phenols				2.7 /D	1.8 /JD		15					
Silvex	0.47	1.2 /D		0.38						0.55 J		
TCE	180	230 /D	170 J	17	100 /D	160 /D	97	130 /D	120 /D	93 /D	120 A/D	120 A

WP-7S	11/18/99	07/10/00	05/02/01
1,1-DCA	0.12 /J	0.19 /J	0.32 /J

SW-31	12/01/99	07/06/00	05/03/01	10/18/01	04/15/02	10/22/03	22/14/03	04/05/04	10/14/04	10/14/04	04/05/05	11/10/05	05/04/06	05/07/07	04/29/08
1,1-DCA	880 /D	1000 /D	1500 B/D	1400 J/D	1200 /D	1600 /D	1600 /D	1400 /D		1400 /D	1600 /D	2400 /D	2600 /D	3000 A/D	2500 A
1,1-DCE	1600 /D	1500 /D	2700 /D	2200 J/D	2400 /D	2800 /D	2900 B/D	2200 /D		2300 /D	3200 B*/D	4300 B*/D	4300 B*/D	4800 A/D	4300 A
2,4-D		0.56 J													
C-1,2-DCE		9.8 /JD	11	12 J/JD	11 /D	17	14 /JD	12 /D		18	18	19 /JD	22 /JD	25 A/D	28 A
Dicamba								3.1							
Dichloroprop	2.1 /D	3.9 J	4.3 /D	1.7 J/JD	25 /JD	3.3	3.0			4.1 J*	3.3 /JD				13 J/D
Fre 113	550 /D	620 /D	910 B	1200 J/D	1500 /D	1500 /D	1500 B/D	1300 /D	1200 /D		2000 B*/D	2000 /D	1900 B*/D	2100 A/D	2000 A
Phenols										4.0					
Silvex	0.16 /D	0.28 J	0.25 /D												1.2 J/D
TCE	430 /D	540 /D	830 /D	930 J/D	1100 /D	1200 /D	1300 B/D	1200 /D		1100 /D	1500 B*/D	1900 B*/D	1900 B*/D	2100 A/D	2200 A

RIMW-3	03/03/05	04/18/05	11/17/05	05/04/06	10/20/06	05/01/07	10/31/07	04/22/08	10/30/08
1,1-DCA	9000 /D	7000 /D	16000 /D	15000 /D	18000 /D	22000 A/D	22000 A	19000 A	19000 A/D
1,1-DCE	1300 /D	1000 /D	2900 /D	1800 B/D	2200 /D	2600 A/D	3700 A	2500 A	2800 A/D
C-1,2-DCE	6700 /D	6000 /D	5500 /D	5400 /D	8200 /D	7800 A/D	6100 A	8900 A	8100 A/D
Dichloroprop	24 /D								
Fre 113	4000 /D	2900 /D	5500 /D	1900 B/D	4400 /D	4300 A/D	8400 A	7300 A	7900 A/D
Phenols	1100 J/D	230 /D	3800 /D	1100 J/D	3500 J/DE	7700 A/D	1500 A	2200 J	3600 A/D
Silvex	3.8 /D								
TCE	5600 /D	4100 /D	12000 /D	8100 B/D	17000 /D	21000 A/D	19000 A	17000 A	18000 A/D

RGPZ-5B	03/03/05	04/18/05
1,1-DCA	27000 /D	24000 /D
1,1-DCE	4500 /D	3900 /D
C-1,2-DCE	3000 /D	2000 /D
Dichloroprop	65 /D	87 /D
Fre 113	7200 /D	4900 /D
Phenols	21000 /D	29000 /D
TCE	11000 /D	8900 /D

RG-10B	04/10/02
Phenols	1.5 /J

RGPZ-6B	03/02/05	04/18/05
1,1-DCA	17000 /D	13000 /D
1,1-DCE	5300 /D	4200 /D
C-1,2-DCE	6700 /D	5200 /D
Dichloroprop		120 J/JDP
Fre 113	11000 /D	7200 /D
Phenols	4200	2700 /D
TCE	19000 /D	13000 /D

RG-8B	07/13/00	05/07/01	10/24/01	04/15/02	10/25/02	05/21/03	10/21/03	04/06/04	10/29/04	03/29/05	11/08/05	05/02/06	05/02/07	04/22/08
1,1-DCA	2000 /D	2200 /D	1400 /D	1500 /D	1100 /D	1200 /D	1300 /D	1300 /D	1500 /D	1100 /D	1500 /D	1500 /D	1500 A/D	1300 A
1,1-DCE	82 /D	110 /D	110 /D	51 /D	58 /D	64	140 /D	61 /D	60 /D	100 /D	56 /D	57 /D	45 A/D	38 A
alpha-BHC	0.12 /D		0.055 J*											
C-1,2-DCE	130 /D	240 /D	100 /D	63 /D	43 /D	52	56	41 /JD	37 /D	44	47 /D	50 /D	37 A/D	35 A
Dichloroprop	130 /N	93	159 /D	73 /N	77 J*/D	20 /ND	61 /D	44 /D	17 /N	34 /NJ		19 /JD		17 A/N
Fre 113	20 /JD	41	40 /D	38 /D	37 /D	31	90	18 /JD	24 B/JD	20	13 /D	14 /D	9.6 A/D,J	
gamma-BHC		0.092												
Phenols					1.9 /JD	1.1 /JD	3.1 /JD							
Silvex	55 /N	33 B*	36 /D	83 /D	17 J*/D	9.6 J*/D	10 /D	12 /D				7.0 /DP		
TCE	51 /D	69	100 /D	34 /D	58 /D	76	130 /D	76 /D	66 /D	110 /D	56 /D	43 /D	30 A/D	44 A

RIMW-1	01/19/05	03/31/05	11/02/05	05/05/06	10/19/06	05/02/07	10/30/07	04/21/08	10/29/08
1,1-DCA	0.92	0.91	0.62	0.80	0.52	0.42 A/J	0.31 A/J	0.45 A/J	0.32 A/J
C-1,2-DCE	0.20 /J								
Dichloroprop	3.1 J*	2.1 J*	2.7 J*	3.6 J*		3.2 A	2.1 J		
Silvex		0.30 J*/P	0.62 J*		0.63 J*		0.23 J		

RG-3B	09/24/97	07/24/98	11/03/98	04/30/99	11/23/99	07/20/00	03/02/05	04/04/05	04/18/05
1,1-DCA		16000 /D	17000 /D	18000 J/D	17000 /D	16000 /D	15000 /D	160 /D	13000 /D
1,1-DCE	2500 /D	6000 /D	8300 /D	6500 J/D	7300 /D	5600 /D	2800 /D		2600 /D
2,4-D		160 /D			35 /D	59 /D			
alpha-BHC						9.5 /D			
C-1,2-DCE		3900 /D	5200 /D	3500 J/D	4500 /D	6400 /D	14000 /D		9900 /D
Dicamba			920 J/D						
Dichloroprop					390 /D	200 J/D	340 /D		180 /JD
Fre 113		8000 /D	13000 /D	11000 J/D	15000 /D	6500 /D	6300 /D		4500 /D
Phenols		5100 /D	5200 /D	8200 /D	5400 /D	6100 J/D	3200 /D		3300 /D
Silvex					11 /D	4.3 /D	7.8 /D		
TCE		29000 /D	27000 /D	21000 J/D	26000 /D	21000 /D	9600 /D	64 /D	8100 /D

Rd Sump	11/12/98	05/05/99	11/23/99	07/20/00
1,1-DCA	3100 /D	8400 /D	4200 /D	2500 /D
1,1-DCE	1300 /D	2800 /D	1300 /D	810 /D
C-1,2-DCE	2100 /D	4500 /D	6800 /D	3600 /D
Dichloroprop		130 /ND	180 /D	
Fre 113	900 /D	2700 /D	1000 /D	490 /D
Phenols	430 /D	690 /D	780 /D	
Silvex			2.4 /D	
TCE	2800 /D	7700 /D	1000 /D	940 /D

Seep 9B	09/26/97	02/09/98	06/03/98
1,1-DCA	12000 J	2400 /D	320 /D
1,1-DCE	6000 J	180	66 /D
C-1,2-DCE	9000 J	860 /D	380 /D
Dicamba		1600	1800 J/D
Fre 113	6500 J	160	54 /D
TCE	11000 J	2300 /D	130 /D

SW-44	11/10/99	07/17/00	05/03/01	10/18/01	04/16/02	05/22/03	10/23/03	04/05/04	10/22/04	04/01/05	11/09/05	05/08/06	05/07/07	04/24/08
1,1-DCA	150	130 /D	130 B/D	180 /D	130 /D	190 /D	380 /D	290 /D	350 /D	300 /D	320 /D	310 /D	280 A/D	280 A
1,1-DCE	120	150 /D	240 /D	100 /D	58 /D	81	55	74	42 /D	130 /D	61	55	44 A	93 A
2,4-D		0.79 J	0.57 J											
C-1,2-DCE	9.3	68 /D	10	41 /D	8.2 /D	19	16	14	14 /D	21 /D	22	24	23 A	130 A
Dicamba	0.032 /J	0.083	0.069 J/J											
Fre 113	1600	1800 B/D	2200 B/D	1100 /D	610 /D	660 B*/D	460 B*/D	300 /D	260 /D	720 /D	320 /D	250 /D	210 A/D	430 A
Phenols		10			0.89 /JD					4.5				
Silvex	0.045 /J	0.36	0.077 J	0.091										
TCE	720	840 B/D	740 /D	560 /D	280 /D	270 B*/D	280 /D	190 /D	230 /D	470 /D	290 /D	230 /D	200 A/D	360 A

RIMW-8	01/20/05	04/07/05	11/11/05	05/10/06	10/19/06	05/09/07	11/02/07	05/01/08	11/04/08
1,1-DCA	330 /D	320 /D	470 /D	400 /D	540 /D	560 A/D	520 A	390 A	530 A/D
1,1-DCE	440 /D	2800 /D	3.1	1600 /D	280 /D	2.0 A/D,J	24 A/J	990 A	12 A/D
C-1,2-DCE	48 /D	220 /D	3.6	380 /D	130 /D	3.4 A/D,J	22 A/J	400 A	23 A/D
Dichloroprop				0.35 J/J					
Fre 113	11000 /D	48000 /D	96 /D	16000 /D	3600 /D	170 A/D	4000 A	27000 A	86 A/D
gamma-BHC				0.83 J/D					
Phenols	300 /D	1900 J/D	73		580 /D		91 A	1200 A	
TCE	1300 /D	9100 /D	13	4200 /D	1200 /D	7.2 A/D	50 A	3100 A	35 A/D

RIMW-6	04/08/05	11/04/05	04/28/06	10/20/06	04/27/07	11/02/07	04/18/08	10/31/08
1,1-DCA	0.93	0.44 /J	0.33 /J	0.30 /J	0.17 A/J	0.16 A/J		
Fre 113	1.2	0.63	0.52	0.50	0.42 A/J	0.66 A	0.67 A	0.62 A
TCE	3.0	1.4	1.0	0.80	0.56 A	0.60 A	0.29 A/J	0.27 A/J

SW-17	09/26/97	06/09/98	10/31/98	05/05/99	12/08/99	07/19/00	11/12/04	04/15/05
1,1-DCA	4100 J	4800 /D	3200 /D	3000 /D	3300 /D	2900 /D	2600 /D	2800 /D
1,1-DCE	3500 J	2900 /D	2500 /D	2400 /D	2000 /D	2000 /D	790 /D	970 /D
2,4-D								28 /D
C-1,2-DCE	71000 J/D	91000 /D	74000 /D	60000 /D	60000 /D	41000 /D	30000 /D	30000 /D
Dicamba		43 J/D	50 J/D	230 /D	28 /D	37 /D		11 J/DP
Dichloroprop	810 J	420 J/D	612 J/D	850 /ND	400 /D	990 /D		670 /D
Fre 113	270 J		400 /D	420 /D	400 /D	220 /JD	120 /D	180 /D
Phenols		1100 /D	49	1300 /D		3300 J/D	2.6	28 B/B
Silvex		17 J/D	23 J/D	51 /JD				23 J/DP
TCE	1300 J	1600 /D	1200 /D	680 /D	970 /D	530 /D	440 /D	340 /D

RIMW-7	01/18/05	04/12/05	11/11/05	05/04/06	10/18/06	05/01/07	10/31/07	04/22/08	10/30/08
1,1-DCA	1300 /D	1100 /D	2400 /D	2800 /D	3300 /D	4300 A/D	4200 A	3200 A	4000 A/D
1,1-DCE	2000 /D	2100 /D	910 /D	1500 B/D	830 /D	390 A/D	340 A	1100 A	720 A/D
C-1,2-DCE	12000 /D	15000 /D	9300 /D	14000 /D	9300 /D	5100 A/D	4600 A	13000 A	7700 A/D
Dicamba	0.59 J*		0.33 J/P		0.55 J		0.22 J		
Fre 113	8100 /D	7700 /D	3100 /D	4500 B/D	1100 /D	380 A/D	240 A	2600 A	1400 A/D
gamma-BHC			0.024 J/D						
Phenols		67 /D	11						
Silvex					0.24 J				
TCE	19000 /D	25000 /D	10000 /D	13000 B/D	6200 /D	39 A/N,D	3600 A	11000 A	5900 A/D

RP-20B	09/30/97	06/06/98	11/02/98	05/05/99	12/06/99	07/18/00	05/07/01	10/24/01	04/16/02	05/21/03	10/23/03	04/06/04	10/19/04	03/23/05	11/08/05	04/26/06	04/26/07	04/17/08
1,1-DCA		0.60	0.49 /J	0.57	0.45 /J	0.46 /J	0.23 /J	0.23 /J		0.17 /J	0.12 /J	0.11 /J				0.15 /J	0.14 A/J	
1,1-DCE	14 J	9.1	7.5	5.9	4.4	4.6	3.7	3.8	2.1	2.5	2.4	2.3	2.0	2.3	2.3	2.1	2.1 A	1.8 A
C-1,2-DCE		0.19 /J			0.17 /J					0.10 /J	0.14 /J						0.13 A/J	
Dicamba		0.042 /J																
Fre 113	5.1 J	4.5 B/B	3.6	2.8	0.91	2.0	1.2	1.2	0.96	0.96		1.6	1.4	2.1	2.1	3.6	3.1 A	2.1 A
Phenols		9.3	39						6.4									
TCE		1.5	1.3	1.3	0.94	1.2	0.66	1.0	0.59	0.70	0.64	0.64	0.63	0.76	0.72	0.66	0.62 A	0.63 A

RIPZ-8	03/03/05	04/18/05	11/18/05	05/04/06	10/19/06	05/01/07	11/01/07	04/23/08	10/30/08
1,1-DCA	14000 /D	13000 /D	9400 /D	14000 /D	1600 /D	1800000 A/D	20000 A	16000 A	41000 A/D
1,1-DCE	3100 /D	3500 /D	3300 /D	3400 B/D	900 /D	880000 A/D	3900 A	2500 A	13000 A/D
C-1,2-DCE	980 /D	1100 /D	1200 /D	840 /D	110 /JD	100000 A/D	1200 A	1200 A	3100 A/D
Fre 113	3100 /D	2800 /D	7900 /D	4700 B/D	14000 /D	13000000 A/D	2600 A	1800 A	86000 A/D
gamma-BHC					87 /D				
Phenols	110 J/D	370 /D	170 /D	350 /D			1100 J		
Silvex									46 A/D
TCE	4300 /D	5500 /D	4600 B/D	4000 B/D	4200 /D	4800000 A/D	6300 A	5400 A	34000 A/D

Gallery Well	09/30/97	06/09/98	11/05/98	05/06/99	11/22/99	07/18/00	11/15/04	12/15/04	04/13/05	11/17/05
1,1-DCA	98000 J	45000 /D	23000 /D	28000	34000 /D	36000 /D	32000 /D	23000 /D	33000 /D	40000 /D
1,1-DCE	21000 J	4000 /D	3400 /D	3800 /J	4300 /D	5000 /D	2100 /JD	1100 /D	2900 /D	3800 /D
2,4-D	1500 J		260 /D		2600 /D	1900 /D			9200 /D	
C-1,2-DCE		200 /D	160 /JD		230 /D				270 /JD	500 /JD
Dicamba	4300 J	960 J/D								
Fre 113	52000 J	33000 B/D	14000 /D	15000	21000 /D	13000 /D	12000 /D	1600 /D	14000 /D	23000 /D
Phenols	160	97000 /D	63000 /D	63000 /D	49000 /D	50000 /D	9300 J	82000 /D	73000 B/DB	
Silvex					2200 /D					
TCE	85000 J	38000 /D	19000 /D	18000	24000 /D	19000 /D	17000 /D	9000 /D	16000 /D	25000 /D

LEGEND

- Burial trench
- Landfill Boundaries
- Facility and Zone 1 boundary
- Perimeter source control trench (PSCT)
- Plume capture collection trench (PCT)
- Clay Barrier
- Creek
- Pond outline
- MW-15C Upper HSU monitoring well
- RAP-2A Upper HSU extraction point
- POND18 Upper HSU surface water sample
- MET Meteorological Station

B-30	10/17/96
1,2-DCB	580

Well Number
Date (Month/Day/Year)
Groundwater Concentrations in micrograms per liter
Chemical

List of chemical abbreviations and data qualifiers provided in text.

No results posted indicates no chemicals reported above detection limits.

"J" indicates estimated value. "D" indicates diluted sample. "N" indicates TIC. "B" indicates blank-qualified result.

The widths of the clay barriers, PSCT, and PCT trenches are exaggerated for presentation purposes.

NOTES:

Zone 1 boundary (green) is approximate and includes the area within the facility boundary.

The twelve representative chemicals are: Freon 113, TCE, 1,1-DCA, 1,1-DCE, and PCE, Phenol, Dichlorprop, Dicamba, 2,4,5-TP(Silvex), 2,4-D, Alpha-BHC and Lindane. The list of representative chemicals was developed in *Casmalia RGMEW Seasonal Variability Evaluation Technical Memorandum* dated June 28, 2002 and prepared by Harding ESE.

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NO.	DATE	REVISIONS	BY	CHK

DRAWN: PCB | PROJECT NO: 4088097619
ENGINEER: | SCALE: 1"= 400'
CHECKED: NAM | APPROVED: WJF
DATE: 1/2011 | DATE: 1/2011

Final Remedial Investigation Report

Casmalia Resources Superfund Site
Casmalia, California

Twelve Representative Chemicals in the Upper HSU North of the PSCT 1997 through October 2008

FIGURE **G-2**
SHEET: **1** OF **1**
REVISION NUMBER: 0
DATE: January 2011