

Appendix B. Summary of Surface Water Monitoring for Diazinon, Chlorpyrifos and Toxicity

		Diazinon 0.05 - 0.08 ug/L		Chlorpyrifos 0.014 - 0.083 ug/L		Daphnid 96-hour						Daphnid 7-day							Pimephales promelas 96-hour Survival			Pimephales promelas 7-day Survival and Growth					
		GMCS (8141A)	ELISA	GMCS (8141A)	ELISA	Mean % survival Control	%Survival in 100% Concentration	LC ₅₀	NOEC	LOEC	TUa	LT50	Mean % survival Control	LC ₅₀	NOEC Survival	LOEC Survival	NOEC Reproduction	TUc Survival	Tuc Sublethal (Reproduction)	Mean % survival Control	LC ₅₀	TUa	Mean % survival Control	LC ₅₀	NOEC Survival	NOEC Growth	TUc
Station	Sample Date	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%		hours	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
SD8(1)	3/5/1994											36		55	30		30	3.33	3.33								
SD8(1)	#####													17.7	12.5		25	8	4						-	-	-
SD8(1)	#####													-	-		-								-	-	-
SD8(1)	1/11/1995													50	25		50	4	2						>100	>100	6.25
SD8(1)	11/1/1995					100		35.36		2.83	5.5		100	35	25		25	4	4								
SD8(1)	2/14/1995													35.4	25		50	4	2						>100	>100	<6.25
SD8(1)	4/16/1995													37.5	25		50	4	2								
SD8(1)	1/22/1996											65	100	71	50		50	2	2								
SD8(1)	2/1/1996																			>100			96	>100	>100	50	2
SD8(1)	3/5/1996					100		55												>100	0.62		98	>100	100	100	1
SD8(1)	12/9/1996					100	0	64					90	39	30		30	3.33	3.33	98	>100	0.2	96	>100	100	100	1/1
SD8(1)	1/16/1997					100	0	63			43		100	54	44		<23	>4.3	>4.3	100	>100	0.2		>100	100	100	1/1
SD8(1)	#####					100		36					100	33	23		23	4.35	4.35	98	>100	0.0	96	>100	100	67	1/1.49
SD8(1)	12/6/1997					100		81.8					100	54.0	44		44	2.27	2.27	100	>100	0.0	98	>100	100	100	1/1
SD8(1)	12/9/1997							63						39.0	30		30	3.33	3.33		>100			>100	100	100	1
SD8(1)	11/8/1998	0.46		0.1				70.5						48.4	44		<20	2.27	>5					>100	100	<20	1/>5
SD8(1)	1/25/1999	0.46						>100				100		67	67		67	1.49	1.49					>100	100	44Q	1/>5
SD8(1) [1(ss1)]	3/15/1999	0.53	0.54	<0.5	0.08			75	50	100	1.3	87		54	67		67	1.49	1.49								
SD8(1) [2(ss2)]	3/25/1999		0.51		0.10			79	50	100	1.3																
SD8(1) [3(ss3)]	4/6/1999		0.32		0.11			>100	>100	>100	<1.0																
SD8(1)	2/12/2000	0.27*		<0.5		90		>100		NA	<1.0	168	90	78.5	67		44	1.49	2.27				90	>100			
SD8(1)	2/21/2000	0.35**		<0.5		100		>100		NA	<1.0	>192	90	>100	100		100	1	1								
SD8(1)	3/5/2000	0.20**		0.04*		100		100			1		90	>100	100		100	1	1								
SD8(1)	1/8/2001		0.7783		0.087			59			1.69																
SD8(1)	2/13/2001		0.2381		0.0467			100	>100		<1.0																
SD8(1)	#####		1.0527		0.0972	95	0	25	<50	50	>2																
SD8(2)	2/12/2000					100	100	>100			>100	<1.0															
SD8(2)	2/21/2000	0.0337		0.433		100	100	>100			>100	<1.0															
SD8(2)	1/8/2001		0.5312		0.063			5			86																
SD8(2)	2/13/2001		0.3441		0.0293			100	>100		<1.0																
SD8(2)	#####		1.0397		0.0630	95	0	25	<50	50	>2																
SD8(3)	2/12/2000					100	65	>100			>100	<1.0															
SD8(3)	2/21/2000	0.0955		0.0429		100	100	>100			>100	<1.0															
SD8(3)	1/8/2001		0.642		0.0743			0			59																
SD8(3)	2/13/2001		0.2051		0.052			100	>100		<1.0																
SD8(3)	#####		0.6146		0.0738	95	0	25	<50	50	>2																
SD8(4)	2/12/2000	<1		<1																							
SD8(4)	2/21/2000	<1		<1																							
SD8(4)	2/23/2000																										
SD8(5)	2/12/2000																										
SD8(5)	2/21/2000					100	100	>100			>100	<1.0															
SD8(5)	1/8/2001		0.8086		0.092			0			81																
SD8(5)	2/13/2001		0.2184		0.0535			100	>100		<1.0																
SD8(5)	#####		0.9043		0.0527	95	90	>100	100	>100	1																

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		Diazinon 0.05 - 0.08 ug/L		Chlorpyrifos 0.014 - 0.083 ug/L		Daphnid 96-hour							Daphnid 7-day							Pimephales promelas 96-hour Survival			Pimephales promelas 7-day Survival and Growth				
		GMCS (8141A)	ELISA	GMCS (8141A)	ELISA	Mean % survival Control	%Survival in 100% Concentration	LC ₅₀	NOEC	LOEC	TUa	LT50	Mean % survival Control	LC ₅₀	NOEC Survival	LOEC Survival	NOEC Reproduction	TUc Survival	Tuc Sublethal (Reproduction)	Mean % survival Control	LC ₅₀	TUa	Mean % survival Control	LC ₅₀	NOEC Survival	NOEC Growth	TUC
Station	Sample Date	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%		hours	%	%	%	%	%	%	%	%	%		%	%	%	%	
SD8(6)	2/12/2000		0.3376		0.0717	100	80	>100		>100	<1.0																
SD8(6)	2/21/2000		0.0509		0.03400	95	100	>100		>100	<1.0																
SD8(6)	1/8/2001		0.5234		0.0684		55	>100			<1.0																
SD8(6)	2/13/2001		0.4101		0.01646		100	>100			<1.0																
SD8(6)	#####		1.0932		0.05090	95	0	25	<50	50	>2																

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		Diazinon 0.05 - 0.08 ug/L		Chlorpyrifos 0.014 - 0.083 ug/L		Daphnid 96-hour						Daphnid 7-day							Pimephales promelas 96-hour Survival			Pimephales promelas 7-day Survival and Growth					
		GMCS (8141A)	ELISA	GMCS (8141A)	ELISA	Mean % survival Control	%Survival in 100% Concentration	LC ₅₀	NOEC	LOEC	TUa	LT50	Mean % survival Control	LC ₅₀	NOEC Survival	LOEC Survival	NOEC Reproduction	TUc Survival	Tuc Sublethal (Reproduction)	Mean % survival Control	LC ₅₀	TUa	Mean % survival Control	LC ₅₀	NOEC Survival	NOEC Growth	TUc
Station	Sample Date	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%		hours	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
DPR(1)	1/8/2001		0.7899		0.082		0	59			1.69																
DPR(1)	2/13/2001		0.2765		0.0354		100	>100			<1.0																
DPR(1)	#####		0.8794		0.0514	95	0	65	50	75	2																
DPR(2)	1/8/2001		0.5173		0.084		0	87			1.15																
DPR(2)	2/13/2001		0.4624		0.0483		55	>100			<1.0																
DPR(2)	#####		1.3743		0.0550	95	0	58	50	75	2																
DPR(3)	1/8/2001		0.3709		0.1103		80	>100			<1.0																
DPR(3)	2/13/2001		0.0748		0.046		95	>100			<1.0																
DPR(3)	#####		0.6257		0.050	95	0	84	75	100	1.33																
DPR(4)	1/8/2001		0.5932		0.104		65	>100			<1.0																
DPR(4)	2/13/2001		0.3221		0.0611		100	>100			<1.0																
DPR(4)	#####		0.6222		0.0650	95	0	61	50	75	2																
NF-1	9/1/2000		0.0134		0.0133	100	100	>100		>100	<1.0																
NF-2	9/1/2000		0.0207		0.0151	100	100	>100		>100	<1.0																
NF-3	9/1/2000		0.1301		0.0274	100	100	>100		>100	<1.0																
NF-4	9/1/2000		0.0228		0.0417	100	0	≤25		50	4.00																
SF-1	9/1/2000		0.1043		0.0790	100	100	>100		>100	<1.0																
SD5	#####													35.4	25		25	4	4						-	-	-
SD5	#####													30.8	25		25	4	4						>100	>100	<6.25
SD5	1/11/1995													56.1	50		50	2	2						-	-	-
SD5	2/14/1995													70.7	50		50	2	2						>100	>100	6.25 1
SD5	1/22/1996						>100				<1.0	108		71	50		50	2	2								
SD5	2/1/1996						55				1.82	36		55	30		30	3.33	3.33		>100			>100	100	100	1
SD5	2/22/1996						>100				<1.0	>168		100	100		100	1	1								
SD5	3/5/1996												90		30	100	30	3.33	3.33		100	0.48	98	>100	100	100	1
SD5	#####					100	40	95			1.05	99	100	54	44		44	2.27	2.27	100	>100	0.21					
SD5	#####					100	0	82			1.22	60	100	54	44		44	2.27	2.27	98	>100	0.2					
SD5	#####					100		67			1.49		100		30		30	3.33	3.33	98	>100	0.0	96		100	100	1/1
SD5	#####					100	40	95			1.05		100		44		44	2.27	2.27	100	>100	0.21		>100	100	100	1
SD5	#####																			100	>100	0.2	98		100	100	1/1
SD5	12/6/1997					100		81.8			1.22		90		44		44	2.27	2.27	100	>100	0.2	98		100	100	1/1
SD5	3/26/1998					100		67			1.49				44		44	2.27	2.27	100	>100	0.0	100		100	100	1
SD5	11/8/1998	0.40		<0.05			>100				<1.0	117		44.8	30	<20	3.33				>100			>100	100	<20	1/5
SD5	1/25/1999	0.28					>100				<1.0	140		78.5	67	67	1.49	1.49			>100			>100	100	100Q	1/5
SD5	3/15/1999	0.41		<0.5			>100				<1.0	>168		>100	100	67	1	1.49									
SD5	2/12/2000	0.30*	0.2577	<0.5	0.0795	80		>100			<1.0		80	81.9	67	20	1.49	5				90	>100				
SD5	2/20/2000	0.39**		<0.5		100		>100			<1.0		80	>100	100	100	1	1									
SD5	3/5/2000	0.18		<0.5		100		>100			<1.0		100	>100	100	100	1	1									
AH1	11/8/1998	0.16		<0.05																							
AH1	1/31/1999	<0.50																									
AH1	3/15/1999	0.38		<0.5																							
AH1	1/25/2000	<0.5		<0.5																							
AH1	2/20/2000	0.47**		<0.5																							
AH1	3/5/2000	0.29		<0.05																							
SD13	#####							33			3.03	35		17	<23			>4.3									
SD13	12/9/1996					100	0	17			6.04		100		<23			>4.3									
SD13	#####							17			5.88	5.5		6	<23			>4.3									

[illegible]

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		Hyaella Survival 96-hour					Hyaella Survival 7-day						Strongylocentrotus purpuratus Sea Urchin Fertilization				Mysidopsis bahia 96-hour survival										
		Mean % survival Control	%Survival in 100% Concentration	LC ₅₀	LOEC	LT50	Mean % survival Control	%Survival in 100% Concentration	LC ₅₀	NOEC Survival	NOEC Survival/Growth	TUc Survival/Sublethal	EC50 (reduced fertilization)	NOEC	LOEC	TU	EC50	NOEC	LOEC	TU							
Station	Sample Date	%	%	%	%	hours	%	%	%	%	%		%	%	%		%	%	%								
SD8(1)	3/5/1994																										
SD8(1)	#####																										
SD8(1)	#####																										
SD8(1)	1/11/1995																										
SD8(1)	11/1/1995																										
SD8(1)	2/14/1995																										
SD8(1)	4/16/1995																										
SD8(1)	1/22/1996																										
SD8(1)	2/1/1996																										
SD8(1)	3/5/1996																										
SD8(1)	12/9/1996																										
SD8(1)	1/16/1997																										
SD8(1)	#####																										
SD8(1)	12/6/1997																										
SD8(1)	12/9/1997																										
SD8(1)	11/8/1998																										
SD8(1)	1/25/1999																										
SD8(1) [1(ss1)]	3/15/1999												46.6	12	25	2.2	>100	>100	>100	<1							
SD8(1) [2(ss2)]	3/25/1999												18.2	6	12.5	5.5	>100	>100	>100	<1							
SD8(1) [3(ss3)]	4/6/1999												27.7	6	12.5	3.6	>100	>100	>100	<1							
SD8(1)	2/12/2000	90	100	>100			125	80	40	81.8	100	100	1/1Q														
SD8(1)	2/21/2000	90	80	>100			>168	90	90	>100	100	100	1/1Q														
SD8(1)	3/5/2000	80	80	>100			>168	80	50	>100	100	100	1/1Q														
SD8(1)	1/8/2001		2	36																							
SD8(1)	2/13/2001		66	>100																							
SD8(1)	#####	100	4	33																							
SD8(2)	2/12/2000	94	8	49	<50																						
SD8(2)	2/21/2000	98	12	65	<50																						
SD8(2)	1/8/2001		0	39																							
SD8(2)	2/13/2001		18	68																							
SD8(2)	#####	100	2	27																							
SD8(3)	2/12/2000	94	4	30	<50																						
SD8(3)	2/21/2000	98	10	34	<50																						
SD8(3)	1/8/2001		26	50																							
SD8(3)	2/13/2001		22	52																							
SD8(3)	#####	100	0	65																							
SD8(4)	2/12/2000																										
SD8(4)	2/21/2000																										
SD8(4)	2/23/2000																										
SD8(5)	2/12/2000																										
SD8(5)	2/21/2000	98	32	77	<50																						
SD8(5)	1/8/2001		14	38																							
SD8(5)	2/13/2001		36	78																							
SD8(5)	#####	100	22	49																							

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		Hyaella Survival 96-hour					Hyaella Survival 7-day						Strongylocentrotus purpuratus Sea Urchin Fertilization				Mysidopsis bahia 96-hour survival			
		Mean % survival Control	%Survival in 100% Concentration	LC ₅₀	LOEC	LT50	Mean % survival Control	%Survival in 100% Concentration	LC ₅₀	NOEC Survival	NOEC Survival/Growth	TUc Survival/Sublethal	EC50 (reduced fertilization)	NOEC	LOEC	TU	EC50	NOEC	LOEC	TU
Station	Sample Date	%	%	%	%	hours	%	%	%	%	%		%	%	%		%	%	%	
SD8(6)	2/12/2000	94	34	74	<50															
SD8(6)	2/21/2000	98	52	>100	<50															
SD8(6)	1/8/2001		28	38																
SD8(6)	2/13/2001		84	>100																
SD8(6)	#####	100	16	49																

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		Hyaella Survival 96-hour					Hyaella Survival 7-day						Strongylocentrotus purpuratus Sea Urchin Fertilization				Mysidopsis bahia 96-hour survival			
		Mean % survival Control	%Survival in 100% Concentration	LC ₅₀	LOEC	LT50	Mean % survival Control	%Survival in 100% Concentration	LC ₅₀	NOEC Survival	NOEC Survival/Growth	TUc Survival/Sublethal	EC50 (reduced fertilization)	NOEC	LOEC	TU	EC50	NOEC	LOEC	TU
Station	Sample Date	%	%	%	%	hours	%	%	%	%	%		%	%	%		%	%	%	
DPR(1)	1/8/2001		28	67																
DPR(1)	2/13/2001		6	36																
DPR(1)	#####	100	72	>100																
DPR(2)	1/8/2001		32	71																
DPR(2)	2/13/2001		34	82																
DPR(2)	#####	100	26	68.5																
DPR(3)	1/8/2001		40	85																
DPR(3)	2/13/2001		88	>100																
DPR(3)	#####	100	78	>100																
DPR(4)	1/8/2001		12	52																
DPR(4)	2/13/2001		52	>100																
DPR(4)	#####	100	10	36.8																
NF-1	9/1/2000	100	82	>100	>100															
NF-2	9/1/2000	100	100	>100	>100															
NF-3	9/1/2000	100	98	>100	>100															
NF-4	9/1/2000	100	96	>100	>100															
SF-1	9/1/2000	100	96	>100	>100															
SD5	#####																			
SD5	#####																			
SD5	1/11/1995																			
SD5	2/14/1995																			
SD5	1/22/1996																			
SD5	2/1/1996																			
SD5	2/22/1996																			
SD5	3/5/1996																			
SD5	#####																			
SD5	#####																			
SD5	#####																			
SD5	#####																			
SD5	12/6/1997																			
SD5	3/26/1998																			
SD5	11/8/1998																			
SD5	1/25/1999																			
SD5	3/15/1999																			
SD5	2/12/2000	90	70	>100			80	70	>100	100	100Q	1/1Q								
SD5	2/20/2000	90	100	>100			80	90	>100	100	100Q	1/1Q								
SD5	3/5/2000	80	50	100			60	50	67	67	100Q	1.49/1Q								
AH1	11/8/1998																			
AH1	1/31/1999																			
AH1	3/15/1999																			
AH1	1/25/2000																			
AH1	2/20/2000																			
AH1	3/5/2000																			
SD13	#####																			
SD13	12/9/1996																			
SD13	#####																			

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		Hyaella Survival 96-hour					Hyaella Survival 7-day						Strongylocentrotus purpuratus Sea Urchin Fertilization				Mysidopsis bahia 96-hour survival			
		Mean % survival Control	%Survival in 100% Concentration	LC ₅₀	LOEC	LT50	Mean % survival Control	%Survival in 100% Concentration	LC ₅₀	NOEC Survival	NOEC Survival/Growth	TUc Survival/Sublethal	EC50 (reduced fertilization)	NOEC	LOEC	TU	EC50	NOEC	LOEC	TU
Station	Sample Date	%	%	%	%	hours	%	%	%	%	%		%	%	%		%	%	%	
SD13	#####																			
SD13	1/25/1999																			
SD13	3/15/1999																			
SD13	2/12/2000																			
SD13	2/20/2000																			
SD13	3/5/2000																			
SV1	12/9/1996																			
SV1	1/16/1997																			
SV1	#####																			
SV1	1/25/1999																			
SV1	3/15/1999																			
SV1	1/25/2000																			
SV1	3/5/2000																			
SV1	4/17/2000																			
La Bajada	4/18/2000																			
La Bajada	5/24/2000																			
Esc Creek	4/18/2000																			
Esc Creek	5/24/2000																			
2nd	2/16/2000																			
San Elijo JPA	2/16/2000																			
Ponto	2/16/2000																			
Ocean Cove	1/25/2000																			
Leucadia	1/25/2000																			
Garden View	1/25/2000																			
East																				
Manchester	2/23/2000																			
Saxony	2/23/2000																			
AC-CC	9/29/1998																			
AC-CC	11/8/1998																			
AC-CC	1/20/1999																			
AC-EC	9/29/1998																			
AC-EC	11/8/1998																			
AC-EC	1/20/1999																			
AC-DF	9/29/1998																			
AC-DF	11/8/1998																			
AC-DF	1/20/1999																			
AC-SC	9/29/1998																			
AC-SC	11/8/1998																			
AC-SC	1/20/1999																			
AC-PCH	9/29/1998																			
AC-PCH	11/8/1998																			
AC-PCH	1/20/1999																			