

Report of Examination

None
07E0537; 3.1.1
Jenny McGuire

Dept of Environment and Conservation
P.O. Box 51
Wanneroo
WA 6946

Attention : Susan Jones

Report On:
9 samples received on 18/09/2007

CCWA ID	Material	Client Description
07E0537 / 001	water	ABP032
07E0537 / 002	water	ABP030
07E0537 / 003	water	ABP055
07E0537 / 004	water	ABP056
07E0537 / 005	water	ABP035
07E0537 / 006	water	ABP051
07E0537 / 007	water	ABP043
07E0537 / 008	water	ABP050
07E0537 / 009	water	ABP041

CCWA ID	07E0537/001	07E0537/002	07E0537/003	07E0537/004
Client ID	ABP032	ABP030	ABP055	ABP056
Sampled	11/09/2007	11/09/2007	11/09/2007	12/09/2007

Analyte	Unit				
Alkalinity	mg/L	5	25	170	305
Ca	mg/L	1.3	2.9	141	491
Cl	mg/L	44	67	9830	58300
CO3	mg/L	<1	<1	72	<1
Colour	TCU	4	82	140	17
ECond	mS/m	20.8	32.3	3150	14400
Fe	mg/L	0.049	0.10	0.006	<0.025
Hardness	mg/L	8	14	3400	16000
HCO3	mg/L	6	31	61	372
K	mg/L	4.9	5.9	81.4	688
Mg	mg/L	1.2	1.5	742	3680
Mn	mg/L	0.022	0.002	<0.001	0.018
Na	mg/L	28.6	53.7	5860	38900
N_NO3	mg/L	0.02	0.02	0.02	0.54
N_total	mg/L	1	1.9	2.1	7.7

**Chemistry Centre of Western Australia
Environmental Chemistry Section**

Report of Examination

CCWA ID	07E0537/001	07E0537/002	07E0537/003	07E0537/004
Client ID	ABP032	ABP030	ABP055	ABP056
Sampled	11/09/2007	11/09/2007	11/09/2007	12/09/2007

Analyte	Unit				
N_totsol	mg/L	1	1.7	1.9	7.3
pH		5.8	6.8	9.4	8
P_total	mg/L	0.03	0.04	0.03	0.01
P_totsol	mg/L	0.01	0.01	<0.01	<0.01
SiO2_Si	mg/L	3.5	2.4	0.5	32
SO4_S	mg/L	2.8	4.5	904	5590
Sr	mg/L	0.013	0.018	2.7	15
TDS_180C	mg/L	99	160	18000	120000
Turbidit	NTU	2	0.9	<0.5	3.9
alON_BAL	%	3.3	4.3	4.1	7
Chloro_a	mg/L	<0.001	<0.001	<0.001	<0.001
Chloro_b	mg/L	<0.001	<0.001	<0.001	<0.001
Chloro_c	mg/L	<0.001	<0.001	<0.001	<0.001
Phaeo_a	mg/L	<0.001	<0.001	<0.001	<0.001

CCWA ID	07E0537/005	07E0537/006	07E0537/007	07E0537/008
Client ID	ABP035	ABP051	ABP043	ABP050
Sampled	12/09/2007	13/09/2007	13/09/2007	13/09/2007

Analyte	Unit				
Alkaline	mg/L	130	235	100	310
Ca	mg/L	97.8	2.6	1140	54.5
Cl	mg/L	1300	535	44000	5260
CO3	mg/L	<1	<1	<1	186
Colour	TCU	19	50	6	20
ECond	mS/m	505	241	12300	1740
Fe	mg/L	0.12	0.20	0.10	0.006
Hardness	mg/L	540	26	10000	1300
HCO3	mg/L	134	287	122	<1
K	mg/L	31.5	9.8	643	89
Mg	mg/L	70.5	4.8	1840	277
Mn	mg/L	0.014	0.003	0.016	<0.001
Na	mg/L	770	408	32800	3190
N_NO3	mg/L	0.02	0.27	0.01	0.02
N_total	mg/L	2.7	10	3.2	1.2
N_totsol	mg/L	2.3	2.8	2.4	1
pH		8.6	8.1	7.5	9.8
P_total	mg/L	0.06	1.1	0.02	0.01
P_totsol	mg/L	0.03	0.32	<0.01	0.01
SiO2_Si	mg/L	0.7	16	0.8	0.7
SO4_S	mg/L	188	14.7	4850	394
Sr	mg/L	1	0.077	17	0.97

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Environmental Chemistry Section**

Report of Examination

CCWA ID	07E0537/005	07E0537/006	07E0537/007	07E0537/008
Client ID	ABP035	ABP051	ABP043	ABP050
Sampled	12/09/2007	13/09/2007	13/09/2007	13/09/2007

Analyte	Unit				
TDS_180C	mg/L	2800	1300	94000	10000
Turbidit	NTU	2.2	160	6.8	0.6
aION_BAL	%	2.4	-4	10	1.1
Chloro_a	mg/L	0.001		<0.001	<0.001
Chloro_b	mg/L	<0.001		<0.001	<0.001
Chloro_c	mg/L	<0.001		<0.001	<0.001
Phaeo_a	mg/L	<0.001		<0.001	<0.001

CCWA ID	07E0537/009
Client ID	ABP041
Sampled	13/09/2007

Analyte	Unit	
Alkaline	mg/L	20
Ca	mg/L	1.3
Cl	mg/L	14
CO3	mg/L	<1
Colour	TCU	80
ECond	mS/m	18.4
Fe	mg/L	0.18
Hardness	mg/L	8
HCO3	mg/L	24
K	mg/L	3.7
Mg	mg/L	1.2
Mn	mg/L	0.002
Na	mg/L	12.1
N_NO3	mg/L	0.02
N_total	mg/L	1
N_totsol	mg/L	1
pH		7.4
P_total	mg/L	0.02
P_totsol	mg/L	0.01
SiO2_Si	mg/L	3.9
SO4_S	mg/L	4.4
Sr	mg/L	0.007
TDS_180C	mg/L	97
Turbidit	NTU	3.2
aION_BAL	%	-8
Chloro_a	mg/L	<0.001
Chloro_b	mg/L	<0.001
Chloro_c	mg/L	<0.001
Phaeo_a	mg/L	<0.001

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Environmental Chemistry Section
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Analyte	Method	Description
aION_BAL	ixIONBAL2	Ionic Balance of neutral charged waters.
Alkalinity	iALK1WATI	Alkalinity, total expressed as CaCO ₃ mg/L.
Ca	iMET1WCICP	Calcium
Chloro_a	iCHLA1WAC	Chlorophyll "a", as per APHA (21st ed) Method 1020
Chloro_b	iCHLA1WAC	Chlorophyll "b", as per APHA (21th ed) Method 1020
Chloro_c	iCHLA1WAC	Chlorophyll "c", as per APHA (21st ed) Method 1020
Cl	iCL1WAAA	Chloride
CO ₃	iALK1WATI	Carbonate
Colour	iCOL1WACO	Colour, True Colour Units (TCU).
ECond	IEC1WZSE	Electrical Conductivity, 25 degrees celcius.
Fe	iMET1WCICP	Iron
Hardness	iHTOT2WAC	Hardness, total expressed as CaCO ₃ mg/L.
HCO ₃	iALK1WATI	Bicarbonate
K	iMET1WCICP	Potassium
Mg	iMET1WCICP	Magnesium
Mn	iMET1WCICP	Manganese
Na	iMET1WCICP	Sodium
N_NO3	iNTAN1WFIA	Nitrogen, nitrate + nitrite fraction by FIA.
N_total	iNP1WTFIA	Nitrogen, persulphate total by FIA
N_totsol	iNP1WDFIA	Nitrogen, persulphate total soluble by FIA
pH	iPH1WASE	pH
Phaeo_a	iCHLA1WAC	Phaeophytin "a", as per APHA (21st ed) Method 1020
P_total	iPP1WTFIA	Phosphorus, persulphate total by FIA.
P_totsol	iPP1WDFIA	Phosphorus, total soluble by FIA.
SiO ₂ _Si	iSI1WCICP	Silica from Si by ICPAES (unacidified)
SO ₄ _S	iMET1WCICP	Sulphate, sulphur expressed as sulphate.
Sr	iMET1WCICP	Strontium
TDS_180C	iSOL1WDGR	Total dissolved solids as per APHA (20th ed) Method 2540 C
Turbidit	iTURB1WCZ	Turbidity

These results apply only to the sample(s) as received. Unless arrangements are made to the contrary, these samples will be disposed of after 60 days of the issue of this report.
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Jenny McGuire
Science Business Manager
Environmental Chemistry Section

18/10/2007

07E0537
18/10/2007

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Report of Examination

None
07E0579; 3.1.1
Jenny McGuire

Dept of Environment and Conservation
P.O. Box 51
Wanneroo
WA 6946

Attention : Susan Jones

Report On:
6 samples received on 24/09/2007

CCWA ID	Material	Client Description
07E0579 / 001	water	ABP036
07E0579 / 002	water	ABP037
07E0579 / 003	water	ABP046
07E0579 / 004	water	ABP052
07E0579 / 005	water	ABP054
07E0579 / 006	water	ABP150

CCWA ID	07E0579/001	07E0579/002	07E0579/003	07E0579/004
Client ID	ABP036	ABP037	ABP046	ABP052
Sampled	18/09/2007	18/09/2007	19/09/2007	19/09/2007

Analyte	Unit				
Alkalinity	mg/L	130	55	5	<1
Ca	mg/L	51.4	17.1	1.1	1590
Cl	mg/L	2550	2180	21	50900
CO3	mg/L	<1	<1	<1	<1
Colour	TCU	42	12	22	9
ECond	mS/m	968	818	10.4	14000
Fe	mg/L	0.044	0.071	0.076	6.2
Hardness	mg/L	1000	730	8	20000
HCO3	mg/L	61	18	6	<1
K	mg/L	16	13.8	1	618
Mg	mg/L	223	167	1.2	3910
Mn	mg/L	<0.001	<0.001	0.001	3.5
Na	mg/L	1590	1410	13.7	37000
N_NO3	mg/L	0.01	0.04	0.01	0.03
N_total	mg/L	1.8	1.3	0.73	2.2
N_totsol	mg/L	1.8	0.73	0.73	1.7
pH		9.1	9.3	8	3.2
P_total	mg/L	0.02	<0.01	0.04	<0.01

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Environmental Chemistry Section**

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CCWA ID	07E0579/001	07E0579/002	07E0579/003	07E0579/004
Client ID	ABP036	ABP037	ABP046	ABP052
Sampled	18/09/2007	18/09/2007	19/09/2007	19/09/2007

Analyte	Unit				
P_totsol	mg/L	0.01	<0.01	0.03	<0.01
SiO2_Si	mg/L	1.9	8.5	0.8	98
SO4_S	mg/L	324	297	3	7620
Sr	mg/L	1.4	0.51	0.012	28
TDS_180C	mg/L	5400	4800	71	110000
Turbidit	NTU	0.5	<0.5	7	0.6
alON_BAL	%	6.3	5.7	-1	12
Chloro_a	mg/L	<0.001	<0.001	<0.001	<0.001
Chloro_b	mg/L	<0.001	<0.001	<0.001	<0.001
Chloro_c	mg/L	<0.001	<0.001	<0.001	<0.001
Phaeo_a	mg/L	<0.001	0.002	<0.001	<0.001

CCWA ID	07E0579/005	07E0579/006
Client ID	ABP054	ABP150
Sampled	19/09/2007	20/09/2007

Analyte	Unit		
Alkaline	mg/L	153	265
Ca	mg/L	683	30.9
Cl	mg/L	27800	1450
CO3	mg/L	<1	<1
Colour	TCU	24	54
ECond	mS/m	8210	598
Fe	mg/L	<0.005	0.24
Hardness	mg/L	6800	460
HCO3	mg/L	70	226
K	mg/L	479	32.5
Mg	mg/L	1230	93.7
Mn	mg/L	0.002	<0.001
Na	mg/L	19800	1020
N_NO3	mg/L	0.02	0.02
N_total	mg/L	5.6	3.2
N_totsol	mg/L	5.5	2.8
pH		8.3	8.8
P_total	mg/L	0.01	0.03
P_totsol	mg/L	0.01	0.02
SiO2_Si	mg/L	<1	4
SO4_S	mg/L	3680	164
Sr	mg/L	14	0.86
TDS_180C	mg/L	53000	3200
Turbidit	NTU	1.4	2
alON_BAL	%	7.9	6.2

**Chemistry Centre of Western Australia
Environmental Chemistry Section**

Report of Examination

CCWA ID	07E0579/005	07E0579/006
Client ID	ABP054	ABP150
Sampled	19/09/2007	20/09/2007

Analyte	Unit		
Chloro_a	mg/L	0.002	<0.001
Chloro_b	mg/L	<0.001	<0.001
Chloro_c	mg/L	<0.001	<0.001
Phaeo_a	mg/L	<0.001	0.011

Analyte	Method	Description
aION_BAL	ixIONBAL2	Ionic Balance of neutral charged waters.
Alkalin	iALK1WATI	Alkalinity, total expressed as CaCO3 mg/L.
Ca	iMET1WCICP	Calcium
Chloro_a	iCHLA1WAC	Chlorophyll "a", as per APHA (21st ed) Method 1020
Chloro_b	iCHLA1WAC	Chlorophyll "b", as per APHA (21th ed) Method 1020
Chloro_c	iCHLA1WAC	Chlorophyll "c", as per APHA (21st ed) Method 1020
Cl	iCL1WAAA	Chloride
CO3	iALK1WATI	Carbonate
Colour	iCOL1WACO	Colour, True Colour Units (TCU).
ECond	IEC1WZSE	Electrical Conductivity, 25 degrees celcius.
Fe	iMET1WCICP	Iron
Hardness	iHTOT2WAC	Hardness, total expressed as CaCO3 mg/L.
HCO3	iALK1WATI	Bicarbonate
K	iMET1WCICP	Potassium
Mg	iMET1WCICP	Magnesium
Mn	iMET1WCICP	Manganese
Na	iMET1WCICP	Sodium
N_NO3	iNTAN1WFIA	Nitrogen, nitrate + nitrite fraction by FIA.
N_total	iNP1WTFIA	Nitrogen, persulphate total by FIA
N_totsol	iNP1WDFIA	Nitrogen, persulphate total soluble by FIA
pH	iPH1WASE	pH
Phaeo_a	iCHLA1WAC	Phaeophytin "a", as per APHA (21st ed) Method 1020
P_total	iPP1WTFIA	Phosphorus, persulphate total by FIA.
P_totsol	iPP1WDFIA	Phosphorus, total soluble by FIA.
SiO2_Si	iSI1WCICP	Silica from Si by ICPAES (unacidified)
SO4_S	iMET1WCICP	Sulphate, sulphur expressed as sulphate.
Sr	iMET1WCICP	Strontium
TDS_180C	iSOL1WDGR	Total dissolved solids as per APHA (20th ed) Method 2540 C
Turbidit	iTURB1WCZ	Turbidity

**Chemistry Centre of Western Australia
Environmental Chemistry Section
Report of Examination**

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**Jenny McGuire
Science Business Manager
Environmental Chemistry Section**

19/10/2007

Report of Examination

None
07E0624; 3.1.1
Jenny McGuire

Dept of Environment and Conservation
P.O. Box 51
Wanneroo
WA 6946

Attention : Susan Jones

Report On:
4 samples received on 02/10/2007

CCWA ID	Material	Client Description
07E0624 / 001	water	ABP048
07E0624 / 002	water	ABP033
07E0624 / 003	water	ABP064
07E0624 / 004	water	ABP039

CCWA ID	07E0624/001	07E0624/002	07E0624/003	07E0624/004
Client ID	ABP048	ABP033	ABP064	ABP039
Sampled	25/09/2007	26/09/2007	27/09/2007	27/09/2007

Analyte	Unit				
Alkalinity	mg/L	5	<1	113	238
Ca	mg/L	0.7	237	714	319
Cl	mg/L	25	56300	36800	20200
CO3	mg/L	<1	<1	<1	72
Colour	TCU	19	13	13	140
ECond	mS/m	13.8	13600	9950	5410
Fe	mg/L	<0.005	5.9	0.049	0.077
Hardness	mg/L	8	15000	14000	5700
HCO3	mg/L	6	<1	46	143
K	mg/L	0.4	735	562	390
Mg	mg/L	1.5	3600	2870	1190
Mn	mg/L	0.002	0.48	0.017	0.14
Na	mg/L	17.1	36200	24300	11600
N_NO3	mg/L	<0.01	<0.01	<0.01	<0.01
N_total	mg/L	0.56	9.2	2.2	12
N_totsol	mg/L	0.52	4.9	2.2	11
pH		7.1	3.5	8.5	9.2
P_total	mg/L	0.02	0.01	0.03	0.48
P_totsol	mg/L	0.01	<0.01	<0.01	0.29
SiO2_Si	mg/L	7.2	110	1.3	1.7

**Chemistry Centre of Western Australia
Environmental Chemistry Section**

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CCWA ID	07E0624/001	07E0624/002	07E0624/003	07E0624/004
Client ID	ABP048	ABP033	ABP064	ABP039
Sampled	25/09/2007	26/09/2007	27/09/2007	27/09/2007

Analyte	Unit				
SO4_S	mg/L	2.7	7150	5310	1650
Sr	mg/L	0.013	9.8	11	9.3
TDS_180C	mg/L	71	120000	87000	41000
Turbidit	NTU	5	5.1	3.2	17
aION_BAL	%	-0.	4.5	7.7	1.3
Chloro_a	mg/L	0.001	0.006	<0.001	0.017
Chloro_b	mg/L	<0.001	<0.001	<0.001	<0.001
Chloro_c	mg/L	0.007	0.004	0.002	0.013
Phaeo_a	mg/L	<0.001	<0.001	<0.001	0.003

Analyte	Method	Description
aION_BAL	ixIONBAL2	Ionic Balance of neutral charged waters.
Alkalin	iALK1WATI	Alkalinity, total expressed as CaCO3 mg/L.
Ca	iMET1WCICP	Calcium
Chloro_a	iCHLA1WAC	Chlorophyll "a", as per APHA (21st ed) Method 1020
Chloro_b	iCHLA1WAC	Chlorophyll "b", as per APHA (21th ed) Method 1020
Chloro_c	iCHLA1WAC	Chlorophyll "c", as per APHA (21st ed) Method 1020
Cl	iCL1WAAA	Chloride
CO3	iALK1WATI	Carbonate
Colour	iCOL1WACO	Colour, True Colour Units (TCU).
ECond	iEC1WZSE	Electrical Conductivity, 25 degrees celcius.
Fe	iMET1WCICP	Iron
Hardness	iHTOT2WAC	Hardness, total expressed as CaCO3 mg/L.
HCO3	iALK1WATI	Bicarbonate
K	iMET1WCICP	Potassium
Mg	iMET1WCICP	Magnesium
Mn	iMET1WCICP	Manganese
Na	iMET1WCICP	Sodium
N_NO3	iNTAN1WFIA	Nitrogen, nitrate + nitrite fraction by FIA.
N_total	iNP1WTFIA	Nitrogen, persulphate total by FIA
N_totsol	iNP1WDFIA	Nitrogen, persulphate total soluble by FIA
pH	iPH1WASE	pH
Phaeo_a	iCHLA1WAC	Phaeophytin "a", as per APHA (21st ed) Method 1020
P_total	iPP1WTFIA	Phosphorus, persulphate total by FIA.
P_totsol	iPP1WDFIA	Phosphorus, total soluble by FIA.
SiO2_Si	iSI1WCICP	Silica from Si by ICPAES (unacidified)
SO4_S	iMET1WCICP	Sulphate, sulphur expressed as sulphate.
Sr	iMET1WCICP	Strontium
TDS_180C	iSOL1WDGR	Total dissolved solids as per APHA (20th ed) Method 2540 C

**Chemistry Centre of Western Australia
Environmental Chemistry Section
Report of Examination**

Analyte	Method	Description
Turbidit	iTURB1WCZ	Turbidity

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Jenny McGuire
Science Business Manager
Environmental Chemistry Section

25/10/2007

Report of Examination

None
07E0664; 3.1.1
Jenny McGuire

Dept of Environment and Conservation
P.O. Box 51
Wanneroo
WA 6946

Attention : Susan Jones

Report On:
6 samples received on 08/10/2007

CCWA ID	Material	Client Description
07E0664 / 001	water	ABP045
07E0664 / 002	water	ABP040
07E0664 / 003	water	ABP044
07E0664 / 004	water	ABP042
07E0664 / 005	water	ABP038
07E0664 / 006	water	ABP031

CCWA ID	07E0664/001	07E0664/002	07E0664/003	07E0664/004
Client ID	ABP045	ABP040	ABP044	ABP042
Sampled	02/10/2007	03/10/2007	03/10/2007	04/10/2007

Analyte	Unit				
Alkalin	mg/L	180	285	200	125
Ca	mg/L	989	2050	499	3340
Cl	mg/L	36700	48200	178000	58000
CO3	mg/L	<1	<1	<1	<1
Colour	TCU	25	28	<1	25
ECond	mS/m	9730	12100	22700	13100
Fe	mg/L	0.075	0.073	0.071	0.13
Hardness	mg/L	9500	18000	49000	24000
HCO3	mg/L	220	348	244	153
K	mg/L	224	468	1320	351
Mg	mg/L	1700	3160	11600	3790
Mn	mg/L	<0.010	0.18	0.81	0.063
Na	mg/L	23700	30100	115000	31600
N_NO3	mg/L	<0.01	<0.01	<0.01	<0.01
N_total	mg/L	2.1	12	5.4	5.2
N_totsol	mg/L	2.8	11	5.3	5.2
pH		8.2	7.7	7.7	7.6
P_total	mg/L	<0.01	0.05	0.02	0.09

**Chemistry Centre of Western Australia
Environmental Chemistry Section**

Report of Examination

CCWA ID	07E0664/001	07E0664/002	07E0664/003	07E0664/004
Client ID	ABP045	ABP040	ABP044	ABP042
Sampled	02/10/2007	03/10/2007	03/10/2007	04/10/2007

Analyte	Unit				
P_totsol	mg/L	0.01	0.18	<0.01	0.07
SiO2_Si	mg/L	0.3	1.3	9.2	0.3
SO4_S	mg/L	4320	8820	15600	5330
Sr	mg/L	9.2	36	31	37
TDS_180C	mg/L	71000	98000	320000	100000
Turbidit	NTU	4.3	27	8.4	3.7
alON_BAL	%	4.1	4.1	5.9	3.1
Chloro_a	mg/L	0.003	0.039	<0.001	0.006
Chloro_b	mg/L	<0.001	0.006	<0.001	<0.001
Chloro_c	mg/L	0.004	0.016	0.004	0.008
Phaeo_a	mg/L	<0.001	0.021	<0.001	<0.001

CCWA ID	07E0664/005	07E0664/006
Client ID	ABP038	ABP031
Sampled	04/10/2007	05/10/2007

Analyte	Unit		
Alkaline	mg/L	130	75
Ca	mg/L	96.8	9.3
Cl	mg/L	5550	765
CO3	mg/L	48	<1
Colour	TCU	13	47
ECond	mS/m	1810	307
Fe	mg/L	<0.005	0.38
Hardness	mg/L	1700	300
HCO3	mg/L	61	92
K	mg/L	61.5	4.3
Mg	mg/L	346	67.8
Mn	mg/L	<0.001	<0.001
Na	mg/L	3150	449
N_NO3	mg/L	0.01	0.01
N_total	mg/L	1.8	0.65
N_totsol	mg/L	1.4	0.65
pH		9.4	8.2
P_total	mg/L	0.05	0.01
P_totsol	mg/L	0.01	0.01
SiO2_Si	mg/L	1.8	23
SO4_S	mg/L	552	63.7
Sr	mg/L	1.7	0.15
TDS_180C	mg/L	10000	1400
Turbidit	NTU	7.7	0.9
alON_BAL	%	0.4	2.4

**Chemistry Centre of Western Australia
Environmental Chemistry Section**

Report of Examination

CCWA ID	07E0664/005	07E0664/006
Client ID	ABP038	ABP031
Sampled	04/10/2007	05/10/2007

Analyte	Unit		
Chloro_a	mg/L	0.001	<0.001
Chloro_b	mg/L	<0.001	<0.001
Chloro_c	mg/L	0.004	0.003
Phaeo_a	mg/L	0.004	0.003

Analyte	Method	Description
aION_BAL	ixIONBAL2	Ionic Balance of neutral charged waters.
Alkalin	iALK1WATI	Alkalinity, total expressed as CaCO3 mg/L.
Ca	iMET1WCICP	Calcium
Chloro_a	iCHLA1WAC	Chlorophyll "a", as per APHA (21st ed) Method 1020
Chloro_b	iCHLA1WAC	Chlorophyll "b", as per APHA (21th ed) Method 1020
Chloro_c	iCHLA1WAC	Chlorophyll "c", as per APHA (21st ed) Method 1020
Cl	iCL1WAAA	Chloride
CO3	iALK1WATI	Carbonate
Colour	iCOL1WACO	Colour, True Colour Units (TCU).
ECond	IEC1WZSE	Electrical Conductivity, 25 degrees celcius.
Fe	iMET1WCICP	Iron
Hardness	iHTOT2WAC	Hardness, total expressed as CaCO3 mg/L.
HCO3	iALK1WATI	Bicarbonate
K	iMET1WCICP	Potassium
Mg	iMET1WCICP	Magnesium
Mn	iMET1WCICP	Manganese
Na	iMET1WCICP	Sodium
N_NO3	iNTAN1WFIA	Nitrogen, nitrate + nitrite fraction by FIA.
N_total	iNP1WTFIA	Nitrogen, persulphate total by FIA
N_totsol	iNP1WDFIA	Nitrogen, persulphate total soluble by FIA
pH	iPH1WASE	pH
Phaeo_a	iCHLA1WAC	Phaeophytin "a", as per APHA (21st ed) Method 1020
P_total	iPP1WTFIA	Phosphorus, persulphate total by FIA.
P_totsol	iPP1WDFIA	Phosphorus, total soluble by FIA.
SiO2_Si	iSI1WCICP	Silica from Si by ICPAES (unacidified)
SO4_S	iMET1WCICP	Sulphate, sulphur expressed as sulphate.
Sr	iMET1WCICP	Strontium
TDS_180C	iSOL1WDGR	Total dissolved solids as per APHA (20th ed) Method 2540 C
Turbidit	iTURB1WCZ	Turbidity

**Chemistry Centre of Western Australia
Environmental Chemistry Section
Report of Examination**

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**Jenny McGuire
Science Business Manager
Environmental Chemistry Section**

25/10/2007

Report of Examination

None
07E0725; 3.1.1
Jenny McGuire

Dept of Environment and Conservation
P.O. Box 51
Wanneroo
WA 6946

Attention : Susan Jones

Report On:
6 samples received on 16/10/2007

CCWA ID	Material	Client Description
07E0725 / 001	water	ABP065
07E0725 / 002	water	ABP066
07E0725 / 003	water	ABP067
07E0725 / 004	water	ABP068
07E0725 / 005	water	ABP069
07E0725 / 006	water	ABP070

CCWA ID	07E0725/001	07E0725/002	07E0725/003	07E0725/004
Client ID	ABP065	ABP066	ABP067	ABP068
Sampled	08/10/2007	09/10/2007	09/10/2007	09/10/2007

Analyte	Unit				
Alkalinity	mg/L	50	125	275	160
Ca	mg/L	827	1480	24.3	66
Cl	mg/L	55500	115000	1770	6250
CO3	mg/L	<1	<1	12	54
Colour	TCU	5	6	16	21
ECond	mS/m	12500	20200	633	2060
Fe	mg/L	0.41	<0.050	0.053	<0.005
Hardness	mg/L	17000	30000	630	1700
HCO3	mg/L	61	153	311	85
K	mg/L	570	946	35.5	134
Mg	mg/L	3550	6300	137	374
Mn	mg/L	0.49	0.15	0.004	<0.001
Na	mg/L	32300	68100	1080	3890
N_NO3	mg/L	<0.01	<0.01	<0.01	<0.01
N_total	mg/L	2.8	5.4	2.4	1.5
N_totsol	mg/L	2.1	4.5	1.6	1.5
pH		6.4	7.9	8.7	9
P_total	mg/L	<0.01	0.02	0.05	<0.01

**Chemistry Centre of Western Australia
Environmental Chemistry Section**

Report of Examination

CCWA ID	07E0725/001	07E0725/002	07E0725/003	07E0725/004
Client ID	ABP065	ABP066	ABP067	ABP068
Sampled	08/10/2007	09/10/2007	09/10/2007	09/10/2007

Analyte	Unit				
P_totsol	mg/L	<0.01	<0.01	<0.01	<0.01
SiO2_Si	mg/L	7.3	0.6	4.6	38
SO4_S	mg/L	5610	9750	177	426
Sr	mg/L	18	53	0.37	1.4
TDS_180C	mg/L	110000	220000	3600	13000
Turbidit	NTU	14	9.5	4	0.5
alON_BAL	%	2.1	1.6	0.8	4.6
Chloro_a	mg/L	0.007	0.012	0.022	<0.001
Chloro_b	mg/L	<0.001	<0.001	<0.001	<0.001
Chloro_c	mg/L	0.011	0.009	0.017	0.003
Phaeo_a	mg/L	<0.001	<0.001	0.002	0.003

CCWA ID	07E0725/005	07E0725/006
Client ID	ABP069	ABP070
Sampled	11/10/2007	11/10/2007

Analyte	Unit		
Alkaline	mg/L	240	55
Ca	mg/L	1460	612
Cl	mg/L	35700	12700
CO3	mg/L	<1	24
Colour	TCU	3	43
ECond	mS/m	9300	3920
Fe	mg/L	<0.010	<0.050
Hardness	mg/L	13000	4700
HCO3	mg/L	293	<1
K	mg/L	639	207
Mg	mg/L	2250	767
Mn	mg/L	0.042	<0.010
Na	mg/L	21700	8080
N_NO3	mg/L	<0.01	<0.01
N_total	mg/L	4.2	1.3
N_totsol	mg/L	3.6	1.5
pH		8	9.4
P_total	mg/L	0.18	<0.01
P_totsol	mg/L	0.13	<0.01
SiO2_Si	mg/L	0.1	1
SO4_S	mg/L	5850	2280
Sr	mg/L	19	7.4
TDS_180C	mg/L	75000	27000
Turbidit	NTU	1.6	<0.5
alON_BAL	%	3.7	4.9

**Chemistry Centre of Western Australia
Environmental Chemistry Section**

Report of Examination

CCWA ID	07E0725/005	07E0725/006
Client ID	ABP069	ABP070
Sampled	11/10/2007	11/10/2007

Analyte	Unit		
Chloro_a	mg/L	0.006	<0.001
Chloro_b	mg/L	<0.001	<0.001
Chloro_c	mg/L	0.005	0.003
Phaeo_a	mg/L	0.001	<0.001

Analyte	Method	Description
aION_BAL	ixIONBAL2	Ionic Balance of neutral charged waters.
Alkalin	iALK1WATI	Alkalinity, total expressed as CaCO3 mg/L.
Ca	iMET1WCICP	Calcium
Chloro_a	iCHLA1WAC	Chlorophyll "a", as per APHA (21st ed) Method 1020
Chloro_b	iCHLA1WAC	Chlorophyll "b", as per APHA (21th ed) Method 1020
Chloro_c	iCHLA1WAC	Chlorophyll "c", as per APHA (21st ed) Method 1020
Cl	iCL1WAAA	Chloride
CO3	iALK1WATI	Carbonate
Colour	iCOL1WACO	Colour, True Colour Units (TCU).
ECond	IEC1WZSE	Electrical Conductivity, 25 degrees celcius.
Fe	iMET1WCICP	Iron
Hardness	iHTOT2WAC	Hardness, total expressed as CaCO3 mg/L.
HCO3	iALK1WATI	Bicarbonate
K	iMET1WCICP	Potassium
Mg	iMET1WCICP	Magnesium
Mn	iMET1WCICP	Manganese
Na	iMET1WCICP	Sodium
N_NO3	iNTAN1WFIA	Nitrogen, nitrate + nitrite fraction by FIA.
N_total	iNP1WTFIA	Nitrogen, persulphate total by FIA
N_totsol	iNP1WDFIA	Nitrogen, persulphate total soluble by FIA
pH	iPH1WASE	pH
Phaeo_a	iCHLA1WAC	Phaeophytin "a", as per APHA (21st ed) Method 1020
P_total	iPP1WTFIA	Phosphorus, persulphate total by FIA.
P_totsol	iPP1WDFIA	Phosphorus, total soluble by FIA.
SiO2_Si	iSI1WCICP	Silica from Si by ICPAES (unacidified)
SO4_S	iMET1WCICP	Sulphate, sulphur expressed as sulphate.
Sr	iMET1WCICP	Strontium
TDS_180C	iSOL1WDGR	Total dissolved solids as per APHA (20th ed) Method 2540 C
Turbidit	iTURB1WCZ	Turbidity

**Chemistry Centre of Western Australia
Environmental Chemistry Section
Report of Examination**

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**Jenny McGuire
Science Business Manager
Environmental Chemistry Section**

02/11/2007

Report of Examination

None
07E0770; 3.1.1
Jenny McGuire

Dept of Environment and Conservation
P.O. Box 51
Wanneroo
WA 6946

Attention : Susan Jones

Report On:
6 samples received on 19/10/2007

CCWA ID	Material	Client Description
07E0770 / 001	water	ABP071
07E0770 / 002	water	ABP072
07E0770 / 003	water	ABP073
07E0770 / 004	water	ABP074
07E0770 / 005	water	ABP075
07E0770 / 006	water	ABP076

CCWA ID	07E0770/001	07E0770/002	07E0770/003	07E0770/004
Client ID	ABP071	ABP072	ABP073	ABP074
Sampled	16/10/2007	16/10/2007	17/10/2007	17/10/2007

Analyte	Unit				
Alkalin	mg/L	625	195	205	20
Ca	mg/L	2330	401	1300	100
Cl	mg/L	80400	7910	21300	10900
CO3	mg/L	<1	54	<1	<1
Colour	TCU	17	27	22	11
ECond	mS/m	16700	2630	6540	3290
Fe	mg/L	0.14	<0.005	0.064	<0.005
Hardness	mg/L	36000	3500	11000	2400
HCO3	mg/L	763	128	250	24
K	mg/L	426	67.7	161	134
Mg	mg/L	7230	611	1770	518
Mn	mg/L	4.9	0.001	0.23	0.009
Na	mg/L	47000	4350	12400	6540
N_NO3	mg/L	<0.01	<0.01	<0.01	<0.01
N_total	mg/L	8.4	2.4	5.4	1.8
N_totsol	mg/L	7.4	2	4.4	1.4
pH		7.4	8.8	7.7	7.4
P_total	mg/L	0.08	0.04	0.01	0.01

**Chemistry Centre of Western Australia
Environmental Chemistry Section**

Report of Examination

CCWA ID	07E0770/001	07E0770/002	07E0770/003	07E0770/004
Client ID	ABP071	ABP072	ABP073	ABP074
Sampled	16/10/2007	16/10/2007	17/10/2007	17/10/2007

Analyte	Unit				
P_totsol	mg/L	0.03	<0.01	<0.01	<0.01
SiO2_Si	mg/L	11	0.3	17	0.2
SO4_S	mg/L	10300	1480	4010	881
Sr	mg/L	50	5.1	15	1.5
TDS_180C	mg/L	160000	17000	47000	20000
Turbidit	NTU	3.4	2.7	6.1	1.9
alON_BAL	%	5.2	0.7	4.5	1.5
Chloro_a	mg/L	0.002	0.001	0.005	0.003
Chloro_b	mg/L	<0.001	<0.001	<0.001	<0.001
Chloro_c	mg/L	<0.001	<0.001	<0.001	<0.001
Phaeo_a	mg/L	<0.001	0.003	0.001	<0.001

CCWA ID	07E0770/005	07E0770/006
Client ID	ABP075	ABP076
Sampled	18/10/2007	18/10/2007

Analyte	Unit		
Alkaline	mg/L	1160	380
Ca	mg/L	95.1	113
Cl	mg/L	29200	30900
CO3	mg/L	222	168
Colour	TCU	43	15
ECond	mS/m	8080	8540
Fe	mg/L	0.050	<0.025
Hardness	mg/L	5400	6400
HCO3	mg/L	964	<1
K	mg/L	350	375
Mg	mg/L	1250	1480
Mn	mg/L	0.008	<0.005
Na	mg/L	17900	18700
N_NO3	mg/L	<0.01	<0.01
N_total	mg/L	9.9	9.3
N_totsol	mg/L	8.1	3.8
pH		8.4	9.6
P_total	mg/L	0.13	0.04
P_totsol	mg/L	0.09	0.04
SiO2_Si	mg/L	0.4	0.1
SO4_S	mg/L	1210	1430
Sr	mg/L	4.1	3.4
TDS_180C	mg/L	57000	59000
Turbidit	NTU	13	20
alON_BAL	%	1.4	2.2

**Chemistry Centre of Western Australia
Environmental Chemistry Section**

Report of Examination

CCWA ID	07E0770/005	07E0770/006
Client ID	ABP075	ABP076
Sampled	18/10/2007	18/10/2007

Analyte	Unit		
Chloro_a	mg/L	<0.001	<0.001
Chloro_b	mg/L	<0.001	0.001
Chloro_c	mg/L	<0.001	<0.001
Phaeo_a	mg/L	0.003	0.005

Analyte	Method	Description
aION_BAL	ixIONBAL2	Ionic Balance of neutral charged waters.
Alkalin	iALK1WATI	Alkalinity, total expressed as CaCO3 mg/L.
Ca	iMET1WCICP	Calcium
Chloro_a	iCHLA1WAC	Chlorophyll "a", as per APHA (21st ed) Method 1020
Chloro_b	iCHLA1WAC	Chlorophyll "b", as per APHA (21th ed) Method 1020
Chloro_c	iCHLA1WAC	Chlorophyll "c", as per APHA (21st ed) Method 1020
Cl	iCL1WAAA	Chloride
CO3	iALK1WATI	Carbonate
Colour	iCOL1WACO	Colour, True Colour Units (TCU).
ECond	IEC1WZSE	Electrical Conductivity, 25 degrees celcius.
Fe	iMET1WCICP	Iron
Hardness	iHTOT2WAC	Hardness, total expressed as CaCO3 mg/L.
HCO3	iALK1WATI	Bicarbonate
K	iMET1WCICP	Potassium
Mg	iMET1WCICP	Magnesium
Mn	iMET1WCICP	Manganese
Na	iMET1WCICP	Sodium
N_NO3	iNTAN1WFIA	Nitrogen, nitrate + nitrite fraction by FIA.
N_total	iNP1WTFIA	Nitrogen, persulphate total by FIA
N_totsol	iNP1WDFIA	Nitrogen, persulphate total soluble by FIA
pH	iPH1WASE	pH
Phaeo_a	iCHLA1WAC	Phaeophytin "a", as per APHA (21st ed) Method 1020
P_total	iPP1WTFIA	Phosphorus, persulphate total by FIA.
P_totsol	iPP1WDFIA	Phosphorus, total soluble by FIA.
SiO2_Si	iSI1WCICP	Silica from Si by ICPAES (unacidified)
SO4_S	iMET1WCICP	Sulphate, sulphur expressed as sulphate.
Sr	iMET1WCICP	Strontium
TDS_180C	iSOL1WDGR	Total dissolved solids as per APHA (20th ed) Method 2540 C
Turbidit	iTURB1WCZ	Turbidity

**Chemistry Centre of Western Australia
Environmental Chemistry Section
Report of Examination**

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**Jenny McGuire
Science Business Manager
Environmental Chemistry Section**

19/11/2007

Report of Examination

None
07E0789; 3.1.1
Jenny McGuire

Dept of Environment and Conservation
P.O. Box 51
Wanneroo
WA 6946

Attention : Susan Jones

Report On:
19 samples received on 23/10/2007

CCWA ID	Material	Client Description
07E0789 / 001	water	2526 Yarra
07E0789 / 002	water	3566 Yarra
07E0789 / 003	water	588 Yarra
07E0789 / 004	water	2359 Yarra
07E0789 / 005	water	PER001 Yarra
07E0789 / 006	water	PER002 Yarra
07E0789 / 007	water	909-2 Yarra
07E0789 / 008	water	2850 Yarra
07E0789 / 009	water	3615-2 Yarra
07E0789 / 010	water	588-2 Yarra
07E0789 / 011	water	ESP001
07E0789 / 012	water	ESP019
07E0789 / 013	water	ESP020
07E0789 / 014	water	ESP023
07E0789 / 015	water	ESP002
07E0789 / 016	water	ESP021
07E0789 / 017	water	ESP027
07E0789 / 018	water	ESP028
07E0789 / 019	water	ESP029

CCWA ID	07E0789/001	07E0789/002	07E0789/003	07E0789/004
Client ID	2526 Yarra	3566 Yarra	588 Yarra	2359 Yarra
Sampled	09/10/2007	09/10/2007	09/10/2007	10/10/2007

Analyte	Unit				
Alkalinity	mg/L	15	105	220	<1
Ca	mg/L	1170	1520	736	670
Cl	mg/L	36000	84500	42000	82600
CO ₃	mg/L	<1	<1	<1	<1
Colour	TCU	22	6	3	17

**Chemistry Centre of Western Australia
Environmental Chemistry Section**

Report of Examination

CCWA ID	07E0789/001	07E0789/002	07E0789/003	07E0789/004
Client ID	2526 Yarra	3566 Yarra	588 Yarra	2359 Yarra
Sampled	09/10/2007	09/10/2007	09/10/2007	10/10/2007

Analyte	Unit				
ECond	mS/m	9520	16600	12300	18300
Fe	mg/L	0.63	<0.05	<0.05	20
Hardness	mg/L	1100	1700	1700	2700
HCO3	mg/L	18	128	268	<1
K	mg/L	795	1180	768	2010
Mg	mg/L	1900	2980	3540	5870
Mn	mg/L	0.53	<0.01	<0.01	14
Na	mg/L	24800	52400	33100	63100
N_NO3	mg/L	0.11	<0.01	0.11	0.27
N_total	mg/L	28	4.7	0.88	16
N_totsol	mg/L	21	1.7	0.77	7.8
pH		4.4	7.2	7.9	2.8
P_total	mg/L	0.19	0.62	<0.01	<0.1
P_totsol	mg/L	<0.01	<0.01	<0.01	<0.01
SiO2_Si	mg/L	69	3.2	27	140
SO4_S	mg/L	9500	7650	6780	14700
Sr	mg/L	24	25	12	26
TDS_180C	mg/L	75000	140000	98000	180000
Turbidit	NTU	400	19	9.9	37
alON_BAL	%	3.2	2.5	4	6.9
Chloro_a	mg/L	0.002	0.008	<0.001	<0.001
Chloro_b	mg/L	0.002	0.001	0.002	0.001
Chloro_c	mg/L	0.002	<0.001	0.002	<0.001
Phaeo_a	mg/L	0.029	0.002	0.003	0.009

CCWA ID	07E0789/005	07E0789/006	07E0789/007	07E0789/008
Client ID	PER001 Yarra	PER002 Yarra	909-2 Yarra	2850 Yarra
Sampled	10/10/2007	10/10/2007	11/10/2007	12/10/2007

Analyte	Unit				
Alkaline	mg/L	190	100	20	<1
Ca	mg/L	1860	1940	742	788
Cl	mg/L	53900	44700	46100	86600
CO3	mg/L	<1	<1	<1	<1
Colour	TCU	43	28	11	25
ECond	mS/m	15700	14500	13200	18300
Fe	mg/L	<0.05	<0.05	<0.05	120
Hardness	mg/L	2900	2500	1900	2900
HCO3	mg/L	232	122	24	<1
K	mg/L	1510	1980	861	2030
Mg	mg/L	5670	4510	3930	6170
Mn	mg/L	0.26	0.019	0.19	5.8

**Chemistry Centre of Western Australia
Environmental Chemistry Section**

Report of Examination

CCWA ID	07E0789/005	07E0789/006	07E0789/007	07E0789/008
Client ID	PER001 Yarra	PER002 Yarra	909-2 Yarra	2850 Yarra
Sampled	10/10/2007	10/10/2007	11/10/2007	12/10/2007

Analyte	Unit				
Na	mg/L	67900	57800	37200	62200
N_NO3	mg/L	<0.01	<0.01	0.16	0.02
N_total	mg/L	15	25	4.2	6.5
N_totsol	mg/L	7.7	21	4	5.5
pH		7.4	6.8	6.4	2.6
P_total	mg/L	0.60	0.25	<0.01	0.02
P_totsol	mg/L	0.08	0.04	<0.01	<0.01
SiO2_Si	mg/L	5.6	6	0.6	220
SO4_S	mg/L	15000	13700	8860	14300
Sr	mg/L	53	47	20	31
TDS_180C	mg/L	140000	120000	110000	180000
Turbidit	NTU	23	76	12	13
alON_BAL	%	5.2	9.2	9.7	4.4
Chloro_a	mg/L	0.058	0.004	0.002	0.10
Chloro_b	mg/L	0.010	0.001	<0.001	0.026
Chloro_c	mg/L	0.006	0.002	<0.001	0.001
Phaeo_a	mg/L	0.003	0.001	<0.001	0.028

CCWA ID	07E0789/009	07E0789/010	07E0789/011	07E0789/012
Client ID	3615-2 Yarra	588-2 Yarra	ESP001	ESP019
Sampled	12/10/2007	12/10/2007	16/10/2007	16/10/2007

Analyte	Unit				
Alkaline	mg/L	265	205	185	125
Ca	mg/L	589	795	102	192
Cl	mg/L	42900	42700	5450	16800
CO3	mg/L	<1	<1	<1	<1
Colour	TCU	2	<1	70	31
ECond	mS/m	11000	13000	1840	5050
Fe	mg/L	<0.05	<0.05	<0.005	<0.05
Hardness	mg/L	1500	1900	1900	590
HCO3	mg/L	323	250	226	153
K	mg/L	785	839	72.5	226
Mg	mg/L	3080	3800	382	1250
Mn	mg/L	<0.01	<0.01	<0.001	0.017
Na	mg/L	28800	36300	3570	11800
N_NO3	mg/L	<0.01	0.02	<0.01	<0.01
N_total	mg/L	1.5	1.1	1.5	1.2
N_totsol	mg/L	0.56	0.76	1.2	0.77
pH		7.8	7.8	8.6	7.7
P_total	mg/L	<0.01	<0.01	<0.01	<0.01
P_totsol	mg/L	<0.01	<0.01	<0.01	<0.01

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Environmental Chemistry Section**

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CCWA ID	07E0789/009	07E0789/010	07E0789/011	07E0789/012
Client ID	3615-2 Yarra	588-2 Yarra	ESP001	ESP019
Sampled	12/10/2007	12/10/2007	16/10/2007	16/10/2007

Analyte	Unit				
SiO2_Si	mg/L	20	26	2.1	4.7
SO4_S	mg/L	5150	7290	633	3060
Sr	mg/L	8.3	13	1.2	3.2
TDS_180C	mg/L	83000	100000	10000	33000
Turbidit	NTU	1.7	2	5.1	1.9
alON_BAL	%	7.5	1.3	4.6	5.4
Chloro_a	mg/L	0.001	<0.001	0.001	<0.001
Chloro_b	mg/L	<0.001	<0.001	<0.001	<0.001
Chloro_c	mg/L	<0.001	0.003	<0.001	<0.001
Phaeo_a	mg/L	0.001	<0.001	0.001	0.004

CCWA ID	07E0789/013	07E0789/014	07E0789/015	07E0789/016
Client ID	ESP020	ESP023	ESP002	ESP021
Sampled	16/10/2007	16/10/2007	17/10/2007	17/10/2007

Analyte	Unit				
Alkaline	mg/L	125	220	20	430
Ca	mg/L	188	36.1	233	170
Cl	mg/L	16000	398	33700	11800
CO3	mg/L	<1	<1	<1	60
Colour	TCU	42	170	5	51
ECond	mS/m	4710	182	7520	3890
Fe	mg/L	<0.05	0.98	<0.05	<0.05
Hardness	mg/L	520	240	750	440
HCO3	mg/L	153	268	24	403
K	mg/L	207	26.8	253	222
Mg	mg/L	1080	33.1	1580	916
Mn	mg/L	0.067	0.009	0.37	0.26
Na	mg/L	10700	260	18600	11100
N_NO3	mg/L	<0.01	0.02	0.02	<0.01
N_total	mg/L	1.3	3.4	0.67	2.2
N_totsol	mg/L	0.90	3.2	0.65	2.1
pH		7.7	8.2	6.9	8.3
P_total	mg/L	0.02	0.81	<0.01	0.04
P_totsol	mg/L	<0.01	0.52	<0.01	0.01
SiO2_Si	mg/L	4.8	0.5	3.2	28
SO4_S	mg/L	2770	15.1	3100	2630
Sr	mg/L	3.4	0.39	3.4	2.3
TDS_180C	mg/L	31000	990	53000	26000
Turbidit	NTU	7	3	2.9	5.4
alON_BAL	%	3.7	3	-5	7
Chloro_a	mg/L	0.006	0.001	<0.001	<0.001

**Chemistry Centre of Western Australia
Environmental Chemistry Section**

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CCWA ID	07E0789/013	07E0789/014	07E0789/015	07E0789/016
Client ID	ESP020	ESP023	ESP002	ESP021
Sampled	16/10/2007	16/10/2007	17/10/2007	17/10/2007

Analyte	Unit				
Chloro_b	mg/L	<0.001	<0.001	<0.001	<0.001
Chloro_c	mg/L	0.002	<0.001	<0.001	<0.001
Phaeo_a	mg/L	0.001	0.003	<0.001	0.005

CCWA ID	07E0789/017	07E0789/018	07E0789/019
Client ID	ESP027	ESP028	ESP029
Sampled	17/10/2007	17/10/2007	17/10/2007

Analyte	Unit			
Alkalinity	mg/L	215	220	20
Ca	mg/L	1580	37.9	396
Cl	mg/L	118000	1510	37500
CO3	mg/L	<1	54	<1
Colour	TCU	18	86	22
ECond	mS/m	21000	563	11500
Fe	mg/L	<0.05	0.43	<0.05
Hardness	mg/L	2400	450	1400
HCO3	mg/L	262	159	24
K	mg/L	1480	27.4	519
Mg	mg/L	4680	81.6	2980
Mn	mg/L	0.060	0.002	0.15
Na	mg/L	72200	1020	32000
N_NO3	mg/L	<0.01	<0.01	<0.01
N_total	mg/L	16	1.4	1.8
N_totsol	mg/L	13	1.3	1.8
pH		7.5	9	6.7
P_total	mg/L	0.22	0.02	<0.01
P_totsol	mg/L	<0.01	0.35	<0.01
SiO2_Si	mg/L	4.7	3.6	0.1
SO4_S	mg/L	10700	61.1	7120
Sr	mg/L	29	0.38	10
TDS_180C	mg/L	220000	3100	91000
Turbidity	NTU	8.7	8	6.2
alON_BAL	%	1.7	4.9	5.5
Chloro_a	mg/L	<0.001	<0.001	0.002
Chloro_b	mg/L	0.001	<0.001	<0.001
Chloro_c	mg/L	0.001	<0.001	<0.001
Phaeo_a	mg/L	0.004	<0.001	<0.001

**Chemistry Centre of Western Australia
Environmental Chemistry Section
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Analyte	Method	Description
aION_BAL	ixIONBAL2	Ionic Balance of neutral charged waters.
Alkalin	iALK1WATI	Alkalinity, total expressed as CaCO ₃ mg/L.
Ca	iMET1WCICP	Calcium
Chloro_a	iCHLA1WAC	Chlorophyll "a", as per APHA (21st ed) Method 1020
Chloro_b	iCHLA1WAC	Chlorophyll "b", as per APHA (21th ed) Method 1020
Chloro_c	iCHLA1WAC	Chlorophyll "c", as per APHA (21st ed) Method 1020
Cl	iCL1WAAA	Chloride
CO ₃	iALK1WATI	Carbonate
Colour	iCOL1WACO	Colour, True Colour Units (TCU).
ECond	IEC1WZSE	Electrical Conductivity, 25 degrees celcius.
Fe	iMET1WCICP	Iron
Hardness	iHTOT2WAC	Hardness, total expressed as CaCO ₃ mg/L.
HCO ₃	iALK1WATI	Bicarbonate
K	iMET1WCICP	Potassium
Mg	iMET1WCICP	Magnesium
Mn	iMET1WCICP	Manganese
Na	iMET1WCICP	Sodium
N_NO ₃	iNTAN1WFIA	Nitrogen, nitrate + nitrite fraction by FIA.
N_total	iNP1WTFIA	Nitrogen, persulphate total by FIA
N_totsol	iNP1WDFIA	Nitrogen, persulphate total soluble by FIA
pH	iPH1WASE	pH
Phaeo_a	iCHLA1WAC	Phaeophytin "a", as per APHA (21st ed) Method 1020
P_total	iPP1WTFIA	Phosphorus, persulphate total by FIA.
P_totsol	iPP1WDFIA	Phosphorus, total soluble by FIA.
SiO ₂ _Si	iSI1WCICP	Silica from Si by ICPAES (unacidified)
SO ₄ _S	iMET1WCICP	Sulphate, sulphur expressed as sulphate.
Sr	iMET1WCICP	Strontium
TDS_180C	iSOL1WDGR	Total dissolved solids as per APHA (20th ed) Method 2540 C
Turbidit	iTURB1WCZ	Turbidity

These results apply only to the sample(s) as received. Unless arrangements are made to the contrary, these samples will be disposed of after 60 days of the issue of this report.
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Jenny McGuire
Science Business Manager
Environmental Chemistry Section

28/11/2007

Report of Examination

None
07E0880; 3.1.1
Jenny McGuire

Dept of Environment and Conservation
P.O. Box 51
Wanneroo
WA 6946

Attention : Susan Jones

Report On:
12 samples received on 05/11/2007

CCWA ID	Material	Client Description
07E0880 / 001	water	BLW001
07E0880 / 002	water	BLW002
07E0880 / 003	water	BLW003
07E0880 / 004	water	BLW005
07E0880 / 005	water	BLW007
07E0880 / 006	water	BLW014
07E0880 / 007	water	BLW018
07E0880 / 008	water	BLW004
07E0880 / 009	water	ESP036
07E0880 / 010	water	ESP040
07E0880 / 011	water	ESP033
07E0880 / 012	water	ESP030

CCWA ID	07E0880/001	07E0880/002	07E0880/003	07E0880/004
Client ID	BLW001	BLW002	BLW003	BLW005
Sampled	29/10/2007	30/10/2007	30/10/2007	30/10/2007

Analyte	Unit				
Alkalinity	mg/L	338	85	238	318
Ca	mg/L	157	748	1710	1620
Cl	mg/L	5760	18600	102000	119000
CO3	mg/L	48	51	<1	<1
Colour	TCU	46	6	14	11
ECond	mS/m	1750	5430	18300	19300
Fe	mg/L	0.049	0.022	0.092	0.66
Hardness	mg/L	2600	9000	37000	42000
HCO3	mg/L	314	<1	290	387
K	mg/L	19.8	215	472	597
Mg	mg/L	534	1720	7860	9300
Mn	mg/L	0.003	0.002	0.038	0.32

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Environmental Chemistry Section**

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CCWA ID	07E0880/001	07E0880/002	07E0880/003	07E0880/004
Client ID	BLW001	BLW002	BLW003	BLW005
Sampled	29/10/2007	30/10/2007	30/10/2007	30/10/2007

Analyte	Unit				
Na	mg/L	2790	10700	57300	65600
N_NO3	mg/L	0.01	<0.01	0.01	0.01
N_total	mg/L	1.2	2.7	7.1	13
N_totsol	mg/L	0.76	2.6	6.4	11
pH		8.4	9.1	8.1	7.7
P_total	mg/L	0.01	<0.01	0.09	0.05
P_totsol	mg/L	<0.01	<0.01	0.02	0.02
SiO2_Si	mg/L	13	0.6	0.5	12
SO4_S	mg/L	380	1890	15200	10100
Sr	mg/L	1.9	11	26	42
TDS_180C	mg/L	11000	37080	190000	210000
Turbidit	NTU	2.3	7.1	6.8	24
alON_BAL	%	-1	7	0.7	1.8
Chloro_a	mg/L	0.001	<0.001	0.006	0.028
Chloro_b	mg/L	<0.001	<0.001	0.002	0.005
Chloro_c	mg/L	0.001	0.001	0.005	0.005
Phaeo_a	mg/L	0.001	<0.001	<0.001	<0.001

CCWA ID	07E0880/005	07E0880/006	07E0880/007	07E0880/008
Client ID	BLW007	BLW014	BLW018	BLW004
Sampled	31/10/2007	31/10/2007	31/10/2007	31/10/2007

Analyte	Unit				
Alkalin	mg/L	238	203	290	258
Ca	mg/L	476	1310	1670	1380
Cl	mg/L	22400	34300	117000	70700
CO3	mg/L	90	<1	<1	<1
Colour	TCU	32	80	15	7
ECond	mS/m	6320	8740	18900	15100
Fe	mg/L	0.018	0.092	0.021	0.091
Hardness	mg/L	9600	14000	53000	25000
HCO3	mg/L	107	247	354	314
K	mg/L	106	310	762	317
Mg	mg/L	2030	2600	11800	5330
Mn	mg/L	0.076	0.14	0.35	0.043
Na	mg/L	13300	19400	56300	41500
N_NO3	mg/L	<0.01	0.01	0.02	0.01
N_total	mg/L	5.6	6.2	13	13
N_totsol	mg/L	4.1	4.6	10	9.8
pH		8.9	8	7.7	7.8
P_total	mg/L	0.09	0.05	0.13	0.14
P_totsol	mg/L	0.06	<0.01	0.08	0.03

**Chemistry Centre of Western Australia
Environmental Chemistry Section**

Report of Examination

CCWA ID	07E0880/005	07E0880/006	07E0880/007	07E0880/008
Client ID	BLW007	BLW014	BLW018	BLW004
Sampled	31/10/2007	31/10/2007	31/10/2007	31/10/2007

Analyte	Unit				
SiO2_Si	mg/L	1.6	0.2	11	5.9
SO4_S	mg/L	2540	4360	14500	8040
Sr	mg/L	7.7	18	43	26
TDS_180C	mg/L	44000	67000	208320	140000
Turbidit	NTU	10	8.9	8.6	12
alON_BAL	%	5.5	3.2	-1	3.4
Chloro_a	mg/L	0.001	0.017	0.009	0.008
Chloro_b	mg/L	<0.001	<0.001	0.002	<0.001
Chloro_c	mg/L	<0.001	0.004	0.002	<0.001
Phaeo_a	mg/L	0.002	0.001	<0.001	0.002

CCWA ID	07E0880/009	07E0880/010	07E0880/011	07E0880/012
Client ID	ESP036	ESP040	ESP033	ESP030
Sampled	01/11/2007	01/11/2007	01/11/2007	01/11/2007

Analyte	Unit				
Alkaline	mg/L	305	60	98	240
Ca	mg/L	21.4	104	13.1	113
Cl	mg/L	6690	7030	33	3280
CO3	mg/L	177	15	<1	63
Colour	TCU	43	19	520	28
ECond	mS/m	1640	1880	38.1	818
Fe	mg/L	0.044	0.022	2.3	0.032
Hardness	mg/L	1200	2400	63	1000
HCO3	mg/L	<1	43	119	165
K	mg/L	148	67.4	9.5	101
Mg	mg/L	283	518	7.4	177
Mn	mg/L	<0.001	0.004	0.010	0.030
Na	mg/L	3770	4270	35.7	1690
N_NO3	mg/L	0.01	0.01	0.01	0.01
N_total	mg/L	4.4	4	4	11
N_totsol	mg/L	3.7	1.7	0.92	3.1
pH		10.1	9.4	7.7	9
P_total	mg/L	0.05	0.02	0.69	0.74
P_totsol	mg/L	0.02	0.02	0.05	0.03
SiO2_Si	mg/L	1.3	1.5	41	18
SO4_S	mg/L	271	1090	6.4	285
Sr	mg/L	0.83	2.2	0.095	1.4
TDS_180C	mg/L	12000	14000	280	5900
Turbidit	NTU	4.2	1.3	39	110
alON_BAL	%	-2	2.9	0.1	-3
Chloro_a	mg/L	0.007	<0.001	0.14	0.068

**Chemistry Centre of Western Australia
Environmental Chemistry Section**

Report of Examination

CCWA ID	07E0880/009	07E0880/010	07E0880/011	07E0880/012
Client ID	ESP036	ESP040	ESP033	ESP030
Sampled	01/11/2007	01/11/2007	01/11/2007	01/11/2007

Analyte	Unit				
Chloro_b	mg/L	0.001	<0.001	0.035	<0.001
Chloro_c	mg/L	0.001	<0.001	0.012	0.009
Phaeo_a	mg/L	<0.001	<0.001	0.003	0.002

Analyte	Method	Description
aION_BAL	ixIONBAL2	Ionic Balance of neutral charged waters.
Alkalin	iALK1WATI	Alkalinity, total expressed as CaCO3 mg/L.
Ca	iMET1WCICP	Calcium
Chloro_a	iCHLA1WAC	Chlorophyll "a", as per APHA (21st ed) Method 1020
Chloro_b	iCHLA1WAC	Chlorophyll "b", as per APHA (21th ed) Method 1020
Chloro_c	iCHLA1WAC	Chlorophyll "c", as per APHA (21st ed) Method 1020
Cl	iCL1WAAA	Chloride
CO3	iALK1WATI	Carbonate
Colour	iCOL1WACO	Colour, True Colour Units (TCU).
ECond	IEC1WZSE	Electrical Conductivity, 25 degrees celcius.
Fe	iMET1WCICP	Iron
Hardness	iHTOT2WAC	Hardness, total expressed as CaCO3 mg/L.
HCO3	iALK1WATI	Bicarbonate
K	iMET1WCICP	Potassium
Mg	iMET1WCICP	Magnesium
Mn	iMET1WCICP	Manganese
Na	iMET1WCICP	Sodium
N_NO3	iNTAN1WFIA	Nitrogen, nitrate + nitrite fraction by FIA.
N_total	iNP1WTFIA	Nitrogen, persulphate total by FIA
N_totsol	iNP1WDFIA	Nitrogen, persulphate total soluble by FIA
pH	iPH1WASE	pH
Phaeo_a	iCHLA1WAC	Phaeophytin "a", as per APHA (21st ed) Method 1020
P_total	iPP1WTFIA	Phosphorus, persulphate total by FIA.
P_totsol	iPP1WDFIA	Phosphorus, total soluble by FIA.
SiO2_Si	iSI1WCICP	Silica from Si by ICPAES (unacidified)
SO4_S	iMET1WCICP	Sulphate, sulphur expressed as sulphate.
Sr	iMET1WCICP	Strontium
TDS_180C	iSOL1WDGR	Total dissolved solids as per APHA (20th ed) Method 2540 C
Turbidit	iTURB1WCZ	Turbidity

**Chemistry Centre of Western Australia
Environmental Chemistry Section
Report of Examination**

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**Jenny McGuire
Science Business Manager
Environmental Chemistry Section**

05/12/2007