

**TABLE 1.1**  
**GTP Groundwater and Surface Water Chemical Monitoring Program**  
**2008 - 2010**

							Proposed 2008/2009 GTP Chemical Monitoring Program						
Chemical Sampling Locations							Analytical Program					Comments	
							Volatile CHCs			Semivolatile CHCs			
Plume Label	Location	Well/ Piezometer ID	All well sample port depths (m)	Scheduled Sample Depths (m)	Shallow depths (if app.)	VC SIM analysis sample ports	Quarterly	Annual (Sept 2008, Sept 2010 etc)	Biennial (Sept 2009, Sept 2011 etc)	Quarterly	Annual (Sept 2008, Sept 2010 etc)	Biennial (Sept 2009, Sept 2011 etc)	
<b>Southern Plumes</b>													
S1/S2	RailCorp	BP95	3, 6, 9, 12, 15, 18, 21	3, 6, 9, 12, 15, 18, 21	3	3						Quarterly and annual sampling of shallowest port to assess vCHC concentration against CHHRA. Biennial sampling of deeper ports to assess changes in CHC distribution in Rail Corridor and S1/S2. Upgradient of PCA. Additional annual svCHC analysis as per DECC comments August 2008. Annual sampling at 7 ports to commence in September 2009 as per Orica/DECC agreement (October 2008). Location has been destroyed (September 2009).	
S2/S3	Block 1 Southlands	BP23	2, 4, 6, 8, 10, 12, 14, 16, 18, 20	4, 8, 12, 16, 20					5		5	Biennial sampling to assess changes in CHC distribution at Block 1 Southlands. Upgradient of PCA	
S1/C1	Block 1 Southlands	BP45	2, 4, 6, 8, 10, 12, 14, 16, 18, 20	4, 8, 12, 16, 20				5	5		5	Biennial sampling to assess changes in CHC distribution at Block 1 Southlands. Upgradient of PCA. Changed to annual monitoring of vCHCs as per DECC comments August 2008.	
S1/C1	Block 1 Southlands	BP46	2, 4, 6, 8, 10, 12, 14, 16, 18, 20	4, 8, 12, 16, 20				5	5		5	Biennial sampling to assess changes in CHC distribution at Block 1 Southlands. Upgradient of PCA. Changed to annual monitoring of vCHCs as per DECC comments August 2008.	
S1/S2	Block 1 Southlands	BP47	2, 4, 6, 8, 10, 12, 14, 16, 18, 20	4, 8, 12, 16, 20					5		5	Biennial sampling to assess changes in CHC distribution at Block 1 Southlands. Upgradient of PCA	
S2	Block 1 Southlands	BP48	2, 4, 6, 8, 10, 12, 14, 16, 18, 20	4, 8, 12, 16, 20					5		5	Biennial sampling to assess changes in CHC distribution at Block 1 Southlands. Upgradient of PCA	
S2/S3	Block 1 Southlands	BP49	2, 4, 6, 8, 10, 12, 14, 16, 18, 20	4, 8, 12, 16, 20					5		5	Biennial sampling to assess changes in CHC distribution at Block 1 Southlands. Upgradient of PCA	
S2/S3	Block 1 Southlands	BP50	2, 4, 6, 8, 10, 12, 14, 16, 18, 20	6, 8, 12, 16, 20					5		5	Biennial sampling to assess changes in CHC distribution at Block 1 Southlands. Upgradient of PCA	
S1/C1	Block 1 Southlands	WG226S	(1-4)	(1-4)				1	1			New to program. Annual sampling of shallowest well to assess vCHC concentration against CHHRA and assess shallow groundwater adjacent to Springvale Drain.	
S1/S2	Block 1 Southlands	WG225S	(1-4)	(1-4)				1	1			New to program. Annual sampling of shallowest well to assess vCHC concentration against CHHRA and assess shallow groundwater adjacent to Springvale Drain.	
S2/S3	Block 1 Southlands	WG224S	(1-4)	(1-4)				1	1			New to program. Annual sampling of shallowest well to assess vCHC concentration against CHHRA and assess shallow groundwater adjacent to Springvale Drain.	
S3	Block 1 Southlands	BP51	3, 6, 9, 12, 15, 18, 21	6, 9, 12, 15, 21					5		5	Biennial sampling to assess changes in CHC distribution at Block 1 Southlands. Upgradient of PCA	
S3	Botany Road	WG23S/ WG75I	4-6, 12-15	4-6, 12-15	WG23S	WG23S	1	2	2	2	2	Quarterly sampling of shallowest port to assess vCHC concentration against CHHRA. Annual sampling of deeper well to assess changes in CHC distribution on periphery of S2/S3 Plumes. Additional VC SIM analysis and annual svCHCs analysis included as per DECC comments (August 2008).	
S2/S3	Discovery Cove	BP61	4, 6, 8, 10, 12, 14, 16, 18, 20	4, 8, 12, 16, 20	4	4	1	5	5	5	5	Quarterly sampling of shallowest port to assess vCHC concentration against CHHRA. Annual sampling of deeper ports to assess changes in CHC distribution. Upgradient of SCA. Additional annual svCHC analysis as per DECC comments August 2008.	
S2/S3	Discovery Cove	BP114	2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24	4, 6, 10, 16, 20	4	4	1	5	5		5	Quarterly sampling of shallowest port to assess vCHC concentration against CHHRA. Annual sampling of deeper ports to assess changes in CHC distribution on periphery of S2/S3 Plumes.	
S3	Discovery Cove	BP62	4, 6, 8, 10, 12, 14, 16, 18, 20	4, 8, 12, 16, 20		4		5	5		5	Annual monitoring to assess changes in vCHC distribution on periphery of S3. Biennial sampling to assess changes in svCHC distribution.	
S2/S3/C1	Downgradient of Foreshore Road	BP115	3.25, 5.25, 6.5	3.25, 5.25, 6.5	3	3	3	3	3			Quarterly sampling of shallowest well to assess vCHC concentration against CHHRA. Annual sampling of deeper wells to assess changes in CHC distribution. Between SCA and Botany Bay. Increase in sampling ports for quarterly program as per DECC comments August 2008 and decommissioning of other Penrhyn Estuary monitoring locations.	
S2/S3/C1	Downgradient of Foreshore Road	BP108	2.25, 3.25, 4.25	2.25, 3.25, 4.25								Quarterly monitoring of water quality parameters to assess salinity of groundwater. Between SCA and Botany Bay. Decommissioned in August 2008 (Port Botany expansion project).	
S2/S3/C1	Downgradient of Foreshore Road	BP109	2.25, 3.25, 4.25	2.25, 3.25, 4.25								Quarterly monitoring of water quality parameters to assess salinity of groundwater. Between SCA and Botany Bay. Decommissioned in August 2008 (Port Botany expansion project).	
S2/S3/C1	Downgradient of Foreshore Road	MWF15S/I/D	S, I, D	S, I, D	(/)		3	3	3			Quarterly monitoring of all wells to assess changes in vCHC distribution.	
							9	36	66	0	7	57	

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<b>Central EDC Plume</b>													
C1	BIP	BP91	2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30	6, 10, 16, 20, 24, 26, 28, 30				8	8			8	Annual monitoring to assess changes in CHC distribution within C1 Source Area. Upgradient of BIP line.
C1	BIP	BP07	???	6, 8, 10, 12, 14				5	5			5	Annual monitoring to assess changes in CHC distribution within C1 Plume. Upgradient of BIP line.
N4/N5/C1	Downgradient HCB Drum Store	BP80	3, 6, 9, 12, 15, 18, 21, 24, 27, 30	6, 15, 18, 24, 30				5	5			5	Annual monitoring to assess changes in CHC distribution within N4/N5/C1 Plume. Upgradient of BIP line.
C1	Nant Street Tank Farm	BP06	???	6, 10, 12, 16, 18					5				Biennial monitoring to assess changes in CHC distribution within C1 Plume. Upgradient of PCA.
C1	Block 2 Southlands	BP02	4, 6, 8, 12, 14, 16, 18, 20, 22, 24, 26	8, 12, 14, 16, 20				5	5			5	Biennial monitoring to assess changes in CHC distribution within C1 Plume at Block 2 Southlands. Upgradient of PCA. Changed to annual monitoring of vCHCs as per DECC comments August 2008.
C1/S1	Block 2 Southlands	BP03	4, 6, 8, 12, 14, 16, 18, 20, 22, 24, 26	6, 12, 14, 16, 22, 26				6	6		6	6	Biennial monitoring to assess changes in CHC distribution within C1/S1 Plume at Block 2 Southlands. Upgradient of PCA. Changed to annual monitoring of vCHCs and svCHCs as per DECC comments August 2008.
C1	Block 2 Southlands	BP33	4, 6, 8, 12, 14, 16, 18, 20	8, 12, 14, 16, 18				5	5				Biennial monitoring to assess changes in CHC distribution within C1 Plume at Block 2 Southlands. Upgradient of PCA. Changed to annual monitoring of vCHCs as per DECC comments August 2008.
C1	Block 2 Southlands	BP21	4, 6, 8, 12, 14, 16, 18, 20	8, 12, 14, 16, 18				5	5				Biennial monitoring to assess changes in CHC distribution within C1 Plume at Block 2 Southlands. Upgradient of PCA. Changed to annual monitoring of vCHCs as per DECC comments August 2008.
C1/S1	Block 2 Southlands	WG74S/I/D	(4-7) (14-17) (27-30)	(4-7) (14-17) (27-30)					3			3	Biennial monitoring to assess changes in CHC distribution within C1/S1 Plumes at Block 2 Southlands. Upgradient of PCA.
C1/N5	Greenfield Street	BP41	2, 4, 8, 12, 14, 16, 18, 20	2, 4, 8, 12, 14, 16, 18	2	2	3	7	7				Quarterly sampling of shallowest port for comparison to CHHRA. Annual sampling of deeper ports to assess changes in C1/N5 Plume distribution. Upgradient of SCA. Additional shallow ports 4 and 8 m added to quarterly monitoring round as per DECC comments August 2008.
C1/S1	ING Property - Botany Road	BP59	2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30	4, 8, 12, 16, 18, 20, 24, 30	4	4	3	6	8			8	Quarterly sampling of shallowest port for comparison against CHHRA. Annual sampling of deeper ports to assess changes in C1/S1 Plume distribution. Upgradient of SCA. Additional shallow ports 8 and 12 m added to quarterly monitoring round as per DECC comments August 2008. Additional VC SIM analysis included as per DECC comments (August 2008).
C1	Bayview Towers - Botany Road	BP76	2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30	4, 6, 10, 14, 18, 22, 26	4	4	1	7	7				Quarterly sampling of shallowest port for comparison to CHHRA. Annual sampling of deeper ports to assess changes in C1 Plume distribution. Regular monitoring of locations BP59, BP60 and BP77 in vicinity. Upgradient of SCA. Additional VC SIM analysis included as per DECC comments (August 2008).
C1/S1	Botany Golf Course	BP60	4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28	4, 6, 10, 14, 18, 22, 26	4	4	1	7	7			7	Quarterly sampling of shallowest port for comparison to CHHRA. Annual sampling of deeper ports to assess changes in C1/S1 Plume distribution. Upgradient of SCA. <b>March quarterly to include sampling at all ports as per DECC comments August 2008.</b>
S1/C1	Botany Golf Course	WG154S/ WG154D	(4-7) and (17-20)	(4-7) and (17-20)	WG154S	WG154S	2	2	2		2	2	Quarterly sampling of shallowest well for comparison against CHHRA. Annual sampling of deeper ports to assess changes in C1/S1 Plume distribution. Upgradient of SCA. Additional annual svCHC analysis as per DECC comments August 2008. Quarterly sampling of deep location added after discussions with DECC 17 April 2009.
C1	Botany Golf Course	BP77	2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30	4, 6, 10, 14, 18, 22, 28	4	4	1	7	7				Quarterly sampling of shallowest well for comparison against CHHRA. Annual sampling of deeper ports to assess changes in C1 Plume distribution. Upgradient of SCA. <b>March quarterly to include sampling at all ports as per DECC comments August 2008.</b>
							11	75	85	0	8	49	

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Plume Label	Location	Well/ Piezometer ID	All well sample port depths (m)	Scheduled Sample Depths (m)	Shallow depths (if app.)	VC SIM analysis sample ports	Quarterly	Annual (Sept 2008, Sept 2010 etc)	Biennial (Sept 2009, Sept 2011 etc)	Quarterly	Annual (Sept 2008, Sept 2010 etc)	Biennial (Sept 2009, Sept 2011 etc)	
<b>Northern Plumes</b>													
-	North of Plant Site - Collins St	BP87	3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33	6, 9, 15, 18, 27, 30		6			6			Biennial monitoring to assess changes in vCHC concentrations.	
N1	Northwest of Plant Site - Queen St	BP86	3, 6, 9, 12, 15, 18, 21	3, 6, 9, 12, 15, 18		3			6			Biennial monitoring to assess changes in vCHC concentrations.	
-	Pagewood Public School	BP85	3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39	6, 9, 12, 18, 24, 36		6			6			Biennial monitoring to assess changes in vCHC concentrations.	
N1/N2	Pater Street	BP110	3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, 42	3, 6, 12, 21, 27, 33, 39	3	3		1	7			Annual sampling of shallow groundwater and biennial sampling of the deeper aquifer to assess changes in vCHC distribution within the N1/N2 Plumes downgradient of BIP. Additional VC SIM analysis included as per DECC comments (August 2008).	
N4	SRA/Tank Farm	WG68/ WG68D	(4-7) (10.5-13.5) (26-29)	(4-7) (10.5-13.5) (26-29)				2	2		2	Annual sampling to assess changes in vCHC distribution within the N4/N5 Plumes downgradient of BIP.	
N4	SRA/Tank Farm	WG227S	(1-4)	(1-4)	WG227S		1	1	1		1	New to program - replaces WG41S. Quarterly sampling to assess vCHC concentrations adjacent to Springvale Drain. Biennial monitoring of svCHCs.	
N3	Mobil Terminal Carpark	WG234S/ WG234I/ WG234D	(6-9) (15-18) (25-28)	(6-9) (15-18) (25-28)	WG234S	WG234S	1	3	3		3	New to program - replaces WG86. Quarterly monitoring of vCHCs in shallowest well for comparison to CHHRA. Annual sampling of vCHCs in deeper wells to assess changes in vCHC distribution within the N3 Plume downgradient of BIP. Biennial monitoring of svCHCs.	
N1	Stephen Road	WG231S/ WG231I/ WG231D	(8-11) (16-19) (28-31)	(8-11) (16-19) (28-31)	WG231S	WG231S	1	3	3			New to program - replaces BP78. Quarterly sampling of shallowest well for comparison to CHHRA. Annual sampling of deeper wells to assess changes in vCHC distribution within the N1 Plume downgradient of BIP.	
N1	Nuplex	WG229S/ WG229I/ WG229D	(8-11) (19-22) (26.5-29.5)	(8-11) (19-22) (26.5-29.5)	WG229S	WG229S	1	3	3			New to program - replaces BP04. Quarterly monitoring of vCHCs in shallowest well for comparison to CHHRA. Annual monitoring of vCHCs in deeper wells to assess changes in vCHC distribution within the N1 Plume downgradient of BIP.	
N2/N3	Nuplex	WG233S/ WG233I/ WG233D	(8-11) (19-22) (29-32)	(8-11) (19-22) (29-32)	WG233S	WG233S	1	3	3			New to program - replaces BP52. Quarterly monitoring of vCHCs in shallowest well for comparison to CHHRA. Annual monitoring of vCHCs in deeper wells to assess changes in vCHC distribution within the N2/N3 Plumes downgradient of BIP. Additional VC SIM analysis included as per DECC comments (August 2008).	
N1/N2	Nuplex	WG230S/ WG230I/ WG230D	(8-11) (18-21) (29.5-32.5)	(8-11) (18-21) (29.5-32.5)					3			New to program - replaces BP53. Biennial monitoring to assess changes in vCHC distribution within the N1/N2 Plumes downgradient of BIP. Quarterly monitoring of WG229S and WG233S considered to be sufficient to assess water quality in this area.	
N1	Wiggins St/Trevelyan St ( Banksmeadow PS)	BP54	3, 6, 9, 12, 15, 18, 21, 24, 27	6, 12, 21, 24, 27	6	6	1	5	5			Quarterly monitoring of vCHCs in shallowest port for comparison to CHHRA. Annual monitoring of vCHCs in deeper ports to assess changes in N1 Plume distribution.	
N1	Banksmeadow PS	WG72S/ WG72I/ WG72D	(15-18) (21-24) (29-32)	(15-18) (21-24) (29-32)		WG72S		3	3			Annual monitoring of vCHCs to assess changes in N1 Plume distribution.	
N2/N3	Australand access road (Fletcher's property) downgradient of rail corridor.	BP111	3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, 42	3, 6, 12, 18, 24, 30, 39	3	3		1	7		7	Annual monitoring of vCHC in shallowest port for comparison to CHHRA. Biennial monitoring of CHCs in deeper ports to assess changes in N2/N3 Plume distribution downgradient of BIP. Additional VC SIM analysis included as per DECC comments (August 2008). Location is said to be decommissioned in August 2009.	
N3/N4/N5	Northern boundary of Mobil property.	BP112	2, 5, 8, 11, 14, 17	2, 8, 11, 14, 17					5		5	Biennial monitoring of CHCs to assess changes in N3/N4/N5 Plume distribution.	
N3/N4/N5	Northern boundary of Mobil property.	WG236	(18.5-21.5)	(18.5-21.5)								New to program - deeper well to supplement BP112. Biennial monitoring to assess changes in CHC distribution within the N3/N4/N5 Plumes downgradient of BIP. Location has been destroyed (December 2008).	
N3/N4/N5	Greenfield Street - downgradient Solvay property McPherson Street	BP113	3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, 42	3, 6, 15, 18, 24, 30, 36	3	3	1	7	7	7	7	Quarterly monitoring of vCHCs in shallowest port for comparison against CHHRA. Annual monitoring of vCHCs in deeper ports to assess changes in N3/N4/N5 Plume distribution. Upgradient of SCA. Biennial monitoring of svCHCs. Additional annual svCHC analysis as per DECC comments August 2008.	
N3	McPherson Street	BP55	3, 6, 9, 12, 15, 18, 21, 24, 27	6, 12, 18, 24, 27	6	6		1	5		5	Annual monitoring of vCHCs in shallowest port for comparison to CHHRA. Biennial monitoring of CHCs in deeper ports to assess changes in N3 Plume distribution in region of the west of PCA. Additional VC SIM analysis included as per DECC comments (August 2008).	
N2	McPherson Street	BP56	3, 6, 9, 12, 15, 18, 21, 24, 27, 30	6, 12, 18, 24, 27	6		1	5	5		5	Quarterly monitoring of vCHCs in shallowest port for comparison to CHHRA. Annual monitoring of vCHCs in deeper ports to assess changes in N2 Plume distribution in region of the west of PCA. Biennial monitoring of svCHCs.	

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							Quarterly	Annual (Sept 2008, Sept 2010 etc)	Biennial (Sept 2009, Sept 2011 etc)	Quarterly	Annual (Sept 2008, Sept 2010 etc)	Biennial (Sept 2009, Sept 2011 etc)	
Plume Label	Location	Well/ Piezometer ID	All well sample port depths (m)	Scheduled Sample Depths (m)	Shallow depths (if app.)	VC SIM analysis sample ports							
N1/N2	Stephen Road/Botany Road (Department of Defence)	BP89	3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39	6, 12, 18, 21, 24, 27, 30	6	6	1	7	7			Quarterly monitoring of vCHCs in shallowest port for comparison to CHHRA. Annual monitoring of vCHCs in deeper ports to assess changes in N1/N2 Plume distribution.	
N1	Fremlin Street	BP57	3, 6, 9, 12, 15, 18, 21, 24, 27, 30	3, 6, 12, 18, 24, 27	3	3	1	6	6			Quarterly monitoring of vCHCs in shallowest port for comparison to CHHRA. Annual monitoring of vCHCs in deeper ports to assess changes in N1 Plume distribution.	
N2/N3	Botany Golf Course	BP58	3, 6, 9, 18, 24, 27	3, 6, 9, 18, 24, 27	3	3	1	6	6			Quarterly monitoring of vCHCs in shallowest port for comparison to CHHRA. Annual monitoring of vCHCs in deeper ports to assess changes in N2/N3 Plume distribution. Upgradient of SCA.	
N2/N3	Botany Golf Course	WG88I	12-18m	12-18m				1	1			Annual monitoring of vCHCs to supplement monitoring at BP58. Upgradient of SCA.	
N2	Offsite – Botany Golf Course	BP72	1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29	3, 5, 9, 15, 19, 23	3	3	1	6	6			Quarterly monitoring of vCHCs in shallowest port for comparison to CHHRA. Annual monitoring of vCHCs in deeper ports to assess changes in N2 Plume distribution.	
N1/N2	Foreshore Road	BP116	3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39	6, 9, 15, 21, 24, 30, 36		6			7			Biennial monitoring of CHCs to assess vCHC concentrations at the periphery of the N1/N2 Plumes upgradient of Botany Bay.	
N1	Foreshore Road	WG76S/ WG76D	(4-7) (27-30)	(4-7) (27-30)		WG76S			2			Biennial monitoring of CHCs to assess vCHC concentrations at the periphery of the N1 Plume upgradient of Botany Bay.	
							12	64	115	0	7	35	
<b>Other Areas</b>													
-	Chlorine Plant	MWC10S/I/D	(6-9) (9-12) (18-21)	(6-9) (9-12) (18-21)		MWC10S			3			3	Biennial monitoring of CHCs.
-	McPherson St	WG30/ MCW12D	(4 - 7) (11-14)	(4 - 7) (11-14)		WG30		2	2			2	Biennial monitoring to assess CHC concentrations to the east of Southern Plumes.
							0	2	5	0	0	5	
<b>Penrhyn Estuary</b>													
S2/S3	Offsite – Penrhyn Estuary	BP01		0.75, 1.25, 2, 6, 10	0.75	0.75	5	5	5			5	Quarterly monitoring of vCHCs in shallowest port (0.75 m) for assessment against the CHHRA. Annual monitoring of deeper ports to assess changes in S1/S2/S3 Plume distribution. Biennial monitoring of svCHCs. Increase in sampling ports for quarterly program as per DECC comments August 2008 and decommissioning of other Penrhyn Estuary monitoring locations.
S2/S3	Central mudflat - Middle Estuary	BP42*, BP43*		0.1, 0.5, 2.0	0.1	0.1	12	12	12			6	Quarterly monitoring of vCHCs in shallowest port (0.1 m) at high/low tides for assessment against the CHHRA. Annual monitoring of 0.1, 0.5 and 2.0 m ports. Biennial monitoring of svCHCs. Due to be decommissioned August 2008 (Port Botany expansion project). BP44 was decommissioned prior to September 2008 sampling. Continued sampling of ports until locations have been removed due to the Port Botany expansion.
S1/C1	Northwestern mudflat - Middle Estuary	BP64*, BP65*		0.1, 0.5, 2.0	0.1	0.1	12	12	12			6	Quarterly monitoring of vCHCs in shallowest port (0.1 m) at high/low tides for assessment against the CHHRA. Annual monitoring of 0.1, 0.5 and 2.0 m ports. Biennial monitoring of svCHCs. Due to be decommissioned August 2008 (Port Botany expansion project). BP66 was decommissioned prior to September 2008 sampling. Continued sampling of ports until locations have been removed due to the Port Botany expansion.
							29	29	29	0	0	17	

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<b>Surface Water</b>													
Springvale Drain	Upstream of Orica Stormwater Pipe	SW046				SW046	1	1	1			1	Quarterly monitoring of vCHCs for assessment against the CHHRA. Biennial monitoring of svCHCs.
Springvale Drain	Realignment – Springvale Drain Outlet	SW049				SW049	1	1	1			1	Quarterly monitoring of vCHCs. Biennial monitoring of svCHCs.
Springvale Drain	McPherson Street	SW005				SW005	1	1	1			1	Quarterly monitoring of vCHCs for assessment against the CHHRA. Biennial monitoring of svCHCs.
Springvale Drain	Penrhyn Estuary Outlet	SW031*				SW031	2	2	2			2	Quarterly monitoring of vCHCs for assessment against the CHHRA. Biennial monitoring of svCHCs.
Springvale Drain	Penrhyn Estuary SVD channel	SW030				SW030	1	1	1			1	Quarterly monitoring of vCHCs. Biennial monitoring of svCHCs.
Springvale Drain	Penrhyn Estuary SVD channel on Southlands	SW062				SW062	1	1	1			1	Added to the program following recommendations in the Air Emissions Sampling Program and discussions with the DECC. Sampling at this location to commence in September 2009.
Springvale Drain	Penrhyn Estuary SVD channel on Southlands	SW062_East				SW062_East	1	1	1			1	Added to the program following recommendations in the Air Emissions Sampling Program and discussions with the DECC. Sampling at this location to commence in September 2009.
Springvale Drain	Penrhyn Estuary SVD channel near MCA Shipping Yard	SW064				SW064	1	1	1			1	Added to the program following recommendations in the Air Emissions Sampling Program and discussions with the DECC. Sampling at this location to commence in September 2009.
Penrhyn Estuary	Old Boat Ramp	SW028*				SW028	2	2	2			2	Quarterly monitoring of vCHCs for assessment against the CHHRA. Biennial monitoring of svCHCs.
Penrhyn Estuary	Opposite Old Boat Ramp	SW060				SW060	1	1	1			1	Quarterly monitoring of vCHCs for assessment against the CHHRA. Biennial monitoring of svCHCs.
Penrhyn Estuary	New Boat Ramp	SW048*				SW048	2	2	2			2	Quarterly monitoring of vCHCs for assessment against the CHHRA. Biennial monitoring of svCHCs.
Botany Golf Course	Pond in Botany Golf Course	SW066				SW066		1	1			1	Biennial monitoring of vCHCs. Monitoring frequency to be reviewed pending CHC concentrations detected during first two sampling events. Removed from quarterly program December 2008.
Floodvale Drain	Upstream Southlands	SW052				SW052	1	1	1			1	Quarterly monitoring of vCHCs. Biennial monitoring of svCHCs.
Floodvale Drain	McPherson Street	SW053				SW053	1	1	1			1	Quarterly monitoring of vCHCs. Biennial monitoring of svCHCs.
Penrhyn Estuary	Floodvale Drain Outlet	SW029*				SW029	2	2	2			2	Quarterly monitoring of vCHCs for assessment against the CHHRA. Biennial monitoring of svCHCs.
							18	19	19	0	0	19	
							79	225	319	0	22	182	

\* Samples to be collected at both high tide and low tide

note: vCHC = volatile chlorinated hydrocarbon compounds; svCHC = semi-volatile chlorinated hydrocarbon compounds

**TABLE 1.2**  
**GTP Quarterly Hydraulic Containment Water Level Monitoring Locations**  
**December 2009**

Location ID	Monitoring Purpose	Location Description	Well Type	Well Construction Type	Easting	Northing	Aquifer
					MGA56		Shallow/Deep
EWD011	BIP - Containment	BIP - 2nd Street	Extraction Well	150mm Stainless Steel	335465	6241474	Deep
EWD01S	BIP - Containment	BIP - 2nd Street	Extraction Well	150mm Stainless Steel	335467	6241472	Shallow
EWD02I	BIP - Containment	BIP - 2nd Street	Extraction Well	150mm Stainless Steel	335449	6241495	Deep
EWD02S	BIP - Containment	BIP - 2nd Street	Extraction Well	150mm Stainless Steel	335451	6241492	Shallow
EWD03I	BIP - Containment	BIP - 2nd Street	Extraction Well	150mm Stainless Steel	335433	6241515	Deep
EWD03S	BIP - Containment	BIP - 2nd Street	Extraction Well	150mm Stainless Steel	335434	6241513	Shallow
EWD04I	BIP - Containment	BIP - 2nd Street	Extraction Well	150mm Stainless Steel	335420	6241532	Deep
EWD04S	BIP - Containment	BIP - 2nd Street	Extraction Well	150mm Stainless Steel	335423	6241528	Shallow
EWD05I	BIP - Containment	BIP - 2nd Street	Extraction Well	150mm Stainless Steel	335389	6241571	Deep
EWD05S	BIP - Containment	BIP - 2nd Street	Extraction Well	150mm Stainless Steel	335390	6241570	Shallow
EWD06I	BIP - Containment	BIP - 2nd Street	Extraction Well	150mm Stainless Steel	335364	6241603	Deep
EWD06S	BIP - Containment	BIP - 2nd Street	Extraction Well	150mm Stainless Steel	335366	6241601	Shallow
EWD07I	BIP - Containment	BIP - 2nd Street	Extraction Well	150mm Stainless Steel	335349	6241622	Deep
EWD07S	BIP - Containment	BIP - 2nd Street	Extraction Well	150mm Stainless Steel	335351	6241620	Shallow
EWD08I	BIP - Containment	BIP - 2nd Street	Extraction Well	150mm Stainless Steel	335327	6241650	Deep
EWD08S	BIP - Containment	BIP - 2nd Street	Extraction Well	150mm Stainless Steel	335329	6241648	Shallow
EWD09I	BIP - Containment	BIP - 2nd Street	Extraction Well	150mm Stainless Steel	335308	6241675	Deep
EWD09S	BIP - Containment	BIP - 2nd Street	Extraction Well	150mm Stainless Steel	335310	6241673	Shallow
EWD10I	BIP - Containment	BIP - 2nd Street	Extraction Well	150mm Stainless Steel	335286	6241703	Deep
EWD10S	BIP - Containment	BIP - 2nd Street	Extraction Well	150mm Stainless Steel	335288	6241701	Shallow
EWD11D	BIP - Containment	BIP - 1st Street	Extraction Well	150mm Stainless Steel	335229	6241613	Deep
EWD11S	BIP - Containment	BIP - 1st Street	Extraction Well	150mm Stainless Steel	335231	6241610	Shallow
EWD12D	BIP - Containment	BIP - 1st Street	Extraction Well	150mm Stainless Steel	335212	6241640	Deep
EWD12S	BIP - Containment	BIP - 1st Street	Extraction Well	150mm Stainless Steel	335214	6241637	Shallow
EWD13I	BIP - Containment	BIP - 1st Street	Extraction Well	150mm Stainless Steel	335198	6241657	Deep
EWD13S	BIP - Containment	BIP - 1st Street	Extraction Well	150mm Stainless Steel	335196	6241660	Shallow
EWD14D	BIP - Containment	BIP - 1st Street	Extraction Well	150mm Stainless Steel	335177	6241684	Deep
EWD14I	BIP - Containment	BIP - 1st Street	Extraction Well	150mm Stainless Steel	335181	6241679	Deep
EWD14S	BIP - Containment	BIP - 1st Street	Extraction Well	150mm Stainless Steel	335178	6241682	Shallow
EWD15D	BIP - Containment	BIP - 1st Street	Extraction Well	150mm Stainless Steel	335161	6241704	Deep
EWD15I	BIP - Containment	BIP - 1st Street	Extraction Well	150mm Stainless Steel	335164	6241701	Deep
EWD15S	BIP - Containment	BIP - 1st Street	Extraction Well	150mm Stainless Steel	335160	6241707	Shallow
EWD16D	BIP - Containment	BIP - 1st Street	Extraction Well	150mm Stainless Steel	335145	6241725	Deep
EWD17D	BIP - Containment	BIP - 1st Street	Extraction Well	150mm Stainless Steel	335130	6241745	Deep
EWD17I	BIP - Containment	BIP - 1st Street	Extraction Well	150mm Stainless Steel	335132	6241742	Deep
EWD18D	BIP - Containment	BIP - 1st Street	Extraction Well	150mm Stainless Steel	335120	6241757	Deep
EWD18I	BIP - Containment	BIP - 1st Street	Extraction Well	150mm Stainless Steel	335122	6241755	Deep
EWD19D	BIP - Containment	BIP - 1st Street	Extraction Well	150mm Stainless Steel	335091	6241794	Deep
EWD19I	BIP - Containment	BIP - 1st Street	Extraction Well	150mm Stainless Steel	335093	6241792	Deep
EWD20D	BIP - Containment	BIP - 1st Street	Extraction Well	150mm Stainless Steel	335065	6241827	Deep
EWD20I	BIP - Containment	BIP - 1st Street	Extraction Well	150mm Stainless Steel	335068	6241824	Deep
EWD21D	BIP - Containment	BIP - 1st Street	Extraction Well	150mm Stainless Steel	335045	6241853	Deep
EWD21I	BIP - Containment	BIP - 1st Street	Extraction Well	150mm Stainless Steel	335049	6241848	Deep
EWD21S	BIP - Containment	BIP - 1st Street	Extraction Well	150mm Stainless Steel	335047	6241851	Shallow
EWD22I	BIP - Containment	BIP - 1st Street	Extraction Well	150mm Stainless Steel	335018	6241887	Deep
EWD22S	BIP - Containment	BIP - 1st Street	Extraction Well	150mm Stainless Steel	335016	6241890	Shallow
EWD23I	BIP - Containment	BIP - 1st Street	Extraction Well	150mm Stainless Steel	334987	6241926	Deep
EWD23S	BIP - Containment	BIP - 1st Street	Extraction Well	150mm Stainless Steel	334985	6241930	Shallow
EWD24I	BIP - Containment	BIP - 1st Street	Extraction Well	150mm Stainless Steel	334956	6241966	Deep
EWD24S	BIP - Containment	BIP - 1st Street	Extraction Well	150mm Stainless Steel	334954	6241969	Shallow
EWD25I	BIP - Containment	BIP - 1st Street	Extraction Well	150mm Stainless Steel	334926	6242005	Deep
EWD25S	BIP - Containment	BIP - 1st Street	Extraction Well	150mm Stainless Steel	334923	6242009	Shallow
EWD26D	BIP - Containment	BIP - 1st Street	Extraction Well	150mm Stainless Steel	334900	6242037	Deep
EWD26I	BIP - Containment	BIP - 1st Street	Extraction Well	150mm Stainless Steel	334903	6242032	Deep
EWD26S	BIP - Containment	BIP - 1st Street	Extraction Well	150mm Stainless Steel	334901	6242035	Shallow
EWD27D	BIP - Containment	BIP - 1st Street	Extraction Well	150mm Stainless Steel	334884	6242094	Deep
EWD27I	BIP - Containment	BIP - 1st Street	Extraction Well	150mm Stainless Steel	334885	6242088	Deep
EWD27S	BIP - Containment	BIP - 1st Street	Extraction Well	150mm Stainless Steel	334885	6242092	Shallow
EWD28I	BIP - Containment	BIP - 1st Street	Extraction Well	150mm Stainless Steel	334924	6242161	Deep
EWD28S	BIP - Containment	BIP - 1st Street	Extraction Well	150mm Stainless Steel	334926	6242162	Shallow
MWD01I	BIP - Containment	BIP - 2nd Street	Monitoring Well	50 mm PVC	335457	6241484	Deep
MWD01S	BIP - Containment	BIP - 2nd Street	Monitoring Well	50 mm PVC	335457	6241484	Shallow
MWD02I	BIP - Containment	BIP - 2nd Street	Monitoring Well	50 mm PVC	335426	6241523	Deep
MWD02S	BIP - Containment	BIP - 2nd Street	Monitoring Well	50 mm PVC	335426	6241523	Shallow
MWD03I	BIP - Containment	BIP - 2nd Street	Monitoring Well	50 mm PVC	335379	6241583	Deep

**TABLE 1.2**  
**GTP Quarterly Hydraulic Containment Water Level Monitoring Locations**  
**December 2009**

Location ID	Monitoring Purpose	Location Description	Well Type	Well Construction Type	Easting	Northing	Aquifer
					MGA56		Shallow/Deep
MWD03S	BIP - Containment	BIP - 2nd Street	Monitoring Well	50 mm PVC	335379	6241583	Shallow
MWD04I	BIP - Containment	BIP - 2nd Street	Monitoring Well	50 mm PVC	335338	6241636	Deep
MWD05D	BIP - Containment	BIP - 2nd Street	Monitoring Well	50 mm PVC	335303	6241681	Deep
MWD05I	BIP - Containment	BIP - 2nd Street	Monitoring Well	50 mm PVC	335303	6241681	Deep
MWD05S	BIP - Containment	BIP - 2nd Street	Monitoring Well	50 mm PVC	335303	6241681	Shallow
MWD06I	BIP - Containment	BIP - 12th Avenue	Monitoring Well	50 mm PVC	335249	6241661	Deep
MWD06S	BIP - Containment	BIP - 12th Avenue	Monitoring Well	50 mm PVC	335249	6241661	Shallow
MWD07D	BIP - Containment	BIP - 1st Street	Monitoring Well	50 mm PVC	335234	6241624	Deep
MWD07I	BIP - Containment	BIP - 1st Street	Monitoring Well	50 mm PVC	335234	6241624	Deep
MWD07S	BIP - Containment	BIP - 1st Street	Monitoring Well	50 mm PVC	335234	6241624	Shallow
MWD08I	BIP - Containment	BIP - 1st Street	Monitoring Well	50 mm PVC	335189	6241670	Deep
MWD08S	BIP - Containment	BIP - 1st Street	Monitoring Well	50 mm PVC	335189	6241670	Shallow
MWD09I	BIP - Containment	BIP - 1st Street	Monitoring Well	50 mm PVC	335153	6241715	Deep
MWD09S	BIP - Containment	BIP - 1st Street	Monitoring Well	50 mm PVC	335153	6241715	Shallow
MWD10I	BIP - Containment	BIP - 1st Street	Monitoring Well	50 mm PVC	335124	6241753	Deep
MWD10S	BIP - Containment	BIP - 1st Street	Monitoring Well	50 mm PVC	335124	6241753	Shallow
MWD11I	BIP - Containment	BIP - 1st Street	Monitoring Well	50 mm PVC	335079	6241809	Deep
MWD11S	BIP - Containment	BIP - 1st Street	Monitoring Well	50 mm PVC	335079	6241809	Shallow
MWD12I	BIP - Containment	BIP - 1st Street	Monitoring Well	50 mm PVC	335032	6241870	Deep
MWD12S	BIP - Containment	BIP - 1st Street	Monitoring Well	50 mm PVC	335032	6241870	Shallow
MWD13I	BIP - Containment	BIP - 1st Street	Monitoring Well	50 mm PVC	334972	6241946	Deep
MWD13S	BIP - Containment	BIP - 1st Street	Monitoring Well	50 mm PVC	334972	6241946	Shallow
MWD14I	BIP - Containment	BIP - 1st Street	Monitoring Well	50 mm PVC	334940	6241987	Deep
MWD14S	BIP - Containment	BIP - 1st Street	Monitoring Well	50 mm PVC	334940	6241987	Shallow
MWD15D	BIP - Containment	BIP - 1st Street	Monitoring Well	50 mm PVC	334898	6242135	Deep
MWD15I	BIP - Containment	BIP - 1st Street	Monitoring Well	50 mm PVC	334898	6242135	Deep
MWD16D	BIP - Regional	BIP - Site Utilities Carpark	Monitoring Well	50 mm PVC	335409	6241504	Deep
MWD16S	BIP - Regional	BIP - Site Utilities Carpark	Monitoring Well	50 mm PVC	335409	6241504	Shallow
WG117	BIP - Regional	BIP - Rosella	Monitoring Well	50 mm PVC	335234	6241958	Shallow
WG118	BIP - Regional	BIP - 1st Street	Monitoring Well	50 mm PVC	335073	6241836	Shallow
WG123D	BIP - Regional	BIP - 1st Street	Monitoring Well	50 mm PVC	334916	6242034	Deep
WG123S	BIP - Regional	BIP - 1st Street	Monitoring Well	50 mm PVC	334916	6242034	Shallow
WG124	BIP - Regional	BIP - Rosella	Monitoring Well	50 mm PVC	335358	6241770	Shallow
WG127S	BIP - Regional	BIP - Rosella	Monitoring Well	50 mm PVC	335303	6242213	Shallow
WG150D	BIP - Regional	BIP - 1st Street	Monitoring Well	50 mm PVC	335013	6241908	Deep
WG200D	BIP - Regional	HCB Waste Encapsulation	Monitoring Well	25 mm PVC	335644	6242358	Deep
WG200S	BIP - Regional	HCB Waste Encapsulation	Monitoring Well	25 mm PVC	335644	6242357	Shallow
WG202D	BIP - Regional	HCB Waste Encapsulation	Monitoring Well	25 mm PVC	335794	6242152	Deep
WG202S	BIP - Regional	HCB Waste Encapsulation	Monitoring Well	25 mm PVC	335794	6242152	Shallow
WG204D	BIP - Regional	BIP - Solvents Plant	Monitoring Well	50 mm PVC	335453	6241424	Deep
WG204S	BIP - Regional	BIP - Solvents Plant	Monitoring Well	50 mm PVC	335453	6241424	Shallow
WG205D	BIP - Regional	BIP - 2nd Street	Monitoring Well	50 mm PVC	335506	6241435	Deep
WG205S	BIP - Regional	BIP - 2nd Street	Monitoring Well	50 mm PVC	335506	6241435	Shallow
WG208D	BIP - Regional	BIP - Solvents Plant	Monitoring Well	50 mm PVC	335578	6241342	Deep
WG208S	BIP - Regional	BIP - Solvents Plant	Monitoring Well	50 mm PVC	335578	6241342	Shallow
WG215D	BIP - Regional	North-eastern extremities	Monitoring Well	50 mm PVC	336144	6241760	Deep
WG216D	BIP - Regional	North-eastern extremities	Monitoring Well	50 mm PVC	336112	6242124	Deep
WG216I	BIP - Regional	North-eastern extremities	Monitoring Well	50 mm PVC	336112	6242124	Deep
WG217D	BIP - Regional	North-eastern extremities	Monitoring Well	50 mm PVC	336065	6242340	Deep
WG217S	BIP - Regional	North-eastern extremities	Monitoring Well	50 mm PVC	336065	6242341	Shallow
WG228D	BIP - Regional	Offsite - Pater Street	Monitoring Well	32 mm PVC	334799	6241938	Deep
WG228S	BIP - Regional	Offsite - Pater Street	Monitoring Well	32 mm PVC	334799	6241938	Shallow
WG41S	BIP - Regional	Nant St Tank Farm	Monitoring Well	50 mm PVC	335141	6241614	Shallow
WG48	BIP - Regional	BIP - Rosella	Monitoring Well	50 mm PVC	335238	6241970	Shallow
WG49	BIP - Regional	BIP - Polypropylene Plant	Monitoring Well	50 mm PVC	335406	6242115	Deep
WG68D	BIP - Regional	Nant St Tank Farm	Monitoring Well	50 mm PVC	335114	6241643	Deep
WG83I	BIP - Regional	BIP - EDC Storage Tanks	Monitoring Well	50 mm PVC	335574	6241699	Deep
WG83S	BIP - Regional	BIP - EDC Storage Tanks	Monitoring Well	50 mm PVC	335575	6241699	Shallow
WG91S	BIP - Regional	BIP - Vinyls Plant	Monitoring Well	50 mm PVC	335647	6241656	Shallow
WG232I	Northern Areas	Eastlakes Golf Course	Monitoring Well	50 mm PVC	334449	6243244	Deep
WG232S	Northern Areas	Eastlakes Golf Course	Monitoring Well	50 mm PVC	334449	6243244	Shallow
WG235D	Northern Areas	David Philips Field	Monitoring Well	50 mm PVC	335733	6243970	Deep
WG235I	Northern Areas	David Philips Field	Monitoring Well	50 mm PVC	335736	6243978	Deep
WG235S	Northern Areas	David Philips Field	Monitoring Well	50 mm PVC	335735	6243974	Shallow
EWB02D	PCA - Containment	PCA - Block 2	Extraction Well	150mm Steel	334986	6241200	Deep
EWB05D	PCA - Containment	PCA - Block 2	Extraction Well	150mm Steel	334935	6241074	Deep
EWB06D	PCA - Containment	PCA - Block 2	Extraction Well	150mm Steel	334885	6241109	Deep
EWB07D	PCA - Containment	PCA - Block 1	Extraction Well	150mm Stainless Steel	335276	6241018	Deep
EWB08D	PCA - Containment	PCA - Block 1	Extraction Well	150mm Stainless Steel	335239	6241024	Deep
EWB09D	PCA - Containment	PCA - Block 1	Extraction Well	150mm Stainless Steel	335198	6241031	Deep

**TABLE 1.2**  
**GTP Quarterly Hydraulic Containment Water Level Monitoring Locations**  
**December 2009**

Location ID	Monitoring Purpose	Location Description	Well Type	Well Construction Type	Easting	Northing	Aquifer
					MGA56		Shallow/Deep
EWB10D	PCA - Containment	PCA - Block 2	Extraction Well	150mm Stainless Steel	335130	6241042	Deep
EWB11D	PCA - Containment	PCA - Block 2	Extraction Well	150mm Stainless Steel	335105	6241047	Deep
EWB12D	PCA - Containment	PCA - Block 2	Extraction Well	150mm Stainless Steel	335045	6241057	Deep
EWB13D	PCA - Containment	PCA - Block 2	Extraction Well	150mm Stainless Steel	334992	6241066	Deep
EWB14D	PCA - Containment	PCA - Block 2	Extraction Well	150mm Stainless Steel	334965	6241166	Deep
EWB15D	PCA - Containment	PCA - Block 2	Extraction Well	150mm Stainless Steel	334859	6241088	Deep
MWB01I	PCA - Containment	PCA - Block 1	Monitoring Well	50 mm PVC	335256	6241021	Deep
MWB01S	PCA - Containment	PCA - Block 1	Monitoring Well	50 mm PVC	335256	6241021	Shallow
MWB02I	PCA - Containment	PCA - Block 1	Monitoring Well	50 mm PVC	335218	6241027	Deep
MWB02S	PCA - Containment	PCA - Block 1	Monitoring Well	50 mm PVC	335218	6241027	Shallow
MWB03I	PCA - Containment	PCA - Block 1	Monitoring Well	50 mm PVC	335174	6241034	Deep
MWB03S	PCA - Containment	PCA - Block 1	Monitoring Well	50 mm PVC	335174	6241034	Shallow
MWB04I	PCA - Containment	PCA - Block 2	Monitoring Well	50 mm PVC	335117	6241045	Deep
MWB04S	PCA - Containment	PCA - Block 2	Monitoring Well	50 mm PVC	335117	6241045	Shallow
MWB05I	PCA - Containment	PCA - Block 2	Monitoring Well	50 mm PVC	335083	6241050	Deep
MWB05S	PCA - Containment	PCA - Block 2	Monitoring Well	50 mm PVC	335083	6241050	Shallow
MWB06I	PCA - Containment	PCA - Block 2	Monitoring Well	50 mm PVC	335017	6241061	Deep
MWB06S	PCA - Containment	PCA - Block 2	Monitoring Well	50 mm PVC	335017	6241061	Shallow
MWB07I	PCA - Containment	PCA - Block 2	Monitoring Well	50 mm PVC	334960	6241071	Deep
MWB07S	PCA - Containment	PCA - Block 2	Monitoring Well	50 mm PVC	334960	6241071	Shallow
MWB08I	PCA - Containment	PCA - Block 2	Monitoring Well	50 mm PVC	334901	6241086	Deep
MWB09I	PCA - Containment	PCA - Block 2	Monitoring Well	50 mm PVC	334869	6241106	Deep
MWB11I	PCA - Containment	Macpherson Street	Monitoring Well	50 mm PVC	334996	6241047	Deep
MWB11S	PCA - Containment	Macpherson Street	Monitoring Well	50 mm PVC	334996	6241047	Shallow
MWB13S	PCA - Containment	Macpherson Street	Monitoring Well	50 mm PVC	335103	6241029	Shallow
MWB14S	PCA - Containment	Macpherson Street	Monitoring Well	50 mm PVC	334932	6241057	Shallow
MWB15S	PCA - Containment	Macpherson Street	Monitoring Well	50 mm PVC	335197	6241020	Shallow
MWB12D	PCA - Regional	PCA - Southlands Block 1	Monitoring Well	50 mm PVC	335378	6241000	Deep
MWB12S	PCA - Regional	PCA - Southlands Block 1	Monitoring Well	50 mm PVC	335378	6241000	Shallow
MWC09D	PCA - Regional	BIP - Chlor-Alkali plant	Monitoring Well	50 mm PVC	335828	6241080	Deep
MWC09S	PCA - Regional	BIP - Chlor-Alkali plant	Monitoring Well	50 mm PVC	335829	6241081	Shallow
MWC11D	PCA - Regional	BIP - Chlor-Alkali plant	Monitoring Well	50 mm PVC	335618	6240908	Deep
MWC11S	PCA - Regional	BIP - Chlor-Alkali plant	Monitoring Well	50 mm PVC	335618	6240909	Shallow
SL01D	PCA - Regional	Solvay	Monitoring Well	50 mm PVC	334776	6241162	Deep
WG141	PCA - Regional	Block 1 Southlands (BP24)	Monitoring Well	50 mm PVC	335355	6241162	Deep
WG146I	PCA - Regional	Southlands Block 2	Monitoring Well	50 mm PVC	335005	6241247	Deep
WG147I	PCA - Regional	Southlands Block 2	Monitoring Well	50 mm PVC	334963	6241188	Deep
WG152D	PCA - Regional	Southlands Block 2	Monitoring Well	50 mm PVC	334893	6241249	Deep
WG153D	PCA - Regional	Southlands Block 2	Monitoring Well	50 mm PVC	335045	6241126	Deep
WG162D	PCA - Regional	Block 2 Southlands	Monitoring Well	50 mm PVC	334899	6241122	Deep
WG162S	PCA - Regional	Block 2 Southlands	Monitoring Well	25 mm PVC	334899	6241123	Shallow
WG171I	PCA - Regional	Block 2 Southlands	Monitoring Well	25 mm PVC	335068	6241348	Deep
WG171S	PCA - Regional	Block 2 Southlands	Monitoring Well	25 mm PVC	335068	6241348	Shallow
WG21	PCA - Regional	Block 1 Southlands	Monitoring Well	50 mm PVC	335315	6241083	Shallow
WG61	PCA - Regional	Block 2 Southlands	Monitoring Well	50 mm PVC	334937	6241339	Deep
WG64	PCA - Regional	Block 2 Southlands	Monitoring Well	50 mm PVC	334940	6241340	Shallow
WG70D	PCA - Regional	Block 1 Southlands	Monitoring Well	50 mm PVC	335342	6241243	Deep
WG73D	PCA - Regional	Southlands Block 1	Monitoring Well	50 mm PVC	335252	6241031	Deep
WG73S	PCA - Regional	Southlands Block 1	Monitoring Well	50 mm PVC	335257	6241031	Shallow
WG74I	PCA - Regional	Southlands Block 2	Monitoring Well	50 mm PVC	334992	6241091	Deep
WG74S	PCA - Regional	Southlands Block 2	Monitoring Well	50 mm PVC	334990	6241091	Shallow
WG82D	PCA - Regional	Block 1 Southlands	Monitoring Well	50 mm PVC	335235	6241323	Deep
WG82S	PCA - Regional	Block 1 Southlands	Monitoring Well	50 mm PVC	335233	6241323	Shallow
EWF01D	SCA - Containment	SCA - Foreshore Road	Extraction Well	150mm Stainless Steel	334685	6240665	Deep
EWF01S	SCA - Containment	SCA - Foreshore Road	Extraction Well	150mm Stainless Steel	334681	6240665	Shallow
EWF02S	SCA - Containment	SCA - Foreshore Road	Extraction Well	150mm Stainless Steel	334665	6240668	Shallow
EWF03D	SCA - Containment	SCA - Foreshore Road	Extraction Well	150mm Stainless Steel	334645	6240671	Deep
EWF03S	SCA - Containment	SCA - Foreshore Road	Extraction Well	150mm Stainless Steel	334641	6240672	Shallow
EWF04S	SCA - Containment	SCA - Foreshore Road	Extraction Well	150mm Stainless Steel	334625	6240675	Shallow
EWF05D	SCA - Containment	SCA - Foreshore Road	Extraction Well	150mm Stainless Steel	334605	6240679	Deep
EWF05S	SCA - Containment	SCA - Foreshore Road	Extraction Well	150mm Stainless Steel	334601	6240680	Shallow
EWF06S	SCA - Containment	SCA - Foreshore Road	Extraction Well	150mm Stainless Steel	334585	6240684	Shallow
EWF07D	SCA - Containment	SCA - Foreshore Road	Extraction Well	150mm Stainless Steel	334565	6240688	Deep
EWF07S	SCA - Containment	SCA - Foreshore Road	Extraction Well	150mm Stainless Steel	334561	6240689	Shallow
EWF08S	SCA - Containment	SCA - Foreshore Road	Extraction Well	150mm Stainless Steel	334545	6240693	Shallow
EWF09D	SCA - Containment	SCA - Foreshore Road	Extraction Well	150mm Stainless Steel	334525	6240698	Deep
EWF09S	SCA - Containment	SCA - Foreshore Road	Extraction Well	150mm Stainless Steel	334521	6240699	Shallow
EWF10S	SCA - Containment	SCA - Foreshore Road	Extraction Well	150mm Stainless Steel	334505	6240704	Shallow
EWF11S	SCA - Containment	SCA - Foreshore Road	Extraction Well	150mm Stainless Steel	334485	6240710	Shallow
EWF12D	SCA - Containment	SCA - Foreshore Road	Extraction Well	150mm Stainless Steel	334465	6240716	Deep

**TABLE 1.2**  
**GTP Quarterly Hydraulic Containment Water Level Monitoring Locations**  
**December 2009**

Location ID	Monitoring Purpose	Location Description	Well Type	Well Construction Type	Easting	Northing	Aquifer
					MGA56		Shallow/Deep
EWF12S	SCA - Containment	SCA - Foreshore Road	Extraction Well	150mm Stainless Steel	334461	6240717	Shallow
EWF13S	SCA - Containment	SCA - Foreshore Road	Extraction Well	150mm Stainless Steel	334445	6240722	Shallow
EWF14D	SCA - Containment	SCA - Foreshore Road	Extraction Well	150mm Stainless Steel	334425	6240729	Deep
EWF14S	SCA - Containment	SCA - Foreshore Road	Extraction Well	150mm Stainless Steel	334421	6240730	Shallow
EWF15S	SCA - Containment	SCA - Foreshore Road	Extraction Well	150mm Stainless Steel	334405	6240736	Shallow
EWF16D	SCA - Containment	SCA - Foreshore Road	Extraction Well	150mm Stainless Steel	334363	6240752	Deep
EWF16S	SCA - Containment	SCA - Foreshore Road	Extraction Well	150mm Stainless Steel	334359	6240753	Shallow
EWF17S	SCA - Containment	SCA - Foreshore Road	Extraction Well	150mm Stainless Steel	334338	6240762	Shallow
EWF18D	SCA - Containment	SCA - Foreshore Road	Extraction Well	150mm Stainless Steel	334313	6240773	Deep
EWF18S	SCA - Containment	SCA - Foreshore Road	Extraction Well	150mm Stainless Steel	334309	6240774	Shallow
EWF19S	SCA - Containment	SCA - Foreshore Road	Extraction Well	150mm Stainless Steel	334288	6240784	Shallow
EWF20D	SCA - Containment	SCA - Foreshore Road	Extraction Well	150mm Stainless Steel	334263	6240796	Deep
EWF21S	SCA - Containment	SCA - Foreshore Road	Extraction Well	150mm Stainless Steel	334705	6240662	Shallow
EWF22D	SCA - Containment	SCA - Foreshore Road	Extraction Well	150mm Stainless Steel	334731	6240658	Deep
EWF22S	SCA - Containment	SCA - Foreshore Road	Extraction Well	150mm Stainless Steel	334727	6240659	Shallow
EWF23S	SCA - Containment	SCA - Foreshore Road	Extraction Well	150mm Stainless Steel	334745	6240657	Shallow
EWF24D	SCA - Containment	SCA - Foreshore Road	Extraction Well	150mm Stainless Steel	334765	6240655	Deep
EWF24S	SCA - Containment	SCA - Foreshore Road	Extraction Well	150mm Stainless Steel	334761	6240655	Shallow
EWF25S	SCA - Containment	SCA - Foreshore Road	Extraction Well	150mm Stainless Steel	334785	6240653	Shallow
EWF26D	SCA - Containment	SCA - Foreshore Road	Extraction Well	150mm Stainless Steel	334805	6240651	Deep
EWF26S	SCA - Containment	SCA - Foreshore Road	Extraction Well	150mm Stainless Steel	334801	6240652	Shallow
EWF27S	SCA - Containment	SCA - Foreshore Road	Extraction Well	150mm Stainless Steel	334825	6240652	Shallow
EWF28D	SCA - Containment	SCA - Foreshore Road	Extraction Well	150mm Stainless Steel	334854	6240650	Deep
EWF28S	SCA - Containment	SCA - Foreshore Road	Extraction Well	150mm Stainless Steel	334849	6240650	Shallow
MWF01D	SCA - Containment	SCA - Foreshore Road	Monitoring Well	50 mm PVC	334673	6240667	Deep
MWF01I	SCA - Containment	SCA - Foreshore Road	Monitoring Well	50 mm PVC	334673	6240667	Deep
MWF01S	SCA - Containment	SCA - Foreshore Road	Monitoring Well	50 mm PVC	334673	6240667	Shallow
MWF02D	SCA - Containment	SCA - Foreshore Road	Monitoring Well	50 mm PVC	334633	6240674	Deep
MWF02I	SCA - Containment	SCA - Foreshore Road	Monitoring Well	50 mm PVC	334633	6240674	Deep
MWF02S	SCA - Containment	SCA - Foreshore Road	Monitoring Well	50 mm PVC	334633	6240674	Shallow
MWF03D	SCA - Containment	SCA - Foreshore Road	Monitoring Well	50 mm PVC	334593	6240682	Deep
MWF03I	SCA - Containment	SCA - Foreshore Road	Monitoring Well	50 mm PVC	334593	6240682	Deep
MWF03S	SCA - Containment	SCA - Foreshore Road	Monitoring Well	50 mm PVC	334593	6240682	Shallow
MWF04D	SCA - Containment	SCA - Foreshore Road	Monitoring Well	50 mm PVC	334553	6240691	Deep
MWF04I	SCA - Containment	SCA - Foreshore Road	Monitoring Well	50 mm PVC	334553	6240691	Deep
MWF04S	SCA - Containment	SCA - Foreshore Road	Monitoring Well	50 mm PVC	334553	6240691	Shallow
MWF05D	SCA - Containment	SCA - Foreshore Road	Monitoring Well	50 mm PVC	334513	6240702	Deep
MWF05I	SCA - Containment	SCA - Foreshore Road	Monitoring Well	50 mm PVC	334513	6240702	Deep
MWF05S	SCA - Containment	SCA - Foreshore Road	Monitoring Well	50 mm PVC	334513	6240702	Shallow
MWF06D	SCA - Containment	SCA - Foreshore Road	Monitoring Well	50 mm PVC	334475	6240713	Deep
MWF06I	SCA - Containment	SCA - Foreshore Road	Monitoring Well	50 mm PVC	334475	6240713	Deep
MWF06S	SCA - Containment	SCA - Foreshore Road	Monitoring Well	50 mm PVC	334475	6240713	Shallow
MWF07D	SCA - Containment	SCA - Foreshore Road	Monitoring Well	50 mm PVC	334436	6240725	Deep
MWF07I	SCA - Containment	SCA - Foreshore Road	Monitoring Well	50 mm PVC	334436	6240725	Deep
MWF07S	SCA - Containment	SCA - Foreshore Road	Monitoring Well	50 mm PVC	334436	6240725	Shallow
MWF08D	SCA - Containment	SCA - Foreshore Road	Monitoring Well	50 mm PVC	334384	6240744	Deep
MWF08I	SCA - Containment	SCA - Foreshore Road	Monitoring Well	50 mm PVC	334384	6240744	Deep
MWF08S	SCA - Containment	SCA - Foreshore Road	Monitoring Well	50 mm PVC	334384	6240744	Shallow
MWF09D	SCA - Containment	SCA - Foreshore Road	Monitoring Well	50 mm PVC	334326	6240767	Deep
MWF09I	SCA - Containment	SCA - Foreshore Road	Monitoring Well	50 mm PVC	334326	6240767	Deep
MWF09S	SCA - Containment	SCA - Foreshore Road	Monitoring Well	50 mm PVC	334326	6240767	Shallow
MWF10D	SCA - Containment	SCA - Foreshore Road	Monitoring Well	50 mm PVC	334275	6240790	Deep
MWF10I	SCA - Containment	SCA - Foreshore Road	Monitoring Well	50 mm PVC	334275	6240790	Deep
MWF10S	SCA - Containment	SCA - Foreshore Road	Monitoring Well	50 mm PVC	334275	6240790	Shallow
MWF11D	SCA - Containment	SCA - Foreshore Road	Monitoring Well	50 mm PVC	334696	6240663	Deep
MWF11I	SCA - Containment	SCA - Foreshore Road	Monitoring Well	50 mm PVC	334696	6240663	Deep
MWF11S	SCA - Containment	SCA - Foreshore Road	Monitoring Well	50 mm PVC	334696	6240663	Shallow
MWF12D	SCA - Containment	SCA - Foreshore Road	Monitoring Well	50 mm PVC	334753	6240656	Deep
MWF12I	SCA - Containment	SCA - Foreshore Road	Monitoring Well	50 mm PVC	334753	6240656	Deep
MWF12S	SCA - Containment	SCA - Foreshore Road	Monitoring Well	50 mm PVC	334753	6240656	Shallow
MWF13D	SCA - Containment	SCA - Foreshore Road	Monitoring Well	50 mm PVC	334793	6240652	Deep
MWF13I	SCA - Containment	SCA - Foreshore Road	Monitoring Well	50 mm PVC	334793	6240652	Deep
MWF13S	SCA - Containment	SCA - Foreshore Road	Monitoring Well	50 mm PVC	334793	6240652	Shallow
MWF14D	SCA - Containment	SCA - Foreshore Road	Monitoring Well	50 mm PVC	334837	6240650	Deep
MWF14I	SCA - Containment	SCA - Foreshore Road	Monitoring Well	50 mm PVC	334837	6240650	Deep
MWF14S	SCA - Containment	SCA - Foreshore Road	Monitoring Well	50 mm PVC	334837	6240650	Shallow
BP115	SCA - Regional	SCA - Penrhyn Estuary	Monitoring Well	25mm PVC	334821	6240544	Deep
MWF15D	SCA - Regional	SCA - Penrhyn Estuary	Monitoring Well	50 mm PVC	334739	6240622	Deep
MWF15I	SCA - Regional	SCA - Penrhyn Estuary	Monitoring Well	50 mm PVC	334739	6240622	Deep
MWF15S	SCA - Regional	SCA - Penrhyn Estuary	Monitoring Well	50 mm PVC	334739	6240622	Shallow

**TABLE 1.2**  
**GTP Quarterly Hydraulic Containment Water Level Monitoring Locations**  
**December 2009**

Location ID	Monitoring Purpose	Location Description	Well Type	Well Construction Type	Eastings	Northings	Aquifer
					MGA56		Shallow/Deep
WG154D	SCA - Regional	Botany Golf Course	Monitoring Well	50 mm PVC	334824	6240773	Deep
WG154S	SCA - Regional	Botany Golf Course	Monitoring Well	50 mm PVC	334823	6240768	Shallow
WG155D	SCA - Regional	Offsite - Discovery Cove	Monitoring Well	50 mm PVC	334985	6240801	Deep
WG155S	SCA - Regional	Offsite - Discovery Cove	Monitoring Well	50 mm PVC	334985	6240800	Shallow
WG23S	SCA - Regional	Cnr Botany Rd and Foreshore Dr	Monitoring Well	50 mm PVC	335049	6240694	Shallow
WG75I	SCA - Regional	Cnr Botany Rd and Foreshore Dr	Monitoring Well	50 mm PVC	335052	6240692	Deep
WG88I	SCA - Regional	Botany Golf Course	Monitoring Well	50 mm PVC	334370	6240958	Deep
WG88S	SCA - Regional	Botany Golf Course	Monitoring Well	50 mm PVC	334370	6240958	Shallow
*WG224S	Springvale Drain	Nant St	Monitoring Well	50 mm PVC	335168	6241120	Shallow
*WG225S	Springvale Drain	Nant St	Monitoring Well	50 mm PVC	335164	6241238	Shallow
*WG226S	Springvale Drain	Nant St	Monitoring Well	50 mm PVC	335169	6241348	Shallow
*WG227S	Springvale Drain	Nant St	Monitoring Well	50 mm PVC	335132	6241586	Shallow
WG77S	Springvale Drain	Nant St Tank Farm	Monitoring Well	50 mm PVC	335151	6241410	Shallow
WG229D	Western Areas	Nuplex	Monitoring Well	32 mm PVC	334513	6241663	Deep
WG229S	Western Areas	Nuplex	Monitoring Well	32 mm PVC	334513	6241663	Shallow
WG231D	Western Areas	Offsite - Stephens Road	Monitoring Well	32 mm PVC	334492	6241924	Deep
WG231S	Western Areas	Offsite - Stephens Road	Monitoring Well	32 mm PVC	334492	6241924	Shallow
WG234D	Western Areas	Mobil Carpark	Monitoring Well	50 mm PVC	334853	6241530	Deep
WG234I	Western Areas	Mobil Carpark	Monitoring Well	50 mm PVC	334853	6241530	Deep
WG234S	Western Areas	Mobil Carpark	Monitoring Well	50 mm PVC	334853	6241530	Shallow
WG72D	Western Areas	Offsite - Banksmeadow PS	Monitoring Well	50 mm PVC	334380	6241482	Deep
WG72S	Western Areas	Offsite - Banksmeadow PS	Monitoring Well	50 mm PVC	334379	6241478	Shallow

Notes

\* Well not included in the Amended GTP Hydraulic Monitoring Programme but data included in the September 2009 monitoring report.

**Table 4.1**  
**GTP Quarterly Hydraulic Monitoring Groundwater Elevations**  
**December 2009**

Bore Numbr	Area	shallow (1) / deep (2)	Easting	Northing	Mar-07	Jun-07	Sep-07	Dec-07	Mar-08	Jun-08	Sep-08	Dec-08	Mar-09	Jun-09	Sep-09	Dec-09
EWD01I	BIP	2	335465	6241474	4.00	1.12	3.00	1.90	3.65	4.02	3.80	3.98	2.16	3.40	3.17	2.38
EWD01S	BIP	1	335467	6241472	4.08	2.61	3.30	1.48	3.59	3.94	3.71	4.28	2.88	2.00	1.62	2.85
EWD02I	BIP	2	335449	6241495	3.97	0.42	2.55	1.50	3.38	3.74	3.53	4.18	1.90	2.88	2.86	1.99
EWD02S	BIP	1	335451	6241492	4.11	2.25	2.07	2.32	1.19	1.99	3.55	4.17	1.43	1.24	1.84	2.63
EWD03I	BIP	2	335433	6241515	3.90	0.05	2.39	1.67	3.16	3.52	3.43	4.17	2.44	2.80	2.77	1.32
EWD03S	BIP	1	335434	6241513	4.01	2.29	1.71	1.61	1.63	1.70	3.58	4.25	0.71	1.01	0.45	1.26
EWD04I	BIP	2	335420	6241532	3.70	0.11	1.92	1.55	1.60	FT	3.18	4.03	1.47	2.36	2.43	1.94
EWD04S	BIP	1	335423	6241528	2.97	0.92	1.41	1.71	2.03	2.30	2.37	3.16	1.54	2.18	2.09	1.41
EWD05I	BIP	2	335389	6241571	3.54	0.64	1.90	2.09	2.83	3.57	2.65	4.13	2.35	3.04	2.50	1.16
EWD05S	BIP	1	335390	6241570	4.95	0.71	1.40	1.49	1.20	3.61	1.39	4.11	1.40	1.50	1.49	1.39
EWD06I	BIP	2	335364	6241603	2.15	0.81	1.27	1.09	1.51	1.97	1.19	4.04	1.49	2.40	2.83	1.36
EWD06S	BIP	1	335366	6241601	3.01	1.74	2.40	1.49	1.33	3.28	1.43	4.07	1.50	1.62	2.68	1.34
EWD07I	BIP	2	335349	6241622	2.40	0.89	2.50	2.64	1.50	3.58	1.27	3.96	1.42	2.38	2.89	1.50
EWD07S	BIP	1	335351	6241620	2.02	2.02	1.02	0.77	0.71	3.65	1.10	4.04	1.42	1.50	1.50	1.35
EWD08I	BIP	2	335327	6241650	2.82	1.00	2.46	2.61	3.17	3.89	2.19	4.01	2.19	2.85	2.52	1.92
EWD08S	BIP	1	335329	6241648	2.83	2.24	2.68	2.74	3.13	3.86	2.09	3.98	2.06	2.68	2.73	1.84
EWD09I	BIP	2	335308	6241675	2.05	1.27	0.79	3.03	3.03	3.68	1.20	3.66	1.18	1.67	1.47	1.03
EWD09S	BIP	1	335310	6241673	2.46	2.28	1.89	3.29	3.25	3.90	1.74	3.88	1.78	2.44	2.17	1.94
EWD10I	BIP	2	335286	6241703	3.14	0.81	0.25	3.18	3.23	3.81	0.87	3.77	1.06	1.33	1.28	0.67
EWD10S	BIP	1	335288	6241701	2.74	2.58	0.67	1.51	3.37	3.97	1.07	2.46	1.17	1.50	1.50	1.11
EWD11D	BIP	2	335229	6241613	0.77	0.26	0.67	1.02	1.10	3.14	0.94	1.56	0.67	1.00	0.65	1.82
EWD11S	BIP	1	335231	6241610	1.68	1.20	2.42	2.78	2.80	3.43	2.60	2.34	1.57	1.97	1.56	2.05
EWD12D	BIP	2	335212	6241640	2.03	1.63	1.88	2.14	2.22	2.94	2.07	2.44	1.53	1.99	1.62	1.76
EWD12S	BIP	1	335214	6241637	2.50	1.93	1.82	2.10	2.56	2.70	2.40	2.48	2.12	1.91	0.68	1.85
EWD13I	BIP	2	335198	6241657	1.94	1.66	1.97	2.21	2.29	2.82	2.09	2.48	1.77	2.25	1.89	1.57
EWD13S	BIP	1	335196	6241660	1.74	1.59	2.28	2.49	2.66	3.19	2.54	2.46	2.08	2.05	1.66	1.27
EWD14D	BIP	2	335177	6241684	2.13	1.81	1.87	1.16	1.43	1.90	1.54	1.91	1.25	1.99	1.44	1.11
EWD14I	BIP	2	335181	6241679	2.00	1.82	1.98	2.23	2.31	2.83	2.25	2.87	2.11	2.37	2.01	1.73
EWD14S	BIP	1	335178	6241682	1.97	1.74	1.88	2.10	2.17	2.70	2.24	2.89	2.12	2.24	1.93	1.53
EWD15D	BIP	2	335161	6241704	1.15	1.73	1.08	1.40	1.77	2.31	2.18	2.59	1.67	2.05	2.22	2.09
EWD15I	BIP	2	335164	6241701	1.54	1.22	1.24	1.61	1.81	2.87	1.80	2.73	1.74	2.24	2.11	1.82
EWD15S	BIP	1	335160	6241707	2.42	2.32	2.33	2.03	2.07	2.48	2.00	3.38	2.62	2.14	1.87	1.44
EWD16D	BIP	2	335145	6241725	1.70	1.49	1.53	1.98	2.61	2.97	2.08	3.39	2.11	2.18	2.19	1.99
EWD17D	BIP	2	335130	6241745	1.99	1.68	2.06	2.06	2.06	2.06	FT	2.06	2.06	2.06	2.06	2.06
EWD17I	BIP	2	335132	6241742	1.33	1.24	1.60	2.54	2.67	2.90	2.48	3.53	2.64	2.87	2.39	2.25
EWD18D	BIP	2	335120	6241757	2.19	1.95	1.95	2.49	2.40	1.13	1.37	3.65	0.99	1.49	1.24	2.29
EWD18I	BIP	2	335122	6241755	1.86	1.60	1.61	2.62	2.72	2.83	2.52	3.69	2.77	2.99	1.99	2.00
EWD19D	BIP	2	335091	6241794	5.16	1.43	1.39	1.92	2.66	-0.19	2.34	3.69	2.36	1.48	1.57	1.54
EWD19I	BIP	2	335093	6241792	4.44	1.09	1.12	1.60	1.75	1.93	1.78	FT	3.23	3.32	1.59	2.70
EWD20D	BIP	2	335065	6241827	1.30	2.45	7.70	FT	FT	FT	FT	FT	FT	#N/A	FT	FT
EWD20I	BIP	2	335068	6241824	2.80	2.78	2.30	2.83	3.86	3.59	4.23	FT	6.36	7.63	1.31	2.39
EWD21D	BIP	2	335045	6241853	2.76	2.64	2.37	2.61	2.66	2.61	2.64	3.90	2.99	1.99	2.97	2.57
EWD21I	BIP	2	335049	6241848	2.44	2.77	2.32	2.38	2.55	2.57	2.39	4.01	1.93	2.12	3.02	2.68
EWD21S	BIP	1	335047	6241851	2.94	2.98	0.65	1.23	0.92	0.54	0.38	4.12	2.13	1.83	3.27	2.76
EWD22I	BIP	2	335018	6241887	2.89	2.95	2.73	2.42	2.96	2.37	2.29	4.21	3.70	3.75	3.58	2.73
EWD22S	BIP	1	335016	6241890	1.94	3.02	1.58	2.28	1.79	2.27	1.88	4.37	3.14	1.99	3.71	2.66
EWD23I	BIP	2	334987	6241926	2.61	1.36	1.72	2.39	1.82	2.31	3.29	4.23	3.92	4.14	3.84	2.61
EWD23S	BIP	1	334985	6241930	1.84	1.97	2.29	1.74	1.81	1.72	1.64	4.29	3.78	4.48	4.03	2.71
EWD24I	BIP	2	334956	6241966	1.97	2.18	3.31	3.58	3.49	2.75	3.77	4.36	4.24	4.49	4.11	1.83
EWD24S	BIP	1	334954	6241969	2.32	1.52	4.17	4.23	4.19	4.15	4.36	4.54	4.77	4.98	4.26	2.54
EWD25I	BIP	2	334926	6242005	1.44	1.88	3.56	3.84	3.78	3.73	4.00	4.30	4.37	4.62	4.24	2.16
EWD25S	BIP	1	334923	6242009	2.45	1.84	4.81	4.80	4.77	4.84	4.96	4.71	5.12	5.27	4.84	2.76
EWD26D	BIP	2	334900	6242037	1.96	1.88	3.93	4.16	4.10	4.17	4.35	4.46	4.69	4.89	4.57	1.99
EWD26I	BIP	2	334903	6242032	1.49	1.56	3.95	4.16	4.09	4.15	4.32	4.33	4.64	4.84	4.50	2.05
EWD26S	BIP	1	334901	6242035	3.70	3.84	5.38	5.29	5.28	5.31	5.42	5.03	5.52	5.60	5.27	3.60
EWD27D	BIP	2	334884	6242094	2.79	2.40	4.94	5.39	5.53	5.79	6.08	6.17	6.51	6.72	6.43	3.46
EWD27I	BIP	2	334885	6242088	1.55	1.54	4.08	4.28	4.20	4.30	FT	FT	2.78	4.73	4.43	1.92
EWD27S	BIP	1	334885	6242092	2.33	2.59	5.67	5.52	5.52	5.52	5.60	5.15	5.61	5.74	5.49	4.02
EWD28I	BIP	2	334924	6242161	2.48	1.76	4.63	4.85	4.85	4.96	5.04	5.04	5.37	5.60	5.28	2.92
EWD28S	BIP	1	334926	6242162	4.13	4.22	6.18	6.08	6.04	6.26	6.23	5.73	6.22	6.35	6.08	5.03
MWD01I	BIP	2	335457	6241484	3.97	1.78	3.04	2.49	3.44	3.74	3.51	4.11	2.53	3.20	3.13	2.55
MWD01S	BIP	1	335457	6241484	5.29	5.07	5.52	5.29	5.74	5.60	5.73	5.26	5.78	5.55	5.90	6.16
MWD02I	BIP	2	335426	6241523	3.84	1.42	2.65	2.43	2.93	FT	FT	FT	FT	2.99	2.92	2.28
MWD02S	BIP	1	335426	6241523	4.68	3.05	2.98	2.88	FT	FT	3.59	4.15	2.93	3.33	3.43	2.82
MWD03I	BIP	2	335379	6241583	3.37	1.86	2.58	2.60	2.80	3.54	2.61	FT	FT	2.92	2.97	2.12
MWD03S	BIP	1	335379	6241583	5.07	4.61	4.84	4.78	5.04	5.07	5.05	4.89	4.68	4.65	4.83	4.66
MWD04I	BIP	2	335338	6241636	3.10	2.01	2.61	2.94	2.90	3.76	2.36	3.97	2.26	2.88	2.91	2.15
MWD05D	BIP	2	335303	6241681	4.07	2.86	2.23	4.05	3.80	3.96	2.65	4.13	3.29	3.21	3.00	2.13
MWD05I	BIP	2	335303	6241681	2.84	1.95	1.96	3.07	3.07	3.77	2.09	3.73	1.99	2.48	2.39	1.83
MWD05S	BIP	1	335303	6241681	3.13	2.38	2.22	3.39	3.55	3.92	1.86	3.37	1.77	2.75	2.49	2.19
MWD06I	BIP	2	335249	6241661	2.56	1.85	2.05	2.63	2.78	3.39	2.29	3.42	1.98	2.52	FT	1.86
MWD06S	BIP	1	335249	6241661	2.87	2.30	2.37	3.00	3.17	3.48	2.54	3.34	2.35	3.23	2.44	2.01
MWD07D	BIP	2	335234	6241624	1.93	1.48	1.60	2.18	2.37	3.03	1.90	2.42	1.45	1.83	1.41	1.16
MWD07I	BIP	2	335234	6241624	2.26	1.69	1.99	2.34	2.39	FT	FT	FT	FT	2.32	2.01	1.89
MWD07S	BIP	1	335234	6241624	2.70	2.13	2.41	2.90	3.11	3.42	2.53	3.00	2.13	2.53	2.12	1.86
MWD08I	BIP	2	335189	6241670	2.09	1.70	1.86	2.07	2.24	2.56	1.88	2.50	1.68	-2.42	1.80	1.66
MWD08S	BIP	1	335189	6241670	2.35	2.09	2.17	2.62	2.86	3.10	2.53	3.10	2.38	2.51	2.19	1.93
MWD09I	BIP	2	335153	6241715	2.07	1.82	1.83	2.22								

**Table 4.1**  
**GTP Quarterly Hydraulic Monitoring Groundwater Elevations**  
**December 2009**

Bore Num	Area	shallow (1) / deep (2)	Easting	Northing	Mar-07	Jun-07	Sep-07	Dec-07	Mar-08	Jun-08	Sep-08	Dec-08	Mar-09	Jun-09	Sep-09	Dec-09
MWD11S	BIP	1	335079	6241809	3.01	3.41	2.84	3.13	3.42	3.05	2.83	3.71	3.54	3.83	3.14	2.70
MWD12I	BIP	2	335032	6241870	2.92	2.89	2.60	2.68	2.79	2.74	2.97	4.32	3.46	3.60	3.43	2.67
MWD12S	BIP	1	335032	6241870	3.17	3.56	3.23	3.44	3.60	3.46	3.42	4.15	4.02	4.11	3.64	2.98
MWD13I	BIP	2	334972	6241946	2.22	2.12	2.77	3.26	3.28	3.06	3.55	4.24	4.09	-2.91	3.97	2.33
MWD13S	BIP	1	334972	6241946	3.16	3.40	4.19	4.11	4.35	4.20	4.26	4.58	4.70	5.07	4.10	3.30
MWD14I	BIP	2	334940	6241987	2.24	2.32	3.46	3.71	3.64	3.46	3.92	4.34	4.35	-2.60	4.23	2.24
MWD14S	BIP	1	334940	6241987	3.37	3.19	4.71	4.70	4.90	4.71	4.79	4.67	5.05	5.20	4.28	2.92
MWD15D	BIP	2	334898	6242135	2.30	2.12	4.06	4.24	6.01	4.27	4.48	4.49	4.75	4.79	4.69	1.32
MWD15I	BIP	2	334898	6242135	4.54	4.63	6.07	5.95	5.92	6.07	6.10	5.60	6.11	-1.93	6.54	5.1
MWD16D	BIP	2	335409	6241504	3.66	1.74	2.64	2.51	3.33	3.45	3.14	3.88	2.54	3.06	2.77	2.20
MWD16S	BIP	1	335409	6241504	5.50	5.06	5.24	4.73	5.37	5.30	5.55	5.05	5.02	5.34	5.15	FL
WG117S	BIP	1	335259	6241953	7.00	7.52	7.13	6.94	7.23	7.38	7.13	6.56	7.05	7.53	6.76	6.68
WG118S	BIP	1	335073	6241836	4.46	4.39	4.59	4.58	4.84	4.74	4.81	4.58	4.79	4.95	4.31	4.20
WG123D	BIP	2	334916	6242034	1.99	2.08	3.90	4.10	4.30	5.83	4.26	4.32	4.61	4.61	4.42	2.05
WG123S	BIP	1	334916	6242034	5.07	5.23	5.74	5.48	5.89	4.08	5.99	5.21	5.68	6.05	5.45	4.93
WG124S	BIP	1	335358	6241770	5.92	3.99	4.35	5.01	4.26	4.93	4.32	4.82	4.06	4.51	4.54	3.94
WG127S	BIP	1	335303	6242213	8.30	8.30	8.42	8.25	8.34	8.33	#N/A	#N/A	8.02	8.38	8.37	8.40
WG150D	BIP	2	335013	6241908	2.92	2.99	2.71	2.96	3.25	3.11	3.00	4.29	3.87	3.79	3.55	2.33
WG200D	BIP	2	335644	6242358	7.04	5.94	7.35	6.78	6.15	7.75	8.24	8.42	8.16	8.19	8.71	8.44
WG200S	BIP	1	335644	6242357	9.08	8.91	9.46	9.25	9.59	9.57	9.69	9.77	9.63	9.83	10.03	9.99
WG202D	BIP	2	335794	6242152	7.38	6.89	7.73	7.38	7.34	7.51	6.96	7.43	6.89	6.95	8.25	7.24
WG202S	BIP	1	335794	6242152	8.45	8.19	8.20	8.51	8.65	8.61	8.61	8.47	8.24	8.42	9.09	8.79
WG204D	BIP	2	335453	6241424	3.84	2.89	3.30	3.49	3.37	#N/A	#N/A	3.90	2.75	3.38	3.21	2.55
WG204S	BIP	1	335453	6241424	5.66	5.73	5.67	5.56	5.73	#N/A	#N/A	5.39	5.38	5.77	5.59	5.35
WG205D	BIP	2	335506	6241435	4.12	2.92	3.56	3.33	4.04	4.07	3.79	4.21	3.18	3.73	3.66	3.01
WG205S	BIP	1	335506	6241435	6.12	5.91	6.27	6.01	6.50	6.36	6.40	6.03	6.10	6.37	6.06	FL
WG208D	BIP	2	335578	6241342	4.30	3.84	4.07	4.27	3.98	4.27	4.03	4.22	3.52	4.05	3.97	3.54
WG208S	BIP	1	335578	6241342	6.32	6.25	6.47	6.23	6.45	6.44	6.40	6.18	6.06	6.27	6.34	6.19
WG215D	BIP	2	336144	6241760	8.11	7.93	8.56	8.21	8.23	8.26	8.16	7.95	7.59	8.13	8.52	8.20
WG216D	BIP	2	336112	6242124	8.69	8.53	9.34	8.91	9.01	9.04	9.00	8.87	8.50	8.91	9.61	9.10
WG216I	BIP	2	336112	6242124	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	9.05	9.68	9.30
WG217D	BIP	2	336065	6242340	9.24	8.99	10.14	9.79	9.91	9.90	10.27	10.27	10.01	10.29	10.69	10.48
WG217S	BIP	1	336065	6242341	9.53	9.42	10.06	9.87	10.10	10.10	10.35	10.22	10.06	10.28	10.71	10.59
WG228D	BIP	2	334799	6241938	#N/A	#N/A	#N/A	3.49	2.91	3.46	3.31	3.02	3.60	3.74	3.39	2.37
WG228S	BIP	1	334799	6241938	#N/A	#N/A	#N/A	5.22	2.40	5.34	5.30	5.04	5.22	5.33	5.07	4.90
WG41S	BIP	1	335140	6241579	3.11	1.85	2.03	2.26	2.33	2.91	2.36	2.64	2.10	#N/A	1.99	1.69
WG48D	BIP	2	335238	6241970	5.51	5.23	5.30	6.31	5.30	5.44	5.29	5.28	5.23	5.57	5.30	5.13
WG49D	BIP	2	335406	6242115	7.09	6.79	7.09	6.78	6.92	6.97	6.96	6.92	6.79	6.99	7.18	7.01
WG68D	BIP	2	335114	6241643	3.44	2.32	2.33	3.80	2.62	3.07	2.67	2.86	2.36	2.54	1.86	1.47
WG83I	BIP	2	335574	6241699	5.61	4.95	5.55	5.64	5.08	6.09	5.58	5.68	4.84	5.23	5.52	4.91
WG83S	BIP	1	335575	6241699	6.49	6.09	6.36	6.18	6.21	5.77	5.68	5.44	5.20	6.03	6.30	5.96
WG91S	BIP	1	335647	6241656	6.57	6.46	6.74	6.53	6.58	6.66	6.57	6.31	6.13	6.36	6.60	6.08
WG232I	NOR	2	334449	6243244	#N/A	#N/A	9.11	8.81	9.39	9.27	9.30	9.08	9.21	9.34	9.17	8.28
WG232S	NOR	1	334449	6243244	#N/A	#N/A	9.70	9.65	9.91	9.64	9.73	9.61	9.67	9.76	9.67	9.67
WG235D	NOR	2	335733	6243970	#N/A	10.82	14.16	14.29	14.59	14.38	14.22	14.45	14.41	14.56	15.05	15.05
WG235I	NOR	2	335736	6243978	#N/A	13.75	14.49	14.31	14.82	14.70	14.91	14.72	14.63	15.11	15.05	15.02
WG235S	NOR	1	335735	6243974	#N/A	14.11	14.75	14.51	15.05	14.84	15.08	14.83	14.76	15.23	15.32	15.15
EWB02D	PCA	2	334986	6241200	0.93	-0.50	1.07	-0.63	0.66	0.07	-0.33	-0.37	0.16	0.31	-0.96	-0.96
EWB05D	PCA	2	334935	6241074	0.27	0.86	1.09	0.80	1.00	0.83	-0.50	0.15	-0.51	1.11	0.87	-0.99
EWB06D	PCA	2	334885	6241109	0.08	-0.12	0.31	0.83	-0.24	0.67	0.00	-0.19	-1.75	0.00	-0.99	0.74
EWB07D	PCA	2	335276	6241018	1.55	-0.14	1.38	-0.09	-0.29	0.00	-0.40	-0.37	0.99	0.00	0.06	1
EWB08D	PCA	2	335239	6241024	1.65	1.05	1.65	-0.98	-0.46	1.35	-0.99	-0.99	1.19	-0.99	-0.99	-
EWB09D	PCA	2	335198	6241031	0.87	0.59	1.40	0.26	0.27	-0.25	-0.99	-1.00	0.00	-0.99	-1.00	-
EWB10D	PCA	2	335130	6241042	0.65	-0.88	0.78	0.44	0.24	-0.31	-0.49	-0.50	-0.24	-0.50	-0.50	-
EWB11D	PCA	2	335105	6241047	-0.01	-0.35	0.66	-0.62	-0.62	-0.49	-0.99	-0.02	0.54	0.18	-0.15	-
EWB12D	PCA	2	335045	6241057	0.44	0.19	-0.41	-0.41	0.04	-0.10	-0.99	-1.00	-0.43	-0.99	-1.00	-0.99
EWB13D	PCA	2	334992	6241066	-0.42	0.82	0.05	-0.21	0.03	-3.60	-0.58	-0.80	-0.80	-0.80	-0.79	-0.8
EWB14D	PCA	2	334965	6241166	-0.09	-0.14	-0.40	-1.76	-0.75	-2.13	-2.00	-2.00	-0.30	-1.99	-2.00	-1.99
EWB15D	PCA	2	334859	6241088	0.59	0.53	-0.25	-0.30	-0.25	1.01	FT	-1.00	-0.11	-0.99	-1.00	-0.99
MWB01I	PCA	2	335256	6241021	1.84	1.11	1.17	0.96	0.98	1.41	0.99	1.19	1.57	1.02	1.05	1.26
MWB01S	PCA	1	335256	6241021	1.90	1.95	2.06	2.06	2.34	2.93	2.24	2.11	2.02	2.19	2.04	1.84
MWB02I	PCA	2	335218	6241027	1.76	1.01	2.00	0.39	1.53	1.31	0.87	0.91	1.17	0.96	1.05	0.96
MWB02S	PCA	1	335218	6241027	2.07	1.92	2.16	1.99	2.28	3.23	2.27	2.09	FL	2.27	1.99	1.72
MWB03I	PCA	2	335174	6241034	1.26	0.81	1.35	1.00	0.96	0.95	0.74	0.79	0.91	0.89	0.86	0.65
MWB03S	PCA	1	335174	6241034	1.79	1.77	1.92	1.82	2.15	0.84	2.00	1.85	1.67	2.05	1.81	1.54
MWB04I	PCA	2	335117	6241045	0.75	0.40	1.17	0.72	0.73	0.52	0.63	0.81	0.84	0.96	0.85	0.64
MWB04S	PCA	1	335117	6241045	1.23	1.18	1.47	1.28	1.64	2.78	1.31	1.29	FL	1.61	1.32	1.07
MWB05I	PCA	2	335083	6241050	0.72	0.64	1.02	0.68	0.76	0.35	0.25	0.43	0.78	0.83	0.65	0.52
MWB05S	PCA	1	335083	6241050	1.24	1.33	1.36	1.18	1.75	1.50	FL	1.40	1.31	1.67	1.38	1.05
MWB06I	PCA	2	335017	6241061	0.13	0.87	0.97	0.70	0.93	0.54	0.67	0.74	0.79	0.91	0.57	0.53
MWB06S	PCA	1	335017	6241061	0.99	1.19	1.10	1.22	1.61	2.66	1.37	1.32	1.03	1.61	1.24	0.93
MWB07I	PCA	2	334960	6241071	0.21	0.86	0.99	0.70	0.97	0.65	0.80	0.87	0.82	1.15	0.78	0.52
MWB07S	PCA	1	334960	6241071	0.94	1.08	1.01	1.09	0.00	1.01	1.13	1.08	1.03	1.51	1.17	0.88
MWB08I	PCA	2	334901	6241086	0.51	0.70	0.90	0.63	0.80	0.80	0.74	0.67	0.64	0.88	0.55	0.44
MWB09I	PCA	2	334869	6241106	0.89	0.91	0.93	0.53	0.67	0.98	0.86	0.51	0.57	0.63	0.41	0.34
MWB11I	PCA	2	334996	6241047	-0.04	0.86	1.15	0.67	1.11	0.43	0.72	0.80	0.94	0.99	0.68	0.52
MWB11S	PCA	1	334996	6241047	0.93	1.14	1.10	1.17	1.53	1.27	1.22	1.20	1.11	1.50	1.20	0.90
MWB12D																

**Table 4.1**  
**GTP Quarterly Hydraulic Monitoring Groundwater Elevations**  
**December 2009**

Bore Numbr	Area	shallow (1)/ deep (2)	Easting	Northing	Mar-07	Jun-07	Sep-07	Dec-07	Mar-08	Jun-08	Sep-08	Dec-08	Mar-09	Jun-09	Sep-09	Dec-09
MWC09D	PCA	2	335829	6241081	4.33	4.35	4.50	4.44	4.44	4.44	4.44	5.46	5.24	4.44	4.41	4.17
MWC09S	PCA	1	335828	6241080	5.37	5.48	5.70	5.53	5.70	5.67	5.68	4.31	4.21	5.55	5.53	5.42
MWC11D	PCA	2	335618	6240909	3.19	3.25	3.25	3.25	3.25	4.48	3.27	4.48	4.30	3.25	3.17	2.99
MWC11S	PCA	1	335618	6240908	4.18	4.42	4.36	4.45	4.47	3.26	4.51	3.09	3.15	4.31	4.24	4.52
SL01D	PCA	2	334776	6241162	1.35	1.30	1.34	1.40	1.76	1.59	1.48	1.43	1.40	1.71	1.30	1.19
WG141D	PCA	2	335355	6241162	3.09	2.76	#N/A	3.05	0.09	2.98	2.53	2.82	2.46	2.87	2.58	2.30
WG146I	PCA	2	335005	6241247	1.59	1.09	1.81	1.17	1.82	1.54	1.36	1.52	1.41	1.52	1.07	0.86
WG147I	PCA	2	334963	6241188	0.94	0.39	0.24	0.21	1.12	0.70	0.49	0.70	0.65	0.70	0.31	0.21
WG152D	PCA	2	334893	6241249	1.41	1.13	1.59	1.26	1.82	1.58	1.46	1.51	1.58	#N/A	1.33	1.16
WG153D	PCA	2	335045	6241126	1.03	0.97	0.89	0.99	1.58	2.65	1.26	1.17	1.15	1.50	1.09	0.85
WG162D	PCA	2	334899	6241122	0.66	1.52	0.27	0.88	0.89	1.13	0.67	1.35	1.34	1.56	0.61	0.61
WG162S	PCA	1	334899	6241123	1.43	1.93	1.43	1.63	1.67	1.45	1.48	1.53	1.54	1.92	1.58	1.26
WG171I	PCA	2	335068	6241348	2.56	2.59	2.07	0.10	2.40	2.71	2.18	2.42	2.23	2.60	2.14	1.80
WG171S	PCA	1	335068	6241348	2.55	2.71	2.18	2.79	2.37	2.82	2.32	FL	FL	2.74	2.25	1.91
WG21S	PCA	1	335315	6241083	2.15	1.88	#N/A	2.09	1.82	2.10	1.72	1.85	1.65	2.05	1.76	1.51
WG61D	PCA	2	334937	6241340	2.13	2.32	1.62	2.71	1.98	2.30	1.74	1.99	1.83	2.00	1.67	1.42
WG64S	PCA	1	334941	6241340	2.30	2.58	#N/A	2.42	2.22	2.58	2.10	2.20	-	2.58	1.88	1.77
WG70D	PCA	2	335342	6241243	3.19	2.63	#N/A	3.41	2.73	3.07	2.53	FL	3.16	2.93	2.64	2.27
WG73D	PCA	2	335252	6241031	2.11	1.26	1.66	0.96	1.38	1.45	1.00	1.31	1.95	#N/A	1.07	1.21
WG73S	PCA	1	335257	6241031	2.36	2.10	2.39	2.21	2.48	2.41	2.45	2.25	1.78	#N/A	1.14	0.91
WG74I	PCA	2	334992	6241091	0.17	0.83	0.40	0.47	1.24	1.35	0.73	0.83	1.04	#N/A	0.69	0.55
WG74S	PCA	1	334990	6241091	0.95	1.03	0.95	1.01	1.41	1.35	1.25	1.32	1.03	1.57	1.99	1.72
WG82D	PCA	2	335235	6241323	3.03	2.47	#N/A	3.14	2.62	1.16	2.44	2.88	2.36	2.82	2.46	2.06
WG82S	PCA	1	335233	6241323	3.29	2.57	#N/A	3.29	2.83	1.44	2.73	3.08	2.58	3.12	2.69	2.28
BP115D	SCA	2	334820.8	6240544.4	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0.59	-0.04
EFWF01D	SCA	2	334685	6240665	-0.97	-1.25	-2.45	-3.23	-2.96	-2.31	-2.50	-3.19	FT	-2.75	-2.75	-2.75
EFWF01S	SCA	1	334681	6240665	-0.29	0.01	-1.01	-0.61	-0.13	-3.95	-1.00	-0.87	-0.75	0.23	-0.75	-0.74
EFWF02S	SCA	1	334665	6240668	-0.76	0.18	-0.79	-0.87	-1.19	-0.75	-1.25	-1.38	-1.01	-1.50	-1.66	-1.64
EFWF03D	SCA	2	334645	6240671	-0.22	-1.50	-0.76	-0.93	-1.56	-0.87	-0.99	-0.69	-0.99	-0.99	-1.00	-0.99
EFWF03S	SCA	1	334641	6240672	-0.25	0.07	-0.52	-0.50	-0.26	-0.50	-1.14	-0.73	-0.84	-0.42	-0.92	-0.77
EFWF04S	SCA	1	334625	6240675	-0.33	-0.73	-0.77	-0.68	-0.30	-0.61	-1.42	-0.70	-0.67	-0.21	-0.86	-0.76
EFWF05D	SCA	2	334605	6240679	-0.27	-0.82	0.00	-0.60	FT	FT	FT	FT	FT	-1.08	0.17	-0.60
EFWF05S	SCA	1	334601	6240680	-0.14	0.19	-0.01	-0.08	-0.40	-0.36	-0.90	-1.07	FT	-0.13	FT	FT
EFWF06S	SCA	1	334585	6240684	-0.57	-0.41	-0.41	-0.94	-0.80	-0.81	-0.79	-1.11	-0.80	-0.79	-0.80	-0.79
EFWF07D	SCA	2	334565	6240688	-0.22	-0.16	-0.28	-0.48	-0.20	-0.20	-0.30	-0.19	-0.30	-0.25	-0.30	-0.02
EFWF07S	SCA	1	334561	6240689	-0.23	-0.01	-0.63	-0.50	-0.21	-0.35	-0.53	-0.49	-0.50	-0.15	-0.50	-0.48
EFWF08S	SCA	1	334545	6240693	-0.25	-0.88	-0.87	-0.58	-0.16	-0.33	-0.75	-0.38	-0.51	0.00	-0.38	-0.28
EFWF09D	SCA	2	334525	6240698	-0.13	-0.39	-0.38	-0.58	-0.39	-0.39	-0.39	-0.30	-0.38	-0.38	-0.39	-0.38
EFWF09S	SCA	1	334521	6240699	-0.25	-0.12	-0.65	-0.44	-0.16	-0.21	-0.50	-0.01	-0.50	-0.04	-0.34	-0.23
EFWF10S	SCA	1	334505	6240704	-0.48	-0.72	-0.75	-0.46	-0.14	-0.24	-0.60	-0.38	-0.58	-0.08	-0.46	-0.36
EFWF11S	SCA	1	334485	6240710	-0.22	-0.07	-0.61	-0.38	0.09	0.07	-0.43	-0.28	-0.37	0.01	-0.26	-0.14
EFWF12D	SCA	2	334465	6240716	-0.86	-0.22	-0.66	-0.20	-0.25	-0.35	-0.25	-0.31	-0.25	-0.24	-0.24	-0.24
EFWF12S	SCA	1	334461	6240717	-0.48	-0.64	-0.74	-0.36	0.00	-0.13	-0.46	-0.28	-0.39	0.05	-0.38	-0.20
EFWF13S	SCA	1	334445	6240722	-0.07	-0.03	-0.72	-0.41	-0.10	-0.16	-0.49	-0.30	-0.49	0.01	-0.41	-0.27
EFWF14D	SCA	2	334425	6240729	-0.59	-1.44	-0.15	-0.99	-0.49	-0.99	0.00	0.11	0.00	0.20	0.01	0.00
EFWF14S	SCA	1	334421	6240730	-0.05	-0.70	-0.60	-0.35	-0.03	-0.15	-0.38	0.00	-0.41	0.06	-0.34	-0.21
EFWF15S	SCA	1	334405	6240736	-0.01	-0.12	-0.65	-0.36	-0.08	-0.08	-0.36	-0.21	-0.42	0.09	-0.35	-0.28
EFWF16D	SCA	2	334363	6240752	-0.08	-0.99	-1.20	-0.96	-0.48	-0.49	-0.56	-0.23	-0.32	0.00	-0.18	0.05
EFWF16S	SCA	1	334359	6240753	-0.31	-0.74	-0.43	-0.19	0.01	0.04	-0.24	-0.14	-0.28	0.05	-0.26	-0.23
EFWF17S	SCA	1	334338	6240762	-0.55	0.21	-0.41	-0.27	0.05	0.06	-0.30	-0.14	-0.21	0.10	-0.03	0.11
EFWF18D	SCA	2	334313	6240773	-0.96	0.30	-1.22	-1.86	-1.39	-1.40	-1.94	-1.33	-1.40	-1.39	-1.39	-1.39
EFWF18S	SCA	1	334309	6240774	0.03	FT	-0.45	-0.25	-0.01	-0.01	-0.31	-0.22	-0.31	-0.07	-0.33	-0.28
EFWF19S	SCA	1	334288	6240784	-0.52	FT	-0.40	-0.16	0.19	0.25	-0.16	-0.19	-0.25	-0.04	-0.28	-0.27
EFWF20D	SCA	2	334263	6240796	-0.67	FT	-0.88	-2.13	-2.00	0.27	0.22	0.26	FT	-2.28	-2.00	-1.76
EFWF21S	SCA	1	334705	6240662	0.00	FT	0.00	-1.29	-0.75	-0.85	-0.89	-1.20	-0.62	-0.49	-0.79	-0.87
EFWF22D	SCA	2	334731	6240658	0.03	-0.24	0.00	-2.36	0.13	-3.27	-1.50	-2.03	-2.00	-2.07	-2.00	-2.00
EFWF22S	SCA	1	334727	6240659	-0.64	0.64	0.00	-0.56	0.27	-1.72	-0.75	-0.23	-0.75	0.42	0.29	-0.80
EFWF23S	SCA	1	334745	6240657	-0.78	0.37	0.29	-0.67	0.15	-1.12	-0.75	-0.65	-0.50	-0.24	-0.50	-0.50
EFWF24D	SCA	2	334765	6240655	-2.19	-2.11	-2.33	-2.11	-2.13	-2.23	-2.25	-2.57	0.14	-1.41	-2.85	-3.16
EFWF24S	SCA	1	334761	6240655	-0.51	0.55	0.16	-1.20	-0.56	-1.23	-0.83	-2.26	-0.58	-0.34	-0.75	-0.74
EFWF25S	SCA	1	334785	6240653	-0.53	-0.51	0.16	-0.79	-0.28	-0.61	-0.79	-0.83	-0.79	0.50	-0.79	-0.78
EFWF26D	SCA	2	334805	6240651	-0.07	-0.30	-2.44	-4.37	-3.20	-3.32	-3.00	-3.48	-3.14	-3.49	-3.50	-3.49
EFWF26S	SCA	1	334801	6240652	-0.43	-0.41	-0.89	-1.15	-0.75	-1.22	-0.85	-1.04	-0.85	-0.89	-0.85	-0.84
EFWF27S	SCA	1	334825	6240652	0.00	-0.03	-0.20	-0.12	-1.10	-0.63	-1.00	-1.00	-1.00	0.23	-1.00	-0.99
EFWF28D	SCA	2	334854	6240650	-0.29	-2.28	-3.31	-2.94	-2.79	-3.76	-2.99	-2.81	-3.00	-3.49	-3.49	-3.49
EFWF28S	SCA	1	334849	6240650	-0.58	-0.93	-1.02	-1.76	-1.81	-1.20	-0.89	-0.79	-0.92	-1.41	-1.42	-1.41
MWF01D	SCA	2	334673	6240667	0.16	0.05	0.26	-0.21	0.15	0.30	0.42	0.13	0.46	0.21	0.11	FT
MWF01I	SCA	2	334673	6240667	0.01	0.15	0.00	-0.21	0.07	0.14	0.26	0.15	0.50	0.43	0.30	0.32
MWF01S	SCA	1	334673	6240667	-0.08	0.20	-0.07	-0.13	0.04	0.01	-0.21	-0.08	-0.07	0.19	-0.03	-0.09
MWF02D	SCA	2	334633	6240674	0.15	-0.10	0.32	-0.50	-0.35	-0.04	-0.04	-0.18	0.29	-0.05	0.01	-0.10
MWF02I	SCA	2	334633	6240674	0.04	0.02	0.14	-0.17	0.00	0.09	0.12	0.12	0.18	0.22	FT	FT
MWF02S	SCA	1	334633	6240674	-0.26	0.00	-0.18	-0.39	-0.01	-0.16	-0.42	-0.20	-0.27	0.00	-0.34	-0.32
MWF03D	SCA	2	334593	6240682	-0.24	-0.49	-0.13	-0.70	-0.34	-0.33	-0.35	-0.30	-0.22	-0.67	-0.18	-0.39
MWF03I	SCA	2	334593	6240682	-0.17	-0.11	0.00	-0.08	0.08	0.11	0.05	0.06	0.09	0.23	0.13	0.14
MWF03S	SCA	1	334593	6240682	-0.37	0.00	-0.05	-0.11	-0.02	-0.08	-0.27	-0.14	-0.17	-0.07	-0.34	-0.18
MWF04D	SCA	2	334553	6240691	-0.19	-0.18	-0.07	-0.18	0.00	0.00	-0.01	0.00	-0.02	0.08	0.07	0.10
MWF04I	SCA	2	334553	6240691	-0.34	-0.29	-0.18	-0.28	-0.10	-0.09	-0.16	-0.14	-0.19	-0.03	-0.11	-0.05

**Table 4.1**  
**GTP Quarterly Hydraulic Monitoring Groundwater Elevations**  
**December 2009**

Bore Num	Area	shallow (1) / deep (2)	Easting	Northing	Mar-07	Jun-07	Sep-07	Dec-07	Mar-08	Jun-08	Sep-08	Dec-08	Mar-09	Jun-09	Sep-09	Dec-09
MWF06I	SCA	2	334475	6240713	-0.42	-0.18	-0.30	-0.18	-0.06	-0.09	-0.06	-0.09	-0.21	0.04	-0.11	-0.04
MWF06S	SCA	1	334475	6240713	-0.08	0.06	-0.12	0.05	0.29	0.27	-0.02	0.12	-0.07	0.33	-0.04	0.07
MWF07D	SCA	2	334436	6240725	FT	0.15	0.19	FT	FT	FT	FT	FT	0.78	0.92	FT	FT
MWF07I	SCA	2	334436	6240725	-0.39	-0.55	-0.15	-0.40	-0.13	-0.12	0.05	-0.35	-0.05	0.22	-0.01	0.05
MWF07S	SCA	1	334436	6240725	0.01	0.01	-0.17	0.02	0.22	0.23	-0.02	0.12	-0.08	0.33	0.06	FT
MWF08D	SCA	2	334384	6240744	-0.03	-0.22	-0.33	-0.35	-0.16	-0.15	-0.22	-0.16	-0.23	-0.01	FT	FT
MWF08I	SCA	2	334384	6240744	-0.05	0.08	-0.20	-0.18	-0.04	-0.01	-0.12	-0.15	-0.15	0.05	-0.11	-0.18
MWF08S	SCA	1	334384	6240744	0.19	0.25	-0.01	0.17	0.35	0.47	0.30	0.30	0.19	0.62	0.23	0.18
MWF09D	SCA	2	334326	6240767	0.14	0.23	0.10	0.01	0.11	0.12	0.05	-0.04	0.12	0.19	0.10	-0.03
MWF09I	SCA	2	334326	6240767	-0.19	0.29	-0.29	-0.36	-0.13	-0.16	-0.33	-0.22	-0.37	-0.12	-0.29	-0.33
MWF09S	SCA	1	334326	6240767	0.15	0.39	-0.01	0.12	0.28	0.31	0.10	0.15	0.01	0.25	0.06	0.02
MWF10D	SCA	2	334275	6240790	0.22	0.56	0.16	0.13	0.28	0.41	0.32	0.30	0.22	1.11	1.04	0.98
MWF10I	SCA	2	334275	6240790	0.10	0.43	0.12	0.02	0.11	0.18	0.15	0.12	0.21	0.28	0.15	0.04
MWF10S	SCA	1	334275	6240790	0.66	0.87	0.89	0.82	0.83	0.90	0.88	0.73	0.99	0.24	0.12	0.06
MWF11D	SCA	2	334696	6240663	0.51	0.26	0.39	0.20	0.62	0.25	-0.03	0.03	0.55	0.18	0.13	-0.24
MWF11I	SCA	2	334696	6240663	0.05	1.19	0.07	-0.11	0.11	0.14	0.22	0.20	0.49	0.40	0.28	0.21
MWF11S	SCA	1	334696	6240663	0.01	0.30	0.05	-0.17	0.05	0.06	-0.35	-0.09	-0.13	0.11	-0.09	-0.16
MWF12D	SCA	2	334753	6240656	0.29	0.04	0.01	-0.39	-0.02	0.00	0.03	0.04	0.47	0.14	0.14	0.11
MWF12I	SCA	2	334753	6240656	0.28	0.25	0.25	0.10	0.29	0.34	0.32	0.35	0.57	0.51	0.41	0.31
MWF12S	SCA	1	334753	6240656	-0.39	0.13	0.09	-0.20	0.06	-1.00	-0.27	-0.30	-0.06	0.08	-0.07	-0.20
MWF13D	SCA	2	334793	6240652	0.34	0.04	-0.16	-0.22	0.08	-0.13	0.18	-0.05	0.52	0.10	0.03	0.00
MWF13I	SCA	2	334793	6240652	-0.28	-0.40	-0.26	-0.42	-0.31	0.39	-0.42	0.41	0.58	0.51	0.38	0.30
MWF13S	SCA	1	334793	6240652	0.33	0.26	0.22	0.12	0.43	0.18	0.38	-0.26	-0.05	0.14	-0.21	-0.29
MWF14D	SCA	2	334837	6240650	0.43	-0.07	-0.32	-0.34	0.01	-0.20	0.15	-0.16	0.59	0.05	0.00	0.00
MWF14I	SCA	2	334837	6240650	0.26	0.14	0.10	0.14	0.05	0.34	0.40	0.48	1.00	0.54	0.42	0.34
MWF14S	SCA	1	334837	6240650	0.06	0.02	0.00	0.03	-0.03	0.05	0.05	0.53	0.13	0.30	-0.06	-0.15
MWF15D	SCA	2	334739	6240622	0.29	0.27	0.29	0.32	0.53	0.16	0.30	FL	#N/A	0.52	0.53	0.33
MWF15I	SCA	2	334739	6240622	0.19	0.12	0.18	0.04	0.39	1.73	0.22	FL	#N/A	0.54	0.30	0.20
MWF15S	SCA	1	334739	6240622	0.12	0.27	0.16	0.09	0.51	0.12	0.27	FL	#N/A	0.18	0.05	-0.02
WG154D	SCA	2	334824	6240773	0.52	0.51	0.42	1.12	0.68	0.24	0.47	FL	0.52	0.79	0.56	0.47
WG154S	SCA	1	334823	6240768	0.49	FL	0.49	0.40	0.81	1.10	0.58	0.58	0.67	0.77	0.71	0.63
WG155D	SCA	2	334985	6240800	0.77	0.96	0.73	2.84	0.74	0.81		0.78	0.79	0.84	0.73	0.63
WG155S	SCA	1	334985	6240800	0.83	0.98	0.83	0.94	0.79	0.86	0.74	0.84	0.84	1.02	0.86	0.73
WG23S	SCA	1	335049	6240694	0.75	0.69	0.79	0.72	1.01	0.79	0.82	0.75	0.78	0.89	0.75	0.59
WG75I	SCA	2	335052	6240692	1.03	0.92	0.98	0.91	1.21	0.98	0.98	0.97	0.92	1.03	0.91	0.82
WG88I	SCA	2	334370	6240958	0.57	0.73	0.77	0.67	1.00	0.88	0.91	0.75	0.77	1.00	0.67	0.62
WG88S	SCA	1	334370	6240958	0.65	0.77	0.70	0.59	0.92	0.87	0.94	0.63	0.73	0.90	0.60	0.58
WG224S	SVD	1	335168	6241120	#N/A	#N/A	#N/A	2.01	2.37	#N/A	#N/A	2.07	1.97	2.38	2.02	1.63
WG225S	SVD	1	335164	6241238	#N/A	#N/A	#N/A	2.31	2.73	#N/A	#N/A	2.42	2.30	2.68	2.24	1.88
WG226S	SVD	1	335169	6241348	#N/A	#N/A	#N/A	2.70	2.99	#N/A	#N/A	2.87	2.55	2.93	2.24	2.18
WG227S	SVD	1	335132	6241614	#N/A	#N/A	#N/A	3.31	#N/A	#N/A	#N/A	3.41	3.26	3.48	3.16	2.70
WG77S	SVD	1	335151	6241410	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	2.97	#N/A	3.01	2.63	2.22
WG229D	WEST	2	334513	6241663	#N/A	#N/A	2.36	2.57	3.59	2.49	2.31	2.27	2.35	2.55	2.28	1.96
WG229S	WEST	1	334513	6241663	#N/A	#N/A	4.75	4.45	4.99	4.42	4.36	4.34	4.33	4.51	4.45	4.28
WG231D	WEST	2	334492	6241924	#N/A	#N/A	#N/A	5.24	2.98	3.16	2.99	2.72	3.15	3.10	3.04	2.41
WG231S	WEST	1	334492	6241924	#N/A	#N/A	#N/A	3.30	3.45	5.39	5.31	6.34	6.49	6.47	5.37	5.24
WG234D	WEST	2	334853	6241530	#N/A	#N/A	2.13	2.49	2.77	2.67	2.47	2.63	2.52	2.71	2.32	1.99
WG234I	WEST	2	334853	6241530	#N/A	#N/A	2.26	2.61	2.86	2.62	2.60	2.75	2.69	2.98	2.78	2.65
WG234S	WEST	1	334853	6241530	#N/A	#N/A	2.49	2.74	3.00	2.91	2.80	2.77	2.77	3.01	2.59	2.35
WG72D	WEST	2	334380	6241482	1.86	2.03	2.03	2.19	2.09	2.19	2.09	2.00	2.07	2.40	1.96	1.71
WG72S	WEST	1	334379	6241478	3.17	3.25	3.59	3.28	3.44	4.34	3.34	3.18	3.18	3.43	3.38	3.30

Notes  
Data prior to March 2007 not presented  
NOR Northern areas  
SVD Springvale Drain  
WEST Western areas  
FT Faulty transducer  
FL Faulty logger  
#N/A Not measured / inaccessible

Table 5.1  
Field Observation Data  
December 2009

Location	Depth	Date Sampled	Volume (L) Removed	DO ppm	EC (µS/cm)	pH	Er* (mV)	Eh (mV)	Temp (°C)	TDS (mg/L) calc	SWL (m)	Comments
BP41	2	02-Dec-09	-	-	-	-	-	-	-	-	-	2 m port dry. Alternatively, 6 m port was sampled.
	4	02-Dec-09	3.0	2.47	2038	6.01	-179	20	19.6	1223		Clear to yellow, hydrogen sulphide odour.
		02-Dec-09	6.0	1.38	1828	6.30	-209	-10	19.7	1097		Clear to yellow, hydrogen sulphide odour.
		02-Dec-09	9.0	1.17	1884	6.41	-212	-13	19.9	1130		Clear to yellow, hydrogen sulphide odour.
	6	02-Dec-09	3.0	0.99	130	6.06	-91	108	18.3	78		Brown, hydrogen sulphide odour.
		02-Dec-09	6.0	1.10	160	6.15	-142	57	18.6	96		Brown, hydrogen sulphide odour.
		02-Dec-09	9.0	1.04	160	6.21	-148	51	18.6	96		Brown, hydrogen sulphide odour.
	8	02-Dec-09	3.0	1.75	1990	5.22	-161	38	18.8	1194		Clear, slight hydrogen sulphide odour.
		02-Dec-09	6.0	1.45	1941	5.20	-152	47	18.8	1165		Clear, slight hydrogen sulphide odour.
		02-Dec-09	9.0	1.50	1971	5.17	-152	47	18.7	1183		Clear, slight hydrogen sulphide odour.
BP54	6	02-Dec-09	3.0	4.45	380	5.41	26	225	19.5	228		Clear, no odour.
		02-Dec-09	6.0	3.38	375	6.14	34	233	19.4	225		Clear, no odour.
		02-Dec-09	9.0	3.08	373	6.19	44	243	19.4	224		Clear, no odour.
BP56	6	01-Dec-09	3.0	1.48	164	6.28	39	238	22.0	98		Clear to pale yellow, slight hydrogen sulphide odour.
		01-Dec-09	6.0	1.23	147	6.27	50	249	21.3	88		Clear to pale yellow, slight hydrogen sulphide odour.
		01-Dec-09	9.0	1.28	143	6.27	47	246	21.3	86		Clear to pale yellow, slight hydrogen sulphide odour.
BP57	3	30-Nov-09	3.0	2.02	309	5.89	40	239	22.2	185		Clear, no odour.
		30-Nov-09	6.0	1.19	308	5.97	44	243	22.3	185		Clear, no odour.
		30-Nov-09	9.0	0.92	308	6.04	45	244	22.3	185		Clear, no odour.
BP58	3	30-Nov-09	-	-	-	-	-	-	-	-	-	3 m port not labelled. Alternatively, 6 m port was sampled.
	6	30-Nov-09	3.0	1.34	2840	5.17	74	273	20.7	1704		Clear, slight hydrogen sulphide odour.
		30-Nov-09	6.0	0.80	2550	5.27	71	270	20.9	1530		Clear, slight hydrogen sulphide odour.
		30-Nov-09	9.0	0.44	2570	5.35	66	265	20.6	1542		Clear, slight hydrogen sulphide odour.
BP59	4	09-Dec-09	3.0	2.45	6500	5.93	-38	161	21.7	3900		Black, turbid, strong hydrogen sulphide odour.
		09-Dec-09	6.0	1.01	6190	5.91	-174	25	21.7	3714		Black, turbid, strong hydrogen sulphide odour.
		09-Dec-09	9.0	0.90	6190	5.89	-185	14	21.7	3714		Black, turbid, strong hydrogen sulphide odour.
	8	09-Dec-09	2.0	1.20	2045	5.58	-109	90	18.9	1227		Grey to clear, slightly turbid, slight hydrogen sulphide odour.
		09-Dec-09	4.0	0.50	2017	5.53	-143	56	19.6	1210		Grey to clear, slightly turbid, slight hydrogen sulphide odour.
		09-Dec-09	6.0	0.75	2031	5.56	-135	64	19.5	1219		Grey to clear, slightly turbid, slight hydrogen sulphide odour.
	12	09-Dec-09	2.0	1.41	2092	4.83	-158	41	19.2	1255		Clear, solvent and hydrogen sulphide odour.
		09-Dec-09	4.0	1.00	2310	4.91	-170	29	19.5	1386		Clear, solvent and hydrogen sulphide odour.
		09-Dec-09	6.0	0.65	2120	4.88	-181	18	19.6	1272		Clear, solvent and hydrogen sulphide odour.
BP60	4	02-Dec-09	3.0	1.10	227	6.22	-51	148	19.2	136		Clear to yellow, slight hydrogen sulphide odour.
		02-Dec-09	6.0	0.67	186	6.24	-55	144	19.3	111		Clear to yellow, slight hydrogen sulphide odour.
		02-Dec-09	9.0	0.46	184	6.25	-58	141	19.4	110		Clear to yellow, slight hydrogen sulphide odour.
BP61	4	30-Nov-09	3.0	1.05	1282	5.40	-38	161	20.8	769		Clear, hydrogen sulphide odour.
		30-Nov-09	5.0	0.66	1267	5.41	-53	146	20.9	760		Clear, hydrogen sulphide odour.
		30-Nov-09	8.0	0.46	1261	5.42	-66	133	20.7	757		Clear, hydrogen sulphide odour.
BP72	3	30-Nov-09	3.0	1.86	661	5.89	-29	170	20.7	397		Yellow, slightly turbid, slight hydrogen sulphide odour.
		30-Nov-09	6.0	0.87	580	5.85	-44	155	20.4	348		Yellow, slightly turbid, slight hydrogen sulphide odour.
		30-Nov-09	9.0	0.58	582	5.79	-50	149	20.2	349		Yellow, slightly turbid, slight hydrogen sulphide odour.
BP76	4	03-Dec-09	3.0	3.44	1733	6.30	98	297	23.2	1040		Clear, hydrogen sulphide odour.
		03-Dec-09	6.0	2.04	1796	6.34	-130	69	22.4	1078		Clear, hydrogen sulphide odour.
		03-Dec-09	9.0	1.60	1798	6.36	-140	59	22.4	1079		Clear, hydrogen sulphide odour.
BP77	4	02-Dec-09	3.0	3.58	3460	6.02	-154	45	18.8	2076		Clear to brown, slightly turbid, hydrogen sulphide odour.
		02-Dec-09	6.0	1.33	3480	6.05	-204	-5	19.0	2088		Clear to brown, slightly turbid, hydrogen sulphide odour.
		02-Dec-09	9.0	1.08	3490	6.01	-203	-4	19.0	2094		Clear to brown, slightly turbid, hydrogen sulphide odour.
BP89	6	02-Dec-09	3.0	1.39	247	6.26	53	252	20.5	148		Clear, no odour.
		02-Dec-09	6.0	0.93	239	6.22	49	248	20.5	143		Clear, no odour.
		02-Dec-09	9.0	0.89	235	6.19	48	247	20.5	141		Clear, no odour.
BP113	3	02-Dec-09	3.0	1.79	574	6.34	-161	38	19.2	344		Clear to yellow, no odour.
		02-Dec-09	6.0	0.60	494	6.28	-181	18	19.4	296		Clear to yellow, no odour.
		02-Dec-09	9.0	0.44	498	6.29	-191	8	19.4	299		Clear to yellow, no odour.
BP114	4	30-Nov-09	-	-	-	-	-	-	-	-	-	4m port dry. Alternatively, 6m port was sampled.
	6	30-Nov-09	3.0	0.55	2216	5.20	-69	130	20.2	1330		Clear to pale yellow, hydrogen sulphide odour.
		30-Nov-09	6.0	0.35	2193	5.18	-85	114	20.0	1316		Clear to pale yellow, hydrogen sulphide odour.
		30-Nov-09	9.0	0.25	2198	5.17	-93	106	20.0	1319		Clear to pale yellow, hydrogen sulphide odour.
WG23S	S	30-Nov-09	3.0	0.76	2200	4.70	-23	176	20.4	1320	2.50	Pale yellow, hydrogen sulphide odour.
		30-Nov-09	6.0	0.46	2260	4.72	-88	111	20.0	1356		Pale yellow, hydrogen sulphide odour.
		30-Nov-09	9.0	0.40	2190	4.73	-95	104	20.0	1314		Pale yellow, hydrogen sulphide odour.
		30-Nov-09	12.0	0.35	2060	4.73	-100	99	19.9	1236		Pale yellow, hydrogen sulphide odour.
WG154	S	02-Dec-09	3.0	1.03	2560	5.64	-117	82	19.3	1536	2.41	Clear, hydrogen sulphide odour.
		02-Dec-09	6.0	0.75	2610	5.64	-149	50	19.7	1566		Clear, hydrogen sulphide odour.
		02-Dec-09	9.0	0.74	2590	5.65	-173	26	19.8	1554		Clear, hydrogen sulphide odour.
	D	02-Dec-09	3.0	0.91	3470	5.36	-119	80	19.7	2082	2.28	Clear, effervescent, hydrogen sulphide odour.
		02-Dec-09	6.0	0.90	3550	5.35	-141	58	19.9	2130		Clear, effervescent, hydrogen sulphide odour.
02-Dec-09	9.0	0.88	3570	5.40	-161	38	20.0	2142		Clear, effervescent, hydrogen sulphide odour.		
WG227	S	02-Dec-09	3.0	1.13	416	6.58	0	199	16.9	250	1.63	Brown, turbid, slight hydrogen sulphide odour.
		02-Dec-09	6.0	0.69	387	6.58	-3	196	17.1	232		Brown, turbid, slight hydrogen sulphide odour.
		02-Dec-09	9.0	0.50	378	6.58	-6	193	17.2	227		Brown, turbid, slight hydrogen sulphide odour.
		02-Dec-09	12.0	0.46	377	6.58	-6	193	17.2	226		Brown, turbid, slight hydrogen sulphide odour.
WG229	S	02-Dec-09	3.0	1.62	1197	6.64	-171	28	21.7	718	5.98	Dark brown, turbid, hydrogen sulphide odour.
		02-Dec-09	6.0	0.98	1189	6.59	-197	2	21.6	713		Dark brown, turbid, hydrogen sulphide odour.
		02-Dec-09	9.0	0.78	1194	6.58	-208	-9	21.5	716		Dark brown, turbid, hydrogen sulphide odour.
WG231	S	30-Nov-09	3.0	1.36	374	5.09	93	292	22.3	224	5.98	Clear to yellow, hydrogen sulphide odour.
		30-Nov-09	6.0	0.80	393	5.00	103	302	21.7	236		Clear to yellow, hydrogen sulphide odour.
		30-Nov-09	9.0	0.62	401	4.97	109	308	21.4	241		Clear to yellow, hydrogen sulphide odour.
		30-Nov-09	12.0	0.56	399	4.97	110	309	21.3	239		Clear to yellow, hydrogen sulphide odour.
WG233	S	02-Dec-09	3.0	1.04	361	6.36	-83	116	22.3	217	5.92	Clear to yellow, solvent odour.
		02-Dec-09	6.0	0.73	350	6.34	-89	110	22.2	210		Clear to yellow, solvent odour.
		02-Dec-09	9.0	0.63	328	6.27	-92	107	22.4	197		Clear to yellow, solvent odour.
		02-Dec-09	12.0	0.61	329	6.28	-93	106	22.4	197		Clear to yellow, solvent odour.
WG234	S	02-Dec-09	3.0	1.71	1207	6.47	-144	55	21.2	724	0.69	Clear to brown, hydrogen sulphide odour.
		02-Dec-09	6.0	1.16	1247	6.47	-167	32	21.0	748		Clear to brown, hydrogen sulphide odour.
		02-Dec-09	9.0	0.83	1249	6.47	-168	31	20.8	749		Clear to brown, hydrogen sulphide odour.

Table 5.1  
Field Observation Data  
December 2009

Location	Depth	Date Sampled	Volume (L) Removed	DO ppm	EC (µS/cm)	pH	Er* (mV)	Eh (mV)	Temp (°C)	TDS (mg/L) calc	SWL (m)	Comments
<b>PENRHYN ESTUARY / DUNES</b>												
BP01	0.75	01-Dec-09	1.0	2.48	11830	6.54	253	452	20.2	7098		Clear, no odour.
	1.25	01-Dec-09	1.0	2.10	17600	6.72	224	423	21.0	10560		Clear, no odour.
	2	01-Dec-09	1.0	2.38	38200	5.69	195	394	20.6	22920		Grey, turbid, hydrogen sulphide odour.
	4	01-Dec-09	1.0	3.55	10500	5.06	100	299	20.3	6300		Clear, hydrogen sulphide odour.
	6	01-Dec-09	-	-	-	-	-	-	-	-		6m port dry. Alternatively, 4m port was sampled.
BP115	10	01-Dec-09	1.0	2.06	13190	4.95	62	261	20.5	7914		Clear, no odour.
	3.25	01-Dec-09	3.0	5.48	2840	7.42	-35	164	19.5	1704	3.74	Clear, no odour.
	5.25	01-Dec-09	3.0	3.93	19150	6.56	26	225	20.9	11490	3.86	Clear, hydrogen sulphide odour.
MWF15	6.5	01-Dec-09	3.0	3.37	12330	6.98	1	200	21.0	7398	3.91	Clear, hydrogen sulphide odour.
	S	01-Dec-09	2.0	1.19	45600	6.45	-70	129	19.5	27360	2.72	Clear, hydrogen sulphide odour.
		01-Dec-09	4.0	0.70	43500	5.91	-17	182	19.1	26100		Clear, hydrogen sulphide odour.
		01-Dec-09	6.0	0.76	43900	5.97	-35	164	19.3	26340		Clear, hydrogen sulphide odour.
	I	01-Dec-09	2.0	1.71	8510	4.83	-22	177	19.8	5106	2.49	Clear, strong hydrogen sulphide odour.
		01-Dec-09	4.0	1.26	8090	4.74	-52	147	19.9	4854		Clear, strong hydrogen sulphide odour.
		01-Dec-09	6.0	1.15	8610	4.87	-58	141	19.5	5166		Clear, strong hydrogen sulphide odour.
	D	01-Dec-09	2.0	0.73	1479	6.28	-58	141	19.4	887	1.94	Brown, hydrogen sulphide odour.
		01-Dec-09	4.0	0.74	1723	6.22	-88	111	19.7	1034		Brown, hydrogen sulphide odour.
		01-Dec-09	6.0	0.58	1697	6.34	-102	97	19.7	1018		Brown, hydrogen sulphide odour.
<b>High Tide</b>												
BP42	0.1	01-Dec-09	1.0	3.86	45600	5.86	56	255	20.2	27360		Clear, no odour.
	0.5	01-Dec-09	1.0	2.41	45300	6.22	61	260	21.2	27180		Clear, slight hydrogen sulphide odour.
	2	01-Dec-09	1.0	2.08	38600	6.17	20	219	20.9	23160		Clear, slight hydrogen sulphide odour.
BP43	0.1	01-Dec-09	1.0	4.79	49300	6.93	-42	157	19.5	29580		Clear, no odour.
	0.5	01-Dec-09	1.0	5.02	48800	6.83	-23	176	19.4	29280		Clear, slight hydrogen sulphide odour.
	1	01-Dec-09	1.0	4.35	47400	6.86	-67	132	19.9	28440		Clear, no odour.
BP64	2	01-Dec-09	-	-	-	-	-	-	-	-		2m port dry. Alternatively, 1m port was sampled.
	0.1	01-Dec-09	1.0	4.34	45600	6.91	-25	174	19.5	27360		Clear, slight hydrogen sulphide odour.
	0.5	01-Dec-09	1.0	3.63	45900	6.78	-40	159	19.8	27540		Clear, no odour.
BP65	2	01-Dec-09	1.0	3.75	43300	6.54	-63	136	19.9	25980		Clear, no odour.
	0.1	01-Dec-09	1.0	3.12	51500	7.21	-1	198	19.5	30900		Clear, no odour.
	0.5	01-Dec-09	1.0	2.70	50500	7.11	-14	185	19.6	30300		Clear, no odour.
2	01-Dec-09	1.0	3.83	49900	7.04	-31	168	19.4	29940		Clear, slight hydrogen sulphide odour.	
<b>Low Tide</b>												
BP42	0.1	01-Dec-09	1.0	3.08	47300	6.81	-7	192	21.3	28380		Clear, no odour.
	0.5	01-Dec-09	1.0	2.96	48100	6.74	5	204	21.4	28860		Clear, no odour.
	2	01-Dec-09	1.0	2.77	37100	6.53	-49	150	20.9	22260		Clear, no odour.
BP43	0.1	01-Dec-09	1.0	4.07	49200	6.54	44	243	22.2	29520		Clear, slight hydrogen sulphide odour.
	0.5	01-Dec-09	1.0	3.62	50300	6.64	0	199	22.1	30180		Clear, no odour.
	1	01-Dec-09	1.0	3.31	48600	6.67	-36	163	21.8	29160		Clear, no odour.
BP64	2	01-Dec-09	-	-	-	-	-	-	-	-		2m port dry. Alternatively, 1m port was sampled.
	0.1	01-Dec-09	1.0	1.89	46500	6.85	-49	150	19.8	27900		Clear, strong hydrogen sulphide odour.
	0.5	01-Dec-09	1.0	2.27	47000	6.75	-67	132	19.7	28200		Clear, strong hydrogen sulphide odour.
BP65	2	01-Dec-09	1.0	2.25	43300	6.55	-89	110	19.1	25980		Clear, strong hydrogen sulphide odour.
	0.1	01-Dec-09	1.0	1.42	49900	7.00	-18	181	19.9	29940		Clear, hydrogen sulphide odour.
	0.5	01-Dec-09	1.0	2.03	50300	6.99	-22	177	20.0	30180		Clear, slight hydrogen sulphide odour.
2	01-Dec-09	1.0	2.59	49400	6.97	-27	172	19.7	29640		Clear, no odour.	
<b>SURFACE WATER</b>												
<b>High Tide</b>												
SW028		01-Dec-09	-	5.51	50600	7.22	-49	150	19.5	30360		Clear, no odour.
SW029		01-Dec-09	-	5.29	36400	6.48	4	203	21.6	21840		Clear to brown, no odour.
SW031		01-Dec-09	-	4.61	30000	7.20	23	222	19.5	18000		Clear, no odour.
SW048		01-Dec-09	-	-	-	-	-	-	-	-		Not sampled (not accessible)
<b>Low Tide</b>												
SW028		01-Dec-09	-	6.24	48700	7.04	-33	166	21.0	29220		Clear, no odour.
SW029		01-Dec-09	-	5.92	30004	7.12	-7	192	21.2	18002		Clear, no odour.
SW031		01-Dec-09	-	5.71	20007	7.47	-49	150	23.1	12004		Clear, slightly turbid, hydrogen sulphide odour.
SW048		01-Dec-09	-	-	-	-	-	-	-	-		Not sampled (not accessible)
<b>Tide Non-specific</b>												
SW005		01-Dec-09	-	2.68	818	6.77	-16	183	20.1	491		Clear, no odour.
SW030		01-Dec-09	-	5.82	6990	7.54	-46	153	21.9	4194		Clear, slight solvent odour.
SW046		01-Dec-09	-	2.69	1376	7.25	-16	183	19.0	826		Clear, no odour.
SW049		01-Dec-09	-	2.78	2400	6.62	28	227	18.2	1440		Clear, no odour.
SW052		01-Dec-09	-	3.41	585	6.97	37	236	20.2	351		Clear, slight solvent odour.
SW053		01-Dec-09	-	3.55	577	6.91	36	235	20.0	346		Clear, slight solvent odour.
SW060		01-Dec-09	-	5.56	21270	7.01	52	251	20.9	12762		Clear, no odour.
SW062		01-Dec-09	-	2.08	2008	6.28	-26	173	22.2	1205		Clear, hydrogen sulphide odour, slight film.
SW062_east		01-Dec-09	-	1.96	496	6.76	2	201	20.2	298		Clear, no odour.
SW064		01-Dec-09	-	7.54	825	4.87	105	304	21.4	495		Clear, no odour.

Er = oxidation reduction (redox) potential as measured with a platinum electrode and silver/silver chloride reference electrode

Eh = redox potential relative to the standard hydrogen electrode. (Eh = Er + 199mv).

TDS = EC in µS x 0.6

NR = no record

**Table 5.2**  
**Groundwater Volatile CHCs**  
**December 2009**

Location:		BP01	BP01	BP01	BP01	BP01	BP01	BP01	BP01
Sample Depth:		0.75	0.75	1.25	1.25	2	2	6	10
Date Sampled:		1/12/2009	2/11/2010	1/12/2009	2/11/2010	1/12/2009	2/11/2010	1/12/2009	1/12/2009
Analyte	Unit								
Carbon Tetrachloride	mg/l	< 0.020	< 0.001	< 0.001	< 0.001	< 0.020	< 0.001	< 0.020	< 0.020
Chloroform	mg/l	3.98	<b>0.001</b>	<b>0.197</b>	< 0.001	1.75	<b>0.035</b>	<b>3.54</b>	<b>2.32</b>
Methylene chloride	mg/l	0.082	< 0.005	<b>0.007</b>	< 0.005	< 0.020	< 0.005	<b>0.098</b>	<b>0.076</b>
Chloromethane	mg/l	< 0.200	< 0.010	< 0.010	< 0.010	< 0.200	< 0.010	< 0.200	< 0.200
<b>Total Chlorinated Methanes</b>	mg/l	<b>4.062</b>	<b>0.001</b>	<b>0.204</b>	<0.01	<b>1.75</b>	<b>0.035</b>	<b>3.638</b>	<b>2.396</b>
Pentachloroethane	mg/l	< 0.020	< 0.001	< 0.001	< 0.001	< 0.020	< 0.001	< 0.020	< 0.020
1.1.1.2-Tetrachloroethane	mg/l	< 0.020	< 0.001	< 0.001	< 0.001	< 0.020	< 0.001	< 0.020	< 0.020
1.1.2.2-Tetrachloroethane	mg/l	4.75	<b>0.004</b>	<b>0.112</b>	< 0.001	3.55	<b>0.004</b>	<b>9.08</b>	<b>4.07</b>
1.1.1-Trichloroethane	mg/l	< 0.020	< 0.001	< 0.001	< 0.001	< 0.020	< 0.001	< 0.020	< 0.020
1.1.2-Trichloroethane	mg/l	5.28	< 0.001	<b>0.203</b>	< 0.001	1.95	<b>0.034</b>	<b>6.62</b>	<b>1.95</b>
1.1-Dichloroethane	mg/l	0.316	< 0.001	<b>0.024</b>	< 0.001	<b>0.068</b>	<b>0.006</b>	<b>0.379</b>	<b>0.119</b>
1.2-Dichloroethane	mg/l	18	<b>0.004</b>	<b>1.29</b>	< 0.001	5.06	<b>0.291</b>	<b>18.6</b>	<b>5.22</b>
Chloroethane (Ethyl chloride)	mg/l	< 0.200	< 0.010	< 0.010	< 0.010	< 0.200	< 0.010	< 0.200	< 0.200
<b>Total Chlorinated Ethanes</b>	mg/l	<b>28.35</b>	<b>0.01</b>	<b>1.629</b>	<0.01	<b>10.63</b>	<b>0.34</b>	<b>34.679</b>	<b>11.36</b>
Tetrachloroethene	mg/l	< 0.020	< 0.001	< 0.001	< 0.001	0.221	<b>0.017</b>	<b>0.851</b>	<b>1.83</b>
Trichloroethene	mg/l	15	<b>0.03</b>	<b>0.148</b>	<b>0.001</b>	11.5	<b>0.114</b>	<b>24.3</b>	<b>25.4</b>
1.1-Dichloroethene	mg/l	0.867	< 0.001	<b>0.038</b>	< 0.001	0.298	<b>0.015</b>	<b>1.02</b>	<b>0.641</b>
cis-1.2-Dichloroethene	mg/l	1.88	<b>0.001</b>	<b>0.062</b>	< 0.001	0.707	<b>0.093</b>	<b>0.713</b>	<b>0.519</b>
trans-1.2-Dichloroethene	mg/l	0.298	< 0.001	<b>0.017</b>	< 0.001	0.116	<b>0.016</b>	<b>0.308</b>	<b>0.391</b>
Vinyl chloride	mg/l	0.24	< 0.010	<b>0.02</b>	< 0.010	< 0.200	<b>0.08</b>	< 0.200	< 0.200
Vinyl chloride (SIM)	mg/l		< 0.001						
<b>Total Chlorinated Ethenes</b>	mg/l	<b>18.29</b>	<b>0.03</b>	<b>0.285</b>	<b>0.001</b>	<b>12.84</b>	<b>0.34</b>	<b>27.19</b>	<b>28.78</b>
Hexachlorobutadiene	mg/l	< 0.020	< 0.001	< 0.001	< 0.001	< 0.020	< 0.001	< 0.020	< 0.020
<b>Total Volatile CHCs</b>	mg/l	<b>50.69</b>	<b>0.04</b>	<b>2.118</b>	<b>0.001</b>	<b>25.22</b>	<b>0.71</b>	<b>65.51</b>	<b>42.54</b>
Carbon disulfide	mg/l	< 0.020	< 0.001	<b>0.002</b>	< 0.001	< 0.020	< 0.001	<b>0.262</b>	<b>0.341</b>

**Table 5.2**  
**Groundwater Volatile CHCs**  
**December 2009**

Location:		BP41	BP41	BP41	BP54	BP56	BP57	BP58	BP59	BP59	BP59
Sample Depth:		4	6	8	6	6	3	6	4	8	12
Date Sampled:		2/12/2009	2/12/2009	2/12/2009	2/12/2009	3/12/2009	30/11/2009	30/11/2009	9/12/2009	9/12/2009	9/12/2009
Analyte	Unit										
Carbon Tetrachloride	mg/l	< 0.005	< 0.005	< 0.020	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	< 0.500
Chloroform	mg/l	<b>0.387</b>	<b>0.377</b>	<b>1.32</b>	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	<b>0.018</b>	<b>2.94</b>
Methylene chloride	mg/l	<b>1.08</b>	<b>1.21</b>	<b>0.882</b>	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.500
Chloromethane	mg/l	< 0.050	< 0.050	< 0.200	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.050	< 5.000
<b>Total Chlorinated Methanes</b>	<b>mg/l</b>	<b>1.467</b>	<b>1.587</b>	<b>2.202</b>	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	<b>0.018</b>	<b>2.94</b>
Pentachloroethane	mg/l	< 0.005	< 0.005	< 0.020	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	< 0.500
1.1.1.2-Tetrachloroethane	mg/l	< 0.005	< 0.005	< 0.020	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	< 0.500
1.1.2.2-Tetrachloroethane	mg/l	<b>0.052</b>	<b>0.075</b>	<b>0.919</b>	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	<b>0.705</b>
1.1.1-Trichloroethane	mg/l	< 0.005	< 0.005	< 0.020	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	< 0.500
1.1.2-Trichloroethane	mg/l	<b>0.826</b>	<b>1.26</b>	<b>3.8</b>	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	<b>3.11</b>
1.1-Dichloroethane	mg/l	<b>0.398</b>	<b>0.564</b>	<b>0.634</b>	< 0.001	< 0.001	< 0.001	<b>0.006</b>	<b>0.004</b>	<b>0.014</b>	< 0.500
1.2-Dichloroethane	mg/l	<b>3.33</b>	<b>4.96</b>	<b>42.6</b>	< 0.001	< 0.001	< 0.001	<b>0.395</b>	<b>0.013</b>	<b>1.16</b>	<b>1180</b>
Chloroethane (Ethyl chloride)	mg/l	< 0.050	< 0.050	< 0.200	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.050	< 5.000
<b>Total Chlorinated Ethanes</b>	<b>mg/l</b>	<b>4.606</b>	<b>6.859</b>	<b>47.95</b>	< 0.010	< 0.010	< 0.010	<b>0.401</b>	<b>0.017</b>	<b>1.174</b>	<b>1184</b>
Tetrachloroethene	mg/l	<b>0.028</b>	<b>0.081</b>	<b>1.09</b>	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	<b>2.07</b>
Trichloroethene	mg/l	<b>0.565</b>	<b>0.65</b>	<b>1.59</b>	< 0.001	< 0.001	< 0.001	<b>0.006</b>	<b>0.003</b>	<b>0.162</b>	<b>8.36</b>
1.1-Dichloroethene	mg/l	<b>0.453</b>	<b>0.555</b>	<b>1.48</b>	< 0.001	< 0.001	< 0.001	<b>0.006</b>	< 0.001	<b>0.02</b>	<b>1.17</b>
cis-1.2-Dichloroethene	mg/l	<b>0.488</b>	<b>0.866</b>	<b>1.72</b>	< 0.001	< 0.001	< 0.001	<b>0.034</b>	<b>0.002</b>	<b>0.505</b>	<b>2.47</b>
trans-1.2-Dichloroethene	mg/l	<b>0.093</b>	<b>0.144</b>	<b>0.309</b>	< 0.001	< 0.001	< 0.001	<b>0.004</b>	< 0.001	<b>0.174</b>	< 0.500
Vinyl chloride	mg/l	<b>1.06</b>	<b>1.8</b>	<b>1.5</b>	< 0.010	< 0.010	< 0.010	<b>0.02</b>	< 0.010	<b>1.57</b>	<b>10.4</b>
Vinyl chloride (SIM)	mg/l				< 0.001	< 0.001	< 0.001	<b>0.02</b>	< 0.001		
<b>Total Chlorinated Ethenes</b>	<b>mg/l</b>	<b>2.687</b>	<b>4.096</b>	<b>7.689</b>	< 0.010	< 0.010	< 0.010	<b>0.09</b>	<b>0.005</b>	<b>2.431</b>	<b>24.47</b>
Hexachlorobutadiene	mg/l	< 0.005	< 0.005	< 0.020	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	< 0.500
<b>Total Volatile CHCs</b>	<b>mg/l</b>	<b>8.76</b>	<b>12.54</b>	<b>57.84</b>	< 0.010	< 0.010	< 0.010	<b>0.491</b>	<b>0.022</b>	<b>3.623</b>	<b>1211</b>
Carbon disulfide	mg/l	<b>0.133</b>	<b>0.206</b>	<b>0.474</b>	< 0.001	< 0.001	<b>0.004</b>	<b>0.005</b>	< 0.001	< 0.005	< 0.500

**Table 5.2**  
**Groundwater Volatile CHCs**  
**December 2009**

Location:		BP60	BP61	BP72	BP76	BP77	BP89	BP113	BP114
Sample Depth:		4	4	3	4	4	6	3	6
Date Sampled:		2/12/2009	30/11/2009	30/11/2009	3/12/2009	2/12/2009	2/12/2009	2/12/2009	30/11/2009
Analyte	Unit								
Carbon Tetrachloride	mg/l	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chloroform	mg/l	< 0.001	< 0.001	< 0.001	<b>0.162</b>	<b>0.002</b>	< 0.001	< 0.001	< 0.001
Methylene chloride	mg/l	< 0.005	< 0.005	< 0.005	<b>0.083</b>	< 0.005	< 0.005	< 0.005	< 0.005
Chloromethane	mg/l	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
<b>Total Chlorinated Methanes</b>	mg/l	< 0.010	< 0.010	< 0.010	<b>0.245</b>	<b>0.002</b>	< 0.010	< 0.010	< 0.010
Pentachloroethane	mg/l	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1.1.1.2-Tetrachloroethane	mg/l	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1.1.2.2-Tetrachloroethane	mg/l	< 0.001	< 0.001	< 0.001	<b>0.013</b>	<b>0.001</b>	< 0.001	< 0.001	< 0.001
1.1.1-Trichloroethane	mg/l	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1.1.2-Trichloroethane	mg/l	< 0.001	< 0.001	< 0.001	<b>0.267</b>	< 0.001	< 0.001	< 0.001	< 0.001
1.1-Dichloroethane	mg/l	< 0.001	<b>0.058</b>	< 0.001	<b>0.317</b>	<b>0.094</b>	< 0.001	< 0.001	<b>0.004</b>
1.2-Dichloroethane	mg/l	<b>0.001</b>	<b>0.006</b>	<b>0.014</b>	<b>0.687</b>	<b>0.243</b>	< 0.001	< 0.001	<b>0.009</b>
Chloroethane (Ethyl chloride)	mg/l	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
<b>Total Chlorinated Ethanes</b>	mg/l	<b>0.001</b>	<b>0.064</b>	<b>0.014</b>	<b>1.284</b>	<b>0.338</b>	< 0.010	< 0.010	<b>0.013</b>
Tetrachloroethene	mg/l	<b>0.002</b>	< 0.001	< 0.001	<b>0.015</b>	< 0.001	< 0.001	<b>0.001</b>	< 0.001
Trichloroethene	mg/l	<b>0.002</b>	<b>0.001</b>	< 0.001	<b>0.093</b>	<b>0.003</b>	< 0.001	<b>0.008</b>	< 0.001
1.1-Dichloroethene	mg/l	< 0.001	< 0.001	< 0.001	<b>0.704</b>	<b>0.002</b>	< 0.001	< 0.001	< 0.001
cis-1.2-Dichloroethene	mg/l	< 0.001	<b>0.239</b>	< 0.001	<b>0.745</b>	<b>0.008</b>	< 0.001	<b>0.059</b>	<b>0.081</b>
trans-1.2-Dichloroethene	mg/l	< 0.001	<b>0.016</b>	< 0.001	<b>0.082</b>	<b>0.002</b>	< 0.001	< 0.001	<b>0.016</b>
Vinyl chloride	mg/l	< 0.010	<b>0.28</b>	< 0.010	<b>1.01</b>	<b>0.13</b>	< 0.010	< 0.010	< 0.010
Vinyl chloride (SIM)	mg/l	< 0.001		< 0.001			< 0.001	< 0.001	< 0.001
<b>Total Chlorinated Ethenes</b>	mg/l	<b>0.004</b>	<b>0.536</b>	< 0.010	<b>2.649</b>	<b>0.145</b>	< 0.010	<b>0.068</b>	<b>0.097</b>
Hexachlorobutadiene	mg/l	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	<b>0.002</b>
<b>Total Volatile CHCs</b>	mg/l	<b>0.005</b>	<b>0.6</b>	<b>0.014</b>	<b>4.178</b>	<b>0.485</b>	< 0.010	<b>0.068</b>	<b>0.11</b>
Carbon disulfide	mg/l	< 0.001	<b>0.009</b>	<b>0.004</b>	<b>0.133</b>	<b>0.049</b>	< 0.001	< 0.001	< 0.001

**Table 5.2**  
**Groundwater Volatile CHCs**  
**December 2009**

Location:		BP115	BP115	BP115	MWF15S	MWF15I	MWF15D	WG23	WG154	WG154	WG227	WG229
Sample Depth:		3.25	5.25	6.5				S	S	D	S	S
Date Sampled:		1/12/2009	1/12/2009	1/12/2009	1/12/2009	1/12/2009	1/12/2009	30/11/2009	2/12/2009	2/12/2009	2/12/2009	2/12/2009
Analyte	Unit											
Carbon Tetrachloride	mg/l	< 0.001	< 0.001	< 0.001	< 0.001	<b>3.79</b>	< 0.001	< 0.005	< 0.050	<b>1.1</b>	< 0.001	< 0.001
Chloroform	mg/l	< 0.001	< 0.001	<b>0.109</b>	< 0.001	<b>27.3</b>	< 0.001	<b>0.05</b>	<b>1.22</b>	<b>7.59</b>	< 0.001	< 0.001
Methylene chloride	mg/l	< 0.005	< 0.005	<b>0.02</b>	< 0.005	<b>0.19</b>	< 0.005	< 0.005	<b>1.24</b>	< 0.200	< 0.005	< 0.005
Chloromethane	mg/l	< 0.010	< 0.010	< 0.010	< 0.010	< 0.200	< 0.010	< 0.050	< 0.500	< 2.000	< 0.010	< 0.010
<b>Total Chlorinated Methanes</b>	mg/l	< 0.010	< 0.010	<b>0.129</b>	< 0.010	<b>31.28</b>	< 0.010	<b>0.05</b>	<b>2.46</b>	<b>8.69</b>	< 0.010	< 0.010
Pentachloroethane	mg/l	< 0.001	< 0.001	< 0.001	< 0.001	< 0.020	< 0.001	< 0.005	< 0.050	< 0.200	< 0.001	< 0.001
1.1.1.2-Tetrachloroethane	mg/l	< 0.001	< 0.001	< 0.001	< 0.001	< 0.020	< 0.001	< 0.005	< 0.050	< 0.200	< 0.001	< 0.001
1.1.2.2-Tetrachloroethane	mg/l	< 0.001	< 0.001	<b>0.037</b>	< 0.001	<b>15</b>	<b>0.001</b>	<b>0.068</b>	<b>0.359</b>	<b>3.77</b>	< 0.001	< 0.001
1.1.1-1-Trichloroethane	mg/l	< 0.001	< 0.001	< 0.001	< 0.001	< 0.020	< 0.001	< 0.005	< 0.050	< 0.200	< 0.001	< 0.001
1.1.2-1-Trichloroethane	mg/l	< 0.001	< 0.001	<b>0.092</b>	< 0.001	<b>9</b>	< 0.001	< 0.005	<b>1.81</b>	<b>5.62</b>	< 0.001	< 0.001
1.1-Dichloroethane	mg/l	< 0.001	<b>0.097</b>	<b>0.039</b>	< 0.001	<b>0.468</b>	< 0.001	<b>0.016</b>	<b>0.676</b>	< 0.200	<b>0.001</b>	< 0.001
1.2-Dichloroethane	mg/l	< 0.001	< 0.001	<b>0.257</b>	< 0.001	<b>21.6</b>	< 0.001	<b>0.006</b>	<b>75.4</b>	<b>432</b>	< 0.001	<b>0.003</b>
Chloroethane (Ethyl chloride)	mg/l	< 0.010	< 0.010	< 0.010	< 0.010	< 0.200	< 0.010	< 0.050	< 0.500	< 2.000	< 0.010	< 0.010
<b>Total Chlorinated Ethanes</b>	mg/l	< 0.010	<b>0.097</b>	<b>0.425</b>	< 0.010	<b>46.07</b>	<b>0.001</b>	<b>0.09</b>	<b>78.25</b>	<b>441.4</b>	<b>0.001</b>	<b>0.003</b>
Tetrachloroethene	mg/l	< 0.001	< 0.001	<b>0.01</b>	< 0.001	<b>18.2</b>	< 0.001	<b>0.135</b>	<b>1.14</b>	<b>7.82</b>	< 0.001	< 0.001
Trichloroethene	mg/l	< 0.001	< 0.001	<b>0.008</b>	< 0.001	<b>26.2</b>	<b>0.002</b>	<b>0.207</b>	<b>1.78</b>	<b>9.04</b>	<b>0.003</b>	< 0.001
1.1-Dichloroethene	mg/l	< 0.001	< 0.001	< 0.001	< 0.001	<b>1.61</b>	< 0.001	<b>0.01</b>	<b>2</b>	<b>0.493</b>	< 0.001	< 0.001
cis-1.2-Dichloroethene	mg/l	< 0.001	< 0.001	<b>0.03</b>	< 0.001	<b>2.32</b>	< 0.001	<b>0.949</b>	<b>3.17</b>	<b>2.01</b>	<b>0.008</b>	< 0.001
trans-1.2-Dichloroethene	mg/l	< 0.001	< 0.001	<b>0.022</b>	< 0.001	<b>0.421</b>	< 0.001	<b>0.136</b>	<b>0.17</b>	< 0.200	<b>0.01</b>	< 0.001
Vinyl chloride	mg/l	< 0.010	< 0.010	< 0.010	< 0.010	< 0.200	< 0.010	<b>0.11</b>	<b>4.87</b>	< 2.000	< 0.010	< 0.010
Vinyl chloride (SIM)	mg/l	< 0.001										< 0.001
<b>Total Chlorinated Ethenes</b>	mg/l	< 0.010	< 0.010	<b>0.07</b>	< 0.010	<b>48.75</b>	<b>0.002</b>	<b>1.547</b>	<b>13.13</b>	<b>19.36</b>	<b>0.021</b>	< 0.010
Hexachlorobutadiene	mg/l	< 0.001	< 0.001	<b>0.001</b>	< 0.001	< 0.020	< 0.001	<b>0.011</b>	< 0.050	< 0.200	< 0.001	< 0.001
<b>Total Volatile CHCs</b>	mg/l	< 0.010	<b>0.097</b>	<b>0.624</b>	< 0.010	<b>126.1</b>	<b>0.003</b>	<b>1.687</b>	<b>93.84</b>	<b>469.4</b>	<b>0.022</b>	<b>0.003</b>
Carbon disulfide	mg/l	< 0.001	< 0.001	<b>0.013</b>	< 0.001	<b>2.17</b>	< 0.001	<b>0.031</b>	<b>0.659</b>	<b>2.03</b>	< 0.001	< 0.001

**Table 5.2**  
**Groundwater Volatile CHCs**  
**December 2009**

Location:		WG231	WG233	WG234
Sample Depth:		S	S	S
Date Sampled:		30/11/2009	2/12/2009	7/01/2010
Analyte	Unit			
Carbon Tetrachloride	mg/l	< 0.001	< 0.001	< 0.001
Chloroform	mg/l	< 0.001	< 0.001	<b>0.003</b>
Methylene chloride	mg/l	< 0.005	< 0.005	< 0.005
Chloromethane	mg/l	< 0.010	< 0.010	< 0.010
<b>Total Chlorinated Methanes</b>	mg/l	< 0.010	< 0.010	<b>0.003</b>
Pentachloroethane	mg/l	< 0.001	< 0.001	< 0.001
1.1.1.2-Tetrachloroethane	mg/l	< 0.001	< 0.001	< 0.001
1.1.2.2-Tetrachloroethane	mg/l	< 0.001	< 0.001	< 0.001
1.1.1-Trichloroethane	mg/l	< 0.001	< 0.001	< 0.001
1.1.2-Trichloroethane	mg/l	< 0.001	< 0.001	< 0.001
1.1-Dichloroethane	mg/l	< 0.001	< 0.001	<b>0.002</b>
1.2-Dichloroethane	mg/l	< 0.001	< 0.001	<b>0.173</b>
Chloroethane (Ethyl chloride)	mg/l	< 0.010	< 0.010	< 0.010
<b>Total Chlorinated Ethanes</b>	mg/l	< 0.010	< 0.010	<b>0.175</b>
Tetrachloroethene	mg/l	< 0.001	< 0.001	< 0.001
Trichloroethene	mg/l	< 0.001	< 0.001	<b>0.009</b>
1.1-Dichloroethene	mg/l	< 0.001	< 0.001	<b>0.002</b>
cis-1.2-Dichloroethene	mg/l	< 0.001	< 0.001	<b>0.038</b>
trans-1.2-Dichloroethene	mg/l	< 0.001	< 0.001	<b>0.003</b>
Vinyl chloride	mg/l	< 0.010	< 0.010	< 0.010
Vinyl chloride (SIM)	mg/l	< 0.001	< 0.001	< 0.001
<b>Total Chlorinated Ethenes</b>	mg/l	< 0.010	< 0.010	<b>0.052</b>
Hexachlorobutadiene	mg/l	< 0.001	< 0.001	< 0.001
<b>Total Volatile CHCs</b>	mg/l	< 0.010	< 0.010	<b>0.23</b>
Carbon disulfide	mg/l	< 0.001	< 0.001	< 0.001

**Table 5.3**  
**Penrhyn Estuary Pore Water**  
**December 2009**

Location:		BP42	BP42	BP42	BP42	BP42	BP42
Sample Depth:		0.1	0.5	2	0.1	0.5	2
Tide:		H	H	H	L	L	L
Date Sampled:		1/12/2009	1/12/2009	1/12/2009	1/12/2009	1/12/2009	1/12/2009
Analyte	Unit						
Carbon Tetrachloride	mg/l	< 0.001	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001
Chloroform	mg/l	<b>0.008</b>	<b>0.023</b>	<b>0.071</b>	<b>0.003</b>	<b>0.01</b>	<b>0.078</b>
Methylene chloride	mg/l	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Chloromethane	mg/l	< 0.010	< 0.010	< 0.050	< 0.010	< 0.010	< 0.010
<b>Total Chlorinated Methanes</b>	mg/l	<b>0.008</b>	<b>0.023</b>	<b>0.071</b>	<b>0.003</b>	<b>0.01</b>	<b>0.078</b>
Pentachloroethane	mg/l	< 0.001	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001
1.1.1.2-Tetrachloroethane	mg/l	< 0.001	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001
1.1.2.2-Tetrachloroethane	mg/l	< 0.001	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001
1.1.1-Trichloroethane	mg/l	< 0.001	< 0.001	0.005	< 0.001	< 0.001	< 0.001
1.1.2-Trichloroethane	mg/l	< 0.001	< 0.001	< 0.005	< 0.001	< 0.001	<b>0.005</b>
1.1-Dichloroethane	mg/l	<b>0.021</b>	<b>0.034</b>	<b>0.091</b>	<b>0.013</b>	<b>0.019</b>	<b>0.084</b>
1.2-Dichloroethane	mg/l	<b>0.315</b>	<b>0.438</b>	<b>1.36</b>	<b>0.185</b>	<b>0.246</b>	<b>1.64</b>
Chloroethane (Ethyl chloride)	mg/l	< 0.010	< 0.010	< 0.050	< 0.010	< 0.010	< 0.010
<b>Total Chlorinated Ethanes</b>	mg/l	<b>0.336</b>	<b>0.472</b>	<b>1.451</b>	<b>0.198</b>	<b>0.265</b>	<b>1.729</b>
Tetrachloroethene	mg/l	< 0.001	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001
Trichloroethene	mg/l	<b>0.007</b>	<b>0.011</b>	<b>0.045</b>	<b>0.005</b>	<b>0.004</b>	<b>0.039</b>
1.1-Dichloroethene	mg/l	<b>0.007</b>	<b>0.011</b>	<b>0.042</b>	<b>0.005</b>	<b>0.004</b>	<b>0.044</b>
cis-1.2-Dichloroethene	mg/l	<b>0.236</b>	<b>0.319</b>	<b>1.13</b>	<b>0.144</b>	<b>0.132</b>	<b>1.27</b>
trans-1.2-Dichloroethene	mg/l	<b>0.046</b>	<b>0.07</b>	<b>0.307</b>	<b>0.031</b>	<b>0.024</b>	<b>0.304</b>
Vinyl chloride	mg/l	<b>0.28</b>	<b>0.5</b>	<b>1.46</b>	<b>0.17</b>	<b>0.22</b>	<b>1.31</b>
Vinyl chloride (SIM)	mg/l						
<b>Total Chlorinated Ethenes</b>	mg/l	<b>0.576</b>	<b>0.911</b>	<b>2.984</b>	<b>0.355</b>	<b>0.384</b>	<b>2.967</b>
Hexachlorobutadiene	mg/l	< 0.001	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001
<b>Total Volatile CHCs</b>	mg/l	<b>0.92</b>	<b>1.406</b>	<b>4.506</b>	<b>0.556</b>	<b>0.659</b>	<b>4.774</b>
Carbon disulfide	mg/l	<b>0.003</b>	<b>0.003</b>	<b>0.047</b>	< 0.001	< 0.001	<b>0.005</b>

**Table 5.3**  
**Penrhyn Estuary Pore Water**  
**December 2009**

Location:		BP43	BP43	BP43	BP43	BP43	BP43
Sample Depth:		0.1	0.5	1	0.1	0.5	1
Tide:		H	H	H	L	L	L
Date Sampled:		1/12/2009	1/12/2009	1/12/2009	1/12/2009	1/12/2009	1/12/2009
Analyte	Unit						
Carbon Tetrachloride	mg/l	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chloroform	mg/l	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Methylene chloride	mg/l	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Chloromethane	mg/l	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
<b>Total Chlorinated Methanes</b>	mg/l	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Pentachloroethane	mg/l	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1.1.1.2-Tetrachloroethane	mg/l	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1.1.2.2-Tetrachloroethane	mg/l	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1.1.1-Trichloroethane	mg/l	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1.1.2-Trichloroethane	mg/l	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1.1-Dichloroethane	mg/l	< 0.001	<b>0.002</b>	<b>0.008</b>	< 0.001	< 0.001	<b>0.004</b>
1.2-Dichloroethane	mg/l	< 0.001	< 0.001	< 0.001	<b>0.006</b>	< 0.001	< 0.001
Chloroethane (Ethyl chloride)	mg/l	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
<b>Total Chlorinated Ethanes</b>	mg/l	< 0.010	<b>0.002</b>	<b>0.008</b>	<b>0.006</b>	< 0.010	<b>0.004</b>
Tetrachloroethene	mg/l	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Trichloroethene	mg/l	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1.1-Dichloroethene	mg/l	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
cis-1.2-Dichloroethene	mg/l	< 0.001	< 0.001	< 0.001	<b>0.005</b>	< 0.001	< 0.001
trans-1.2-Dichloroethene	mg/l	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vinyl chloride	mg/l	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Vinyl chloride (SIM)	mg/l	< 0.001			< 0.001		
<b>Total Chlorinated Ethenes</b>	mg/l	< 0.010	< 0.010	< 0.010	<b>0.005</b>	< 0.010	< 0.010
Hexachlorobutadiene	mg/l	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
<b>Total Volatile CHCs</b>	mg/l	< 0.010	<b>0.002</b>	<b>0.008</b>	<b>0.011</b>	< 0.010	<b>0.004</b>
Carbon disulfide	mg/l	<b>0.003</b>	<b>0.003</b>	<b>0.003</b>	<b>0.004</b>	<b>0.003</b>	<b>0.003</b>

**Table 5.3**  
**Penrhyn Estuary Pore Water**  
**December 2009**

Location:		BP64	BP64	BP64	BP64	BP64	BP64
Sample Depth:		0.1	0.5	2	0.1	0.5	2
Tide:		H	H	H	L	L	L
Date Sampled:		1/12/2009	1/12/2009	1/12/2009	1/12/2009	1/12/2009	1/12/2009
Analyte	Unit						
Carbon Tetrachloride	mg/l	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chloroform	mg/l	<b>0.012</b>	<b>0.015</b>	<b>0.016</b>	< 0.001	< 0.001	< 0.001
Methylene chloride	mg/l	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Chloromethane	mg/l	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
<b>Total Chlorinated Methanes</b>	mg/l	<b>0.012</b>	<b>0.015</b>	<b>0.016</b>	< 0.010	< 0.010	< 0.010
Pentachloroethane	mg/l	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1.1.1.2-Tetrachloroethane	mg/l	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1.1.2.2-Tetrachloroethane	mg/l	<b>0.022</b>	<b>0.034</b>	<b>0.061</b>	< 0.001	<b>0.001</b>	<b>0.005</b>
1.1.1-Trichloroethane	mg/l	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1.1.2-Trichloroethane	mg/l	<b>0.019</b>	<b>0.027</b>	<b>0.031</b>	< 0.001	< 0.001	< 0.001
1.1-Dichloroethane	mg/l	<b>0.005</b>	<b>0.004</b>	<b>0.005</b>	<b>0.003</b>	<b>0.002</b>	<b>0.005</b>
1.2-Dichloroethane	mg/l	<b>0.062</b>	<b>0.073</b>	<b>0.136</b>	< 0.001	< 0.001	<b>0.052</b>
Chloroethane (Ethyl chloride)	mg/l	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
<b>Total Chlorinated Ethanes</b>	mg/l	<b>0.108</b>	<b>0.138</b>	<b>0.233</b>	<b>0.003</b>	<b>0.003</b>	<b>0.062</b>
Tetrachloroethene	mg/l	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Trichloroethene	mg/l	<b>0.026</b>	<b>0.034</b>	<b>0.072</b>	< 0.001	< 0.001	<b>0.002</b>
1.1-Dichloroethene	mg/l	< 0.001	< 0.001	<b>0.002</b>	< 0.001	< 0.001	< 0.001
cis-1.2-Dichloroethene	mg/l	<b>0.005</b>	<b>0.005</b>	<b>0.025</b>	< 0.001	< 0.001	<b>0.012</b>
trans-1.2-Dichloroethene	mg/l	< 0.001	< 0.001	<b>0.005</b>	< 0.001	< 0.001	<b>0.004</b>
Vinyl chloride	mg/l	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Vinyl chloride (SIM)	mg/l	< 0.001			< 0.001		
<b>Total Chlorinated Ethenes</b>	mg/l	<b>0.031</b>	<b>0.039</b>	<b>0.104</b>	< 0.010	< 0.010	<b>0.018</b>
Hexachlorobutadiene	mg/l	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
<b>Total Volatile CHCs</b>	mg/l	<b>0.151</b>	<b>0.192</b>	<b>0.353</b>	<b>0.003</b>	<b>0.003</b>	<b>0.08</b>
Carbon disulfide	mg/l	<b>0.003</b>	< 0.001	<b>0.004</b>	<b>0.003</b>	<b>0.003</b>	< 0.001

**Table 5.3**  
**Penrhyn Estuary Pore Water**  
**December 2009**

Location:		BP65	BP65	BP65	BP65	BP65	BP65
Sample Depth:		0.1	0.5	2	0.1	0.5	2
Tide:		H	H	H	L	L	L
Date Sampled:		1/12/2009	1/12/2009	1/12/2009	1/12/2009	1/12/2009	1/12/2009
Analyte	Unit						
Carbon Tetrachloride	mg/l	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chloroform	mg/l	<b>0.008</b>	<b>0.021</b>	<b>0.003</b>	< 0.001	< 0.001	< 0.001
Methylene chloride	mg/l	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Chloromethane	mg/l	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
<b>Total Chlorinated Methanes</b>	mg/l	<b>0.008</b>	<b>0.021</b>	<b>0.003</b>	< 0.010	< 0.010	< 0.010
Pentachloroethane	mg/l	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1.1.1.2-Tetrachloroethane	mg/l	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1.1.2.2-Tetrachloroethane	mg/l	<b>0.018</b>	<b>0.051</b>	<b>0.012</b>	< 0.001	<b>0.003</b>	< 0.001
1.1.1-Trichloroethane	mg/l	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1.1.2-Trichloroethane	mg/l	<b>0.014</b>	<b>0.039</b>	<b>0.006</b>	< 0.001	< 0.001	< 0.001
1.1-Dichloroethane	mg/l	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dichloroethane	mg/l	<b>0.038</b>	<b>0.088</b>	<b>0.015</b>	< 0.001	< 0.001	< 0.001
Chloroethane (Ethyl chloride)	mg/l	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
<b>Total Chlorinated Ethanes</b>	mg/l	<b>0.07</b>	<b>0.178</b>	<b>0.033</b>	< 0.010	<b>0.003</b>	< 0.010
Tetrachloroethene	mg/l	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Trichloroethene	mg/l	<b>0.02</b>	<b>0.051</b>	<b>0.019</b>	< 0.001	< 0.001	< 0.001
1.1-Dichloroethene	mg/l	< 0.001	<b>0.002</b>	< 0.001	< 0.001	< 0.001	< 0.001
cis-1.2-Dichloroethene	mg/l	<b>0.003</b>	<b>0.007</b>	<b>0.003</b>	< 0.001	< 0.001	< 0.001
trans-1.2-Dichloroethene	mg/l	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vinyl chloride	mg/l	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Vinyl chloride (SIM)	mg/l	< 0.001			< 0.001		
<b>Total Chlorinated Ethenes</b>	mg/l	<b>0.023</b>	<b>0.06</b>	<b>0.022</b>	< 0.010	< 0.010	< 0.010
Hexachlorobutadiene	mg/l	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
<b>Total Volatile CHCs</b>	mg/l	<b>0.101</b>	<b>0.259</b>	<b>0.058</b>	< 0.010	<b>0.003</b>	< 0.010
Carbon disulfide	mg/l	<b>0.003</b>	< 0.001	<b>0.003</b>	<b>0.003</b>	< 0.001	< 0.001

**Table 5.4**  
**Surface Water Volatile CHCs**  
**December 2009**

Sample ID		SW005	SW028	SW028	SW029	SW029	SW030	SW031	SW031	SW031	SW046	SW049	SW052	SW053
Tide			H	L	H	L		H	L					
Date Sampled		1/12/2009	1/12/2009	1/12/2009	1/12/2009	1/12/2009	1/12/2009	1/12/2009	1/12/2009	1/12/2009	1/12/2009	1/12/2009	1/12/2009	1/12/2009
Analyte	Unit													
Carbon Tetrachloride	mg/l	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	<b>0.034</b>	< 0.001	< 0.001	< 0.001
Chloroform	mg/l	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	<b>0.02</b>	< 0.001	< 0.001	< 0.001
Methylene chloride	mg/l	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Chloromethane	mg/l	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
<b>Total Chlorinated Methanes</b>	mg/l	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	<b>0.054</b>	< 0.010	< 0.010	< 0.010
Pentachloroethane	mg/l	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1.1.1.2-Tetrachloroethane	mg/l	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1.1.2.2-Tetrachloroethane	mg/l	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1.1.1-Trichloroethane	mg/l	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1.1.2-Trichloroethane	mg/l	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	<b>0.001</b>	< 0.001	< 0.001	< 0.001
1.1-Dichloroethane	mg/l	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dichloroethane	mg/l	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	<b>0.008</b>	< 0.001	< 0.001
Chloroethane (Ethyl chloride)	mg/l	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
<b>Total Chlorinated Ethanes</b>	mg/l	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	<b>0.001</b>	<b>0.008</b>	< 0.010	< 0.010
Tetrachloroethene	mg/l	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	<b>0.012</b>	< 0.001	< 0.001	< 0.001
Trichloroethene	mg/l	<b>0.002</b>	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	<b>0.035</b>	< 0.001	< 0.001	< 0.001
1.1-Dichloroethene	mg/l	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
cis-1.2-Dichloroethene	mg/l	<b>0.003</b>	< 0.001	< 0.001	< 0.001	< 0.001	<b>0.008</b>	<b>0.004</b>	<b>0.003</b>	<b>0.032</b>	<b>0.012</b>	< 0.001	< 0.001	< 0.001
trans-1.2-Dichloroethene	mg/l	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vinyl chloride	mg/l	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Vinyl chloride (SIM)	mg/l	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
<b>Total Chlorinated Ethenes</b>	mg/l	<b>0.005</b>	< 0.010	< 0.010	< 0.010	< 0.010	<b>0.008</b>	<b>0.004</b>	<b>0.003</b>	<b>0.079</b>	<b>0.012</b>	< 0.010	< 0.010	< 0.010
Hexachlorobutadiene	mg/l	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
<b>Total Volatile CHCs</b>	mg/l	<b>0.005</b>	< 0.010	< 0.010	< 0.010	< 0.010	<b>0.008</b>	<b>0.004</b>	<b>0.003</b>	<b>0.134</b>	<b>0.02</b>	< 0.010	< 0.010	< 0.010
Carbon disulfide	mg/l	< 0.001	< 0.001	< 0.001	<b>0.003</b>	< 0.001	<b>0.007</b>	< 0.001	< 0.001	<b>0.004</b>	< 0.001	< 0.001	< 0.001	< 0.001

**Table 5.4**  
**Surface Water Volatile CHCs**  
**December 2009**

Sample ID		SW060	SW062	SW062_East	SW064
Tide					
Date Sampled		1/12/2009	1/12/2009	1/12/2009	1/12/2009
Analyte	Unit				
Carbon Tetrachloride	mg/l	< 0.001	< 0.001	<b>0.015</b>	< 0.001
Chloroform	mg/l	< 0.001	<b>0.025</b>	<b>0.008</b>	< 0.001
Methylene chloride	mg/l	< 0.005	< 0.005	< 0.005	< 0.005
Chloromethane	mg/l	< 0.010	< 0.010	< 0.010	< 0.010
<b>Total Chlorinated Methanes</b>	mg/l	< 0.010	<b>0.025</b>	<b>0.023</b>	< 0.010
Pentachloroethane	mg/l	< 0.001	< 0.001	< 0.001	< 0.001
1.1.1.2-Tetrachloroethane	mg/l	< 0.001	< 0.001	< 0.001	< 0.001
1.1.2.2-Tetrachloroethane	mg/l	< 0.001	< 0.001	< 0.001	< 0.001
1.1.1-Trichloroethane	mg/l	< 0.001	< 0.001	< 0.001	< 0.001
1.1.2-Trichloroethane	mg/l	< 0.001	<b>0.002</b>	< 0.001	< 0.001
1.1-Dichloroethane	mg/l	< 0.001	<b>0.007</b>	< 0.001	< 0.001
1.2-Dichloroethane	mg/l	< 0.001	<b>0.299</b>	<b>0.002</b>	< 0.001
Chloroethane (Ethyl chloride)	mg/l	< 0.010	< 0.010	< 0.010	< 0.010
<b>Total Chlorinated Ethanes</b>	mg/l	< 0.010	<b>0.308</b>	<b>0.002</b>	< 0.010
Tetrachloroethene	mg/l	< 0.001	<b>0.009</b>	<b>0.006</b>	< 0.001
Trichloroethene	mg/l	< 0.001	<b>0.066</b>	<b>0.017</b>	< 0.001
1.1-Dichloroethene	mg/l	< 0.001	<b>0.002</b>	< 0.001	< 0.001
cis-1.2-Dichloroethene	mg/l	< 0.001	<b>0.386</b>	<b>0.019</b>	< 0.001
trans-1.2-Dichloroethene	mg/l	< 0.001	<b>0.007</b>	< 0.001	< 0.001
Vinyl chloride	mg/l	< 0.010	<b>0.42</b>	< 0.010	< 0.010
Vinyl chloride (SIM)	mg/l	< 0.001		< 0.001	< 0.001
<b>Total Chlorinated Ethenes</b>	mg/l	< 0.010	<b>0.89</b>	<b>0.042</b>	< 0.010
Hexachlorobutadiene	mg/l	< 0.001	<b>0.004</b>	<b>0.001</b>	< 0.001
<b>Total Volatile CHCs</b>	mg/l	< 0.010	<b>1.223</b>	<b>0.067</b>	< 0.010
Carbon disulfide	mg/l	< 0.001	< 0.001	< 0.001	< 0.001