



Groundwater - Well Sampling Data Form

Job Information	
Date: 17.12.13	Time: arrive 245pm depart
Project Name: Symphony	Project Number: 0224198
Site Location: Lidell	Sampler: J. Grant
Well ID: LI-MW01	Weather: Fine

Equipment	
Water quality equipment description:	Interface probe number: SYD 3954 60m
Purging equipment: (please circle)	Bailer type: Plastic Teflon Pump type: Peristaltic Submersible Micro-purge Amazon Other: Mensor

Well Gauging and Purge Volume Calculations									
Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm	Volume of water in well / V = Pr x r x h
Conversion Factor (volume in factor L/m)	0.98	1.96	7.85	31.4	49.1	70.7	125.7	196.3	V = volume in litres P = 3.14159 r = radius in cm h = height of water column in cm
Total Well Depth (-) Water level (=) Water Column									
10.985 m (-) 5.795 m (=) 5.190 m									
Water Column (x) Conversion Factor (=) Litres per 1 Well Volume									
5.19 m (x) 1.96 (=) 10 L									
Depth to product: / m Product Thickness: / m Verified with Bailer: <input type="checkbox"/> Y <input checked="" type="checkbox"/> N									

Water Quality Parameters										
Beginning purge time:					Ending purge time:					
Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments		
								brown		
								Dark → light milky brown water		
								dry @ ~25L		
								~30L		
								~40L		
*pH, temp, cond readings not necessary if well is purged dry										
Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth										
40L		Total Well Volume			Sample time			Containers used		
		Actual amount of water prior to sampling								
		Flow rate mL/minute			Did field parameters stabilise?			Was the well dry purged?		
					Y N NA			Y N		

Field QC Checks			
Was pre-cleaning sampling equipment used for these samples?	Y	N	
Was pre-cleaning sampling equipment properly protected from contamination?	Y	N	
Was documentation of equipment conducted?	Y	N	NA
Were air bubbles present in vials at time of collection?	Y	N	NA
Was sample for metals field filtered prior to preservations?	Y	N	NA
Duplicate sample collected?	Y	N	Duplicate sample ID _____
Rinsate blank collected?	Y	N	Rinsate blank ID _____

10.985
5.795
5.190



Groundwater - Well Sampling Data Form

Well Development		Job Information	
Date: 25/11/13	Time: arrive 12:10	depart 13:10	
Project Name: Project Symphony	Project Number: 0224198		
Site Location: Liddell	Sampler: N.H		
Well ID: LI-MW02	Weather: Fine		

Equipment			
Water quality equipment description: NA	Interface probe number: SYD 3954		
Purging equipment: (please circle)	Bailer type: Plastic	Teflon	
	Pump type: Peristaltic	<u>Submersible</u>	Micro-purge Amazon Other:

Well Gauging and Purge Volume Calculations									
Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm	Volume of water in well / V = $\pi r^2 h$ V = volume in litres P = 3.14159 r = radius in cm h = height of water column in cm
Conversion Factor (volume in factor L/m)	0.49	1.96	7.85	12.3	17.7	31.4	49.1	70.7	
Total Well Depth	(-) Water level	(=) Water Column							
6.735 m	(-) 2.525 m	(=) 4.41 m							
Water Column			(x) Conversion Factor	(=) Litres per 1 Well Volume					
4.41 m			(x) 1.96	(=) 8.644 L					
Depth to product: _____ m	Product Thickness: _____ m	Verified with Bailer:	<input type="checkbox"/> Y	<input type="checkbox"/> N					

Water Quality Parameters									
Beginning purge time: 12:30			Ending purge time: 12:55			Pump Intake Depth (mbtoc):			
Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments	
15	12:35							brown-black, turbid. No odour. Purged dry after 15L. Allowed to recharge	
20	12:40							brown, v. turbid. No odour. Purged dry after another 5L. Allowed to recharge	
24	12:45							brown, v. turbid. No odour. Purged dry after another 4L	
27	12:55							brown, v. turbid. No odour. Purged dry after another 3L. Recharging slowly	
*pH, temp, cond readings not necessary if well is purged dry						Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth			
Total Well Volume		Actual amount of water prior to sampling		Sample time		Containers used			
Flow rate		mL/minute		Did field parameters stabilise?		Was the well dry purged?			
—				Y N <u>NA</u>		Y <u>Y</u> N			

Field QC Checks			
Was pre-cleaned sampling equipment used for these samples?	Y	N	
Was pre-cleaning sampling equipment properly protected from contamination?	Y	N	
Was documentation of equipment conducted?	Y	N	NA
Were air bubbles present in vials at time of collection?	Y	N	NA
Was sample for metals field filtered prior to preservations?	Y	N	NA
Duplicate sample collected?	Y	N	Duplicate sample ID _____
Rinsate blank collected?	Y	N	Rinsate blank ID _____



Groundwater - Well Sampling Data Form

Job Information

Date: 25/11/13	Time: arrive 10:15	depart
Project Name: Project Symphony	Project Number: 0224198	
Site Location: Liddell	Sampler: N.H	
Well ID: LI-MW03	Weather: Fine	

Equipment

Water quality equipment description: NA	Interface probe number: SYD 3954				
Purging equipment: (please circle)	Bailer type: Plastic	Teflon			
	Pump type: Peristaltic	Submersible	Micro-purge	Amazon	Other:

Well Gauging and Purge Volume Calculations

Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm	Volume of water in well / V $V = \pi r^2 h$ V = volume in litres $P = 3.14159$ r = radius in cm h = height of water column in cm
Conversion Factor (volume in factor L/m)	0.49	1.96	7.85	12.3	17.7	31.4	49.1	70.7	
Total Well Depth	(-) Water level	(=) Water Column							
6.050 m	(-) 3.735 m	(=) 2.315 m							
Water Column		(x) Conversion Factor	(=) Litres per 1 Well Volume						
2.315 m		(x) 1.96	(=) 4.537 L						
Depth to product: _____ m	Product Thickness: _____ m	Verified with Bailer: <input type="checkbox"/> Y <input type="checkbox"/> N							

Water Quality Parameters

Beginning purge time: 10:25				Ending purge time: 10:55				Pump Intake Depth (mbtoc):	
Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments	
5	10:28							brown, turbid. Purged dry after 5L. Allowed to recharge	
8	10:35							brown, turbid. Purged dry after 3L. Allowed to recharge	
11	10:45							Purged another 3L. Dry. Allowed to recharge	
14	10:55							Purged another 3L. Dry. Recharging slowly	
*pH, temp, cond readings not necessary if well is purged dry								Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth	

14	Total Well Volume Actual amount of water prior to sampling	Sample time _____	Containers used _____
—	Flow rate mL/minute	Did field parameters stabilise? <input type="checkbox"/> Y <input type="checkbox"/> N <input checked="" type="checkbox"/> NA	Was the well dry purged? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N

Field QC Checks

Was pre-cleaned sampling equipment used for these samples?	<input type="checkbox"/> Y	<input type="checkbox"/> N	
Was pre-cleaning sampling equipment properly protected from contamination?	<input type="checkbox"/> Y	<input type="checkbox"/> N	
Was documentation of equipment conducted?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
Were air bubbles present in vials at time of collection?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
Was sample for metals field filtered prior to preservations?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
Duplicate sample collected?	<input type="checkbox"/> Y	<input type="checkbox"/> N	Duplicate sample ID _____
Rinsate blank collected?	<input type="checkbox"/> Y	<input type="checkbox"/> N	Rinsate blank ID _____



Groundwater - Well Sampling Data Form

Job Information

Date: 25/11/13	Time: arrive 13:30	depart 14:00
Project Name: Project Symphony	Project Number: 0224198	
Site Location: Liddell	Sampler: N.H	
Well ID: LI-MW04	Weather: Fine, becoming overcast	

Equipment

Water quality equipment description:	Interface probe number:
Purging equipment: (please circle)	Bailer type: Plastic Teflon
	Pump type: Peristaltic Submersible Micro-purge Amazon Other:

Well Gauging and Purge Volume Calculations

Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm	Volume of water in well / V = Pr x r x h V = volume in litres P = 3.14159 r = radius in cm h = height of water column in cm
Conversion Factor (volume in factor L/m)	0.49	1.96	7.85	12.3	17.7	31.4	49.1	70.7	
Total Well Depth	(-) Water level	(=) Water Column							
5.985 m	(-) 3.750 m	(=) 2.235 m							
			Water Column	(x) Conversion Factor	(=) Litres per 1 Well Volume				
			2.235 m	(x) 1.96	(=) 4.381 L				
Depth to product:	_____ m	Product Thickness:	_____ m	Verified with Bailer:	<input type="checkbox"/> Y	<input type="checkbox"/> N			

Water Quality Parameters

Beginning purge time: 13:35	Ending purge time: 13:50	Pump Intake Depth (mbtoc):						
Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments
5	13:40							brown, turbid. Purged dry after 5L. Allowed to recharge.
10	13:45							brown, turbid. No odour. Purged dry after another 5L. Allowed to recharge.
12	13:50							brown, turbid. No odour. Purged dry after another 2L. slow recharge.
*pH, temp, cond readings not necessary if well is purged dry								Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth

Total Well Volume	Actual amount of water prior to sampling	Sample time	Containers used
Flow rate	mL/minute	Did field parameters stabilise?	Was the well dry purged?
		<input type="checkbox"/> Y <input type="checkbox"/> N <input checked="" type="checkbox"/> NA	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N

Field QC Checks

Was pre-cleaned sampling equipment used for these samples?	<input type="checkbox"/> Y	<input type="checkbox"/> N	
Was pre-cleaning sampling equipment properly protected from contamination?	<input type="checkbox"/> Y	<input type="checkbox"/> N	
Was documentation of equipment conducted?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
Were air bubbles present in vials at time of collection?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
Was sample for metals field filtered prior to preservations?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
Duplicate sample collected?	<input type="checkbox"/> Y	<input type="checkbox"/> N	Duplicate sample ID _____
Rinsate blank collected?	<input type="checkbox"/> Y	<input type="checkbox"/> N	Rinsate blank ID _____



Groundwater - Well Sampling Data Form

Well Development		Job Information	
Date: 26/11/13	Time: arrive 07:55	depart 09:10	
Project Name: Project Symphony	Project Number: 0224198		
Site Location: Liddell	Sampler: N.H		
Well ID: LI-MW05	Weather: overcast in AM, becoming fine.		

Equipment			
Water quality equipment description: NA		Interface probe number: SYD 3954	
Purging equipment: (please circle)	Bailer type: Plastic	Teflon	
	Pump type: Peristaltic	<u>Submersible</u>	Micro-purge Amazon Other:

Well Gauging and Purge Volume Calculations									
Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm	Volume of water in well / V = Pr x r x h V = volume in litres P = 3.14159 r = radius in cm h = height of water column in cm
Conversion Factor (volume in factor L/m)	0.49	1.96	7.85	12.3	17.7	31.4	49.1	70.7	
Total Well Depth (-) Water level (=) Water Column	5.965 m (-) 3.710 m (=) 2.255 m								
Water Column		(x) Conversion Factor (=) Litres per 1 Well Volume							
2.255 m (x) 1.96 (=) 4.42 L									
Depth to product: _____ m	Product Thickness: _____ m	Verified with Bailer: <input type="checkbox"/> Y <input type="checkbox"/> N							

Water Quality Parameters									
Beginning purge time: 08:20			Ending purge time: 09:00			Pump Intake Depth (mbtoc):			
Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments	
5	08:22							brown, turbid. Purged dry after 5L. No odour. Allowed to recharge.	
8	08:30							brown, turbid. Purged dry after another 3L. No odour. Allowed to recharge.	
11	08:45							brown, turbid. Purged dry after another 3L. No odour. Allowed to recharge.	
14	09:00							brown, turbid. Purged dry after another 3L. Slow to recharge.	
*pH, temp, cond readings not necessary if well is purged dry Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth									

14	Total Well Volume Actual amount of water prior to sampling	Sample time _____	Containers used _____
	Flow rate mL/minute	Did field parameters stabilise? <input type="checkbox"/> Y <input type="checkbox"/> N <input checked="" type="checkbox"/> NA	Was the well dry purged? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N

Field QC Checks			
Was pre-cleaned sampling equipment used for these samples?	<input type="checkbox"/> Y	<input type="checkbox"/> N	
Was pre-cleaning sampling equipment properly protected from contamination?	<input type="checkbox"/> Y	<input type="checkbox"/> N	
Was documentation of equipment conducted?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
Were air bubbles present in vials at time of collection?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
Was sample for metals field filtered prior to preservations?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
Duplicate sample collected?	<input type="checkbox"/> Y	<input type="checkbox"/> N	Duplicate sample ID _____
Rinsate blank collected?	<input type="checkbox"/> Y	<input type="checkbox"/> N	Rinsate blank ID _____



Groundwater - Well Sampling Data Form

Job Information

Date: 27/11/13	Time: arrive 13:30 depart
Project Name: Project Symphony	Project Number: 0224198
Site Location: 40m Liddell	Sampler: N.H
Well ID: LI_MW06	Weather: Fine

Equipment

Water quality equipment description: NA	Interface probe number: 84D 3954
Purging equipment: (please circle)	Bailer type: Plastic Teflon
	Pump type: Peristaltic <u>Submersible</u> Micro-purge Amazon Other:

Well Gauging and Purge Volume Calculations

Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm	Volume of water in well / V = Pr x r x h V = volume in litres P = 3.14159 r = radius in cm h = height of water column in cm
Conversion Factor (volume in factor L/m)	0.49	1.96	7.85	12.3	17.7	31.4	49.1	70.7	
Total Well Depth (-) Water level (=) Water Column	5.455 m (-) 2.935 m (=) 2.52 m								
Water Column (x) Conversion Factor (=) Litres per 1 Well Volume	2.52 m (x) 1.96 (=) 4.94 L								
Depth to product: _____ m	Product Thickness: _____ m	Verified with Bailer: <input type="checkbox"/> Y <input type="checkbox"/> N							

Water Quality Parameters

Beginning purge time:		Ending purge time:				Pump Intake Depth (mbtoc):			Comments
Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm		
20	12:50							brown, v. turbid. No odour. & actively recharging as pumping	
40	12:55							brown, v. turbid. No odour. Actively recharging as pumping.	
50	13:05							brown, turbid. No odour. Recharging as pumping, but recharges slowly	
60	13:10							brown, v. turbid. No odour. Purged dry after 60L. Allowed to recharge	
70	13:15							brown, v. turbid. Purged dry after another 10L. No odour.	

*pH, temp, cond readings not necessary if well is purged dry

Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth

70	Total Well Volume Actual amount of water prior to sampling	Sample time _____	Containers used _____
—	Flow rate mL/minute	Did field parameters stabilise? <input type="checkbox"/> Y <input type="checkbox"/> N <input checked="" type="checkbox"/> NA	Was the well dry purged? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N

Field QC Checks

Was pre-cleaned sampling equipment used for these samples?	<input type="checkbox"/> Y <input type="checkbox"/> N	
Was pre-cleaning sampling equipment properly protected from contamination?	<input type="checkbox"/> Y <input type="checkbox"/> N	
Was documentation of equipment conducted?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA	
Were air bubbles present in vials at time of collection?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA	
Was sample for metals field filtered prior to preservations?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA	
Duplicate sample collected?	<input type="checkbox"/> Y <input type="checkbox"/> N	Duplicate sample ID _____
Rinsate blank collected?	<input type="checkbox"/> Y <input type="checkbox"/> N	Rinsate blank ID _____



Groundwater - Well Sampling Data Form

Job Information

Date: 27/11/13	Time: arrive 13:50 depart
Project Name: Project Symphony	Project Number: 0224198
Site Location: Liddell	Sampler: N.H
Well ID: LI-MW07	Weather: Fine

Equipment

Water quality equipment description: NA	Interface probe number: SYD 3954
Purging equipment: (please circle)	Bailer type: Plastic Teflon
	Pump type: Peristaltic <u>Submersible</u> Micro-purge Amazon Other:

Well Gauging and Purge Volume Calculations

Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm	Volume of water in well / V = Pr x r x h V = volume in litres P = 3.14159 r = radius in cm h = height of water column in cm
Conversion Factor (volume in factor L/m)	0.49	1.96	7.85	12.3	17.7	31.4	49.1	70.7	
Total Well Depth	(-) Water level	(=) Water Column							
8.085 m	3.860 m	4.225 m							
Water Column			(x) Conversion Factor	(=) Litres per 1 Well Volume					
4.225 m			1.96	8.281 L					
Depth to product: — m	Product Thickness: — m	Verified with Bailer: <input type="checkbox"/> Y <input type="checkbox"/> N							

Water Quality Parameters

Beginning purge time: 14:00			Ending purge time:				Pump Intake Depth (mbtoc):		
Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments	
14:05	14:05							brown, v. turbid. No odour. Purged dry after 12L. Allowed to recharge	
18	14:10							brown, v. turbid. No odour. Purged dry after another 4L. Allowed to recharge	
20	14:15							brown, turbid. No odour. Purged dry after another 2L. Slow to recharge.	
*pH, temp, cond readings not necessary if well is purged dry							Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth		

Total Well Volume Actual amount of water prior to sampling	Sample time: —	Containers used: —
Flow rate mL/minute	Did field parameters stabilise? <input type="checkbox"/> Y <input type="checkbox"/> N <input checked="" type="checkbox"/> NA	Was the well dry purged? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N

Field QC Checks

Was pre-cleaned sampling equipment used for these samples?	<input type="checkbox"/> Y <input type="checkbox"/> N	
Was pre-cleaning sampling equipment properly protected from contamination?	<input type="checkbox"/> Y <input type="checkbox"/> N	
Was documentation of equipment conducted?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA	
Were air bubbles present in vials at time of collection?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA	
Was sample for metals field filtered prior to preservations?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA	
Duplicate sample collected?	<input type="checkbox"/> Y <input type="checkbox"/> N	Duplicate sample ID: _____
Rinsate blank collected?	<input type="checkbox"/> Y <input type="checkbox"/> N	Rinsate blank ID: _____



Groundwater - Well Sampling Data Form

Job Information	
Date: <u>17-12-2013</u>	Time: arrive <u>1510</u> depart
Project Name: <u>Symphony</u>	Project Number:
Site Location: <u>Liddell</u>	Sampler: <u>Sam Campbell</u>
Well ID: <u>LI MW08</u>	Weather: <u>Fine + Sunny</u>

Equipment	
Water quality equipment description: _____	Interface probe number: <u>Solinst 55191</u>
Purging equipment: (please circle)	Bailer type: <u>Plastic</u> <u>Teflon</u>
	Pump type: <u>Peristaltic</u> <u>Submersible</u> <u>Micro-purge</u> <u>Amazon</u> <u>Other:</u>

Well Gauging and Purge Volume Calculations									
Casing Diameter	25mm	<u>50mm</u>	100mm	125mm	150mm	200mm	250mm	300mm	Volume of water in well / V = Pr x r x h V = volume in litres P = 3.14159 r = radius in cm h = height of water column in cm
Conversion Factor (volume in factor L/m)	0.49	<u>1.96</u>	7.85	12.3	17.7	31.4	49.1	70.7	
Total Well Depth	(-) Water level	(=) Water Column							
<u>6.021</u> m	(-) <u>3.950</u> m	(=) <u>~2</u> m							
Water Column		(x) Conversion Factor	(=) Litres per 1 Well Volume						
<u>~2</u> m		(x) <u>1.96</u>	(=) <u>~4</u> L						
Depth to product: _____ m	Product Thickness: _____ m	Verified with Bailer: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N							

Water Quality Parameters								
Beginning purge time: <u>1517</u>			Ending purge time:			Pump Intake Depth (mbtoc):		
Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments
 silty bottom, light brown / tan, no odour, turbid well dry ~ 9L, wait 10 minutes Begin recharge (1530) well dry ~ 10L, wait 10 minutes Begin recharge (1542) well dry ~ 10L Total volume purged = ~10L Post-purging gauging water level = 5.650 Well depth = 6.030 								
*pH, temp, cond readings not necessary if well is purged dry						Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth		

<input checked="" type="checkbox"/>	Total Well Volume Actual amount of water prior to sampling	Sample time _____	Containers used _____
<input checked="" type="checkbox"/>	Flow rate mL/minute	Did field parameters stabilise? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA	Was the well dry purged? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N

Field QC Checks			
Was pre-cleaned sampling equipment used for these samples?	Y	N	
Was pre-cleaning sampling equipment properly protected from contamination?	Y	N	
Was documentation of equipment conducted?	Y	N	NA
Were air bubbles present in vials at time of collection?	Y	N	NA
Was sample for metals field filtered prior to preservations?	Y	N	NA
Duplicate sample collected?	Y	N	Duplicate sample ID _____
Rinsate blank collected?	Y	N	Rinsate blank ID _____



Groundwater - Well Sampling Data Form

Job Information	
Date: 16/12/2013	Time: arrive 0915 1715 depart @ 1900
Project Name: Symphony	Project Number: 0224/98
Site Location: Liddell	Sampler: Sam Campbell
Well ID: LI-MW09	Weather: Fine/sunny/windy

Equipment	
Water quality equipment description: -	Interface probe number: 122009747-1
Purging equipment: (please circle)	Bailer type: Plastic <u>Teflon</u>
	Pump type: Peristaltic <u>Submersible</u> Micro-purge Amazon Other:

Well Gauging and Purge Volume Calculations									
Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm	Volume of water in well / V = Pr x r x h V = volume in litres P = 3.14159 r = radius in cm h = height of water column in cm
Conversion Factor (volume in factor L/m)	0.49	1.96	7.85	12.3	17.7	31.4	49.1	70.7	
Total Well Depth (-) Water level (=) Water Column	8.904 m (-) 3.668 m (=) 5.236 m								
		Water Column	(x) Conversion Factor	(=) Litres per 1 Well Volume					
		~5.3 m	(x) 1.96	(=) ~10.6 L					
Depth to product: _____ m	Product Thickness: _____ m	Verified with Bailer:	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N						

Water Quality Parameters									
Beginning purge time: 0520			Ending purge time:				Pump Intake Depth (mbtoc):		
Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments	
								no odour, brown, turbid	
								Dry after 20L removed (0730)	
								wait 10 minutes	
								Begin recharge 0740	
								well dry.	
								Total volume = ~20L	
								Gauging after purging:	
								well depth = 8.896, water level = well/dry	
*pH, temp, cond readings not necessary if well is purged dry						Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth			
Total Well Volume		Actual amount of water prior to sampling		Sample time		Containers used			
Flow rate		mL/minute		Did field parameters stabilise?		<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA		Was the well dry purged?	
								<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	

Field QC Checks				
Was pre-cleaned sampling equipment used for these samples?	<input type="checkbox"/> Y	<input type="checkbox"/> N		
Was pre-cleaning sampling equipment properly protected from contamination?	<input type="checkbox"/> Y	<input type="checkbox"/> N		
Was documentation of equipment conducted?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA	
Were air bubbles present in vials at time of collection?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA	
Was sample for metals field filtered prior to preservations?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA	
Duplicate sample collected?	<input type="checkbox"/> Y	<input type="checkbox"/> N	Duplicate sample ID _____	
Rinsate blank collected?	<input type="checkbox"/> Y	<input type="checkbox"/> N	Rinsate blank ID _____	



Groundwater - Well Sampling Data Fo.

Well Developed		Job Information	
Date: 12/12/13	Time: arrive 8AM	depart 9:10am	
Project Name: SYMPHONY	Project Number: 0224198		
Site Location: LIDDELL	Sampler: TH		
Well ID: L5-MW01	Weather: HOT & CLEAR		

Equipment			
Water quality equipment description: —		Interface probe number: Cotech IP #4261 30m	
Purging equipment: (please circle)	Bailer type: Plastic	Teflon	
	Pump type: Peristaltic	Submersible	Micro-purge Amazon Other:

Well Gauging and Purge Volume Calculations									
Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm	Volume of water in well / V = Pr x r x h
Conversion Factor (volume in factor L/m)	0.49	1.96	7.85	12.3	17.7	31.4	49.1	70.7	V = volume in litres P = 3.14159 r = radius in cm h = height of water column in cm
Total Well Depth (-) Water level (=) Water Column	4.993 m (-) 1.135 m (=) 3.86 m								
Water Column (x) Conversion Factor (=) Litres per 1 Well Volume			3.86 m (x) 1.96 (=) 7.56 L						
Depth to product: — m	Product Thickness: — m	Verified with Bailer: <input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N							

Water Quality Parameters								
Beginning purge time:			Ending purge time:				Pump Intake Depth (mbtoc):	
Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments
8L	8:05am							gray turbidity, clearing with pumping - well was agitated to remove sediment some pipe shavings may still be present at the bottom of the well.
<p>> 10 WELL VOL. REMOVED</p> <p>DEVELOPED</p> <p>no odor rapid recharge.</p>								
*pH, temp, cond readings not necessary if well is purged dry						Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth		
Total Well Volume			Actual amount of water prior to sampling			Sample time		Containers used
Flow rate mL/minute			Did field parameters stabilise?			Y N NA		Was the well dry purged? Y N

Field QC Checks			
Was pre-cleaned sampling equipment used for these samples?	Y	N	
Was pre-cleaning sampling equipment properly protected from contamination?	Y	N	
Was documentation of equipment conducted?	Y	N	NA
Were air bubbles present in vials at time of collection?	Y	N	NA
Was sample for metals field filtered prior to preservations?	Y	N	NA
Duplicate sample collected?	Y	N	Duplicate sample ID _____
Rinsate blank collected?	Y	N	Rinsate blank ID _____



Groundwater - Well Sampling Data Form

WELL DEVELOPMENT		Job Information	
Date: 5/12/13	Time: arrive 3:45pm	depart 4:	
Project Name: SYMPHONY	Project Number: 0224198		
Site Location: LIDDELL L3	Sampler: TH		
Well ID: L3 - MW02	Weather: HOT, CLOUDY, VERY STRONG WINDS		

Equipment			
Water quality equipment description: _____		Interface probe number: Cootech IP#4261 30m	
Purging equipment: (please circle)	Bailer type: Plastic	Teflon	little / it may sediment on the well bottom
	Pump type: Peristaltic	<u>Submersible</u>	Micro-purge Amazon Other:

Well Gauging and Purge Volume Calculations									
Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm	Volume of water in well / V = Pr x r x h
Conversion Factor (volume in factor L/m)	0.49	1.96	7.85	12.3	17.7	31.4	49.1	70.7	V = volume in litres P = 3.14159 r = radius in cm h = height of water column in cm
Total Well Depth	(-) Water level	(=) Water Column							
4.307 m	(-) 1.999 m	(=) 2.308 m							
Water Column			(x) Conversion Factor	(=) Litres per 1 Well Volume					
2.308 m			(x) 1.96	(=) 4.52 L					
Depth to product: _____ m	Product Thickness: _____ m	Verified with Bailer: <input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N							

Water Quality Parameters								
Beginning purge time:		Ending purge time:				Pump Intake Depth (mbtoc):		
Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments
7	4:10pm							odor, is above turbid
2	4:15pm							As above
1	4:20pm							As above
0.5	4:30pm							As above
0.25	4:35							As above
VERY LOW YIELD SLOW TO RECHARGE PUMPING CEASED								

*pH, temp, cond readings not necessary if well is purged dry

Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth

Total Well Volume	Actual amount of water prior to sampling	Sample time _____	Containers used _____
Flow rate	mL/minute	Did field parameters stabilise? <input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/> NA	Was the well dry purged? <input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N

Field QC Checks			
Was pre-cleaned sampling equipment used for these samples?	<input checked="" type="checkbox"/> Y	<input checked="" type="checkbox"/> N	
Was pre-cleaning sampling equipment properly protected from contamination?	<input checked="" type="checkbox"/> Y	<input checked="" type="checkbox"/> N	
Was documentation of equipment conducted?	<input checked="" type="checkbox"/> Y	<input checked="" type="checkbox"/> N	<input checked="" type="checkbox"/> NA
Were air bubbles present in vials at time of collection?	<input checked="" type="checkbox"/> Y	<input checked="" type="checkbox"/> N	<input checked="" type="checkbox"/> NA
Was sample for metals field filtered prior to preservations?	<input checked="" type="checkbox"/> Y	<input checked="" type="checkbox"/> N	<input checked="" type="checkbox"/> NA
Duplicate sample collected?	<input checked="" type="checkbox"/> Y	<input checked="" type="checkbox"/> N	Duplicate sample ID _____
Rinsate blank collected?	<input checked="" type="checkbox"/> Y	<input checked="" type="checkbox"/> N	Rinsate blank ID _____



Groundwater - Well Sampling Data Form

WELL DEVELOPMENT		Job Information	
Date: 5/12/13		Time: arrive 2:10pm	depart 3:15pm
Project Name: SYMPHONY		Project Number: 0224188	
Site Location: LIDDELL - W		Sampler: TH	
Well ID: L3-MW04		Weather: HOT, cloudy + very windy.	

Equipment	
Water quality equipment description: _____	Interface probe number: Geotech IP 4261 30m
Purging equipment: (please circle)	Bailer type: Plastic Teflon Pump type: Peristaltic Submersible Micro-purge Amazon Other:

Well Gauging and Purge Volume Calculations									
Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm	Volume of water in well / V = Pr x r x h V = volume in litres P = 3.14159 r = radius in cm h = height of water column in cm
Conversion Factor (volume in factor L/m)	0.49	1.96	7.85	12.3	17.7	31.4	49.1	70.7	
Total Well Depth (-) Water level (=) Water Column	10.270 m (-) 3.400 m (=) 6.87 m								
Water Column (x) Conversion Factor (=) Litres per 1 Well Volume		6.87 m (x) 1.96 (=) 13.47 L							
Depth to product: _____ m	Product Thickness: _____ m	Verified with Bailer: <input type="checkbox"/> Y <input checked="" type="checkbox"/> N							

Water Quality Parameters									
Beginning purge time:		Ending purge time:				Pump Intake Depth (mbtoc):			
Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments	
100	2:20-2:37							Rapidly reducing brown turbidity not clearing with pumping. Hydrocarbon odour during one odour test.	
40L	3:10							from 80-100L the pressure of the water leaving the pump had reduced. clear on initial pumping; then bottom of the well started with pumps brown turbidity returned to odour.	
*pH, temp, cond readings not necessary if well is purged dry									
Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth									

Total Well Volume Actual amount of water prior to sampling	Sample time _____	Containers used _____
Flow rate mL/minute	Did field parameters stabilise? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA	Was the well dry purged? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N

Field QC Checks			
Was pre-cleaned sampling equipment used for these samples?	Y	N	
Was pre-cleaning sampling equipment properly protected from contamination?	Y	N	
Was documentation of equipment conducted?	Y	N	NA
Were air bubbles present in vials at time of collection?	Y	N	NA
Was sample for metals field filtered prior to preservations?	Y	N	NA
Duplicate sample collected?	Y	N	Duplicate sample ID _____
Rinsate blank collected?	Y	N	Rinsate blank ID _____



Groundwater - Well Sampling Data Form

Job Information	
Date: <u>4/12/13</u>	Time: arrive <u>2:30pm</u> depart <u>4:45pm</u>
Project Name: <u>SYMPOUM</u>	Project Number: <u>0224198</u>
Site Location: <u>LIDDELL - LL</u>	Sampler: <u>TH</u>
Well ID: <u>LL - ML01 MW01 (5806)</u>	Weather: <u>HOT + OVERCAST + WINDY (AT TIMES)</u>

Equipment	
Water quality equipment description:	Interface probe number: <u>Creswell IP #4261 SW</u>
Purging equipment: (please circle)	Bailer type: <u>Plastic</u> <u>Teflon</u>
	Pump type: <u>Peristaltic</u> <u>Submersible</u> <u>Micro-purge</u> <u>Amazon</u> <u>Other:</u>

Well Gauging and Purge Volume Calculations									
Casing Diameter	25mm	<u>50mm</u>	100mm	125mm	150mm	200mm	250mm	300mm	Volume of water in well / V $V = \pi r^2 \times h$ V = volume in litres $P = 3.14159$ r = radius in cm h = height of water column in cm
Conversion Factor (volume in factor L/m)	0.49	<u>1.96</u>	7.85	12.3	17.7	31.4	49.1	70.7	
Total Well Depth	(-) Water level	(=) Water Column							
<u>11.181</u> m	(-) <u>3.551</u> m	(=) <u>7.63</u> m							
			Water Column	(x) Conversion Factor	(=) Litres per 1 Well Volume				
			<u>7.63</u> m	(x) <u>1.96</u>	(=) <u>14.95</u> L				
Depth to product: _____ m		Product Thickness: _____ m		Verified with Bailer: <input type="checkbox"/> Y <input checked="" type="checkbox"/> N					

Water Quality Parameters								
Beginning purge time:			Ending purge time:				Pump Intake Depth (mbtoc):	
Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments
<u>24</u>	<u>3:45</u>							<u>Dark grey turbidity, cloudy at times, no odour, altered to recharge.</u>
<u>6L</u>	<u>3:55</u>							<u>As above (pump sitting on bottom of well)</u>
<u>10</u>	<u>4:07</u>							<u>As above.</u>
<u>4.2L</u>	<u>4:15</u>							<u>Dark grey turbidity, clearing with pump, no odour (pump on bottom of well).</u>
<u>3.5L</u>	<u>4:20</u>							<u>As above.</u>
<u>2L</u>	<u>4:25</u>							<u>As Above.</u>
<u>2L</u>	<u>4:30</u>							<u>As Above.</u>
<u>8L</u>	<u>4:33</u>							<u>STOPPED AS CONSIDERED DEVELOPED.</u>
pH, Temp, cond. readings not necessary if well is purged dry								Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth

<u>60L</u> removed	Total Well Volume	Sample time _____	Containers used _____
	Actual amount of water prior to sampling		
	Flow rate mL/minute	Did field parameters stabilise? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA	Was the well dry purged? <input type="checkbox"/> Y <input checked="" type="checkbox"/> N

Field QC Checks			
Was pre-cleaned sampling equipment used for these samples?	Y	N	
Was pre-cleaning sampling equipment properly protected from contamination?	Y	N	
Was documentation of equipment conducted?	Y	N	NA
Were air bubbles present in vials at time of collection?	Y	N	NA
Was sample for metals field filtered prior to preservations?	Y	N	NA
Duplicate sample collected?	Y	N	Duplicate sample ID _____
Rinsate blank collected?	Y	N	Rinsate blank ID _____



Groundwater - Well Sampling Data Form

Job Information	
Date: <u>12/13</u>	Time: arrive <u>11:30</u> depart
Project Name: <u>SUMP HWM</u>	Project Number: <u>0224198</u>
Site Location: <u>LIDDELL - LL</u>	Sampler: <u>M</u>
Well ID: <u>LL-MW02 (SBOS)</u>	Weather: <u>HOT & CLOUDY</u>

Equipment	
Water quality equipment description:	Interface probe number: <u>Catech IP#4261 30m</u>
Purging equipment: (please circle)	Bailer type: <u>Plastic</u> Pump type: <u>Peristaltic</u>
	Teflon Submersible Micro-purge Amazon Other:

Well Gauging and Purge Volume Calculations									
Casing Diameter	25mm	<u>50mm</u>	100mm	125mm	150mm	200mm	250mm	300mm	Volume of water in well / V = Pr x r x h V = volume in litres P = 3.14159 r = radius in cm h = height of water column in cm
Conversion Factor (volume in factor L/m)	0.49	<u>1.96</u>	7.85	12.3	17.7	31.4	49.1	70.7	
Total Well Depth	(-) Water level	(=) Water Column							
<u>11.310</u> m	(-) <u>4.680</u> m	(=) <u>0.66</u> m							
	Water Column	(x) Conversion Factor	(=) Litres per 1 Well Volume						
	<u>0.66</u> m	(x) <u>1.16</u>	(=) <u>1.29</u> L						
Depth to product:	<u>-</u> m	Product Thickness:	<u>-</u> m	Verified with Bailer:		<input type="checkbox"/> Y <input checked="" type="checkbox"/> N			

Water Quality Parameters								
Beginning purge time:			Ending purge time:				Pump Intake Depth (mbtoc):	
Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments
<u>3.5</u>	<u>Bailer volumes</u>		<u>12:15pm</u>					<u>Upper depth level that water in well was very turbid as probe continued to keep after touching at SWL.</u>
<u>on can is developing welded very little, if any more water.</u>								

*pH, temp, cond readings not necessary if well is purged dry

Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth

Total Well Volume	Actual amount of water prior to sampling	Sample time	Containers used
Flow rate	mL/minute	Did field parameters stabilise?	Was the well dry purged?
		<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA	<input type="checkbox"/> Y <input type="checkbox"/> N

Field QC Checks		
Was pre-cleaned sampling equipment used for these samples?	<input type="checkbox"/> Y	<input type="checkbox"/> N
Was pre-cleaning sampling equipment properly protected from contamination?	<input type="checkbox"/> Y	<input type="checkbox"/> N
Was documentation of equipment conducted?	<input type="checkbox"/> Y	<input type="checkbox"/> N <input type="checkbox"/> NA
Were air bubbles present in vials at time of collection?	<input type="checkbox"/> Y	<input type="checkbox"/> N <input type="checkbox"/> NA
Was sample for metals field filtered prior to preservations?	<input type="checkbox"/> Y	<input type="checkbox"/> N <input type="checkbox"/> NA
Duplicate sample collected?	<input type="checkbox"/> Y	<input type="checkbox"/> N Duplicate sample ID _____
Rinsate blank collected?	<input type="checkbox"/> Y	<input type="checkbox"/> N Rinsate blank ID _____



Groundwater - Well Sampling Data Form

WELL DEVELOPMENT - Job Information	
Date: 4/12/13	Time: arrive 9:15AM depart
Project Name: SUMPHON	Project Number: 0224198
Site Location: L100EU-LL	Sampler: TA
Well ID: LL-MW03 (SBO4)	Weather: HOT & CLEAR

Equipment	
Water quality equipment description:	Interface probe number: Castech IP #1261 30m
Purging equipment: (please circle)	Bailer type: Plastic Teflon Pump type: Peristaltic <u>Submersible</u> Micro-purge Amazon Other:

Well Gauging and Purge Volume Calculations									
Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm	Volume of water in well / V $= Pr \times r \times h$ V = volume in litres $P = 3.14159$ r = radius in cm h = height of water column in cm
Conversion Factor (volume in factor L/m)	0.49	1.96	7.85	12.3	17.7	31.4	49.1	70.7	
Total Well Depth (-) Water level (=) Water Column	$19.950 \text{ m} - 6.447 \text{ m} = 13.503 \text{ m}$								
Water Column (x) Conversion Factor (=) Litres per 1 Well Volume		$13.50 \text{ m} \times 1.96 = 26.47 \text{ L}$							
Depth to product: _____ m	Product Thickness: _____ m	Verified with Bailer: <input type="checkbox"/> Y <input checked="" type="checkbox"/> N							

Water Quality Parameters									
Beginning purge time:			Ending purge time:				Pump Intake Depth (mbtoc):		
Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments	
32L	10:15							dark grey turbidity, clean with pumping, no odour, pumpine stopped as volume containers had to be replaced	
20L	10:20AM							pumping recommenced. dark grey turbidity - NOT clear odour added further red age	
1L	11:35AM							no odour, dark grey turbidity added to red age	
500ml	11:50AM							Dark grey turbidity,	
0.25L	12PM							As above - yield dropped, slow to recharge, considered abandoned	

*pH, temp, cond readings not necessary if well is purged dry

Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth

Total Well Volume	Actual amount of water prior to sampling	Sample time	Containers used
Flow rate	mL/minute	Did field parameters stabilise?	Was the well dry purged?

Field QC Checks			
Was pre-cleaned sampling equipment used for these samples?	Y	N	
Was pre-cleaning sampling equipment properly protected from contamination?	Y	N	
Was documentation of equipment conducted?	Y	N	NA
Were air bubbles present in vials at time of collection?	Y	N	NA
Was sample for metals field filtered prior to preservations?	Y	N	NA
Duplicate sample collected?	Y	N	Duplicate sample ID _____
Rinsate blank collected?	Y	N	Rinsate blank ID _____



Groundwater - Well Sampling Data Form

WELL DEVELOPMENT		Job Information	
Date: 4/12/13	Time: arrive 4pm	depart	
Project Name: SIMPHONY	Project Number: 0224198		
Site Location: LIODELL-LL	Sampler: TH		
Well ID: LL-MW07	Weather: HOT & CLOUDY		

Equipment			
Water quality equipment description:		Interface probe number: 4261	
Purging equipment: (please circle)	Bailer type: Plastic	Teflon	Sediment on bottom of well
	Pump type: Peristaltic	Submersible	Micro-purge Amazon Other:

Well Gauging and Purge Volume Calculations									
Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm	Volume of water in well / V $= Pr \times r \times h$ V = volume in litres $P = 3.14159$ $r = \text{radius in cm}$ $h = \text{height of water column in cm}$
Conversion Factor (volume in factor L/m)	0.49	1.96	7.85	12.3	17.7	31.4	49.1	70.7	
Total Well Depth	(-) Water level	(=) Water Column							
#550	3.677	7.39							
11.065	Water Column	(x) Conversion Factor	(=) Litres per 1 Well Volume						
	7.39	1.96	14.48						
Depth to product:	m	Product Thickness:	m	Verified with Bailer:	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N				

Water Quality Parameters								
Beginning purge time:		Ending purge time:				Pump Intake Depth (mbtoc):		
Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments
30L	1:22pm							Dark grey turbidity, no odour. allowed to recharge.
4L	1:26pm							As above - seems to be reasonably quick to recharge
3L	1:35pm							(stream is adjacent.)
3L	1:50pm							
1L	1:55	SHOW TO RECHARGE						characteristics remain the same at each purging interval
		CONSIDERED DEVELOPED						

*pH, temp, cond readings not necessary if well is purged dry

Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth

41	Total Well Volume	Actual amount of water prior to sampling	Sample time	Containers used
	Flow rate	mL/minute	Did field parameters stabilise?	Was the well dry purged?
			Y N NA	<input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N

Field QC Checks			
Was pre-cleaned sampling equipment used for these samples?	Y	N	
Was pre-cleaning sampling equipment properly protected from contamination?	Y	N	
Was documentation of equipment conducted?	Y	N	NA
Were air bubbles present in vials at time of collection?	Y	N	NA
Was sample for metals field filtered prior to preservations?	Y	N	NA
Duplicate sample collected?	Y	N	Duplicate sample ID _____
Rinsate blank collected?	Y	N	Rinsate blank ID _____



Groundwater - Well Sampling Data Form

WELL DEVELOPMENT		Job Information	
Date: 4/12/13		Time: arrive 8:40 AM	depart
Project Name: SYMPHONY		Project Number: 0224198	
Site Location: LIODELL - LL		Sampler: TH	
Well ID: LL - MW09		Weather: Hot & clear	

Equipment	
Water quality equipment description: _____	Interface probe number: Cotech IP. 4261 30m
Purging equipment: (please circle)	Bailer type: Plastic Teflon
Pump type: Peristaltic	Submersible (circled)
	Micro-purge Amazon Other:

ease in identifying bottom of well indicative of mineral sediment

Well Gauging and Purge Volume Calculations									
Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm	Volume of water in well / V = Pr x r x h
Conversion Factor (volume in factor L/m)	0.49	1.96	7.85	12.3	17.7	31.4	49.1	70.7	V = volume in litres P = 3.14159 r = radius in cm h = height of water column in cm
Total Well Depth	(-) Water level	(=) Water Column							
10.870 m	(-) 5.602 m	(=) 5.268 m							
	Water Column	(x) Conversion Factor	(=) Litres per 1 Well Volume						
	5.268 m	(x) 1.96	(=) 10.33 L						
Depth to product: _____ m	Product Thickness: _____ m	Verified with Bailer: <input checked="" type="checkbox"/> <input type="checkbox"/>							

Water Quality Parameters									
Beginning purge time:			Ending purge time:				Pump Intake Depth (mbtoc):		
Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments	
21	9:05 AM							Dark grey turbidity, clearing after flushing for thirty seconds. odour present. allowed to recharge.	
9	9:20 AM							As above, turbidity clearing much quicker	
6.5	9:37 AM							no odour dark grey turbidity clearing with purging	
3.5	9:44 AM							As above	
3	9:50 AM							As above mostly clear	
2	9:55 AM							As above mostly clear	
1.5	9:57 AM							As above mostly clear	
pH, temp, cond readings not necessary if well is purged dry							Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth		
Total Well Volume			Actual amount of water prior to sampling			Sample time		Containers used	
Flow rate			mL/minute			Did field parameters stabilise?		Was the well dry purged?	
						Y N NA		Y N	

developed

Field QC Checks			
Was pre-cleaned sampling equipment used for these samples?	Y	N	
Was pre-cleaning sampling equipment properly protected from contamination?	Y	N	
Was documentation of equipment conducted?	Y	N	NA
Were air bubbles present in vials at time of collection?	Y	N	NA
Was sample for metals field filtered prior to preservations?	Y	N	NA
Duplicate sample collected?	Y	N	Duplicate sample ID _____
Rinsate blank collected?	Y	N	Rinsate blank ID _____



Groundwater - Well Sampling Data Form

Well Development		Job Information	
Date: 19/11/13	Project Name: Project Symphony	Time: arrive 08:00	depart
Site Location: Liddell.	Well ID: LM-MW01	Project Number: 0224198	Sampler: N.H/IG
		Weather: overcast	

Equipment			
Water quality equipment description:		Interface probe number:	
Purging equipment: (please circle)	Bailer type: Plastic	Teflon	
	Pump type: Peristaltic	<u>Submersible</u>	Micro-purge Amazon Other:

Well Gauging and Purge Volume Calculations									
Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm	Volume of water in well / V = Pr x r x h V = volume in litres P = 3.14159 r = radius in cm h = height of water column in cm
Conversion Factor (volume in factor L/m)	0.49	1.96	7.85	12.3	17.7	31.4	49.1	70.7	
Total Well Depth 9.015 m	(-) Water level 6.420 m	(=) Water Column 2.595 m							
		Water Column 2.595 m	(x) Conversion Factor 1.96	(=) Litres per 1 Well Volume 5.08					
Depth to product: — m	Product Thickness: — m	Verified with Bailer: <input type="checkbox"/> Y <input type="checkbox"/> N							

Water Quality Parameters									
Beginning purge time:			Ending purge time:				Pump Intake Depth (mbtoc):		
Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments	
10	08:05							Turbid. black, becoming a bit clearer after 10L. Allowed to recharge. Pumped another 4L. Dry.	
14	08:20								
*pH, temp, cond readings not necessary if well is purged dry						Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth			
14	Total Well Volume Actual amount of water prior to sampling			Sample time			Containers used		
	Flow rate mL/minute			Did field parameters stabilise? <input type="checkbox"/> Y <input type="checkbox"/> N <input checked="" type="checkbox"/> NA			Was the well dry purged? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N		

Field QC Checks			
Was pre-cleaned sampling equipment used for these samples?	<input type="checkbox"/> Y	<input type="checkbox"/> N	
Was pre-cleaning sampling equipment properly protected from contamination?	<input type="checkbox"/> Y	<input type="checkbox"/> N	
Was documentation of equipment conducted?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
Were air bubbles present in vials at time of collection?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
Was sample for metals field filtered prior to preservations?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
Duplicate sample collected?	<input type="checkbox"/> Y	<input type="checkbox"/> N	Duplicate sample ID _____
Rinsate blank collected?	<input type="checkbox"/> Y	<input type="checkbox"/> N	Rinsate blank ID _____



Groundwater - Well Sampling Data Form

Well Development		Job Information	
Date: 19/4/13	Time: arrive 08:35	depart	
Project Name: Project Symphony	Project Number: 0224198		
Site Location: Liddell	Sampler: Nit / 10.6		
Well ID: LM-MW02	Weather: Overcast, rain		

Equipment			
Water quality equipment description:		Interface probe number:	
Purging equipment: (please circle)	Bailer type: Plastic	Teflon	
	Pump type: Peristaltic	Submersible	Micro-purge Amazon Other:

Well Gauging and Purge Volume Calculations									
Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm	Volume of water in well / V = Pr x r x h V = volume in litres P = 3.14159 r = radius in cm h = height of water column in cm
Conversion Factor (volume in factor L/m)	0.49	1.96	7.85	12.3	17.7	31.4	49.1	70.7	
Total Well Depth	(-) Water level	(=) Water Column							
9.910 m	(-) 6.685 m	(=) _____ m							
	Water Column	(x) Conversion Factor	(=) Litres per 1 Well Volume						
	3.225 m	(x) 1.96	(=) 6.32 L						
Depth to product: _____ m	Product Thickness: _____ m	Verified with Bailer:	<input type="checkbox"/> Y	<input type="checkbox"/> N					

Water Quality Parameters									
Beginning purge time:			Ending purge time:				Pump Intake Depth (mbtoc):		
Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments	
10	08:40							Turbid brown. Purged dry after 10L. Allowed to recharge. Purged another 6L. Dry.	
16	08:55								
*pH, temp, cond readings not necessary if well is purged dry						Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth			
16	Total Well Volume Actual amount of water prior to sampling			Sample time _____			Containers used _____		
_____	Flow rate mL/minute			Did field parameters stabilise? <input type="checkbox"/> Y <input type="checkbox"/> N <input checked="" type="checkbox"/> NA			Was the well dry purged? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N		

Field QC Checks			
Was pre-cleaned sampling equipment used for these samples?	<input type="checkbox"/> Y	<input type="checkbox"/> N	
Was pre-cleaning sampling equipment properly protected from contamination?	<input type="checkbox"/> Y	<input type="checkbox"/> N	
Was documentation of equipment conducted?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
Were air bubbles present in vials at time of collection?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
Was sample for metals field filtered prior to preservations?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
Duplicate sample collected?	<input type="checkbox"/> Y	<input type="checkbox"/> N	Duplicate sample ID _____
Rinsate blank collected?	<input type="checkbox"/> Y	<input type="checkbox"/> N	Rinsate blank ID _____



Groundwater - Well Sampling Data Form

Job Information	
Date: <u>21/11/13</u>	Time: arrive <u>10:40</u> depart <u>11:35</u>
Project Name: <u>Project Symphony</u>	Project Number: <u>0224198</u>
Site Location: <u>Liddell</u>	Sampler: <u>N.H</u>
Well ID: <u>LN_MW01</u>	Weather: <u>overcast</u>

Equipment	
Water quality equipment description:	Interface probe number:
Purging equipment: (please circle)	Bailer type: <u>Plastic</u> <u>Teflon</u>
	Pump type: <u>Peristaltic</u> <u>Submersible</u> <u>Micro-purge</u> <u>Amazon</u> <u>Other:</u>

Well Gauging and Purge Volume Calculations									
Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm	Volume of water in well / V = Pr x r x h V = volume in litres P = 3.14159 r = radius in cm h = height of water column in cm
Conversion Factor (volume in factor L/m)	0.49	1.96	7.85	12.3	17.7	31.4	49.1	70.7	
Total Well Depth	(-) Water level	(=) Water Column							
<u>9.050</u> m	(-) <u>3.135</u> m	(=) <u>5.915</u> m							
			Water Column	(x) Conversion Factor	(=) Litres per 1 Well Volume				
			<u>5.915</u> m	(x) <u>1.96</u>	(=) <u>11.59</u> L				
Depth to product:	_____ m	Product Thickness:	_____ m	Verified with Bailer:	<input type="checkbox"/> Y	<input type="checkbox"/> N			

Water Quality Parameters									
Beginning purge time: <u>10:50</u>		Ending purge time: <u>11:25</u>				Pump Intake Depth (mbtoc):			
Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments	
<u>25</u>	<u>10:55</u>							<u>brown, turbid purged dry after 25L. Allowed to recharge</u>	
<u>30</u>	<u>11:05</u>							<u>pumped another 5L. brown, turbid. Dry. Allowed to recharge</u>	
<u>35</u>	<u>11:10</u>							<u>pumped another 5L. brown, turbid. Allowed to recharge</u>	
<u>42</u>	<u>11:25</u>							<u>pumped another 7L. brown, becoming clear after 37L. purged dry.</u>	
<p>*pH, temp, cond readings not necessary if well is purged dry</p> <p>Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth</p>									
<u>42</u>	Total Well Volume		Actual amount of water prior to sampling			Sample time _____		Containers used _____	
	Flow rate		mL/minute			Did field parameters stabilise? <input type="checkbox"/> Y <input type="checkbox"/> N <input checked="" type="checkbox"/> NA		Was the well dry purged? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N	

Field QC Checks			
Was pre-cleaned sampling equipment used for these samples?	<input type="checkbox"/> Y	<input type="checkbox"/> N	
Was pre-cleaning sampling equipment properly protected from contamination?	<input type="checkbox"/> Y	<input type="checkbox"/> N	
Was documentation of equipment conducted?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
Were air bubbles present in vials at time of collection?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
Was sample for metals field filtered prior to preservations?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
Duplicate sample collected?	<input type="checkbox"/> Y	<input type="checkbox"/> N	Duplicate sample ID _____
Rinsate blank collected?	<input type="checkbox"/> Y	<input type="checkbox"/> N	Rinsate blank ID _____



Groundwater - Well Sampling Data Form

Well Development		Job Information	
Date: 20/11/13	Time: arrive 12:30	depart 13:25	
Project Name: Project Symphony	Project Number: 0224198		
Site Location: Liddell	Sampler: N.H		
Well ID: LN-MW02	Weather: Fine		

Equipment			
Water quality equipment description:		Interface probe number:	
Purging equipment: (please circle)	Bailer type: Plastic	Teflon	
	Pump type: Peristaltic	Submersible	Micro-purge Amazon Other:

Well Gauging and Purge Volume Calculations									
Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm	Volume of water in well / V = Pr x r x h V = volume in litres P = 3.14159 r = radius in cm h = height of water column in cm
Conversion Factor (volume in factor L/m)	0.49	1.96	7.85	12.3	17.7	31.4	49.1	70.7	
Total Well Depth	(-) Water level	(=) Water Column							
7.495 m	(-) 2.075 m	(=) 5.42 m							
Water Column			(x) Conversion Factor	(=) Litres per 1 Well Volume					
5.42 m			(x) 1.96	(=) 10.62 L					
Depth to product: _____ m	Product Thickness: _____ m	Verified with Bailer:	Y		N				

Water Quality Parameters								
Beginning purge time: 12:40			Ending purge time: 13:20			Pump Intake Depth (mbtoc):		
Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments
120	12:45							brown, turbid
40	12:50							brown, turbid
60	12:55							brown, turbid well actually recharging ... Th
80	13:00							brown, turbid.
100	13:05							
120	13:10							brown, turbid
140	13:15							brown, turbid
160	13:20							

*pH, temp, cond readings not necessary if well is purged dry

Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth

160	Total Well Volume	Actual amount of water prior to sampling	440	Sample time	_____	Containers used	_____
_____	Flow rate	mL/minute	_____	Did field parameters stabilise?	Y	N	NA
				Was the well dry purged?	Y	NA	

Field QC Checks	
Was pre-cleaned sampling equipment used for these samples?	Y N
Was pre-cleaning sampling equipment properly protected from contamination?	Y N
Was documentation of equipment conducted?	Y N NA
Were air bubbles present in vials at time of collection?	Y N NA
Was sample for metals field filtered prior to preservations?	Y N NA
Duplicate sample collected?	Y N
Rinsate blank collected?	Y N
	Duplicate sample ID _____
	Rinsate blank ID _____



Groundwater - Well Sampling Data Form

Well Development		Job Information	
Date: 2/11/13	Time: arrive 11:45	depart 12:15	
Project Name: Project Symphony	Project Number: 0224198		
Site Location: Liddell	Sampler: N.H		
Well ID: LN-MW04	Weather: Fine		

Equipment			
Water quality equipment description:		Interface probe number:	
Purging equipment: (please circle)	Bailer type: Plastic	Teflon	
	Pump type: Peristaltic	Submersible	Micro-purge Amazon Other:

Well Gauging and Purge Volume Calculations									
Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm	Volume of water in well / V = $\pi r^2 h$ V = volume in litres P = 3.14159 r = radius in cm h = height of water column in cm
Conversion Factor (volume in factor L/m)	0.49	1.96	7.85	12.3	17.7	31.4	49.1	70.7	
Total Well Depth	(-) Water level	(=) Water Column							
4.800 m	(-) 2.675 m	(=) 2.125 m							
Water Column			(x) Conversion Factor	(=) Litres per 1 Well Volume					
2.125 m			(x) 1.96	(=) 4.165 L					
Depth to product:	Product Thickness:		Verified with Bailer:		<input type="checkbox"/> Y <input type="checkbox"/> N				

Water Quality Parameters								
Beginning purge time: 11:50			Ending purge time: 12:05			Pump Intake Depth (mbtoc):		
Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments
8	11:55							brown, turbid, drilling slurry. Purged dry after 8L. Allowed to recharge. Recharge 5L.
10	12:05							
*pH, temp, cond readings not necessary if well is purged dry						Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth		
10	Total Well Volume		Actual amount of water prior to sampling		Sample time		Containers used	
	Flow rate		mL/minute		Did field parameters stabilise?		Was the well dry purged?	
					<input type="checkbox"/> Y <input type="checkbox"/> N <input checked="" type="checkbox"/> NA		<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	

Field QC Checks			
Was pre-cleaned sampling equipment used for these samples?	Y	N	
Was pre-cleaning sampling equipment properly protected from contamination?	Y	N	
Was documentation of equipment conducted?	Y	N	NA
Were air bubbles present in vials at time of collection?	Y	N	NA
Was sample for metals field filtered prior to preservations?	Y	N	NA
Duplicate sample collected?	Y	N	Duplicate sample ID _____
Rinsate blank collected?	Y	N	Rinsate blank ID _____



Groundwater - Well Sampling Data Form

Job Information	
Date: <u>20/11/13</u>	Time: arrive <u>11:25</u> depart <u>12:15</u>
Project Name: <u>Project Symphony</u>	Project Number: <u>0224198</u>
Site Location: <u>Liddell</u>	Sampler: <u>N.H</u>
Well ID: <u>LNMW05</u>	Weather: <u>Fine, some cloud</u>

Equipment	
Water quality equipment description:	Interface probe number:
Purging equipment: (please circle)	Bailer type: <u>Plastic</u> <u>Teflon</u>
	Pump type: <u>Peristaltic</u> <u>Submersible</u> <u>Micro-purge</u> <u>Amazon</u> <u>Other:</u>

Well Gauging and Purge Volume Calculations									
Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm	Volume of water in well / V = $\pi r^2 h$ V = volume in litres P = 3.14159 r = radius in cm h = height of water column in cm
Conversion Factor (volume in factor L/m)	0.49	1.96	7.85	12.3	17.7	31.4	49.1	70.7	
Total Well Depth <u>9.800</u> m (-) Water level <u>1.780</u> m (=) Water Column <u>8.020</u> m									
			Water Column <u>8.02</u> m (x) Conversion Factor (=) Litres per 1 Well Volume <u>15.72</u> L						
Depth to product: <u>—</u> m			Product Thickness: <u>—</u> m						Verified with Bailer: <input type="checkbox"/> Y <input type="checkbox"/> N

Water Quality Parameters								
Beginning purge time: <u>11:30</u>		Ending purge time: <u>12:10</u>			Pump Intake Depth (mbtoc): <u>9.00</u>			
Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments
<u>20</u>	<u>11:35</u>							<u>brown, turbid</u>
<u>40</u>	<u>11:40</u>							<u>brown, turbid well actively recharging as pump</u>
<u>60</u>	<u>11:45</u>							
<u>80</u>	<u>11:50</u>							<u>brown, turbid, becoming clear after 90L</u>
<u>100</u>	<u>11:55</u>							<u>Actively recharging as pumping</u>
<u>120</u>	<u>12:00</u>							<u>clear</u>
<u>140</u>	<u>12:05</u>							<u>clear</u>
<u>160</u>	<u>12:10</u>							<u>clear</u>
*pH, temp, cond readings not necessary if well is purged dry						Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth		
<u>160</u>	Total Well Volume		Actual amount of water prior to sampling <u>None</u>		Sample time <u>—</u>		Containers used <u>—</u>	
<u>—</u>	Flow rate		mL/minute <u>—</u>		Did field parameters stabilise? <input type="checkbox"/> Y <input type="checkbox"/> N <input checked="" type="checkbox"/> NA		Was the well dry purged? <input type="checkbox"/> Y <input checked="" type="checkbox"/> N	

Field QC Checks			
Was pre-cleaned sampling equipment used for these samples?	<input type="checkbox"/> Y	<input type="checkbox"/> N	
Was pre-cleaning sampling equipment properly protected from contamination?	<input type="checkbox"/> Y	<input type="checkbox"/> N	
Was documentation of equipment conducted?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
Were air bubbles present in vials at time of collection?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
Was sample for metals field filtered prior to preservations?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
Duplicate sample collected?	<input type="checkbox"/> Y	<input type="checkbox"/> N	Duplicate sample ID <u>—</u>
Rinsate blank collected?	<input type="checkbox"/> Y	<input type="checkbox"/> N	Rinsate blank ID <u>—</u>



Groundwater - Well Sampling Data Form

Job Information	
Date: 20/01/13	Time: arrive 08:00 depart 9:05
Project Name: Project Symphony	Project Number: 0224198
Site Location: Loddell	Sampler: N.H
Well ID: LN-MW06	Weather: Foggy early, becoming fine

Equipment	
Water quality equipment description:	Interface probe number:
Purging equipment: (please circle)	Bailer type: Plastic Teflon
	Pump type: Peristaltic <u>Submersible</u> Micro-purge Amazon Other:

Well Gauging and Purge Volume Calculations									
Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm	Volume of water in well / V = Pr x r x h V = volume in litres P = 3.14159 r = radius in cm h = height of water column in cm
Conversion Factor (volume in factor L/m)	0.49	1.96	7.85	12.3	17.7	31.4	49.1	70.7	
Total Well Depth	(-) Water level	(=) Water Column							
9.860 m	(-) 2.060 m	(=) 7.8 m							
Water Column			(x) Conversion Factor	(=) Litres per 1 Well Volume					
7.8 m			(x) 1.96	(=) 15.288 L					
Depth to product:	_____ m	Product Thickness:	_____ m	Verified with Bailer:	<input type="checkbox"/> Y	<input type="checkbox"/> N			

Water Quality Parameters									
Beginning purge time: 08:10		Ending purge time: 08:50		Pump Intake Depth (mbtoc):					
Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments	
20	08:15							brown, turbid.	
40	08:20							as above.	
60	08:25							Actively recharging as water is pumped out.	
80	08:30								
100	08:35								
120	08:40							brown, turbid.	
140	08:45							brown, turbid. Actively recharging as water is pumped out.	
160	08:50							Brown, turbid	
*pH, temp, cond readings not necessary if well is purged dry						Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth			
160	Total Well Volume		Actual amount of water prior to sampling		Sample time		Containers used		
—			160						
	Flow rate mL/minute		Did field parameters stabilise?		Was the well dry purged?				
	—		Y N <u>NA</u>		Y <u>N</u>				

Field QC Checks				
Was pre-cleaned sampling equipment used for these samples?	Y	N		
Was pre-cleaning sampling equipment properly protected from contamination?	Y	N		
Was documentation of equipment conducted?	Y	N	NA	
Were air bubbles present in vials at time of collection?	Y	N	NA	
Was sample for metals field filtered prior to preservations?	Y	N	NA	
Duplicate sample collected?	Y	N	Duplicate sample ID _____	
Rinsate blank collected?	Y	N	Rinsate blank ID _____	



Groundwater - Well Sampling Data Form

Job Information	
Date: <u>21/11/13</u>	Time: arrive <u>09:35</u> depart <u>10:30</u>
Project Name: <u>Project Symphony</u>	Project Number: <u>0224198</u>
Site Location: <u>Liddell</u>	Sampler: <u>N.H</u>
Well ID: <u>LN-MW07</u>	Weather: <u>overcast</u>

Equipment	
Water quality equipment description:	Interface probe number:
Purging equipment: (please circle)	Bailer type: <u>Plastic</u> <u>Teflon</u>
	Pump type: <u>Peristaltic</u> <u>Submersible</u> <u>Micro-purge</u> <u>Amazon</u> <u>Other:</u>

Well Gauging and Purge Volume Calculations									
Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm	Volume of water in well / V = $\pi r^2 \times h$
Conversion Factor (volume in factor L/m)	0.49	1.96	7.85	12.3	17.7	31.4	49.1	70.7	V = volume in litres P = 3.14159 r = radius in cm h = height of water column in cm
Total Well Depth	(-) <u>8.985</u> m	Water level	(-) <u>2.225</u> m	(=) Water Column	(=) <u>6.76</u> m				
		Water Column	(x) <u>6.76</u> m	(x) Conversion Factor	(=) <u>1.96</u>	Litres per 1 Well Volume			
						(<u>13.25</u>) L			
Depth to product:	<u>—</u> m	Product Thickness:	<u>—</u> m	Verified with Bailer:	<input type="checkbox"/> Y	<input type="checkbox"/> N			

Water Quality Parameters									
Beginning purge time: <u>09:45</u>			Ending purge time: <u>10:15</u>			Pump Intake Depth (mbtoc): <u>8.5</u>			
Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments	
<u>20</u>	<u>09:50</u>							<u>brown, turbid. Purged dry after 20L.</u>	
<u>30</u>	<u>10:00</u>							<u>Allowed to recharge. Pumped another 10L. Dry. Allowed</u>	
<u>35</u>	<u>10:05</u>							<u>to recharge. Pumped another 5L. Brown, becoming clearer</u>	
<u>40</u>	<u>10:15</u>							<u>purged dry. Pumped another 5L. Purged dry.</u>	
*pH, temp, cond readings not necessary if well is purged dry						Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth			
<u>40</u>	Total Well Volume			Sample time <u>—</u>			Containers used <u>—</u>		
<u>—</u>	Actual amount of water prior to sampling								
<u>—</u>	Flow rate mL/minute			Did field parameters stabilise?			Was the well dry purged?		
				<input type="checkbox"/> Y <input type="checkbox"/> N <input checked="" type="checkbox"/> NA			<input checked="" type="checkbox"/> Y <input type="checkbox"/> N		

Field QC Checks			
Was pre-cleaned sampling equipment used for these samples?	<input type="checkbox"/> Y	<input type="checkbox"/> N	
Was pre-cleaning sampling equipment properly protected from contamination?	<input type="checkbox"/> Y	<input type="checkbox"/> N	
Was documentation of equipment conducted?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
Were air bubbles present in vials at time of collection?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
Was sample for metals field filtered prior to preservations?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
Duplicate sample collected?	<input type="checkbox"/> Y	<input type="checkbox"/> N	Duplicate sample ID _____
Rinsate blank collected?	<input type="checkbox"/> Y	<input type="checkbox"/> N	Rinsate blank ID _____



Groundwater - Well Sampling Data Form

Well Development		Job Information	
Date: 12/12/13		Time: arrive 14:05	depart
Project Name: Symphony		Project Number: 0224198	
Site Location: Liddell		Sampler: N.H	
Well ID: LQ.MW01		Weather: Fine	

Equipment			
Water quality equipment description: NA	Interface probe number: Testwell 9300159		
Purging equipment: (please circle)	Bailer type: Plastic	Teflon	
	Pump type: Peristaltic	<u>Submersible</u>	Micro-purge Amazon Other:

Well Gauging and Purge Volume Calculations									
Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm	Volume of water in well / V = $\pi r^2 \times h$ V = volume in litres P = 3.14159 r = radius in cm h = height of water column in cm
Conversion Factor (volume in factor L/m)	0.49	1.96	7.85	12.3	17.7	31.4	49.1	70.7	
Total Well Depth 10.065 m	(-) Water level 8.990 m	(=) Water Column 1.12 m							
		Water Column 1.12 m	(x) Conversion Factor 1.96	(=) Litres per 1 Well Volume 2.19					
Depth to product: — m		Product Thickness: — m		Verified with Bailer: <input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/> NA					

Water Quality Parameters									
Beginning purge time: 14:10			Ending purge time:				Pump Intake Depth (mbtoc):		
Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments	
4	14:12							turbid, black, no odour purged dry after 4L. Allowed to recharge	
5	14:20							as above. purged dry after another 1L. Allowed to recharge.	
6	14:30								
7	14:40							~ 3-5 well volumes removed. Developed. Slow recharge	

*pH, temp, cond readings not necessary if well is purged dry

Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth

7	Total Well Volume	Actual amount of water prior to sampling	Sample time	Containers used
—	Flow rate	mL/minute	Did field parameters stabilise? <input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/> NA	Was the well dry purged? <input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N

Field QC Checks		
Was pre-cleaned sampling equipment used for these samples?	<input checked="" type="checkbox"/> Y	<input checked="" type="checkbox"/> N
Was pre-cleaning sampling equipment properly protected from contamination?	<input checked="" type="checkbox"/> Y	<input checked="" type="checkbox"/> N
Was documentation of equipment conducted?	<input checked="" type="checkbox"/> Y	<input checked="" type="checkbox"/> N <input checked="" type="checkbox"/> NA
Were air bubbles present in vials at time of collection?	<input checked="" type="checkbox"/> Y	<input checked="" type="checkbox"/> N <input checked="" type="checkbox"/> NA
Was sample for metals field filtered prior to preservations?	<input checked="" type="checkbox"/> Y	<input checked="" type="checkbox"/> N <input checked="" type="checkbox"/> NA
Duplicate sample collected?	<input checked="" type="checkbox"/> Y	<input checked="" type="checkbox"/> N
Rinsate blank collected?	<input checked="" type="checkbox"/> Y	<input checked="" type="checkbox"/> N

Duplicate sample ID _____

Rinsate blank ID _____



Groundwater - Well Sampling Data Form

Well Development		Job Information	
Date: 12/12/13	Time: arrive 08:40	depart 09:20	
Project Name: Symphony	Project Number: 0224198		
Site Location: London Liddell	Sampler: N.H		
Well ID: CO-MW02	Weather: Fine		

Equipment			
Water quality equipment description: NA		Interface probe number: Testwell 9300159	
Purging equipment: (please circle)	Bailer type: Plastic	Teflon	
	Pump type: Peristaltic	<u>Submersible</u>	Micro-purge Amazon Other:

Well Gauging and Purge Volume Calculations									
Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm	Volume of water in well / V = Pr x r x h V = volume in litres P = 3.14159 r = radius in cm h = height of water column in cm
Conversion Factor (volume in factor L/m)	0.49	<u>1.96</u>	7.85	12.3	17.7	31.4	49.1	70.7	
Total Well Depth	(-) Water level	(=) Water Column							
<u>6.065</u> m	(-) <u>2.760</u> m	(=) <u>3.305</u> m							
Water Column		(x) Conversion Factor	(=) Litres per 1 Well Volume						
<u>3.305</u> m		(x) <u>1.96</u>	(=) <u>6.478</u> L						
Depth to product: _____ m	Product Thickness: _____ m	Verified with Bailer: <input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N <input type="checkbox"/> NA							

Water Quality Parameters									
Beginning purge time: 08:50			Ending purge time:				Pump Intake Depth (mbtoc):		
Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments	
20	08:55							brown, turbid, no odour. Purged dry after 20L. Allowed to recharge	
36	09:00							becoming cloudy to clear after ~23L. purged dry after another 16L.	
50	09:05							Clear, no odour.	
60L	09:10							60L purged, ~10 well volumes Developed	
*pH, temp, cond readings not necessary if well is purged dry						Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth			

<u>60L</u>	Total Well Volume Actual amount of water prior to sampling	Sample time _____	Containers used _____
	Flow rate mL/minute	Did field parameters stabilise? <input type="checkbox"/> Y <input type="checkbox"/> N <input checked="" type="checkbox"/> NA	Was the well dry purged? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N

Field QC Checks			
Was pre-cleaned sampling equipment used for these samples?	<input type="checkbox"/> Y	<input type="checkbox"/> N	
Was pre-cleaning sampling equipment properly protected from contamination?	<input type="checkbox"/> Y	<input type="checkbox"/> N	
Was documentation of equipment conducted?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
Were air bubbles present in vials at time of collection?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
Was sample for metals field filtered prior to preservations?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
Duplicate sample collected?	<input type="checkbox"/> Y	<input type="checkbox"/> N	Duplicate sample ID _____
Rinsate blank collected?	<input type="checkbox"/> Y	<input type="checkbox"/> N	Rinsate blank ID _____



Groundwater - Well Sampling Data Form

Job Information	
WELL DEVELOPMENT	
Date: 10/12/13	Time: arrive 2:20pm depart 3:40pm
Project Name: SYMPHONY	Project Number: 0224198
Site Location: LIDDELL	Sampler: TH
Well ID: LO-MW03	Weather: HOT CLEAR WINDY

Equipment	
Water quality equipment description: _____	Interface probe number: <u>Geotech RA4261 3m</u>
Purging equipment: (please circle)	Bailer type: Plastic Teflon
	Pump type: Peristaltic Submersible Micro-purge Amazon Other:

Well Gauging and Purge Volume Calculations									
Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm	Volume of water in well / V $= Pr \times r \times h$ V = volume in litres P = 3.14159 r = radius in cm h = height of water column in cm
Conversion Factor (volume in factor L/m)	0.49	1.96	7.85	12.3	17.7	31.4	49.1	70.7	
Total Well Depth	(-) Water level	(=) Water Column							
<u>5.025</u> m	(-) <u>3.162</u> m	(=) <u>1.863</u> m							
	Water Column	(x) Conversion Factor	(=) Litres per 1 Well Volume						
	<u>1.863</u> m	(x) <u>1.96</u>	(=) <u>3.66</u> L						
Depth to product: _____ m	Product Thickness: _____ m	Verified with Bailer: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N							

Water Quality Parameters								
Beginning purge time:			Ending purge time:				Pump Intake Depth (mbtoc):	
Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments
<u>4.5</u>	<u>2:30pm</u>	_____	_____	_____	_____	_____	_____	<u>brown turbidity, no odour. Pumping ceased due to insufficient water volume.</u>
<u>4</u>	<u>2:45</u>	_____	_____	_____	_____	_____	_____	<u>brown turbidity clearing with ongoing pumping, no odour.</u>
<u>3</u>	<u>3pm</u>	_____	_____	_____	_____	_____	_____	<u>As above.</u>
<u>2</u>	<u>3:15</u>	_____	_____	_____	_____	_____	_____	<u>As above.</u>
<u>0.15</u>	<u>3:20</u>	_____	_____	_____	_____	_____	_____	<u>As above.</u>
<u>0.95</u>	<u>3:20</u>	_____	_____	_____	_____	_____	_____	
<u>74 well volumes removed considered redeveloped.</u>								
*pH, temp, cond readings not necessary if well is purged to Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth								

<u>11.5</u>	Total Well Volume Actual amount of water prior to sampling	Sample time _____	Containers used _____
<u>13.165</u>	Flow rate mL/minute	Did field parameters stabilise? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA	Was the well dry purged? <input type="checkbox"/> Y <input checked="" type="checkbox"/> N

Field QC Checks			
Was pre-cleaned sampling equipment used for these samples?	Y	N	
Was pre-cleaning sampling equipment properly protected from contamination?	Y	N	
Was documentation of equipment conducted?	Y	N	NA
Were air bubbles present in vials at time of collection?	Y	N	NA
Was sample for metals field filtered prior to preservations?	Y	N	NA
Duplicate sample collected?	Y	N	Duplicate sample ID _____
Rinsate blank collected?	Y	N	Rinsate blank ID _____



Groundwater - Well Sampling Data Form

Job Information	
Date: 10/12/13	Time: arrive 3:45 depart
Project Name: SYMPHONY	Project Number: 0224198
Site Location: LIDWELL_CO	Sampler: TH
Well ID: LG_MW04	Weather: CLEAR + HOT + WINDY

Equipment	
Water quality equipment description:	Interface probe number: Aestech IP 4261 30m
Purging equipment: (please circle)	Bailer type: Plastic Teflon Pump type: Peristaltic Submersible Micro-purge Amazon Other:

Well Gauging and Purge Volume Calculations									
Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm	Volume of water in well / V $V = \pi r^2 \times h$ V = volume in litres $P = 3.14159$ r = radius in cm h = height of water column in cm
Conversion Factor (volume in factor L/m)	0.49	1.96	7.85	12.3	17.7	31.4	49.1	70.7	
Total Well Depth (-) Water level (=) Water Column	5.022 m (-) 2.323 m (=) 2.699 m								
Water Column (x) Conversion Factor (=) Litres per 1 Well Volume		2.70 m (x) 1.96 (=) 5.30 L							
Depth to product: _____ m	Product Thickness: _____ m	Verified with Bailer: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N							

Water Quality Parameters									
Beginning purge time:			Ending purge time:				Pump Intake Depth (mbtoc):		
Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments	
3	3:55							ground to be dry, no odour, pumped dry	
2.5	4:05							As above	
1.5	4:15							As above	
0.5	4:20							As above	
TOUCH OF SITES WITH IP									
3	4:55							no turbidity, clearing with depth, no odour	
1L	5:06							TO BE CONTINUED TOMORROW	
2L	5:12/13							As above, clearing, no odour	
2.5	8:15							slight turbidity, clearing, no odour	
2	8:25							As above	
1.5	8:30							pH, temp, cond readings not necessary if well is purged dry	
Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / strong odour / drawdown depth									
20 L	Total Well Volume			Actual amount of water prior to sampling			Sample time		
	Flow rate mL/minute			Did field parameters stabilise?			Was the well dry purged?		

Field QC Checks			
Was pre-cleaned sampling equipment used for these samples?	Y	N	
Was pre-cleaning sampling equipment properly protected from contamination?	Y	N	
Was documentation of equipment conducted?	Y	N	NA
Were air bubbles present in vials at time of collection?	Y	N	NA
Was sample for metals field filtered prior to preservations?	Y	N	NA
Duplicate sample collected?	Y	N	Duplicate sample ID _____
Rinsate blank collected?	Y	N	Rinsate blank ID _____



Groundwater - Well Sampling Data Form

Well Development		Job Information	
Date: 12/12/13	Time: arrive 9:15am.	depart 10:20am	
Project Name: SYMPHONY	Project Number: 0224198		
Site Location: LIDDELL - LO	Sampler: JM		
Well ID: LO-MW05	Weather: CLEAR & HOT.		

Equipment			
Water quality equipment description: _____		Interface probe number: Gotech IP #4261 30m	
Purging equipment: (please circle)	Bailer type: Plastic	Teflon	
	Pump type: Peristaltic	<u>Submersible</u>	Micro-purge Amazon Other:

Well Gauging and Purge Volume Calculations									
Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm	
Conversion Factor (volume in factor L/m)	0.49	1.96	7.85	12.3	17.7	31.4	49.1	70.7	
Total Well Depth	(-) Water level		(=) Water Column						
5.972 m	(-) 2.834 m		(=) 3.138 m						
	Water Column		(x) Conversion Factor		(=) Litres per 1 Well Volume				
	3.138 m		(x) 1.96		(=) 6.15 L				
Depth to product: _____ m	Product Thickness: _____ m		Verified with Bailer: <input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N						

Water Quality Parameters								
Beginning purge time:			Ending purge time:				Pump Intake Depth (mbtoc):	
Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments
7	8:27							Hydrocarbon odour on pump
3	9:40							fast pump, mostly clear.
								hydrocarbon odour, clear, not log to bed
								with pump to remove sediment but little present
1	9:50							As above
0.5	10am							slow to recharge
0.25	10:05							
SLOW RECHARGE CONSIDERED PUMPED DRY								

*pH, temp, cond readings not necessary if well is purged dry

Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth

Total Well Volume	Actual amount of water prior to sampling	Sample time	Containers used
Flow rate mL/minute	Did field parameters stabilise? <input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/> NA	Was the well dry purged? <input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N	

Field QC Checks			
Was pre-cleaned sampling equipment used for these samples?	Y	N	
Was pre-cleaning sampling equipment properly protected from contamination?	Y	N	
Was documentation of equipment conducted?	Y	N	NA
Were air bubbles present in vials at time of collection?	Y	N	NA
Was sample for metals field filtered prior to preservations?	Y	N	NA
Duplicate sample collected?	Y	N	Duplicate sample ID _____
Rinsate blank collected?	Y	N	Rinsate blank ID _____



Groundwater - Well Sampling Data Form

Well Development		Job Information	
Date: 12/12/13	Time: arrive 10:25am	Project Name: SYMPHONY	Project Number: 0224198
Site Location: LIODELL - LO	Sampler: TH	Well ID: LO - MW06	Weather: HOT & CLEAR

Equipment	
Water quality equipment description: _____	Interface probe number: Geotech IP#4261 30w
Purging equipment: (please circle)	Bailer type: Plastic Teflon
	Pump type: Peristaltic <u>Submersible</u> Micro-purge Amazon Other:

Well Gauging and Purge Volume Calculations									
Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm	Volume of water in well / V = Pr x r x h V = volume in litres P = 3.14159 r = radius in cm h = height of water column in cm
Conversion Factor (volume in factor L/m)	0.49	1.96	7.85	12.3	17.7	31.4	49.1	70.7	
Total Well Depth (-) Water level (=) Water Column	7.080 m (-) 2.930 m (=) 4.15 m								
Water Column (x) Conversion Factor (=) Litres per 1 Well Volume	4.15 m (x) 1.96 (=) 8.134 L								
Depth to product: _____ m	Product Thickness: _____ m	Verified with Bailer: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N							

Water Quality Parameters								
Beginning purge time:		Ending purge time:				Pump Intake Depth (mbtoc):		
Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments
13	10:43							hydrocarbon above on probe, from turbidity, well agitated with pump to remove collected sediment
5.5	10:50							hydrocarbon above
5	11am							As above
8.5	11:15							As above, turbidity not clearing
8	11:25							As above
2	11:30							As above - turbidity slightly clearing
3	11:35							As above - " " " " with pumping
3	11:40							consistent recharge above
4	11:45							As above

*pH, temp, cond readings not necessary if well is purged dry

Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth

52L	Total Well Volume	CONSIDERED DEVELOPED	Sample time	Containers used
	Actual amount of water prior to sampling	7.6 well volumes		
	Flow rate mL/minute	Did field parameters stabilise?	Y N NA	Was the well dry purged?
				Y N

Field QC Checks		
Was pre-cleaned sampling equipment used for these samples?	Y	N
Was pre-cleaning sampling equipment properly protected from contamination?	Y	N
Was documentation of equipment conducted?	Y	N NA
Were air bubbles present in vials at time of collection?	Y	N NA
Was sample for metals field filtered prior to preservations?	Y	N NA
Duplicate sample collected?	Y	N
Rinsate blank collected?	Y	N

Duplicate sample ID _____
Rinsate blank ID _____



Groundwater - Well Sampling Data Form

WELL DEVELOPMENT		Job Information	
Date: 13/12/13	Project Name: SUMPTON	Time: arrive 8:10am	depart 8:50am
Site Location: LIDELL	Well ID: LD - MW08	Project Number: 022498	Sampler: TH
		Weather: HOT & CLEAR	

Equipment	
Water quality equipment description:	Interface probe number: Geotech IP#126130m
Purging equipment: (please circle)	Bailer type: Plastic Teflon Pump type: Peristaltic <u>Submersible</u> Micro-purge Amazon Other:

Well Gauging and Purge Volume Calculations									
Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm	Volume of water in well / V = Pr x r x h V = volume in litres. P = 3.14159 r = radius in cm h = height of water column in cm
Conversion Factor (volume in factor L/m)	0.49	1.96	7.85	12.3	17.7	31.4	49.1	70.7	
Total Well Depth	(-) Water level	(=) Water Column							
9.825 m	(-) 3.041 m	(=) 6.784 m							
			Water Column	(x) Conversion Factor	(=) Litres per 1 Well Volume				
			6.784 m	(x) 1.96	(=) 13.30 L				
Depth to product: _____ m		Product Thickness: _____ m		Verified with Bailer: <input checked="" type="checkbox"/> <input type="checkbox"/>					

Water Quality Parameters								
Beginning purge time:		Ending purge time:				Pump Intake Depth (mbtoc):		
Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments
80L	8:15							can turbidity well agitated, slight hydrocarbon odor.
60	8:35							As above
RAPID RECHARGE 210 WELL VOLUMES REMOVED DEVELOPED.								

*pH, temp, cond readings not necessary if well is purged dry

Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth

Total Well Volume	Actual amount of water prior to sampling	Sample time	Containers used
Flow rate	mL/minute	Did field parameters stabilise? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA	Was the well dry purged? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N

Field QC Checks			
Was pre-cleaned sampling equipment used for these samples?	Y	N	
Was pre-cleaning sampling equipment properly protected from contamination?	Y	N	
Was documentation of equipment conducted?	Y	N	NA
Were air bubbles present in vials at time of collection?	Y	N	NA
Was sample for metals field filtered prior to preservations?	Y	N	NA
Duplicate sample collected?	Y	N	Duplicate sample ID _____
Rinsate blank collected?	Y	N	Rinsate blank ID _____



Groundwater - Well Sampling Data Form

Well Development		Job Information	
Date: 12/12/13	Time: arrive	Time: depart	
Project Name: SYMPHONY	Project Number: 0224198		
Site Location: LIDDELL	Sampler: TH		
Well ID: LG-MW10	Weather: Hot + Clear		

Equipment			
Water quality equipment description: _____		Interface probe number: Cotech IP #126130	
Purging equipment: (please circle)	Bailer type: Plastic	Teflon	
	Pump type: Peristaltic	Submersible	Micro-purge Amazon Other:

Well Gauging and Purge Volume Calculations									
Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm	Volume of water in well / V = $\pi r^2 \times h$ V = volume in litres P = 3.14159 r = radius in cm h = height of water column in cm
Conversion Factor (volume in factor L/m)	0.49	1.96	7.85	12.3	17.7	31.4	49.1	70.7	
Total Well Depth (-) Water level (=) Water Column	5.780 m (-) 2.609 m (=) 3.171 m								
(Sediment on bottom of well)	Water Column (x) Conversion Factor (=) Litres per 1 Well Volume		3.171 m (x) 1.96 (=) 6.22 L						
Depth to product: _____ m	Product Thickness: _____ m	Verified with Bailer: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N							

Water Quality Parameters									
Beginning purge time:			Ending purge time:				Pump Intake Depth (mbtoc):		
Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments	
11L	12:55							Brown turbidity, odour (impedance on sediment at bottom of well, well grouted with pump to remove sediment)	
17L	1:03							as above	
12L	1:13							Brown turbidity, odour slightly, impedance, odour, well grouted with pump.	
12L	1:20							as above.	
8L	1:27							stopped pumping to get another drum	
12L	1:31							brown turbid, well grouted, impedance odour.	
8L	1:36							As above	
RAPID RECHARGE 710 WELL VOLUMES REMOVED DEVELOPED							Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth		

80L	Total Well Volume	Actual amount of water prior to sampling	Sample time	Containers used
	Flow rate	mL/minute	Did field parameters stabilise? <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA	Was the well dry purged? <input type="checkbox"/> Y <input checked="" type="checkbox"/> N

Field QC Checks			
Was pre-cleaned sampling equipment used for these samples?	Y	N	
Was pre-cleaning sampling equipment properly protected from contamination?	Y	N	
Was documentation of equipment conducted?	Y	N	NA
Were air bubbles present in vials at time of collection?	Y	N	NA
Was sample for metals field filtered prior to preservations?	Y	N	NA
Duplicate sample collected?	Y	N	Duplicate sample ID _____
Rinsate blank collected?	Y	N	Rinsate blank ID _____



Groundwater - Well Sampling Data Form

Well Development		Job Information	
Date: 12/12/13	Time: arrive 2:30pm	depart 3:10pm	
Project Name: SYMPHONY	Project Number: 0224198		
Site Location: LIDDELL	Sampler: TH		
Well ID: LO-MW11	Weather: HOT + CLEAR		

Equipment			
Water quality equipment description: —		Interface probe number: Catech IP#4261 30a	
Purging equipment: (please circle)	Bailer type: Plastic	Teflon	
	Pump type: Peristaltic	Submersible	Micro-purge Amazon Other:

Well Gauging and Purge Volume Calculations									
Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm	Volume of water in well / V = $\pi r^2 h$ V = volume in litres P = 3.14159 r = radius in cm h = height of water column in cm
Conversion Factor (volume in factor L/m)	0.49	1.96	7.85	12.3	17.7	31.4	49.1	70.7	
Total Well Depth	(-) Water level	(=) Water Column							
5.035 m	(-) 2.42 m	(=) 2.615 m							
			Water Column	(x) Conversion Factor	(=) Litres per 1 Well Volume				
			2.615 m	(x) 1.96	(=) 5.13 L				
Depth to product: — m		Product Thickness: — m		Verified with Bailer: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N					

Water Quality Parameters								
Beginning purge time:			Ending purge time:				Pump Intake Depth (mbtoc):	
Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments
7	2:30	—	—	—	—	—	—	Dark grey turbidity, hydro carbon odour, well agitated
1.5	2:35	—	—	—	—	—	—	As above
0.5	2:45	—	—	—	—	—	—	As above
0.25	2:55	—	—	—	—	—	—	" "
0.05	3:05	—	—	—	—	—	—	" "
*pH, temp, cond readings not necessary if well is purged dry						Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth		
Total Well Volume			Actual amount of water prior to sampling			Sample time		Containers used
Flow rate			mL/minute			Did field parameters stabilise?		Was the well dry purged?
						Y N NA		Y N

Field QC Checks			
Was pre-cleaned sampling equipment used for these samples?	Y	N	
Was pre-cleaning sampling equipment properly protected from contamination?	Y	N	
Was documentation of equipment conducted?	Y	N	NA
Were air bubbles present in vials at time of collection?	Y	N	NA
Was sample for metals field filtered prior to preservations?	Y	N	NA
Duplicate sample collected?	Y	N	Duplicate sample ID _____
Rinsate blank collected?	Y	N	Rinsate blank ID _____



Groundwater - Well Sampling Data Form

WELL DEVELOPMENT		Job Information	
Date: 13/12/13		Time: arrive 7:15am	depart 7:45am
Project Name: SYMPHONY		Project Number: 0224198	
Site Location: LIODELL		Sampler: TH	
Well ID: 40-MW12		Weather: CLEAR + FINE	

Equipment	
Water quality equipment description: _____	Interface probe number: <u>Watch IP #1261-30m</u>
Purging equipment: (please circle)	Bailer type: Plastic Pump type: Peristaltic <u>Submersible</u> Micro-purge Amazon Other:

Well Gauging and Purge Volume Calculations										
Casing Diameter	25mm	<u>50mm</u>	100mm	125mm	150mm	200mm	250mm	300mm	Volume of water in well / V = Pr x r x h V = volume in litres. P = 3.14159 r = radius in cm h = height of water column in cm	
Conversion Factor (volume in factor L/m)	0.49	<u>1.96</u>	7.85	12.3	17.7	31.4	49.1	70.7		
Total Well Depth (-) Water level (=) Water Column	<u>5.049</u> m (-)	<u>3.421</u> m (=)	<u>1.628</u> m							
Water Column (x) Conversion Factor (=) Litres per 1 Well Volume	<u>1.628</u> m (x)	<u>1.96</u> (=)	<u>3.19</u>							
Depth to product: _____ m	Product Thickness: _____ m	Verified with Bailer: <input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N								

Water Quality Parameters									
Beginning purge time:			Ending purge time:				Pump Intake Depth (mbtoc):		Comments
Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm		
10L	7:18							from turbidity well agitated with pump to remove sediment, hydrocarbon odor present, turbidity clearing with pumping	
10L	7:25							As above	
6.5L	7:30							As above hydrocarbon odor less apparent	
5.5	7:35							As above	
8	7:40							As above - turbidity clearing ^{even follow agitation}	
710 WELL VOLUMES REMOVED DEVELOPED									
*pH, temp, cond readings not necessary if well is purged dry						Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth			

<u>40</u>	Total Well Volume	Sample time _____	Containers used _____
	Actual amount of water prior to sampling		
	Flow rate mL/minute	Did field parameters stabilise? <input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/> NA	Was the well dry purged? <input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N

Field QC Checks			
Was pre-cleaned sampling equipment used for these samples?	<input checked="" type="checkbox"/> Y	<input checked="" type="checkbox"/> N	
Was pre-cleaning sampling equipment properly protected from contamination?	<input checked="" type="checkbox"/> Y	<input checked="" type="checkbox"/> N	
Was documentation of equipment conducted?	<input checked="" type="checkbox"/> Y	<input checked="" type="checkbox"/> N	<input checked="" type="checkbox"/> NA
Were air bubbles present in vials at time of collection?	<input checked="" type="checkbox"/> Y	<input checked="" type="checkbox"/> N	<input checked="" type="checkbox"/> NA
Was sample for metals field filtered prior to preservations?	<input checked="" type="checkbox"/> Y	<input checked="" type="checkbox"/> N	<input checked="" type="checkbox"/> NA
Duplicate sample collected?	<input checked="" type="checkbox"/> Y	<input checked="" type="checkbox"/> N	Duplicate sample ID _____
Rinsate blank collected?	<input checked="" type="checkbox"/> Y	<input checked="" type="checkbox"/> N	Rinsate blank ID _____



Groundwater - Well Sampling Data Form

WELL DEVELOPMENT		Job Information	
Date: 12/12/13	Time: arrive 4:35pm	depart 9:45.	
Project Name: SUMPION	Project Number: 0224198		
Site Location: LIDDELL - LO	Sampler: TH		
Well ID: LO - MW13	Weather: HOT + CLEAR		

Equipment			
Water quality equipment description: _____		Interface probe number: Cestek IP#4261 30m	
Purging equipment: (please circle)	Bailer type: Plastic	Teflon	
	Pump type: Peristaltic	<u>Submersible</u>	Micro-purge Amazon Other:

Well Gauging and Purge Volume Calculations									
Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm	Volume of water in well / V $= Pr \times r \times h$ V = volume in litres P = 3.14159 r = radius in cm h = height of water column in cm
Conversion Factor (volume in factor L/m)	0.49	1.96	7.85	12.3	17.7	31.4	49.1	70.7	
Total Well Depth	(-) Water level	(=) Water Column							
9.007 m	(-) 1.877 m	(=) 7.13 m							
Water Column			(x) Conversion Factor	(=) Litres per 1 Well Volume					
7.13 m			(x) 1.96	(=) 13.97 L					
Depth to product: _____ m	Product Thickness: _____ m		Verified with Bailer: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N						

Water Quality Parameters									
Beginning purge time:				Ending purge time:				Pump Intake Depth (mbtoc):	
Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments	
120L	4:30 - 4:45							slight odour, grey turbidity at start cleaning to water body with oxygen pumping, well was intermitted by agitation to remove sediment STOPPED PUMPING (NO MORE CONTAINERS) QUICK RECHARGE	
79 WELL VOLUMES REMOVED CONSIDERED DEVELOPED									
*pH, temp, cond readings not necessary if well is purged dry						Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth			
Total Well Volume Actual amount of water prior to sampling				Sample time _____		Containers used _____			
Flow rate mL/minute				Did field parameters stabilise? <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA		Was the well dry purged? <input type="checkbox"/> Y <input type="checkbox"/> N			

Field QC Checks			
Was pre-cleaned sampling equipment used for these samples?	Y	N	
Was pre-cleaning sampling equipment properly protected from contamination?	Y	N	
Was documentation of equipment conducted?	Y	N	NA
Were air bubbles present in vials at time of collection?	Y	N	NA
Was sample for metals field filtered prior to preservations?	Y	N	NA
Duplicate sample collected?	Y	N	Duplicate sample ID _____
Rinsate blank collected?	Y	N	Rinsate blank ID _____



Groundwater - Well Sampling Data Form

Job Information	
WEEL DEVELOPMENT.	
Date: 9/12/13	Time: arrive 11am depart 12.30pm
Project Name: SYMPHONY	Project Number: 0224198
Site Location: LIDDELL-LO	Sampler: TH
Well ID: LO-MW-14	Weather: HOT + CLEAR + WINDY.

Equipment	
Water quality equipment description:	Interface probe number: Geotech IP 426130m
Purging equipment: (please circle)	Bailer type: Plastic Teflon Pump type: Peristaltic <u>Submersible</u> Micro-purge Amazon Other:

Well Gauging and Purge Volume Calculations									
Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm	
Conversion Factor (volume in factor L/m)	0.49	1.96	7.85	12.3	17.7	31.4	49.1	70.7	
Total Well Depth	(-) Water level	(=) Water Column							
13.885 m	(-) 1.917 m	(=) 11.968 m							
			Water Column	(x) Conversion Factor	(=) Litres per 1 Well Volume				
			11.97 m	(x) 1.96	(=) 23.46 L				
Depth to product: _____ m		Product Thickness: _____ m		Verified with Bailer: <input type="checkbox"/> Y <input checked="" type="checkbox"/> N					

Water Quality Parameters								
Beginning purge time:			Ending purge time:				Pump Intake Depth (mbtoc):	
Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments
60	11:05 - 11:14							Dark brown turbidity, clearing to grey cloudy with purging odour present on first inspection, not present in subsequent inspections pumping was stopped to empty containers
100	11:30 - 11:45							no odour, minor (light grey) turbidity - no slowing of purging.
80	12: - 12:20							No odour slight grey darkness, no issue with recharge.
<p>> 10 well volumes removed</p> <p>DEVELOPED</p>								
*pH, temp, cond readings not necessary if well is purged dry						Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth		

Total Well Volume Actual amount of water prior to sampling	Sample time _____	Containers used _____
Flow rate mL/minute	Did field parameters stabilise? <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA	Was the well dry purged? <input type="checkbox"/> Y <input type="checkbox"/> N

Field QC Checks			
Was pre-cleaned sampling equipment used for these samples?	<input type="checkbox"/> Y	<input type="checkbox"/> N	
Was pre-cleaning sampling equipment properly protected from contamination?	<input type="checkbox"/> Y	<input type="checkbox"/> N	
Was documentation of equipment conducted?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
Were air bubbles present in vials at time of collection?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
Was sample for metals field filtered prior to preservations?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
Duplicate sample collected?	<input type="checkbox"/> Y	<input type="checkbox"/> N	Duplicate sample ID _____
Rinsate blank collected?	<input type="checkbox"/> Y	<input type="checkbox"/> N	Rinsate blank ID _____



Groundwater - Well Sampling Data Form

Job Information	
Date: <u>5/12/13</u>	Time: arrive <u>7:30AM</u> depart <u>8:45</u>
Project Name: <u>SIMPHONY</u>	Project Number: <u>0224198</u>
Site Location: <u>LIDDELL LA</u>	Sampler: <u>TH</u>
Well ID: <u>10-MW16</u>	Weather: <u>OVERCAST</u>

Equipment	
Water quality equipment description: <u>←</u>	Interface probe number: <u>Cooker IP #4261 30cm</u>
Purging equipment: (please circle)	Bailer type: <u>Plastic</u> Teflon
	Pump type: <u>Peristaltic</u> <u>Submersible</u> Micro-purge Amazon Other:

Scanning little sediment at bottom of well.

Well Gauging and Purge Volume Calculations									
Casing Diameter	25mm	<u>50mm</u>	100mm	125mm	150mm	200mm	250mm	300mm	Volume of water in well / V = Pr x r x h V = volume in litres P = 3.14159 r = radius in cm h = height of water column in cm
Conversion Factor (volume in factor L/m)	0.49	<u>1.96</u>	7.85	12.3	17.7	31.4	49.1	70.7	
Total Well Depth	(-) Water level	(=) Water Column							
<u>10.063</u> m	(-) <u>4.527</u> m	(=) <u>5.536</u> m							
			Water Column	(x) Conversion Factor	(=) Litres per 1 Well Volume				
			<u>5.536</u> m	(x) <u>1.96</u>	(=) <u>10.85</u> L				
Depth to product: <u>—</u> m		Product Thickness: <u>—</u> m		Verified with Bailer: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N					

Water Quality Parameters								
Beginning purge time:			Ending purge time:				Pump Intake Depth (mbtoc):	
Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments
<u>20L</u>	<u>7:55</u>							<u>Dark brown turbidity, no odour - changed to recharge</u>
<u>5L</u>	<u>8:05</u>							<u>As above, turbidity clearing with purging</u>
<u>2.5</u>	<u>8:12AM</u>							<u>As above.</u>
<u>1.5</u>	<u>8:20AM</u>							<u>As above.</u>
<u>0.5</u>	<u>8:15AM</u>							<u>As above.</u>
<u>RECHARGE SHOWING CONSIDERED DEVELOPED.</u>								

*pH, temp, cond readings not necessary if well is purged dry

Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth

<u>29.5L</u>	Total Well Volume	Actual amount of water prior to sampling	Sample time	Containers used
	Flow rate	mL/minute	Did field parameters stabilise?	Was the well dry purged?
			<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N

Field QC Checks		
Was pre-cleaned sampling equipment used for these samples?	Y	N
Was pre-cleaning sampling equipment properly protected from contamination?	Y	N
Was documentation of equipment conducted?	Y	N NA
Were air bubbles present in vials at time of collection?	Y	N NA
Was sample for metals field filtered prior to preservations?	Y	N NA
Duplicate sample collected?	Y	N Duplicate sample ID _____
Rinsate blank collected?	Y	N Rinsate blank ID _____



Groundwater - Well Sampling Data Form

Well Development		Job Information	
Date: 21/4/13	Time: arrive 13:20	depart 14:10	
Project Name: Project Symphony	Project Number: 022498		
Site Location: Liddell	Sampler: N.H		
Well ID: LP-MW01	Weather: Fine		

Equipment	
Water quality equipment description: NA	Interface probe number: SYD 3954
Purging equipment: (please circle)	Bailer type: Plastic Teflon
	Pump type: Peristaltic <u>Submersible</u> Micro-purge Amazon Other:

Well Gauging and Purge Volume Calculations									
Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm	Volume of water in well / V = Pr x r x h
Conversion Factor (volume in factor L/m)	0.49	1.96	7.85	12.3	17.7	31.4	49.1	70.7	V = volume in litres P = 3.14159 r = radius in cm h = height of water column in cm
Total Well Depth	(-) Water level	(=) Water Column							
9.940 m	(-) 3.085 m	(=) 6.855 m							
			Water Column	(x) Conversion Factor	(=) Litres per 1 Well Volume				
			6.855 m	(x) 1.96	(=) 13.436 L				
Depth to product: _____ m	Product Thickness: _____ m	Verified with Bailer:	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N						

Water Quality Parameters									
Beginning purge time: 13:25		Ending purge time: 14:00			Pump Intake Depth (mbtoc):				
Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments	
20	13:30							brown, turbid, becoming clearer after 1st purged dry after 20L. Allowed to recharge	
28	13:40							purged another 8L. Dry, brown, turbid. Allowed to recharge	
36	13:50							purged another 8L. brown, turbid, becoming clearer after 30L	
40	14:00							Purged another 4L. Clearer. Purged dry.	
<p>*pH, temp, cond readings not necessary if well is purged dry</p> <p>Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth</p>									
40		Total Well Volume			Sample time _____		Containers used _____		
—		Actual amount of water prior to sampling							
		Flow rate mL/minute			Did field parameters stabilise? <input type="checkbox"/> Y <input type="checkbox"/> N <input checked="" type="checkbox"/> NA		Was the well dry purged? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N		

Field QC Checks			
Was pre-cleaned sampling equipment used for these samples?	<input type="checkbox"/> Y	<input type="checkbox"/> N	
Was pre-cleaning sampling equipment properly protected from contamination?	<input type="checkbox"/> Y	<input type="checkbox"/> N	
Was documentation of equipment conducted?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
Were air bubbles present in vials at time of collection?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
Was sample for metals field filtered prior to preservations?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
Duplicate sample collected?	<input type="checkbox"/> Y	<input type="checkbox"/> N	Duplicate sample ID _____
Rinsate blank collected?	<input type="checkbox"/> Y	<input type="checkbox"/> N	Rinsate blank ID _____