

SURFACE WATER MONITORING		Locations & timing		Techniques			
Analyte	Units	Monitoring locations	Monitoring start	Sampling method	Lab	Lab method	LOR
<b>Surface water flow</b>							
Water flow rate	L/sec	SW4,8,11,12	-	Field	-	-	-
<b>Group A - Physicochemical</b>							
pH	units	SW1 - SW12	-	Field	-	-	-
Electrical conductivity	uS/cm	SW1 - SW12	-	Field	-	-	-
Turbidity	NTU	SW1 - SW12	-	Field	-	-	-
Dissolved oxygen	%sat	SW1 - SW12	-	Field	-	-	-
Temperature	deg C	SW1 - SW12	-	Field	-	-	-
Redox (oxidation reduction potential)	mV	SW1 - SW12	-	Field	-	-	-
<b>Group B - General</b>							
Alkalinity - Total as CaCO <sub>3</sub>	mg/L	SW1 - SW12	27-Sep-06	Grab	NMI	MNW_B1	5
Oil & Grease	mg/L	SW1 - SW12	27-Sep-06	Grab	NMI	NW_S10B	5
Solids Total Dissolved	mg/L	SW1 - SW12	27-Sep-06	Grab	NMI	NW_B10A	100
Chemical Oxygen demand	mg/L	SW1 - SW12	27-Sep-06	Grab	NMI	NW_S3	3
Dissolved Organic Carbon	mg/L	SW1 - SW12	27-Sep-06	Grab	NMI	NW_S15	1
Solids Total Suspended	mg/L	SW1 - SW12		Grab	NMI	NW_S13	2
<b>Group C - Major cations and anions</b>							
Sodium	ug/L	SW2,3,8,11,12	27-Sep-06*	Grab	NMI	NT2_47	50
Calcium	ug/L	SW2,3,8,11,12	27-Sep-06*	Grab	NMI	NT2_47	5
Potassium	ug/L	SW2,3,8,11,12	27-Sep-06*	Grab	NMI	NT2_47	50
Magnesium	ug/L	SW2,3,8,11,12	27-Sep-06*	Grab	NMI	NT2_47	1
Sulphate	ug/L	SW2,3,8,11,12	27-Sep-06*	Grab	NMI	NWD10/NWB14	100
Chloride	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NWD3/NWB14	100
Fluoride as F	ug/L	SW2,3,8,11,12	27-Sep-06*	Grab	NMI	NW_B3	0.1

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<b>Group D - Nutrients</b>							
Nitrate-N	mg/L	SW2,3,8,11,12	27-Sep-06*	Grab	NMI	NW_B19	0.005
Nitrite-N	mg/L	SW2,3,8,11,12	27-Sep-06*	Grab	NMI	NW_B19	0.005
Nitrogen - total as N	mg/L	SW2,3,8,11,12	27-Sep-06*	Grab	NMI	NW_B23	0.05
Phosphorus total	ug/L	SW2,3,8,11,12	27-Sep-06*	Grab	NMI	NT2_47	50
Orthophosphate as P (FRP)	ug/L	SW2,3,8,11,12	27-Sep-06*	Grab	NMI	NW_S21	5
<b>Group E - Metals (standard)</b>							
Aluminium - Total	ug/L	SW1 - SW12 except SW10	27-Sep-06	Grab	NMI	NT2_47	5
Arsenic - Total	ug/L	SW1 - SW12 except SW10	27-Sep-06	Grab	NMI	NT2_247_251	0.5
Cadmium - Total	ug/L	SW1 - SW12 except SW10	27-Sep-06	Grab	NMI	NT2_47	0.1
Cobalt - Total	ug/L	SW1 - SW12 except SW10	27-Sep-06	Grab	NMI	NT2_47	0.2
Chromium - Total	ug/L	SW1 - SW12 except SW10	27-Sep-06	Grab	NMI	NT2_47	0.5
Copper - Total	ug/L	SW1 - SW12 except SW10	27-Sep-06	Grab	NMI	NT2_47	1
Iron - Total	ug/L	SW1 - SW12 except SW10	27-Sep-06	Grab	NMI	NT2_47	5
Manganese - Total	ug/L	SW1 - SW12 except SW10	27-Sep-06	Grab	NMI	NT2_47	0.5
Nickel - Total	ug/L	SW1 - SW12 except SW10	27-Sep-06	Grab	NMI	NT2_47	0.5
Lead - Total	ug/L	SW1 - SW12 except SW10	27-Sep-06	Grab	NMI	NT2_47	0.2
Zinc - Total	ug/L	SW1 - SW12 except SW10	27-Sep-06	Grab	NMI	NT2_47	1
<b>Group F - Metals (others)</b>							
Barium - Total	ug/L	SW1 - SW12 except SW10	27-Sep-06	Grab	NMI	NT2_47	1
Boron - Total	ug/L	SW1 - SW12 except SW10	27-Sep-06	Grab	NMI	NT2_47	10
Chromium VI*** - Total	ug/L	SW1 - SW12 except SW10	27-Sep-06	Grab	NMI	NW_D2	5
Mercury - Total	ug/L	SW1 - SW12 except SW10	27-Sep-06	Grab	NMI	NT2_47_244	0.1
Molybdenum - Total	ug/L	SW1 - SW12 except SW10	27-Sep-06	Grab	NMI	NT2_47	0.1
Antimony - Total	ug/L	SW1 - SW12 except SW10	27-Sep-06	Grab	NMI	NT2_47	0.1

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Selenium - Total	ug/L	SW1 - SW12 except SW10	27-Sep-06	Grab	NMI	NT2_47_251	0.1
Tin - Total	ug/L	SW1 - SW12 except SW10	27-Sep-06	Grab	NMI	NT2_47	2
Vanadium - Total	ug/L	SW1 - SW12 except SW10	27-Sep-06	Grab	NMI	NT2_47	0.5
<b>Group G - Organics (hydrocarbons)</b>							
TPH C6 - C9	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NGCMS_1121	25
TPH C10 - C14	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NGCMS_1112	25
TPH C15 - C28	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NGCMS_1112	100
TPH C29 - C36	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NGCMS_1112	100
Benzene	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NGCMS_1120	1
Toluene	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NGCMS_1120	1
Ethylbenzene	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NGCMS_1120	1
Xylenes	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NGCMS_1120	2
<b>Group H - Organics (others)</b>							
<i>Organochlorine Pesticides</i>							
HCB	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NR_19	0.1
Heptachlor	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NR_19	0.1
Heptachlor epoxide	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NR_19	0.1
Aldrin	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NR_19	0.1
gamma-BHC (Lindane)	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NR_19	0.1
alpha-BHC	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NR_19	0.1
beta-BHC	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NR_19	0.1
delta-BHC	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NR_19	0.1
trans-Chlordane	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NR_19	0.1
cis-Chlordane	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NR_19	0.1
Oxychlordane	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NR_19	0.1

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Dieldrin	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NR_19	0.1
p,p-DDE	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NR_19	0.1
p,p-DDD	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NR_19	0.1
p,p-DDT	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NR_19	0.1
Endrin	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NR_19	0.1
Endrin Aldehyde	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NR_19	0.1
Endrin Ketone	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NR_19	0.1
alpha-Endosulfan	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NR_19	0.1
beta-Endosulfan	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NR_19	0.1
Endosulfan Sulfate	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NR_19	0.1
Methoxychlor	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NR_19	0.1
<b><i>Organophosphate Pesticides</i></b>							
Demeton-S-Methyl	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NR_19	0.1
Dichlorvos	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NR_19	0.1
Diazinon	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NR_19	0.1
Dimethoate	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NR_19	0.1
Chlorpyrifos	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NR_19	0.1
Chlorpyrifos Methyl	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NR_19	0.1
Malathion	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NR_19	0.1
Fenthion	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NR_19	0.1
Azinphos Ethyl	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NR_19	0.1
Azinphos Methyl	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NR_19	0.1
Chlorfenvinphos (E)	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NR_19	0.1
Chlorfenvinphos (Z)	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NR_19	0.1
Ethion	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NR_19	0.1

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Fenitrothion	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NR_19	0.1
Parathion (Ethyl)	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NR_19	0.1
Parathion Methyl	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NR_19	0.1
Pirimiphos Ethyl	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NR_19	0.1
Pirimiphos Methyl	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NR_19	0.1
Atrazine	ug/L	SW2,3,8,11,12		Grab	NMI	NR_19	0.1
Hexazinone	ug/L	SW2,3,8,11,12		Grab	NMI	NR_19	0.1
Simazine	ug/L	SW2,3,8,11,12		Grab	NMI	NR_19	0.1
Metribuzin	ug/L	SW2,3,8,11,12		Grab	NMI	NR_19	0.1
Prometryn	ug/L	SW2,3,8,11,12		Grab	NMI	NR_19	0.1
<b><i>Poly Aromatic Hydrocarbons (PAH)</i></b>							
Naphthalene	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NGCMS_1111	0.01
Acenaphthylene	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NGCMS_1111	0.01
Acenaphthene	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NGCMS_1111	0.01
Fluorene	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NGCMS_1111	0.01
Phenanthrene	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NGCMS_1111	0.01
Anthracene	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NGCMS_1111	0.01
Fluoranthene	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NGCMS_1111	0.01
Pyrene	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NGCMS_1111	0.01
Benz(a)anthracene	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NGCMS_1111	0.01
Chrysene	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NGCMS_1111	0.01
Benzo(b)&(k)fluoranthene	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NGCMS_1111	0.02
Benzo(a)pyrene	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NGCMS_1111	0.01
Indeno(1,2,3-cd)pyrene	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NGCMS_1111	0.01
Dibenz(ah)anthracene	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NGCMS_1111	0.01



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Benzo(ghi)perylene	ug/L	SW2,3,8,11,12	27-Sep-06	Grab	NMI	NGCMS_1111	0.01
<b>PCDD/PCDF/PCB</b>							
Dioxin/furan/PCB (Lower bound)	TEF	SW2,3,8,11,12	27-Sep-06	Grab	NMI	AUTL_01	Variou s
Dioxin/furan/PCB (Middle bound)	TEF	SW2,3,8,11,12	27-Sep-06	Grab	NMI	AUTL_01	Variou s
*Sites SW4,5,7 first sampled 13 Feb 07							