Amended Certificate of Analysis

Origin Energy Resources Ltd
GPO Box 148
Brisbane QLD 4001

Attention: Xiaoda Xu

Project **11PEAD0041234**
Collected by K.Burette, P.Marty
Client Ref: 16091823

Customer Sample ID		**Talinga Inlet**	**Strathblane Inlet**	**Taloona Inlet**	**Spring Gully Inlet**
Sample Type		**Water**	**Water**	**Water**	**Water**
Date Sampled		**16/06/2011**	**29/07/2011**	**28/07/2011**	**29/07/2011**
Time Sampled		**1530 h**	**0800 h**	**1500 h**	**0900 h**
Description		**Inlet Sep. Drain Line**	**Inlet Sep. Drain Line**	**Inlet Sep. Drain Line**	**Inlet Sep. Drain Line**
External Water Tests					
Test/Reference	Unit				
Organics, Inorganics, Metals*		Attached	Attached	Attached	Attached
Langelier Index					
Test/Reference	Unit				
Langelier Index*		0.5	-2.6	-1.4	0.4
WATER ANALYSIS					
Test/Reference	Unit				
PROPERTIES: APHA 4500-H+ A,B					
pH at Measured Temp.		9.2	7.0	7.2	8.1
Measured Temp.	°C	20.8	22.6	22.8	22.7
PROPERTIES: APHA 2510 A,B					
Electrical Conductivity @ 25°C	µS/cm	2800	550	1100	7200
Resistivity @ 25°C	M.Ohm	3.57	18.18	9.09	1.39
PROPERTIES: APHA 21st Ed					
Measured Total Dissolved Solids*	mg/L	1800	260	620	4100
Measured Total Suspended Solids*	mg/L	200	42	23	120
ANIONS mg/L APHA 2320 A,B					
Hydroxide as CaCO3	mg/L	<1	<1	<1	<1
Carbonate as CaCO3	mg/L	170	<1	<1	<1
Bicarbonate as CaCO3	mg/L	910	98	180	1400
ANIONS mg/L APHA 4110					
Chloride as Cl	mg/L	290	130	260	1700
Nitrate as NO3	mg/L	<0.1	<0.1	<0.1	<0.1
Sulphate as SO4	mg/L	0.5	0.3	0.8	0.2
Total Anions	mg/L	1400	250	490	3400
ANIONS meq/L APHA 2320 A,B					
Hydroxide as CaCO3	meq/L	<0.01	<0.01	<0.01	<0.01
Carbonate as CaCO3	meq/L	3	<0.01	<0.01	<0.01
Bicarbonate as CaCO3	meq/L	18	2	4	28
ANIONS meq/L APHA 4110					
Chloride as Cl	meq/L	8	4	7	47
Nitrate as NO3	meq/L	<0.01	<0.01	<0.01	<0.01
Sulphate as SO4	meq/L	<0.01	<0.01	0.02	<0.01
Total Anions	meq/L	29	6	11	75

Customer Sample ID		Talinga Inlet	Strathblane Inlet	Taloona Inlet	Spring Gully Inlet
Sample Type		Water	Water	Water	Water
Date Sampled		16/06/2011	29/07/2011	28/07/2011	29/07/2011
Time Sampled		1530 h	0800 h	1500 h	0900 h
Description		Inlet Sep. Drain Line	Inlet Sep. Drain Line	Inlet Sep. Drain Line	Inlet Sep. Drain Line
WATER ANALYSIS					
Test/Reference	Unit				
CATIONS mg/L APHA 3120					
Potassium as K	mg/L	2	0.7	2	9
Sodium as Na	mg/L	730	110	210	1700
Calcium as Ca	mg/L	0.81	1	5	7
Magnesium as Mg	mg/L	0.64	0.27	0.55	2
Total Cations	mg/L	740	110	220	1700
CATIONS meq/L APHA 3120					
Potassium as K	meq/L	0.05	0.02	0.05	0.23
Sodium as Na	meq/L	32	5	9	75
Calcium as Ca	meq/L	0.04	0.07	0.24	0.37
Magnesium as Mg	meq/L	0.05	0.02	0.05	0.14
Total Cations	meq/L	32	5	10	75
DERIVED PARAMETERS APHA 4110 & 3120					
Ion balance (Diff * 100/Sum)	%	5	9	7	0
Acceptance Criteria	%	5	5	5	5
Satisfactory		Yes	No	No	Yes
DERIVED PARAMETERS APHA 2320 A,B					
Total Alkalinity (calc as CaCO3)	mg/L	1100	98	180	1400
DERIVED PARAMETERS APHA 4110 & 3120					
Total Cations + Anions	mg/L	2100	360	700	5100
DERIVED PARAMETERS APHA 2340 B					
Hardness (calc as CaCO3)	mg/L	5	5	14	25
DERIVED PARAMETERS APHA 2540 A,B,C,D					
Calculated Total Dissolved Solids	mg/L	1800	350	680	4600

Customer Sample ID		Strathblane Sales Gas	Strathblane Inlet Gas	Spring Gully Sales Gas	Spring Gully Inlet Gas
Sample Type		D/S of Meter Run	From Inlet Header	D/S of Meter Run	From Inlet Header
Date Sampled		25/07/2011	25/07/2011	26/07/2011	26/07/2011
Time Sampled		1000-1600h	1041-1628h	0902-1630h	0930-1643h
Pressure		11500 kPag	270 kPag	11200 kPag	200 kPag
Temperature		38°C	17°C	40°C	20°C
Cylinder ID		Cyl # 22	Cyl # 53,08,81,39,	Cyl # 30	Cyl # 98,87,30,84,
Description		D/S PCV-300-055	Between K06/05	D/S PY-400-012	Between K01/05
Test/Reference	Unit				
Water Dewpoints					
H2O Dewpt Temp (meas)*	°C	-27.4	-	-35.4	-
H2O Dewpt Press (meas)*	kPag	11400	-	9400	-
H2O Dewpt Temp (slide calc)*	°C	-66.5	-	-71	-
H2O Dewpt Press (slide calc)*	kPag	0	-	0	-

Customer Sample ID		Strathblane Sales Gas	Strathblane Inlet Gas	Spring Gully Sales Gas	Spring Gully Inlet Gas
Sample Type		D/S of Meter Run	From Inlet Header	D/S of Meter Run	From Inlet Header
Date Sampled		25/07/2011	25/07/2011	26/07/2011	26/07/2011
Time Sampled		1000-1600h	1041-1628h	0902-1630h	0930-1643h
Pressure		11500 kPag	270 kPag	11200 kPag	200 kPag
Temperature		38°C	17°C	40°C	20°C
Cylinder ID		Cyl # 22	Cyl # 53,08,81,39,	Cyl # 30	Cyl # 98,87,30,84,
Description		D/S PCV-300-055	Between K06/05	D/S PY-400-012	Between K01/05
Test/Reference	Unit				
H2O Vap (slide calc) ppm v/v*	mL/m³	4.2	-	2.2	-
H2O Vap (calc) ppm w/v*	mg/m³	3.2	-	1.7	-
Dräger Tube Test ASTM D4810					
Hydrogen Sulphide (ppm v/v)*	mL/m³	0.13	0.10	0.12	0.11
Hydrogen Sulphide (ppm w/v)*	mg/m³	0.19	0.14	0.17	0.16
Dräger Tube Test					
Name Of Component*		Carbonyl Sulfide	Carbonyl Sulfide	Carbonyl Sulfide	Carbonyl Sulfide
Component (ppm v/v)*	mL/m³	<0.1	<0.1	<0.1	<0.1
Name Of Component*		Arsine	Arsine	Arsine	Arsine
Component (ppm v/v)*	mL/m³	<0.05	<0.05	<0.05	<0.05
H2S by Wet Chemistry ASTM D2385					
Total H2S @ 15°C*	mg/m³	0.13	0.15	0.16	0.18
Total H2S (ppm v/v @ 20°C)*	mL/m³	0.09	0.10	0.11	0.12
Total Mercury ISO 6978:1992A (OS-02-01)					
Total Mercury*	µg/m³	< 0.03	< 0.03	0.05	< 0.03
Total Mercury ISO 6978:1992B (OS-02-02)					
Total Mercury*	ng/m³	3.6	26	12	> 14
Methanol and Glycol					
Triethylene Glycol*	mg/m³	< 1	-	< 1	-
Radioactive Material OS-03-01					
Radioactivity*	Bq/m³	330	-	180	-
Total Sulphur ASTM D1072					
Total Sulphur*	mg/m³	0.06	<0.05	0.05	<0.05
Odorant Analysis Results Amdel Procedure GU-P-07131					
IPM*	mg/m³	<1	<1	<1	<1
TBM*	mg/m³	<1	<1	<1	<1
THT*	mg/m³	<1	<1	<1	<1
ETSH*	mg/m³	<1	<1	<1	<1

GAS ANALYSIS

Test/Reference	Unit				
Gas Analysis In-house Method GC-01					
Argon	Mol %	0.01	0.01	0.01	0.01
Oxygen	Mol %	<0.01	<0.01	<0.01	<0.01
Nitrogen	Mol %	0.91	0.95	1.93	2.10
Helium	Mol %	0.01	0.01	0.02	0.02
Carbon Dioxide	Mol %	0.44	0.45	0.33	0.33
Hydrogen	Mol %	< 0.01	< 0.01	< 0.01	< 0.01
Carbon Monoxide	Mol %	< 0.01	< 0.01	< 0.01	< 0.01
Methane	Mol %	98.56	98.52	97.71	97.54
Ethane	Mol %	0.07	0.06	< 0.01	< 0.01

Customer Sample ID		Strathblane Sales Gas	Strathblane Inlet Gas	Spring Gully Sales Gas	Spring Gully Inlet Gas
Sample Type		D/S of Meter Run	From Inlet Header	D/S of Meter Run	From Inlet Header
Date Sampled		25/07/2011	25/07/2011	26/07/2011	26/07/2011
Time Sampled		1000-1600h	1041-1628h	0902-1630h	0930-1643h
Pressure		11500 kPag	270 kPag	11200 kPag	200 kPag
Temperature		38°C	17°C	40°C	20°C
Cylinder ID		Cyl # 22	Cyl # 53,08,81,39,	Cyl # 30	Cyl # 98,87,30,84,
Description		D/S PCV-300-055	Between K06/05	D/S PY-400-012	Between K01/05
GAS ANALYSIS					
Test/Reference	Unit				
Propane	Mol %	< 0.01	< 0.01	< 0.01	< 0.01
I-Butane	Mol %	< 0.01	< 0.01	< 0.01	< 0.01
N-Butane	Mol %	< 0.01	< 0.01	< 0.01	< 0.01
I-Pentane	Mol %	< 0.01	< 0.01	< 0.01	< 0.01
N-Pentane	Mol %	< 0.01	< 0.01	< 0.01	< 0.01
Hexanes	Mol %	< 0.01	< 0.01	< 0.01	< 0.01
Heptanes	Mol %	< 0.01	< 0.01	< 0.01	< 0.01
Octanes and higher hydrocarbons	Mol %	< 0.01	< 0.01	< 0.01	< 0.01
Total	Mol %	100.00	100.00	100.00	100.00
Gas Parameters In-house Method GC-01					
Average Molecular Weight		16.29	16.29	16.37	16.39
Lower Flammability Limit		5.07	5.07	5.12	5.13
Upper Flammability Limit		15.21	15.21	15.35	15.38
Ratio Of Upper To Lower		3.00	3.00	3.00	3.00
Wobbe Index		49.62	49.59	49.01	48.90
Compressibility Factor (Z)		0.9980	0.9980	0.9980	0.9980
Ideal Gas Density (Rel to Air = 1)		0.562	0.563	0.565	0.566
Real Gas Density (Rel to Air = 1)		0.563	0.563	0.566	0.567
Ideal Nett Calorific Value	MJ/m³	33.50	33.48	33.17	33.11
Ideal Gross Calorific Value	MJ/m³	37.21	37.19	36.84	36.78
Real Nett Calorific Value	MJ/m³	33.57	33.55	33.24	33.18
Real Gross Calorific Value	MJ/m³	37.29	37.26	36.92	36.85
Gross Calorific Val Water-Sat Gas	MJ/m³	36.56	36.53	36.19	36.13
Extended Gas In-house Method GC-04					
Nitrogen	Mol %	0.91	0.95	1.93	2.10
Carbon Dioxide	Mol %	0.44	0.45	0.33	0.33
Methane	Mol %	98.56	98.52	97.71	97.54
Ethane	Mol %	0.07	0.06	< 0.01	< 0.01
Propane	Mol %	< 0.01	< 0.01	< 0.01	< 0.01
I-Butane	Mol %	< 0.01	< 0.01	< 0.01	< 0.01
N-Butane	Mol %	< 0.01	< 0.01	< 0.01	< 0.01
I-Pentane	Mol %	< 0.01	< 0.01	< 0.01	< 0.01
N-Pentane	Mol %	< 0.01	< 0.01	< 0.01	< 0.01
Hexanes; C-6	Mol %	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzene	Mol %	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Cyclohexane	Mol %	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Heptanes; C-7	Mol %	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Methylcyclohexane	Mol %	< 0.0001	< 0.0001	< 0.0001	< 0.0001

Customer Sample ID		Strathblane Sales Gas	Strathblane Inlet Gas	Spring Gully Sales Gas	Spring Gully Inlet Gas
Sample Type		D/S of Meter Run	From Inlet Header	D/S of Meter Run	From Inlet Header
Date Sampled		25/07/2011	25/07/2011	26/07/2011	26/07/2011
Time Sampled		1000-1600h	1041-1628h	0902-1630h	0930-1643h
Pressure		11500 kPag	270 kPag	11200 kPag	200 kPag
Temperature		38°C	17°C	40°C	20°C
Cylinder ID		Cyl # 22	Cyl # 53,08,81,39,	Cyl # 30	Cyl # 98,87,30,84,
Description		D/S PCV-300-055	Between K06/05	D/S PY-400-012	Between K01/05
GAS ANALYSIS					
Test/Reference	Unit				
Toluene	Mol %	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Octanes; C-8	Mol %	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Ethylbenzene + Xylenes	Mol %	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Nonanes; C-9	Mol %	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Decanes; C-10	Mol %	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Undecanes; C-11	Mol %	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Dodecanes; C-12	Mol %	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Tridecanes; C-13	Mol %	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Tetradecanes; C14+	Mol %	< 0.0001	< 0.0001	< 0.0001	< 0.0001

Customer Sample ID		Taloona Sales Gas	Taloona Inlet Gas	Talinga Sales Gas	Talinga Inlet Gas
Sample Type		D/S of Meter Run	From Inlet Header	D/S of Meter Run	From Inlet Header
Date Sampled		28/07/2011	28/07/2011	16/06/2011	16/06/2011
Time Sampled		0927-1624h	0958-1646h	0739-1651h	0950-1711h
Pressure		11210 kPag	170 kPag	11550 kPag	200 kPag
Temperature		25°C	19°C	37.3°C	21°C
Cylinder ID		Cyl # 27	Cyl # 37,76,07,13,	Cyl # 98	Cyl # 13,84,87,81
Description		D/S PCV-500-055	Between K01/02	D/S of SDV	Between K4404-07/08
Test/Reference	Unit				
Water Dewpoints					
H2O Dewpt Temp (meas)*	°C	-40.4	-	-27.4	-
H2O Dewpt Press (meas)*	kPag	11100	-	11450	-
H2O Dewpt Temp (slide calc)*	°C	-75.8	-	-67	-
H2O Dewpt Press (slide calc)*	kPag	0	-	0	-
H2O Vap (slide calc) ppm v/v*	mL/m³	1.1	-	4.1	-
H2O Vap (calc) ppm w/v*	mg/m³	0.84	-	3.1	-
Dräger Tube Test ASTM D4810					
Hydrogen Sulphide (ppm v/v)*	mL/m³	0.11	0.10	0.11	0.07
Hydrogen Sulphide (ppm w/v)*	mg/m³	0.16	0.14	0.16	0.10
Dräger Tube Test					
Name Of Component*		Carbonyl Sulfide	Carbonyl Sulfide	-	Carbonyl Sulfide
Component (ppm v/v)*	mL/m³	<0.1	<0.1	-	<0.1
Name Of Component*		Arsine	Arsine	-	-
Component (ppm v/v)*	mL/m³	<0.05	<0.05	-	-

Customer Sample ID		Taloona Sales Gas	Taloona Inlet Gas	Talinga Sales Gas	Talinga Inlet Gas
Sample Type		D/S of Meter Run	From Inlet Header	D/S of Meter Run	From Inlet Header
Date Sampled		28/07/2011	28/07/2011	16/06/2011	16/06/2011
Time Sampled		0927-1624h	0958-1646h	0739-1651h	0950-1711h
Pressure		11210 kPag	170 kPag	11550 kPag	200 kPag
Temperature		25°C	19°C	37.3°C	21°C
Cylinder ID		Cyl # 27	Cyl # 37,76,07,13,	Cyl # 98	Cyl # 13,84,87,81
Description		D/S PCV-500-055	Between K01/02	D/S of SDV	Between K4404-07/08
Test/Reference	Unit				
H2S by Wet Chemistry ASTM D2385					
Total H2S @ 15°C*	mg/m³	0.07	0.11	0.05	0.04
Total H2S (ppm v/v @ 20°C)*	mL/m³	0.05	0.08	0.03	0.03
Total Mercury ISO 6978:1992A (OS-02-01)					
Total Mercury*	µg/m³	< 0.03	< 0.03	< 0.03	0.03
Total Mercury ISO 6978:1992B (OS-02-02)					
Total Mercury*	ng/m³	2.8	1.9	> 70	170
Methanol and Glycol					
Triethylene Glycol*	mg/m³	< 1	-	< 1	-
Arsenic					
Arsenic in gas*	µg/m³	-	-	<0.1	<0.1
Radioactive Material OS-03-01					
Radioactivity*	Bq/m³	320	-	130	-
Total Sulphur ASTM D1072					
Total Sulphur*	mg/m³	0.03	<0.05	0.1	<0.05
Odorant Analysis Results Amdel Procedure GU-P-07131					
IPM*	mg/m³	<1	<1	<1	<1
TBM*	mg/m³	<1	<1	<1	<1
THT*	mg/m³	<1	<1	<1	<1
ETSH*	mg/m³	<1	<1	<1	<1
GAS ANALYSIS					
Test/Reference	Unit				
Gas Analysis In-house Method GC-01					
Argon	Mol %	0.01	0.01	0.03	0.03
Oxygen	Mol %	<0.01	<0.01	<0.01	<0.01
Nitrogen	Mol %	1.21	1.37	2.22	2.27
Helium	Mol %	0.01	0.01	0.01	0.01
Carbon Dioxide	Mol %	0.34	0.33	0.13	0.13
Hydrogen	Mol %	< 0.01	< 0.01	< 0.01	< 0.01
Carbon Monoxide	Mol %	< 0.01	< 0.01	< 0.01	< 0.01
Methane	Mol %	98.37	98.22	97.60	97.55
Ethane	Mol %	0.06	0.06	0.01	0.01
Propane	Mol %	< 0.01	< 0.01	< 0.01	< 0.01
I-Butane	Mol %	< 0.01	< 0.01	< 0.01	< 0.01
N-Butane	Mol %	< 0.01	< 0.01	< 0.01	< 0.01
I-Pentane	Mol %	< 0.01	< 0.01	< 0.01	< 0.01
N-Pentane	Mol %	< 0.01	< 0.01	< 0.01	< 0.01
Hexanes	Mol %	< 0.01	< 0.01	< 0.01	< 0.01
Heptanes	Mol %	< 0.01	< 0.01	< 0.01	< 0.01

Customer Sample ID		Taloona Sales Gas	Taloona Inlet Gas	Talinga Sales Gas	Talinga Inlet Gas
Sample Type		D/S of Meter Run	From Inlet Header	D/S of Meter Run	From Inlet Header
Date Sampled		28/07/2011	28/07/2011	16/06/2011	16/06/2011
Time Sampled		0927-1624h	0958-1646h	0739-1651h	0950-1711h
Pressure		11210 kPag	170 kPag	11550 kPag	200 kPag
Temperature		25°C	19°C	37.3°C	21°C
Cylinder ID		Cyl # 27	Cyl # 37,76,07,13,	Cyl # 98	Cyl # 13,84,87,81
Description		D/S PCV-500-055	Between K01/02	D/S of SDV	Between K4404-07/08
GAS ANALYSIS					
Test/Reference	Unit				
Octanes and higher hydrocarbons	Mol %	< 0.01	< 0.01	< 0.01	< 0.01
Total	Mol %	100.00	100.00	100.00	100.00
Gas Parameters In-house Method GC-01					
Average Molecular Weight		16.29	16.31	16.35	16.36
Lower Flammability Limit		5.08	5.09	5.12	5.12
Upper Flammability Limit		15.24	15.26	15.37	15.37
Ratio Of Upper To Lower		3.00	3.00	3.00	3.00
Wobbe Index		49.51	49.41	48.98	48.95
Compressibility Factor (Z)		0.9980	0.9980	0.9981	0.9981
Ideal Gas Density (Rel to Air = 1)		0.563	0.563	0.565	0.565
Real Gas Density (Rel to Air = 1)		0.563	0.564	0.566	0.566
Ideal Nett Calorific Value	MJ/m³	33.43	33.38	33.14	33.13
Ideal Gross Calorific Value	MJ/m³	37.13	37.07	36.81	36.79
Real Nett Calorific Value	MJ/m³	33.50	33.45	33.20	33.19
Real Gross Calorific Value	MJ/m³	37.21	37.15	36.88	36.87
Gross Calorific Val Water-Sat Gas	MJ/m³	36.48	36.42	36.16	36.15
Extended Gas In-house Method GC-04					
Nitrogen	Mol %	1.21	1.37	2.22	2.27
Carbon Dioxide	Mol %	0.34	0.33	0.13	0.13
Methane	Mol %	98.37	98.22	97.60	97.55
Ethane	Mol %	0.06	0.06	0.01	0.01
Propane	Mol %	< 0.01	< 0.01	< 0.01	< 0.01
I-Butane	Mol %	< 0.01	< 0.01	< 0.01	< 0.01
N-Butane	Mol %	< 0.01	< 0.01	< 0.01	< 0.01
I-Pentane	Mol %	< 0.01	< 0.01	< 0.01	< 0.01
N-Pentane	Mol %	< 0.01	< 0.01	< 0.01	< 0.01
Hexanes; C-6	Mol %	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzene	Mol %	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Cyclohexane	Mol %	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Heptanes; C-7	Mol %	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Methylcyclohexane	Mol %	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Toluene	Mol %	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Octanes; C-8	Mol %	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Ethylbenzene + Xylenes	Mol %	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Nonanes; C-9	Mol %	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Decanes; C-10	Mol %	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Undecanes; C-11	Mol %	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Dodecanes; C-12	Mol %	< 0.0001	< 0.0001	< 0.0001	< 0.0001

Customer Sample ID		Taloona Sales Gas	Taloona Inlet Gas	Talinga Sales Gas	Talinga Inlet Gas
Sample Type		D/S of Meter Run	From Inlet Header	D/S of Meter Run	From Inlet Header
Date Sampled		28/07/2011	28/07/2011	16/06/2011	16/06/2011
Time Sampled		0927-1624h	0958-1646h	0739-1651h	0950-1711h
Pressure		11210 kPag	170 kPag	11550 kPag	200 kPag
Temperature		25°C	19°C	37.3°C	21°C
Cylinder ID		Cyl # 27	Cyl # 37,76,07,13,	Cyl # 98	Cyl # 13,84,87,81
Description		D/S PCV-500-055	Between K01/02	D/S of SDV	Between K4404-07/08
GAS ANALYSIS					
Test/Reference	Unit				
Tridecanes; C-13	Mol %	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Tetradecanes; C14+	Mol %	< 0.0001	< 0.0001	< 0.0001	< 0.0001

Customer Sample ID		Talinga Inlet	Strathblane Inlet	Taloona Inlet	Spring Gully Inlet
Sample Type		Solids from Water	Solids from Water	Solids from Water	Solids from Water
Date Sampled		16/06/2011	29/07/2011	28/07/2011	29/07/2011
Time Sampled		1530 h	0800 h	1500 h	0900 h
Description		Inlet Sep. Drain Line	Inlet Sep. Drain Line	Inlet Sep. Drain Line	Inlet Sep. Drain Line
Test/Reference	Unit				
Carbon Content					
Carbon*	% w/w	1.3	44.2	Insufficient solids	14.0
Elemental Analysis by ICP					
Elemental Analysis*		Attached	Attached	Insufficient solids	Attached
X-Ray Diffraction					
XRD Semi-quantitative mineralogy*		Attached	Attached	Insufficient solids	Attached
SG by Pycnometer					
Specific Gravity*		2.583	1.623	Insufficient solids	2.143
Particle Size Distribution					
PSD Results*		Attached	Attached	Insufficient solids	Attached

Test Description

Water Dewpoints Water Dewpoint is calculated @ 101.3 kPa abs and the Water Vapour Content is calculated @ 101.3 kPa abs, 15°C.

Dräger Tube Test Hydrogen Sulphide results measured at 101.3 kPa abs @ 15°C.

Gas Parameters The above results are calculated on an air and water free basis assuming only the measured constituents are present. The following parameters are calculated from the above composition at 15°C and 101.325 kPa (abs) using ISO 6976 and the physical constants from the GPSA SI Engineering Data Handbook 11 th Ed.

DERIVED PARAMETERS If the ion balance in this sample is unsatisfactory it is most likely due to a component or components of the sample that is not within the scope of this analysis.

Odorant Analysis Results Results are on an "as received" sample basis
Concentrations are in mg/m3@MSC (101.325 kPaa, dry, 15C)
IPM=iso-propyl mercaptan;TBM=tert-butyl mercaptan; ETSH=ethyl mercaptan; THT=tetrahydrothiophene

Radiocative Material Measured as Radon-222 in the gas phase at 101.3 kPa abs @ 15°C.

Test Comments

Strathblane Inlet	**MISC01**	TRH C6-C36 - MGT 100a BTEX Monocyclic Aromatic Hydrocarbons - MGT 350A, USEPA8260 VOC Volatile Organics by GCMS - MGT 350A, USEPA8260 SVOC Semivolatile Organics - USEPA8270
Spring Gully Inlet	**MISC01**	TRH C6-C36 - MGT 100a BTEX Monocyclic Aromatic Hydrocarbons - MGT 350A, USEPA8260 VOC Volatile Organics by GCMS - MGT 350A, USEPA8260 SVOC Semivolatile Organics - USEPA8270
Talinga Inlet	**MISC01**	TRH C6-C36 - MGT 100a BTEX Monocyclic Aromatic Hydrocarbons - MGT 350A, USEPA8260 VOC Volatile Organics by GCMS - MGT 350A, USEPA8260 SVOC Semivolatile Organics - USEPA8270
Taloona Inlet	**MISC01**	TRH C6-C36 - MGT 100a BTEX Monocyclic Aromatic Hydrocarbons - MGT 350A, USEPA8260 VOC Volatile Organics by GCMS - MGT 350A, USEPA8260 SVOC Semivolatile Organics - USEPA8270

Report Results Information

MISC01 MGT Labmark, Accreditation No. 1261

Authorised By

Ceri Alston	Laboratory Technician	
Paul Marty	Technical Manager, Petroleum Services	
Michelle Fordham	Chemist	Accreditation No 2013
Paul Marty	Technical Manager, Petroleum Services	Accreditation No 2013
Paul Marty	Technical Manager, Petroleum Services	Accreditation Number: 1526
Valentina Pavlovic	Chemist	Accreditation No 2013

Laboratory Manager

James Dennett Operations Manager

Amended Report: Added test Comments (Method Details) for External Water Tests
This report replaces report number 876644.

- Indicates Not Requested * Indicates NATA accreditation does not cover the performance of this service

Samples will be discarded after 30 days unless otherwise notified.

The samples were collected by Laboratory staff.

mgt LabMark ENVIRONMENTAL LABORATORIES

Certificate of Analysis

Amdel - Petroleum (BV)
221 Leitchs Road
Brendale
QLD 4500

Attention: Paul Marty

NATA Accredited
Accreditation Number 1261
Site Number 1254

This document is issued in accordance with NATA's accreditation requirements. Accredited for compliance with ISO/IEC 17025. The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Report	302841-W
Client Reference	11PEAD0041234
Received Date	Jun 21, 2011

Client Sample ID			**Talinga Inlet**	**Talinga Out**	**Talinga Out**	**Talinga Out**
			Separator	**1A**	**1B**	**1C**
Sample Matrix			**Water**	**Water**	**Water**	**Water**
mgt-LabMark Sample No.			**B11-Jn58997**	**B11-Jn58998**	**B11-Jn58999**	**B11-Jn59000**
Date Sampled			**Jun 16, 2011**	**Jun 16, 2011**	**Jun 16, 2011**	**Jun 16, 2011**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9 Fraction by GC	0.02	mg/L	< 0.02	-	-	-
TRH C10-C14 Fraction by GC	0.05	mg/L	< 0.05	-	-	-
TRH C15-C28 Fraction by GC	0.1	mg/L	< 0.1	-	-	-
TRH C29-C36 Fraction by GC	0.1	mg/L	< 0.1	-	-	-
TPH C10-36 (Total)	0.1	mg/L	< 0.1	-	-	-
BTEX						
Benzene	0.001	mg/L	< 0.001	-	-	-
Toluene	0.001	mg/L	< 0.001	-	-	-
Ethylbenzene	0.001	mg/L	< 0.001	-	-	-
o-Xylene	0.001	mg/L	< 0.001	-	-	-
Total m+p-Xylenes	0.002	mg/L	< 0.002	-	-	-
Xylenes(ortho.meta and para)	0.003	mg/L	< 0.003	-	-	-
Fluorobenzene (surr.)	1	%	67	-	-	-
Volatile Organics						
1.1-Dichloroethane	0.001	mg/L	< 0.001	-	-	-
1.1-Dichloroethene	0.001	mg/L	< 0.001	-	-	-
1.1.1-Trichloroethane	0.001	mg/L	< 0.001	-	-	-
1.1.1.2-Tetrachloroethane	0.001	mg/L	< 0.001	-	-	-
1.1.2-Trichloroethane	0.001	mg/L	< 0.001	-	-	-
1.1.2.2-Tetrachloroethane	0.001	mg/L	< 0.001	-	-	-
1.2-Dibromoethane	0.001	mg/L	< 0.001	-	-	-
1.2-Dichlorobenzene	0.001	mg/L	< 0.001	-	-	-
1.2-Dichloroethane	0.001	mg/L	< 0.001	-	-	-
1.2-Dichloropropane	0.001	mg/L	< 0.001	-	-	-
1.2.3-Trichloropropane	0.001	mg/L	< 0.001	-	-	-
1.2.4-Trimethylbenzene	0.001	mg/L	< 0.001	-	-	-
1.3-Dichlorobenzene	0.001	mg/L	< 0.001	-	-	-
1.3-Dichloropropane	0.001	mg/L	< 0.001	-	-	-
1.3.5-Trimethylbenzene	0.001	mg/L	< 0.001	-	-	-
1.4-Dichlorobenzene	0.001	mg/L	< 0.001	-	-	-
2-Butanone (MEK)	0.001	mg/L	< 0.001	-	-	-
2-Propanone (Acetone)	0.001	mg/L	< 0.001	-	-	-
4-Chlorotoluene	0.001	mg/L	< 0.001	-	-	-
4-Methyl-2-pentanone (MIBK)	0.001	mg/L	< 0.001	-	-	-
Allyl chloride	0.001	mg/L	< 0.001	-	-	-
Bromobenzene	0.001	mg/L	< 0.001	-	-	-
Bromochloromethane	0.001	mg/L	< 0.001	-	-	-

Client Sample ID			Talinga Inlet Separator	Talinga Out 1A	Talinga Out 1B	Talinga Out 1C
Sample Matrix			Water	Water	Water	Water
mgt-LabMark Sample No.			B11-Jn58997	B11-Jn58998	B11-Jn58999	B11-Jn59000
Date Sampled			Jun 16, 2011	Jun 16, 2011	Jun 16, 2011	Jun 16, 2011
Test/Reference	LOR	Unit				
Bromodichloromethane	0.001	mg/L	< 0.001	-	-	-
Bromoform	0.001	mg/L	< 0.001	-	-	-
Bromomethane	0.001	mg/L	< 0.001	-	-	-
Carbon disulfide	0.001	mg/L	< 0.001	-	-	-
Carbon Tetrachloride	0.001	mg/L	< 0.001	-	-	-
Chlorobenzene	0.001	mg/L	< 0.001	-	-	-
Chloroethane	0.001	mg/L	< 0.001	-	-	-
Chloroform	0.001	mg/L	< 0.001	-	-	-
Chloromethane	0.001	mg/L	< 0.001	-	-	-
cis-1.2-Dichloroethene	0.001	mg/L	< 0.001	-	-	-
cis-1.3-Dichloropropene	0.001	mg/L	< 0.001	-	-	-
Dibromochloromethane	0.001	mg/L	< 0.001	-	-	-
Dibromomethane	0.001	mg/L	< 0.001	-	-	-
Dichlorodifluoromethane	0.001	mg/L	< 0.001	-	-	-
Iodomethane	0.001	mg/L	< 0.001	-	-	-
Isopropyl benzene (Cumene)	0.001	mg/L	< 0.001	-	-	-
Methylene Chloride	0.001	mg/L	< 0.001	-	-	-
Styrene	0.001	mg/L	< 0.001	-	-	-
Tetrachloroethene	0.001	mg/L	< 0.001	-	-	-
trans-1.2-Dichloroethene	0.001	mg/L	< 0.001	-	-	-
trans-1.3-Dichloropropene	0.001	mg/L	< 0.001	-	-	-
Trichloroethene	0.001	mg/L	< 0.001	-	-	-
Trichlorofluoromethane	0.001	mg/L	< 0.001	-	-	-
Vinyl chloride	0.001	mg/L	< 0.001	-	-	-
4-Bromofluorobenzene (surr.)	1	%	56	-	-	-
Semivolatile Organics						
2-Methyl-4.6-dinitrophenol	0.03	mg/L	< 0.03	-	-	-
1-Chloronaphthalene	0.005	mg/L	< 0.005	-	-	-
1-Naphthylamine	0.005	mg/L	< 0.005	-	-	-
1.2-Dichlorobenzene	0.005	mg/L	< 0.005	-	-	-
1.2.3-Trichlorobenzene	0.005	mg/L	< 0.005	-	-	-
1.2.3.4-Tetrachlorobenzene	0.005	mg/L	< 0.005	-	-	-
1.2.3.5-Tetrachlorobenzene	0.005	mg/L	< 0.005	-	-	-
1.2.4-Trichlorobenzene	0.005	mg/L	< 0.005	-	-	-
1.2.4.5-Tetrachlorobenzene	0.005	mg/L	< 0.005	-	-	-
1.3-Dichlorobenzene	0.005	mg/L	< 0.005	-	-	-
1.3.5-Trichlorobenzene	0.005	mg/L	< 0.005	-	-	-
1.4-Dichlorobenzene	0.005	mg/L	< 0.005	-	-	-
2-Chloronaphthalene	0.005	mg/L	< 0.005	-	-	-
2-Chlorophenol	0.003	mg/L	< 0.003	-	-	-
2-Methylnaphthalene	0.005	mg/L	< 0.005	-	-	-
2-Methylphenol (o-Cresol)	0.003	mg/L	< 0.003	-	-	-
2-Naphthylamine	0.005	mg/L	< 0.005	-	-	-
2-Nitroaniline	0.005	mg/L	< 0.005	-	-	-
2-Nitrophenol	0.01	mg/L	< 0.01	-	-	-
2-Picoline	0.005	mg/L	< 0.005	-	-	-
2.3.4.6-Tetrachlorophenol	0.01	mg/L	< 0.01	-	-	-
2.4-Dichlorophenol	0.003	mg/L	< 0.003	-	-	-
2.4-Dimethylphenol	0.003	mg/L	< 0.003	-	-	-

Client Sample ID			Talinga Inlet Separator	Talinga Out 1A	Talinga Out 1B	Talinga Out 1C
Sample Matrix			Water	Water	Water	Water
mgt-LabMark Sample No.			B11-Jn58997	B11-Jn58998	B11-Jn58999	B11-Jn59000
Date Sampled			Jun 16, 2011	Jun 16, 2011	Jun 16, 2011	Jun 16, 2011
Test/Reference	LOR	Unit				
2.4-Dinitrophenol	0.03	mg/L	< 0.03	-	-	-
2.4-Dinitrotoluene	0.005	mg/L	< 0.005	-	-	-
2.4.5-Trichlorophenol	0.01	mg/L	< 0.01	-	-	-
2.4.6-Trichlorophenol	0.01	mg/L	< 0.01	-	-	-
2.6-Dichlorophenol	0.003	mg/L	< 0.003	-	-	-
2.6-Dinitrotoluene	0.005	mg/L	< 0.005	-	-	-
3&4-Methylphenol (m&p-Cresol)	0.006	mg/L	< 0.006	-	-	-
3-Methylcholanthrene	0.005	mg/L	< 0.005	-	-	-
3.3'-Dichlorobenzidine	0.005	mg/L	< 0.005	-	-	-
4-Aminobiphenyl	0.005	mg/L	< 0.005	-	-	-
4-Bromophenyl phenyl ether	0.005	mg/L	< 0.005	-	-	-
4-Chloro-3-methylphenol	0.01	mg/L	< 0.01	-	-	-
4-Chlorophenyl phenyl ether	0.005	mg/L	< 0.005	-	-	-
4-Nitrophenol	0.03	mg/L	< 0.03	-	-	-
4.4'-DDD	0.005	mg/L	< 0.005	-	-	-
4.4'-DDE	0.005	mg/L	< 0.005	-	-	-
4.4'-DDT	0.005	mg/L	< 0.005	-	-	-
7.12-Dimethylbenz(a)anthracene	0.005	mg/L	< 0.005	-	-	-
a-BHC	0.005	mg/L	< 0.005	-	-	-
Acenaphthene	0.001	mg/L	< 0.001	-	-	-
Acenaphthylene	0.001	mg/L	< 0.001	-	-	-
Acetophenone	0.005	mg/L	< 0.005	-	-	-
Aldrin	0.005	mg/L	< 0.2	-	-	-
Aniline	0.005	mg/L	< 0.005	-	-	-
Anthracene	0.001	mg/L	< 0.001	-	-	-
b-BHC	0.005	mg/L	< 0.005	-	-	-
Benz(a)anthracene	0.001	mg/L	< 0.001	-	-	-
Benzo(a)pyrene	0.001	mg/L	< 0.001	-	-	-
Benzo(b)fluoranthene	0.001	mg/L	< 0.001	-	-	-
Benzo(g.h.i)perylene	0.001	mg/L	< 0.001	-	-	-
Benzo(k)fluoranthene	0.001	mg/L	< 0.001	-	-	-
Benzyl chloride	0.005	mg/L	< 0.005	-	-	-
Bis(2-chloroethoxy)methane	0.005	mg/L	< 0.005	-	-	-
Bis(2-chloroisopropyl)ether	0.005	mg/L	< 0.005	-	-	-
Bis(2-ethylhexyl)phthalate	0.005	mg/L	< 0.005	-	-	-
Butyl benzyl phthalate	0.005	mg/L	< 0.005	-	-	-
Chrysene	0.001	mg/L	< 0.001	-	-	-
d-BHC	0.005	mg/L	< 0.005	-	-	-
Di-n-butyl phthalate	0.005	mg/L	< 0.005	-	-	-
Di-n-octyl phthalate	0.005	mg/L	< 0.005	-	-	-
Dibenz(a.h)anthracene	0.001	mg/L	< 0.001	-	-	-
Dibenz(a.j)acridine	0.005	mg/L	< 0.005	-	-	-
Dibenzofuran	0.005	mg/L	< 0.005	-	-	-
Dieldrin	0.005	mg/L	< 0.005	-	-	-
Diethyl phthalate	0.005	mg/L	< 0.005	-	-	-
Dimethyl phthalate	0.005	mg/L	< 0.005	-	-	-
Dimethylaminoazobenzene	0.005	mg/L	< 0.005	-	-	-
Diphenylamine	0.005	mg/L	< 0.005	-	-	-
Endosulfan I	0.005	mg/L	< 0.005	-	-	-

Client Sample ID			Talinga Inlet Separator	Talinga Out 1A	Talinga Out 1B	Talinga Out 1C
Sample Matrix			Water	Water	Water	Water
mgt-LabMark Sample No.			B11-Jn58997	B11-Jn58998	B11-Jn58999	B11-Jn59000
Date Sampled			Jun 16, 2011	Jun 16, 2011	Jun 16, 2011	Jun 16, 2011
Test/Reference	LOR	Unit				
Endosulfan II	0.005	mg/L	< 0.005	-	-	-
Endosulfan sulphate	0.005	mg/L	< 0.005	-	-	-
Endrin	0.005	mg/L	< 0.005	-	-	-
Endrin aldehyde	0.005	mg/L	< 0.005	-	-	-
Endrin ketone	0.005	mg/L	< 0.005	-	-	-
Fluoranthene	0.001	mg/L	< 0.001	-	-	-
Fluorene	0.001	mg/L	< 0.001	-	-	-
g-BHC (Lindane)	0.005	mg/L	< 0.005	-	-	-
Heptachlor	0.005	mg/L	< 0.005	-	-	-
Heptachlor epoxide	0.005	mg/L	< 0.005	-	-	-
Hexachlorobenzene	0.005	mg/L	< 0.005	-	-	-
Hexachlorobutadiene	0.005	mg/L	< 0.005	-	-	-
Hexachlorocyclopentadiene	0.005	mg/L	< 0.005	-	-	-
Hexachloroethane	0.005	mg/L	< 0.005	-	-	-
Indeno(1.2.3-cd)pyrene	0.001	mg/L	< 0.001	-	-	-
Methoxychlor	0.005	mg/L	< 0.005	-	-	-
N-Nitrosodibutylamine	0.005	mg/L	< 0.005	-	-	-
N-Nitrosodipropylamine	0.005	mg/L	< 0.005	-	-	-
N-Nitrosopiperidine	0.005	mg/L	< 0.005	-	-	-
Naphthalene	0.001	mg/L	< 0.001	-	-	-
Nitrobenzene	0.05	mg/L	< 0.05	-	-	-
Pentachlorobenzene	0.005	mg/L	< 0.005	-	-	-
Pentachloronitrobenzene	0.005	mg/L	< 0.005	-	-	-
Pentachlorophenol	0.01	mg/L	< 0.01	-	-	-
Phenanthrene	0.001	mg/L	< 0.001	-	-	-
Phenol	0.003	mg/L	< 0.003	-	-	-
Pronamide	0.005	mg/L	< 0.005	-	-	-
Pyrene	0.001	mg/L	< 0.001	-	-	-
Trifluralin	0.005	mg/L	< 0.005	-	-	-
Phenol-d6 (surr.)	1	%	25	-	-	-
Nitrobenzene-d5 (surr.)	1	%	74	-	-	-
2-Fluorobiphenyl (surr.)	1	%	80	-	-	-
2.4.6-Tribromophenol (surr.)	1	%	82	-	-	-
Ammonia(N)	0.01	mg/L	2.2	-	-	-
Chemical Oxygen Demand (COD)	5	mg/L	220	-	-	-
Dissolved Organic Carbon	5	mg/L	19	-	-	-
Fluoride	0.02	mg/L	2.1	-	-	-
Nitrate & Nitrite (N)	0.05	mg/L	< 0.05	-	-	-
Nitrate (as N)	0.02	mg/L	< 0.02	-	-	-
Nitrite (as N)	0.02	mg/L	0.03	-	-	-
Phosphate ortho (P)	0.05	mg/L	0.10	-	-	-
Phosphate total (P)	0.05	mg/L	0.19	-	-	-
Reactive Silica (as SiO2)	5	mg/L	9.1	-	-	-
Sulphide (Soluble)	0.05	mg/L	< 0.05	-	-	-
Total Carbon	0.01	mg/L	190	-	-	-
Total Kjeldahl Nitrogen (N)	0.1	mg/L	2.9	-	-	-
Total Nitrogen (N)	0.2	mg/L	2.9	-	-	-
Total Organic Carbon	5	mg/L	130	-	-	-

Client Sample ID			Talinga Inlet Separator	Talinga Out 1A	Talinga Out 1B	Talinga Out 1C
Sample Matrix			Water	Water	Water	Water
mgt-LabMark Sample No.			B11-Jn58997	B11-Jn58998	B11-Jn58999	B11-Jn59000
Date Sampled			Jun 16, 2011	Jun 16, 2011	Jun 16, 2011	Jun 16, 2011
Test/Reference	LOR	Unit				
Turbidity (NTU)	1	NTU	280	-	-	-
Silica (filtered)*	0.1	mg/L	5.1	-	-	-
Silica*	0.1	mg/L	21	-	-	-
Heavy Metals						
Aluminium	0.05	mg/L	14	-	-	-
Aluminium (filtered)	0.05	mg/L	< 0.05	-	-	-
Boron	0.05	mg/L	0.28	-	-	-
Boron (filtered)	0.05	mg/L	0.28	-	-	-
Iron	0.05	mg/L	8.8	-	-	-
Iron (filtered)	0.05	mg/L	0.13	-	-	-
Molybdenum	0.005	mg/L	< 0.005	-	-	-
Molybdenum (filtered)	0.005	mg/L	< 0.005	-	-	-
Selenium	0.001	mg/L	< 0.001	-	-	-
Selenium (filtered)	0.001	mg/L	< 0.001	-	-	-
Silver	0.005	mg/L	< 0.005	-	-	-
Silver (filtered)	0.005	mg/L	< 0.005	-	-	-
Strontium	0.005	mg/L	0.15	-	-	-
Strontium (filtered)	0.005	mg/L	0.13	-	-	-
Tin	0.005	mg/L	< 0.005	-	-	-
Tin (filtered)	0.005	mg/L	< 0.005	-	-	-
Arsenic	0.001	mg/L	0.001	< 0.001	< 0.001	< 0.001
Barium	0.02	mg/L	0.15	-	-	-
Beryllium	0.001	mg/L	< 0.001	-	-	-
Cadmium	0.0002	mg/L	< 0.0002	-	-	-
Chromium	0.001	mg/L	0.002	-	-	-
Cobalt	0.001	mg/L	0.002	-	-	-
Copper	0.001	mg/L	0.002	-	-	-
Lead	0.001	mg/L	0.003	-	-	-
Manganese	0.005	mg/L	0.11	-	-	-
Mercury	0.0001	mg/L	< 0.0001	-	-	-
Nickel	0.001	mg/L	0.002	-	-	-
Vanadium	0.005	mg/L	0.007	-	-	-
Zinc	0.001	mg/L	0.011	-	-	-
Arsenic (filtered)	0.001	mg/L	0.001	-	-	-
Barium (filtered)	0.02	mg/L	0.15	-	-	-
Beryllium (filtered)	0.001	mg/L	< 0.001	-	-	-
Cadmium (filtered)	0.0002	mg/L	< 0.0002	-	-	-
Chromium (filtered)	0.001	mg/L	< 0.001	-	-	-
Cobalt (filtered)	0.001	mg/L	< 0.001	-	-	-
Copper (filtered)	0.001	mg/L	< 0.001	-	-	-
Lead (filtered)	0.001	mg/L	< 0.001	-	-	-
Manganese (filtered)	0.005	mg/L	0.017	-	-	-
Mercury (filtered)	0.0001	mg/L	< 0.0001	-	-	-
Nickel (filtered)	0.001	mg/L	< 0.001	-	-	-
Vanadium (filtered)	0.005	mg/L	< 0.005	-	-	-
Zinc (filtered)	0.001	mg/L	0.005	-	-	-

mgt LabMark ENVIRONMENTAL LABORATORIES

Certificate of Analysis

Amdel - Petroleum (BV)
221 Leitchs Road
Brendale
QLD 4500

Attention: Paul Marty

NATA
WORLD RECOGNISED ACCREDITATION

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Report 307243-W
Client Reference 11PEAD0041234
Received Date Aug 01, 2011

Client Sample ID			**TALOONA INLET SEPARATOR**	**STRATHBLANE INLET SEPARATOR**	**SPRING GULLY INLET SEPARATOR**
Sample Matrix			**Water**	**Water**	**Water**
mgt-LabMark Sample No.			**M11-Au00196**	**M11-Au00197**	**M11-Au00198**
Date Sampled			**Jul 28, 2011**	**Jul 29, 2011**	**Jul 29, 2011**
Test/Reference	LOR	Unit			
Total Recoverable Hydrocarbons					
TRH C6-C9	0.02	mg/L	< 0.02	< 0.02	< 0.02
TRH C10-C14	0.05	mg/L	1.9	< 0.05	< 0.05
TRH C15-C28	0.1	mg/L	1.2	< 0.1	0.4
TRH C29-C36	0.1	mg/L	0.4	< 0.1	0.1
TRH C10-36 (Total)	0.1	mg/L	3.5	< 0.1	0.5
BTEX					
Benzene	0.001	mg/L	< 0.001	< 0.001	< 0.001
Toluene	0.001	mg/L	< 0.001	< 0.001	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001
o-Xylene	0.001	mg/L	< 0.001	< 0.001	< 0.001
Total m+p-Xylenes	0.002	mg/L	< 0.002	< 0.002	< 0.002
Xylenes(ortho.meta and para)	0.003	mg/L	< 0.003	< 0.003	< 0.003
Fluorobenzene (surr.)	1	%	90	110	106
Volatile Organics					
1.1-Dichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001
1.1-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001
1.1.1-Trichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001
1.1.1.2-Tetrachloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001
1.1.2-Trichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001
1.1.2.2-Tetrachloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001
1.2-Dibromoethane	0.001	mg/L	< 0.001	< 0.001	< 0.001
1.2-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001
1.2-Dichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001
1.2-Dichloropropane	0.001	mg/L	< 0.001	< 0.001	< 0.001
1.2.3-Trichloropropane	0.001	mg/L	< 0.001	< 0.001	< 0.001
1.2.4-Trimethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001
1.3-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001
1.3-Dichloropropane	0.001	mg/L	< 0.001	< 0.001	< 0.001
1.3.5-Trimethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001
1.4-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001
2-Butanone (MEK)	0.001	mg/L	< 0.001	< 0.001	< 0.001
2-Propanone (Acetone)	0.001	mg/L	< 0.001	< 0.001	< 0.001
4-Chlorotoluene	0.001	mg/L	< 0.001	< 0.001	< 0.001
4-Methyl-2-pentanone (MIBK)	0.001	mg/L	< 0.001	< 0.001	< 0.001
Allyl chloride	0.001	mg/L	< 0.001	< 0.001	< 0.001
Bromobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001

Client Sample ID			TALOONA INLET SEPARATOR	STRATHBLANE INLET SEPARATOR	SPRING GULLY INLET SEPARATOR
Sample Matrix			Water	Water	Water
mgt-LabMark Sample No.			M11-Au00196	M11-Au00197	M11-Au00198
Date Sampled			Jul 28, 2011	Jul 29, 2011	Jul 29, 2011
Test/Reference	LOR	Unit			
Bromochloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001
Bromodichloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001
Bromoform	0.001	mg/L	< 0.001	< 0.001	< 0.001
Bromomethane	0.001	mg/L	< 0.001	< 0.001	< 0.001
Carbon disulfide	0.001	mg/L	< 0.001	< 0.001	< 0.001
Carbon Tetrachloride	0.001	mg/L	< 0.001	< 0.001	< 0.001
Chlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001
Chloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001
Chloroform	0.001	mg/L	< 0.001	< 0.001	< 0.001
Chloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001
cis-1.2-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001
cis-1.3-Dichloropropene	0.001	mg/L	< 0.001	< 0.001	< 0.001
Dibromochloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001
Dibromomethane	0.001	mg/L	< 0.001	< 0.001	< 0.001
Dichlorodifluoromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001
Iodomethane	0.001	mg/L	< 0.001	< 0.001	< 0.001
Isopropyl benzene (Cumene)	0.001	mg/L	< 0.001	< 0.001	< 0.001
Methylene Chloride	0.001	mg/L	< 0.001	< 0.001	< 0.001
Styrene	0.001	mg/L	< 0.001	< 0.001	< 0.001
Tetrachloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001
trans-1.2-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001
trans-1.3-Dichloropropene	0.001	mg/L	< 0.001	< 0.001	< 0.001
Trichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001
Trichlorofluoromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001
Vinyl chloride	0.001	mg/L	< 0.001	< 0.001	< 0.001
4-Bromofluorobenzene (surr.)	1	%	82	97	93
Semivolatile Organics					
2-Methyl-4.6-dinitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03
1-Chloronaphthalene	0.005	mg/L	< 0.005	< 0.005	< 0.005
1-Naphthylamine	0.005	mg/L	< 0.005	< 0.005	< 0.005
1.2-Dichlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005
1.2.3-Trichlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005
1.2.3.4-Tetrachlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005
1.2.3.5-Tetrachlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005
1.2.4-Trichlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005
1.2.4.5-Tetrachlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005
1.3-Dichlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005
1.3.5-Trichlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005
1.4-Dichlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005
2-Chloronaphthalene	0.005	mg/L	< 0.005	< 0.005	< 0.005
2-Chlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003
2-Methylnaphthalene	0.005	mg/L	< 0.005	< 0.005	< 0.005
2-Methylphenol (o-Cresol)	0.003	mg/L	< 0.003	< 0.003	< 0.003
2-Naphthylamine	0.005	mg/L	< 0.005	< 0.005	< 0.005
2-Nitroaniline	0.005	mg/L	< 0.005	< 0.005	< 0.005
2-Nitrophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01
2-Picoline	0.005	mg/L	< 0.005	< 0.005	< 0.005
2.3.4.6-Tetrachlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01

Client Sample ID			TALOONA INLET SEPARATOR	STRATHBLANE INLET SEPARATOR	SPRING GULLY INLET SEPARATOR
Sample Matrix			Water	Water	Water
mgt-LabMark Sample No.			M11-Au00196	M11-Au00197	M11-Au00198
Date Sampled			Jul 28, 2011	Jul 29, 2011	Jul 29, 2011
Test/Reference	LOR	Unit			
2.4-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003
2.4-Dimethylphenol	0.003	mg/L	< 0.003	< 0.003	< 0.003
2.4-Dinitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03
2.4-Dinitrotoluene	0.005	mg/L	< 0.005	< 0.005	< 0.005
2.4.5-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01
2.4.6-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01
2.6-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003
2.6-Dinitrotoluene	0.005	mg/L	< 0.005	< 0.005	< 0.005
3&4-Methylphenol (m&p-Cresol)	0.006	mg/L	< 0.006	< 0.006	< 0.006
3-Methylcholanthrene	0.005	mg/L	< 0.005	< 0.005	< 0.005
3.3'-Dichlorobenzidine	0.005	mg/L	< 0.005	< 0.005	< 0.005
4-Aminobiphenyl	0.005	mg/L	< 0.005	< 0.005	< 0.005
4-Bromophenyl phenyl ether	0.005	mg/L	< 0.005	< 0.005	< 0.005
4-Chloro-3-methylphenol	0.01	mg/L	< 0.01	< 0.01	< 0.01
4-Chlorophenyl phenyl ether	0.005	mg/L	< 0.005	< 0.005	< 0.005
4-Nitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03
4.4'-DDD	0.005	mg/L	< 0.005	< 0.005	< 0.005
4.4'-DDE	0.005	mg/L	< 0.005	< 0.005	< 0.005
4.4'-DDT	0.005	mg/L	< 0.005	< 0.005	< 0.005
7.12-Dimethylbenz(a)anthracene	0.005	mg/L	< 0.005	< 0.005	< 0.005
a-BHC	0.005	mg/L	< 0.005	< 0.005	< 0.005
Acenaphthene	0.001	mg/L	< 0.001	< 0.001	< 0.001
Acenaphthylene	0.001	mg/L	< 0.001	< 0.001	< 0.001
Acetophenone	0.005	mg/L	< 0.005	< 0.005	< 0.005
Aldrin	0.005	mg/L	< 0.05	< 0.01	< 0.1
Aniline	0.005	mg/L	< 0.005	< 0.005	< 0.005
Anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001
b-BHC	0.005	mg/L	< 0.005	< 0.005	< 0.005
Benz(a)anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001
Benzo(a)pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001
Benzo(b)fluoranthene	0.001	mg/L	< 0.001	< 0.001	< 0.001
Benzo(g.h.i)perylene	0.001	mg/L	< 0.001	< 0.001	< 0.001
Benzo(k)fluoranthene	0.001	mg/L	< 0.001	< 0.001	< 0.001
Benzyl chloride	0.005	mg/L	< 0.005	< 0.005	< 0.005
Bis(2-chloroethoxy)methane	0.005	mg/L	< 0.005	< 0.005	< 0.005
Bis(2-chloroisopropyl)ether	0.005	mg/L	< 0.005	< 0.005	< 0.005
Bis(2-ethylhexyl)phthalate	0.005	mg/L	< 0.005	< 0.005	< 0.005
Butyl benzyl phthalate	0.005	mg/L	< 0.005	< 0.005	< 0.005
Chrysene	0.001	mg/L	< 0.001	< 0.001	< 0.001
d-BHC	0.005	mg/L	< 0.005	< 0.005	< 0.005
Di-n-butyl phthalate	0.005	mg/L	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate	0.005	mg/L	< 0.005	< 0.005	< 0.005
Dibenz(a.h)anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001
Dibenz(a.j)acridine	0.005	mg/L	< 0.005	< 0.005	< 0.005
Dibenzofuran	0.005	mg/L	< 0.005	< 0.005	< 0.005
Dieldrin	0.005	mg/L	< 0.005	< 0.005	< 0.005
Diethyl phthalate	0.005	mg/L	< 0.005	< 0.005	< 0.005
Dimethyl phthalate	0.005	mg/L	< 0.005	< 0.005	< 0.005

Client Sample ID			TALOONA INLET SEPARATOR	STRATHBLANE INLET SEPARATOR	SPRING GULLY INLET SEPARATOR
Sample Matrix			Water	Water	Water
mgt-LabMark Sample No.			M11-Au00196	M11-Au00197	M11-Au00198
Date Sampled			Jul 28, 2011	Jul 29, 2011	Jul 29, 2011
Test/Reference	LOR	Unit			
Dimethylaminoazobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005
Diphenylamine	0.005	mg/L	< 0.005	< 0.005	< 0.005
Endosulfan I	0.005	mg/L	< 0.005	< 0.005	< 0.005
Endosulfan II	0.005	mg/L	< 0.005	< 0.005	< 0.005
Endosulfan sulphate	0.005	mg/L	< 0.005	< 0.005	< 0.005
Endrin	0.005	mg/L	< 0.005	< 0.005	< 0.005
Endrin aldehyde	0.005	mg/L	< 0.005	< 0.005	< 0.005
Endrin ketone	0.005	mg/L	< 0.005	< 0.005	< 0.005
Fluoranthene	0.001	mg/L	< 0.001	< 0.001	< 0.001
Fluorene	0.001	mg/L	< 0.001	< 0.001	< 0.001
g-BHC (Lindane)	0.005	mg/L	< 0.005	< 0.005	< 0.005
Heptachlor	0.005	mg/L	< 0.005	< 0.005	< 0.005
Heptachlor epoxide	0.005	mg/L	< 0.005	< 0.005	< 0.005
Hexachlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005
Hexachlorobutadiene	0.005	mg/L	< 0.005	< 0.005	< 0.005
Hexachlorocyclopentadiene	0.005	mg/L	< 0.005	< 0.005	< 0.005
Hexachloroethane	0.005	mg/L	< 0.005	< 0.005	< 0.005
Indeno(1.2.3-cd)pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001
Methoxychlor	0.005	mg/L	< 0.005	< 0.005	< 0.005
N-Nitrosodibutylamine	0.005	mg/L	< 0.005	< 0.005	< 0.005
N-Nitrosodipropylamine	0.005	mg/L	< 0.005	< 0.005	< 0.005
N-Nitrosopiperidine	0.005	mg/L	< 0.005	< 0.005	< 0.005
Naphthalene	0.001	mg/L	< 0.001	< 0.001	< 0.001
Nitrobenzene	0.05	mg/L	< 0.05	< 0.05	< 0.05
Pentachlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005
Pentachloronitrobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005
Pentachlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01
Phenanthrene	0.001	mg/L	< 0.001	< 0.001	< 0.001
Phenol	0.003	mg/L	< 0.003	< 0.003	< 0.003
Pronamide	0.005	mg/L	< 0.005	< 0.005	< 0.005
Pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001
Trifluralin	0.005	mg/L	< 0.005	< 0.005	< 0.005
Phenol-d6 (surr.)	1	%	22	34	21
Nitrobenzene-d5 (surr.)	1	%	74	145	75
2-Fluorobiphenyl (surr.)	1	%	68	122	66
2.4.6-Tribromophenol (surr.)	1	%	80	108	68
Ammonia(N)	0.01	mg/L	8.8	6.6	5.1
Chemical Oxygen Demand (COD)	5	mg/L	280	< 5	96
Dissolved Organic Carbon	5	mg/L	100	11	22
Fluoride	0.02	mg/L	0.17	< 0.02	2.9
Nitrate & Nitrite (N)	0.05	mg/L	< 0.05	< 0.05	< 0.05
Nitrate (as N)	0.02	mg/L	< 0.02	< 0.02	< 0.02
Nitrite (as N)	0.02	mg/L	< 0.02	< 0.02	< 0.02
Phosphate total (P)	0.05	mg/L	0.12	0.33	0.87
Reactive Silica (as SiO2)	5	mg/L	< 5	< 5	< 5
Silica as SiO2	10	mg/L	< 10	< 10	< 10
Sulphide (Soluble)	0.05	mg/L	< 0.05	< 0.05	< 0.05

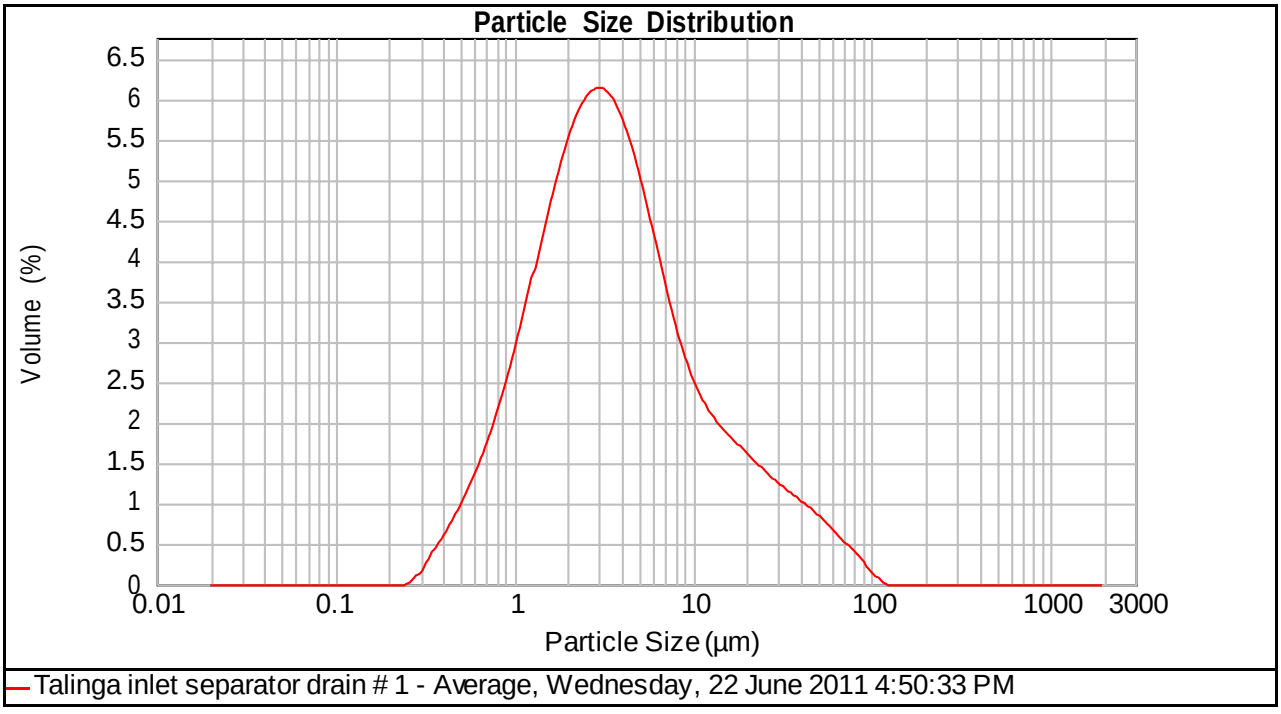
Client Sample ID			TALOONA INLET SEPARATOR	STRATHBLANE INLET SEPARATOR	SPRING GULLY INLET SEPARATOR
Sample Matrix			Water	Water	Water
mgt-LabMark Sample No.			M11-Au00196	M11-Au00197	M11-Au00198
Date Sampled			Jul 28, 2011	Jul 29, 2011	Jul 29, 2011
Test/Reference	LOR	Unit			
Total Carbon	0.01	mg/L	120	24	160
Total Kjeldahl Nitrogen (N)	0.1	mg/L	7.8	4.3	5.7
Total Organic Carbon	5	mg/L	110	14	29
Turbidity (NTU)	1	NTU	93	190	83
Total Nitrogen (as N)					
Total Nitrogen (N)	0.2	mg/L	7.8	4.3	5.7
Heavy Metals					
Aluminium	0.05	mg/L	0.09	0.26	0.85
Aluminium (filtered)	0.05	mg/L	< 0.05	< 0.05	< 0.05
Arsenic (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001
Barium	0.02	mg/L	0.89	0.43	2.4
Barium (filtered)	0.02	mg/L	0.88	0.43	1.5
Beryllium	0.001	mg/L	< 0.001	< 0.001	< 0.001
Beryllium (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001
Boron	0.05	mg/L	0.22	0.09	2.8
Boron (filtered)	0.05	mg/L	0.22	0.09	2.8
Cadmium (filtered)	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002
Chromium (filtered)	0.001	mg/L	< 0.001	< 0.001	0.001
Cobalt	0.001	mg/L	< 0.001	< 0.001	< 0.001
Cobalt (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001
Copper (filtered)	0.001	mg/L	< 0.001	< 0.001	0.001
Iron	0.05	mg/L	14	21	10
Iron (filtered)	0.05	mg/L	0.14	17	< 0.05
Lead (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001
Manganese	0.005	mg/L	0.25	0.16	0.14
Manganese (filtered)	0.005	mg/L	0.23	0.16	0.082
Mercury	0.0001	mg/L	< 0.0001	0.0002	0.0002
Molybdenum	0.005	mg/L	< 0.005	< 0.005	< 0.005
Molybdenum (filtered)	0.005	mg/L	< 0.005	< 0.005	< 0.005
Nickel (filtered)	0.001	mg/L	< 0.001	0.001	< 0.001
Selenium	0.001	mg/L	0.002	< 0.001	0.006
Selenium (filtered)	0.001	mg/L	< 0.001	< 0.001	0.006
Silver	0.005	mg/L	< 0.005	< 0.005	< 0.005
Silver (filtered)	0.005	mg/L	< 0.005	< 0.005	< 0.005
Strontium	0.005	mg/L	0.90	0.23	3.5
Strontium (filtered)	0.005	mg/L	0.90	0.23	3.4
Tin	0.005	mg/L	< 0.005	< 0.005	< 0.005
Tin (filtered)	0.005	mg/L	< 0.005	< 0.005	< 0.005
Vanadium	0.005	mg/L	< 0.005	< 0.005	< 0.005
Vanadium (filtered)	0.005	mg/L	< 0.005	< 0.005	< 0.005
Zinc (filtered)	0.001	mg/L	0.014	0.075	0.014
Arsenic	0.001	mg/L	< 0.001	< 0.001	< 0.001
Cadmium	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002
Chromium	0.001	mg/L	< 0.001	< 0.001	0.002
Copper	0.001	mg/L	< 0.001	0.001	0.003
Lead	0.001	mg/L	< 0.001	< 0.001	0.001
Nickel	0.001	mg/L	< 0.001	0.001	0.002
Zinc	0.001	mg/L	0.017	0.075	0.027

Client Sample ID			TALOONA INLET SEPARATOR	STRATHBLANE INLET SEPARATOR	SPRING GULLY INLET SEPARATOR
Sample Matrix			Water	Water	Water
mgt-LabMark Sample No.			M11-Au00196	M11-Au00197	M11-Au00198
Date Sampled			Jul 28, 2011	Jul 29, 2011	Jul 29, 2011
Test/Reference	LOR	Unit			
Mercury (filtered)	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001

Sample Name: Talinga inlet separator drain # 1 - Average

Result Analysis Report

d(0.1): 0.995 um **d(0.5): 3.392 um** **d (0.8) : 9.359 um** **d(0.9): 19.630 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.010	0.00	0.105	0.00	1.096	11.91	11.482	83.29	120.226	100.00	1258.925	100.00
0.011	0.00	0.120	0.00	1.259	15.07	13.183	85.22	138.038	100.00	1445.440	100.00
0.013	0.00	0.138	0.00	1.445	18.75	15.136	87.00	158.489	100.00	1659.587	100.00
0.015	0.00	0.158	0.00	1.660	22.93	17.378	88.65	181.970	100.00	1905.461	100.00
0.017	0.00	0.182	0.00	1.905	27.60	19.953	90.17	208.930	100.00	2187.762	100.00
0.020	0.00	0.209	0.00	2.188	32.65	22.909	91.58	239.883	100.00	2511.886	100.00
0.023	0.00	0.240	0.00	2.512	38.00	26.303	92.88	275.423	100.00	2884.032	100.00
0.026	0.00	0.275	0.02	2.884	43.51	30.200	94.06	316.228	100.00	3311.311	100.00
0.030	0.00	0.316	0.14	3.311	49.05	34.674	95.14	363.078	100.00	3801.894	100.00
0.035	0.00	0.363	0.46	3.802	54.46	39.811	96.13	416.869	100.00	4365.158	100.00
0.040	0.00	0.417	0.95	4.365	59.62	45.709	97.03	478.630	100.00	5011.872	100.00
0.046	0.00	0.479	1.65	5.012	64.40	52.481	97.83	549.541	100.00	5754.399	100.00
0.052	0.00	0.550	2.57	5.754	68.73	60.256	98.52	630.957	100.00	6606.934	100.00
0.060	0.00	0.631	3.75	6.607	72.54	69.183	99.09	724.436	100.00	7585.776	100.00
0.069	0.00	0.724	5.23	7.586	75.84	79.433	99.52	831.764	100.00	8709.636	100.00
0.079	0.00	0.832	7.04	8.710	78.68	91.201	99.82	954.993	100.00	10000.000	100.00
0.091	0.00	0.955	9.25	10.000	81.13	104.713	99.96	1096.478	100.00		

Measured by: wxpauwin01mp... **Result units:** Volume **Measured:** Wednesday, 22 June 2011 4:50:33 PM

Particle RI: 1.544 **Obscuration:** 11.07 % **Weighted Residual:** 0.537 %

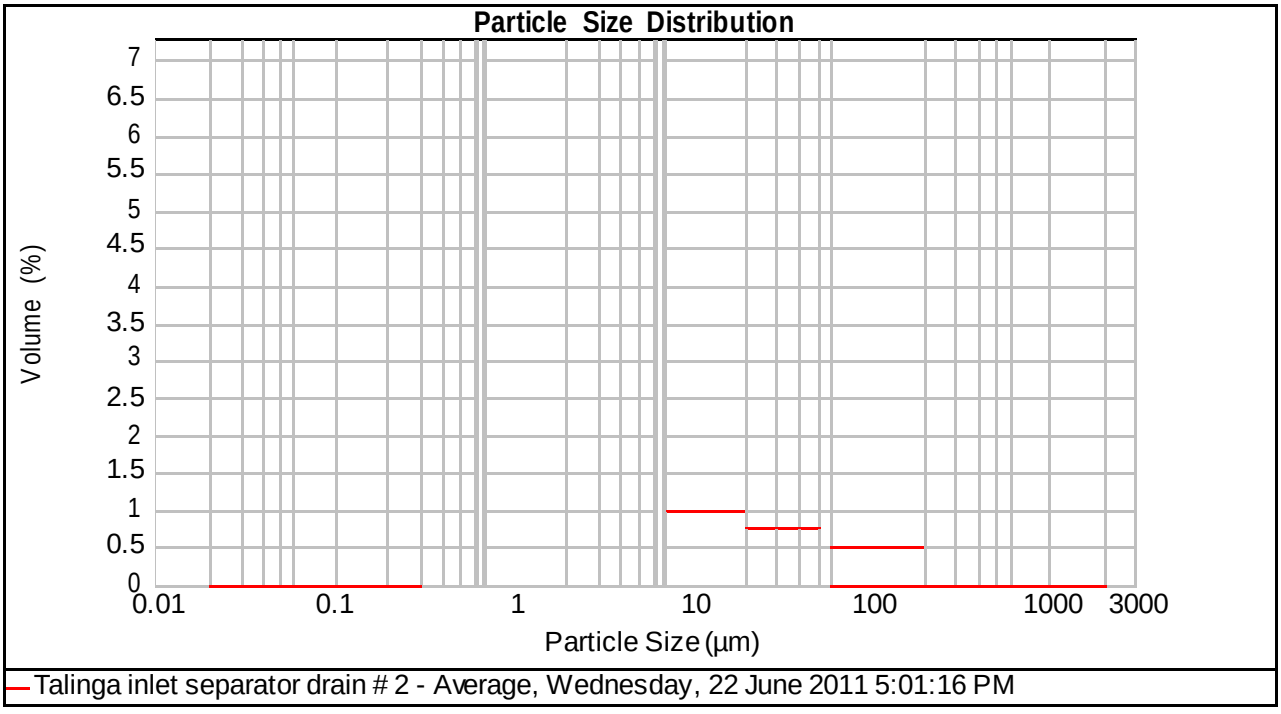
Dispersant Name: Water **Concentration:** 0.0032 %Vol **Vol. Weighted Mean D[4,3]:** 7.886 um

Disclaimer: The laser sizing analysis was determnied using a refractive index (RI) value selected as being typical of the material tested. The actual RI for the sample was not measured. Variations in RI could result in a variation in the particle size distribution measured by the laser sizing. The valiidity of the RI used is represented by the weighted residual value shown on the laser sizing report. A value of <1% is considered very accurate.

Sample Name: Talinga inlet separator drain # 2 - Average

Result Analysis Report

d(0.1): 0.944 um **d(0.5): 3.065 um** **d (0.8) : 6.940 um** **d(0.9): 12.429 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.010	0.00	0.105	0.00	1.096	13.15	11.482	89.12	120.226	100.00	1258.925	100.00
0.011	0.00	0.120	0.00	1.259	16.60	13.183	90.59	138.038	100.00	1445.440	100.00
0.013	0.00	0.138	0.00	1.445	20.60	15.136	91.79	158.489	100.00	1659.587	100.00
0.015	0.00	0.158	0.00	1.660	25.14	17.378	92.80	181.970	100.00	1905.461	100.00
0.017	0.00	0.182	0.00	1.905	30.19	19.953	93.67	208.930	100.00	2187.762	100.00
0.020	0.00	0.209	0.00	2.188	35.65	22.909	94.46	239.883	100.00	2511.886	100.00
0.023	0.00	0.240	0.00	2.512	41.42	26.303	95.19	275.423	100.00	2884.032	100.00
0.026	0.00	0.275	0.02	2.884	47.36	30.200	95.89	316.228	100.00	3311.311	100.00
0.030	0.00	0.316	0.14	3.311	53.34	34.674	96.56	363.078	100.00	3801.894	100.00
0.035	0.00	0.363	0.48	3.802	59.19	39.811	97.22	416.869	100.00	4365.158	100.00
0.040	0.00	0.417	1.03	4.365	64.78	45.709	97.84	478.630	100.00	5011.872	100.00
0.046	0.00	0.479	1.81	5.012	69.96	52.481	98.42	549.541	100.00	5754.399	100.00
0.052	0.00	0.550	2.83	5.754	74.63	60.256	98.93	630.957	100.00	6606.934	100.00
0.060	0.00	0.631	4.15	6.607	78.70	69.183	99.36	724.436	100.00	7585.776	100.00
0.069	0.00	0.724	5.78	7.586	82.15	79.433	99.68	831.764	100.00	8709.636	100.00
0.079	0.00	0.832	7.79	8.710	84.99	91.201	99.91	954.993	100.00	10000.000	100.00
0.091	0.00	0.955	10.23	10.000	87.28	104.713	99.98	1096.478	100.00		

Measured by: wxpauwin01mp... **Result units:** Volume **Measured:** Wednesday, 22 June 2011 5:01:16 PM

Particle RI: 1.544 **Obscuration:** 10.87 % **Weighted Residual:** 0.530 %

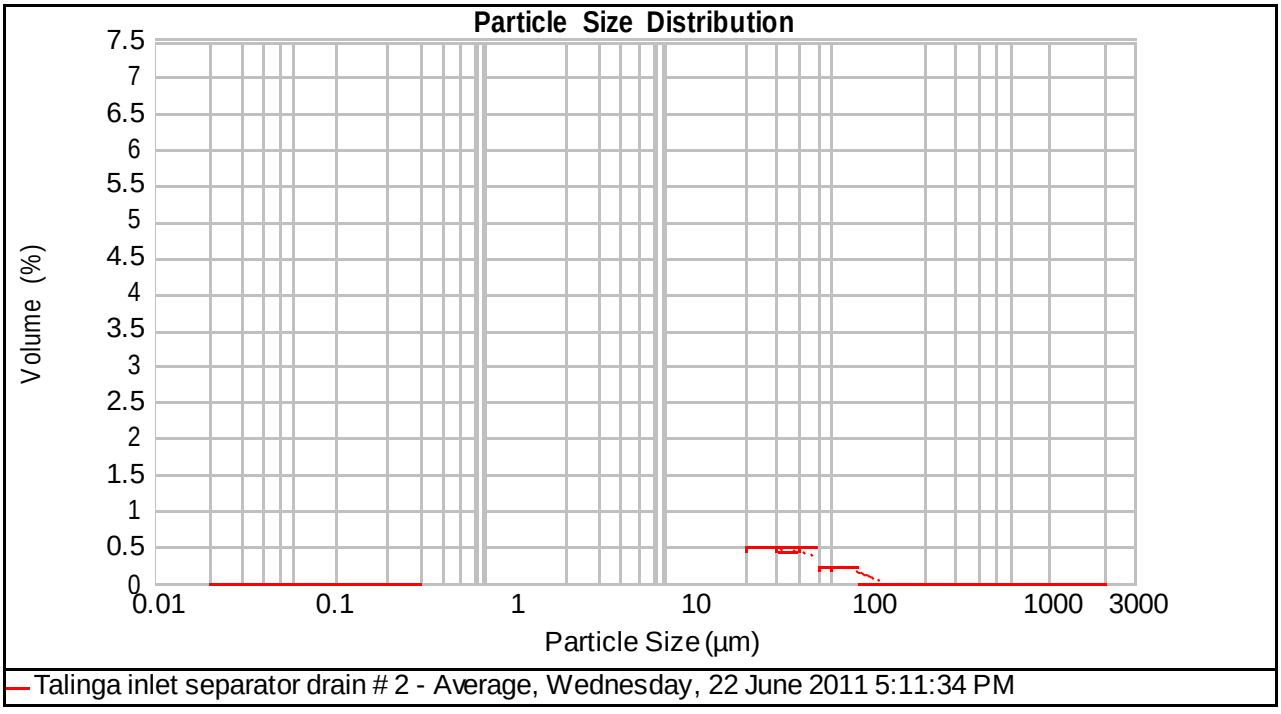
Dispersant Name: Water **Concentration:** 0.0029 %Vol **Vol. Weighted Mean D[4,3]:** 6.330 um

Disclaimer: The laser sizing analysis was determnied using a refractive index (RI) value selected as being typical of the material tested. The actual RI for the sample was not measured. Variations in RI could result in a variation in the particle size distribution measured by the laser sizing. The valiidity of the RI used is represented by the weighted residual value shown on the laser sizing report. A value of <1% is considered very accurate.

Sample Name: Talinga inlet separator drain # 2 - Average

Result Analysis Report

d(0.1): 0.928 um **d(0.5): 2.950 um** **d (0.8) : 6.263 um** **d(0.9): 9.703 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.010	0.00	0.105	0.00	1.096	13.59	11.482	92.31	120.226	100.00	1258.925	100.00
0.011	0.00	0.120	0.00	1.259	17.15	13.183	93.74	138.038	100.00	1445.440	100.00
0.013	0.00	0.138	0.00	1.445	21.29	15.136	94.83	158.489	100.00	1659.587	100.00
0.015	0.00	0.158	0.00	1.660	25.99	17.378	95.67	181.970	100.00	1905.461	100.00
0.017	0.00	0.182	0.00	1.905	31.20	19.953	96.33	208.930	100.00	2187.762	100.00
0.020	0.00	0.209	0.00	2.188	36.85	22.909	96.87	239.883	100.00	2511.886	100.00
0.023	0.00	0.240	0.00	2.512	42.82	26.303	97.32	275.423	100.00	2884.032	100.00
0.026	0.00	0.275	0.02	2.884	48.98	30.200	97.74	316.228	100.00	3311.311	100.00
0.030	0.00	0.316	0.14	3.311	55.17	34.674	98.14	363.078	100.00	3801.894	100.00
0.035	0.00	0.363	0.49	3.802	61.25	39.811	98.52	416.869	100.00	4365.158	100.00
0.040	0.00	0.417	1.05	4.365	67.06	45.709	98.88	478.630	100.00	5011.872	100.00
0.046	0.00	0.479	1.85	5.012	72.46	52.481	99.20	549.541	100.00	5754.399	100.00
0.052	0.00	0.550	2.91	5.754	77.32	60.256	99.48	630.957	100.00	6606.934	100.00
0.060	0.00	0.631	4.27	6.607	81.57	69.183	99.69	724.436	100.00	7585.776	100.00
0.069	0.00	0.724	5.96	7.586	85.16	79.433	99.85	831.764	100.00	8709.636	100.00
0.079	0.00	0.832	8.04	8.710	88.11	91.201	99.95	954.993	100.00	10000.000	100.00
0.091	0.00	0.955	10.56	10.000	90.47	104.713	100.00	1096.478	100.00		

Measured by: wxpauwin01mp... **Result units:** Volume **Measured:** Wednesday, 22 June 2011 5:11:34 PM

Particle RI: 1.544 **Obscuration:** 10.68 % **Weighted Residual:** 0.535 %

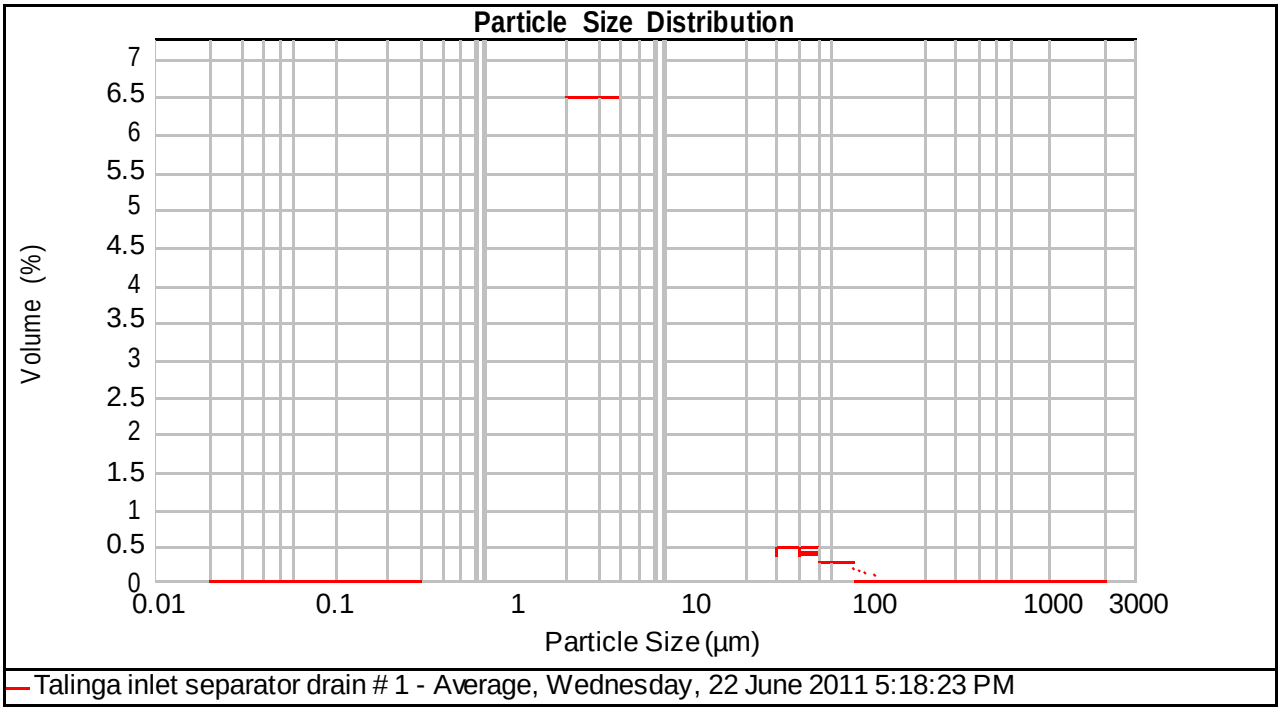
Dispersant Name: Water **Concentration:** 0.0028 %Vol **Vol. Weighted Mean D[4,3]:** 5.178 um

Disclaimer: The laser sizing analysis was determnied using a refractive index (RI) value selected as being typical of the material tested. The actual RI for the sample was not measured. Variations in RI could result in a variation in the particle size distribution measured by the laser sizing. The valiidity of the RI used is represented by the weighted residual value shown on the laser sizing report. A value of <1% is considered very accurate.

Sample Name: Talinga inlet separator drain # 1 - Average

Result Analysis Report

d(0.1): 0.952 um **d(0.5): 3.092 um** **d (0.8) : 6.977 um** **d(0.9): 11.668 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.010	0.00	0.105	0.00	1.096	12.95	11.482	89.78	120.226	100.00	1258.925	100.00
0.011	0.00	0.120	0.00	1.259	16.36	13.183	91.52	138.038	100.00	1445.440	100.00
0.013	0.00	0.138	0.00	1.445	20.33	15.136	92.96	158.489	100.00	1659.587	100.00
0.015	0.00	0.158	0.00	1.660	24.85	17.378	94.16	181.970	100.00	1905.461	100.00
0.017	0.00	0.182	0.00	1.905	29.88	19.953	95.16	208.930	100.00	2187.762	100.00
0.020	0.00	0.209	0.00	2.188	35.32	22.909	96.00	239.883	100.00	2511.886	100.00
0.023	0.00	0.240	0.00	2.512	41.07	26.303	96.71	275.423	100.00	2884.032	100.00
0.026	0.00	0.275	0.02	2.884	47.00	30.200	97.32	316.228	100.00	3311.311	100.00
0.030	0.00	0.316	0.15	3.311	52.96	34.674	97.85	363.078	100.00	3801.894	100.00
0.035	0.00	0.363	0.49	3.802	58.81	39.811	98.30	416.869	100.00	4365.158	100.00
0.040	0.00	0.417	1.03	4.365	64.40	45.709	98.70	478.630	100.00	5011.872	100.00
0.046	0.00	0.479	1.79	5.012	69.61	52.481	99.04	549.541	100.00	5754.399	100.00
0.052	0.00	0.550	2.80	5.754	74.34	60.256	99.32	630.957	100.00	6606.934	100.00
0.060	0.00	0.631	4.08	6.607	78.51	69.183	99.54	724.436	100.00	7585.776	100.00
0.069	0.00	0.724	5.68	7.586	82.11	79.433	99.72	831.764	100.00	8709.636	100.00
0.079	0.00	0.832	7.66	8.710	85.15	91.201	99.85	954.993	100.00	10000.000	100.00
0.091	0.00	0.955	10.06	10.000	87.68	104.713	99.94	1096.478	100.00		

Measured by: wxpauwin01mp... **Result units:** Volume **Measured:** Wednesday, 22 June 2011 5:18:23 PM

Particle RI: 1.544 **Obscuration:** 12.36 % **Weighted Residual:** 0.513 %

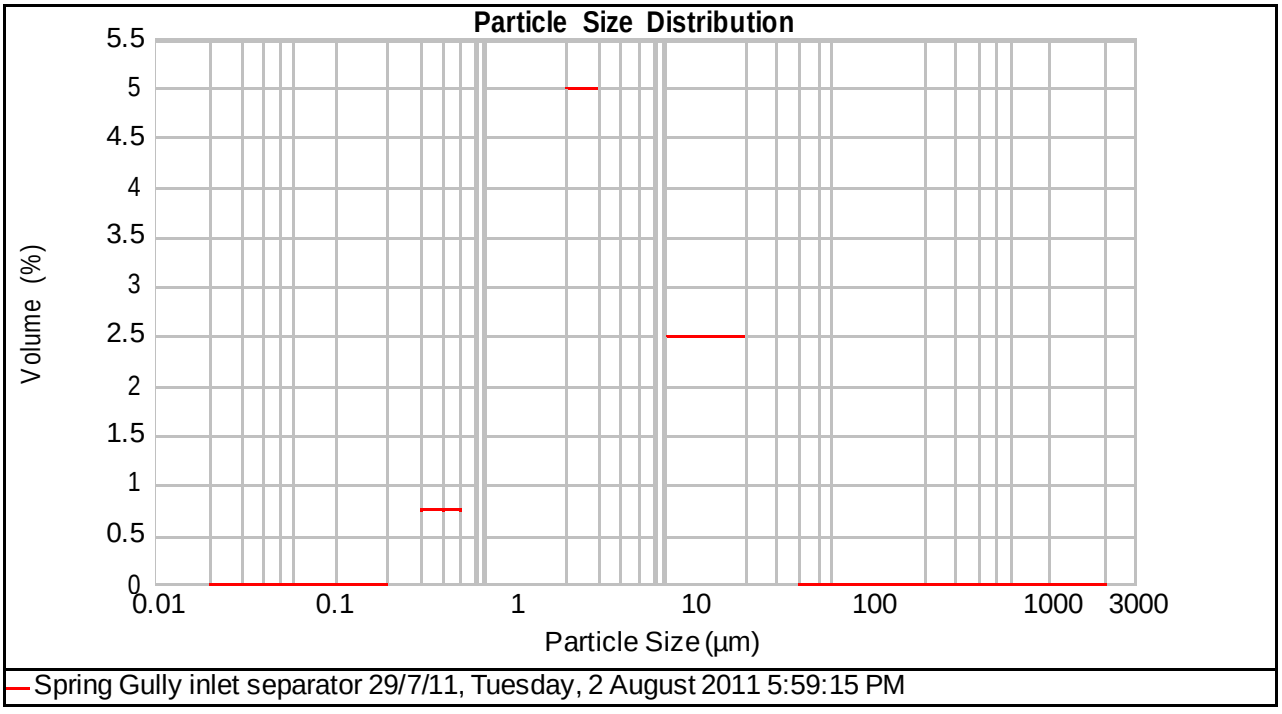
Dispersant Name: Water **Concentration:** 0.0034 %Vol **Vol. Weighted Mean D[4,3]:** 5.793 um

Disclaimer: The laser sizing analysis was determnied using a refractive index (RI) value selected as being typical of the material tested. The actual RI for the sample was not measured. Variations in RI could result in a variation in the particle size distribution measured by the laser sizing. The valiidity of the RI used is represented by the weighted residual value shown on the laser sizing report. A value of <1% is considered very accurate.

Sample Name: Spring Gully inlet separator 29/7/11

Result Analysis Report

d(0.1): 0.920 um **d(0.5): 3.648 um** **d (0.8) : 16.151 um** **d(0.9): 32.885 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.010	0.00	0.105	0.00	1.096	13.50	11.482	74.47	120.226	94.52	1258.925	100.00
0.011	0.00	0.120	0.00	1.259	16.89	13.183	76.67	138.038	96.19	1445.440	100.00
0.013	0.00	0.138	0.00	1.445	20.74	15.136	78.93	158.489	97.77	1659.587	100.00
0.015	0.00	0.158	0.00	1.660	24.93	17.378	81.22	181.970	99.03	1905.461	100.00
0.017	0.00	0.182	0.02	1.905	29.34	19.953	83.51	208.930	99.78	2187.762	100.00
0.020	0.00	0.209	0.13	2.188	33.85	22.909	85.70	239.883	100.00	2511.886	100.00
0.023	0.00	0.240	0.47	2.512	38.36	26.303	87.66	275.423	100.00	2884.032	100.00
0.026	0.00	0.275	0.99	2.884	42.80	30.200	89.25	316.228	100.00	3311.311	100.00
0.030	0.00	0.316	1.63	3.311	47.10	34.674	90.37	363.078	100.00	3801.894	100.00
0.035	0.00	0.363	2.33	3.802	51.20	39.811	91.01	416.869	100.00	4365.158	100.00
0.040	0.00	0.417	3.02	4.365	55.07	45.709	91.24	478.630	100.00	5011.872	100.00
0.046	0.00	0.479	3.71	5.012	58.65	52.481	91.24	549.541	100.00	5754.399	100.00
0.052	0.00	0.550	4.48	5.754	61.92	60.256	91.24	630.957	100.00	6606.934	100.00
0.060	0.00	0.631	5.43	6.607	64.88	69.183	91.24	724.436	100.00	7585.776	100.00
0.069	0.00	0.724	6.69	7.586	67.55	79.433	91.37	831.764	100.00	8709.636	100.00
0.079	0.00	0.832	8.41	8.710	69.98	91.201	91.94	954.993	100.00	10000.000	100.00
0.091	0.00	0.955	10.67	10.000	72.26	104.713	93.03	1096.478	100.00		

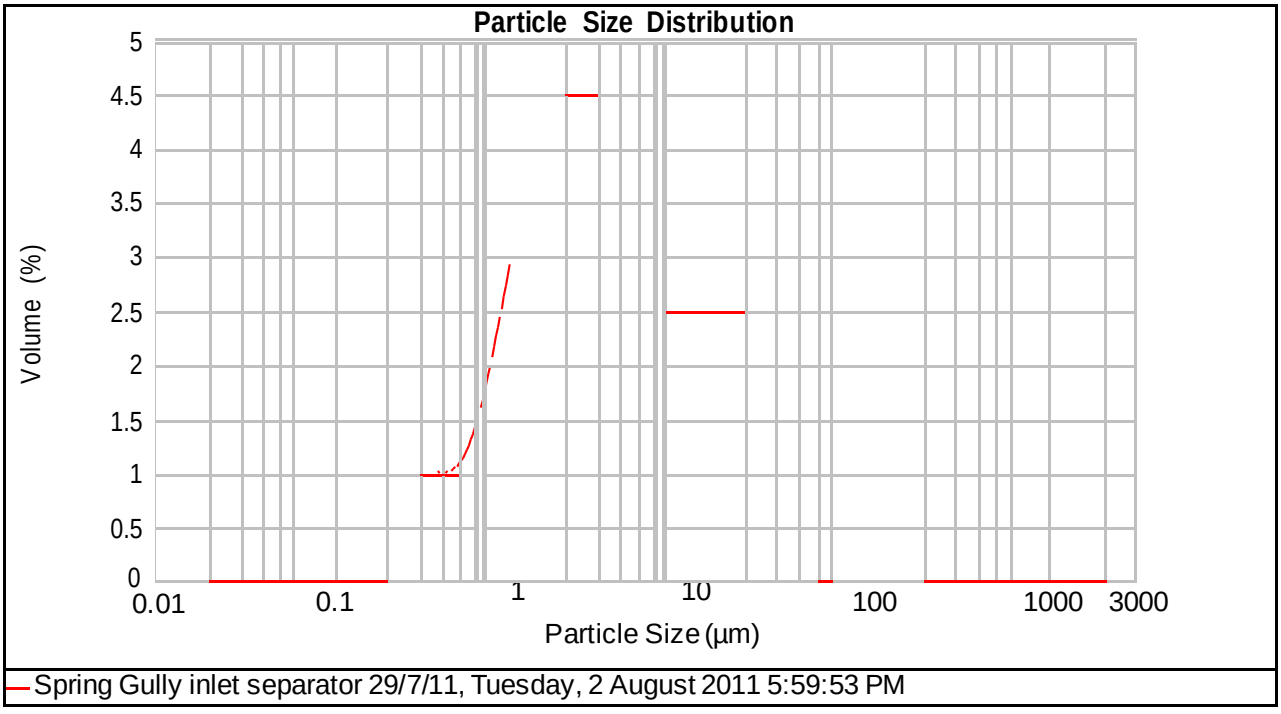
Measured by:	wxpauwin01m...	**Result units:**	Volume		**Measured:**	Tuesday, 2 August 2011 5:59:15 PM	
Particle RI:	1.544	**Obscuratio...**	10.34	%	**Weighted**	1.214	%
Dispersant Name:	Water	**Concentrati...**	0.0028	%Vol	**Vol. Weighted Mean D[4,3]:**	17.829	um

Disclaimer: The laser sizing analysis was determnied using a refractive index (RI) value selected as being typical of the material tested. The actual RI for the sample was not measured. Variations in RI could result in a variation in the particle size distribution measured by the laser sizing. The valiidity of the RI used is represented by the weighted residual value shown on the laser sizing report. A value of <1% is considered very accurate.

Sample Name: Spring Gully inlet separator 29/7/11

Result Analysis Report

d(0.1): 0.821 um **d(0.5): 3.756 um** **d (0.8) : 17.245 um** **d(0.9): 35.424 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.010	0.00	0.105	0.00	1.096	15.33	11.482	73.22	120.226	94.65	1258.925	100.00
0.011	0.00	0.120	0.00	1.259	18.59	13.183	75.49	138.038	96.20	1445.440	100.00
0.013	0.00	0.138	0.00	1.445	22.21	15.136	77.79	158.489	97.69	1659.587	100.00
0.015	0.00	0.158	0.00	1.660	26.10	17.378	80.13	181.970	98.90	1905.461	100.00
0.017	0.00	0.182	0.04	1.905	30.16	19.953	82.46	208.930	99.68	2187.762	100.00
0.020	0.00	0.209	0.22	2.188	34.30	22.909	84.70	239.883	100.00	2511.886	100.00
0.023	0.00	0.240	0.71	2.512	38.44	26.303	86.75	275.423	100.00	2884.032	100.00
0.026	0.00	0.275	1.40	2.884	42.52	30.200	88.49	316.228	100.00	3311.311	100.00
0.030	0.00	0.316	2.23	3.311	46.50	34.674	89.83	363.078	100.00	3801.894	100.00
0.035	0.00	0.363	3.10	3.802	50.33	39.811	90.72	416.869	100.00	4365.158	100.00
0.040	0.00	0.417	3.97	4.365	53.97	45.709	91.19	478.630	100.00	5011.872	100.00
0.046	0.00	0.479	4.85	5.012	57.39	52.481	91.34	549.541	100.00	5754.399	100.00
0.052	0.00	0.550	5.79	5.754	60.55	60.256	91.34	630.957	100.00	6606.934	100.00
0.060	0.00	0.631	6.92	6.607	63.46	69.183	91.38	724.436	100.00	7585.776	100.00
0.069	0.00	0.724	8.35	7.586	66.14	79.433	91.64	831.764	100.00	8709.636	100.00
0.079	0.00	0.832	10.20	8.710	68.61	91.201	92.26	954.993	100.00	10000.000	100.00
0.091	0.00	0.955	12.52	10.000	70.95	104.713	93.28	1096.478	100.00		

Measured by: wxpauwin01mp... **Result units:** Volume **Measured:** Tuesday, 2 August 2011 5:59:53 PM

Particle RI: 1.544 **Obscuration:** 10.29 % **Weighted Residual:** 1.384 %

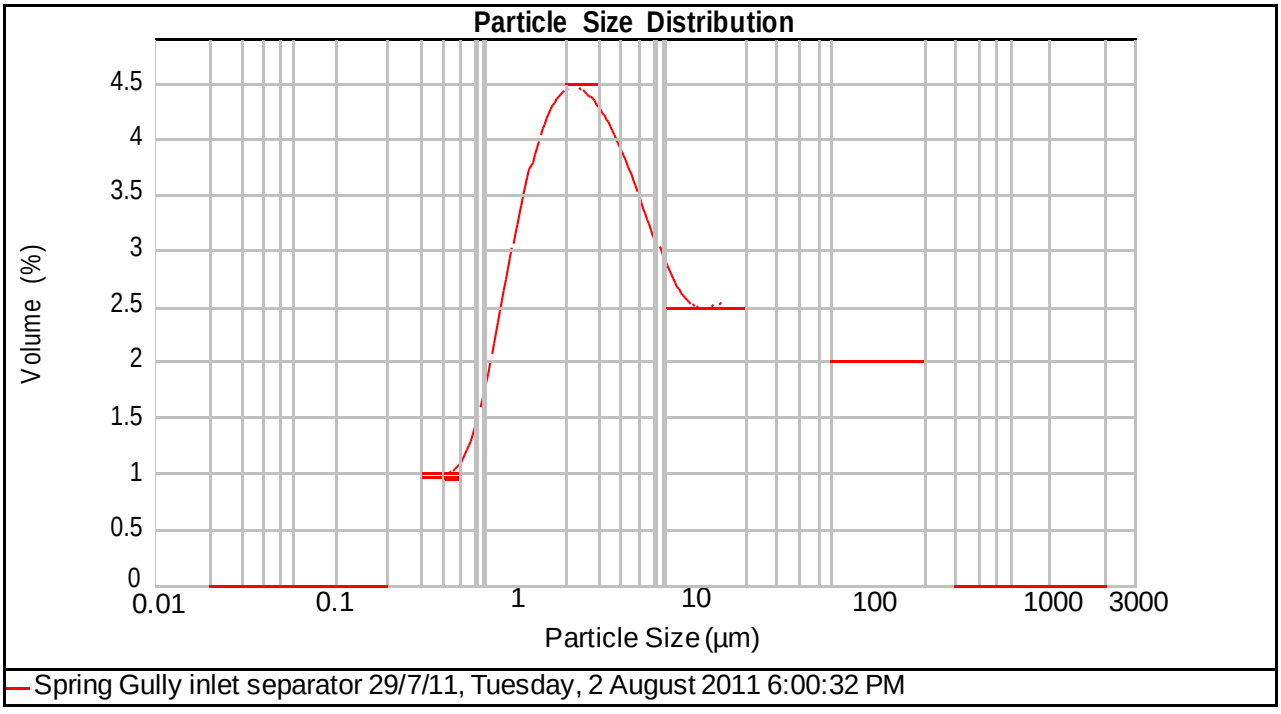
Dispersant Name: Water **Concentration:** 0.0026 %Vol **Vol. Weighted Mean D[4,3]:** 18.083 um

Disclaimer: The laser sizing analysis was determnied using a refractive index (RI) value selected as being typical of the material tested. The actual RI for the sample was not measured. Variations in RI could result in a variation in the particle size distribution measured by the laser sizing. The valiidity of the RI used is represented by the weighted residual value shown on the laser sizing report. A value of <1% is considered very accurate.

Sample Name: Spring Gully inlet separator 29/7/11

Result Analysis Report

d(0.1): 0.837 um **d(0.5):** 3.990 um **d (0.8) :** 20.266 um **d(0.9):** 88.860 um



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.010	0.00	0.105	0.00	1.096	14.89	11.482	70.93	120.226	92.85	1258.925	100.00
0.011	0.00	0.120	0.00	1.259	18.04	13.183	73.11	138.038	94.59	1445.440	100.00
0.013	0.00	0.138	0.00	1.445	21.55	15.136	75.32	158.489	96.35	1659.587	100.00
0.015	0.00	0.158	0.00	1.660	25.32	17.378	77.55	181.970	97.91	1905.461	100.00
0.017	0.00	0.182	0.04	1.905	29.24	19.953	79.75	208.930	99.09	2187.762	100.00
0.020	0.00	0.209	0.21	2.188	33.25	22.909	81.88	239.883	99.79	2511.886	100.00
0.023	0.00	0.240	0.69	2.512	37.25	26.303	83.82	275.423	100.00	2884.032	100.00
0.026	0.00	0.275	1.35	2.884	41.20	30.200	85.49	316.228	100.00	3311.311	100.00
0.030	0.00	0.316	2.15	3.311	45.05	34.674	86.81	363.078	100.00	3801.894	100.00
0.035	0.00	0.363	3.00	3.802	48.75	39.811	87.74	416.869	100.00	4365.158	100.00
0.040	0.00	0.417	3.85	4.365	52.27	45.709	88.30	478.630	100.00	5011.872	100.00
0.046	0.00	0.479	4.70	5.012	55.57	52.481	88.60	549.541	100.00	5754.399	100.00
0.052	0.00	0.550	5.62	5.754	58.64	60.256	88.76	630.957	100.00	6606.934	100.00
0.060	0.00	0.631	6.72	6.607	61.46	69.183	88.98	724.436	100.00	7585.776	100.00
0.069	0.00	0.724	8.12	7.586	64.05	79.433	89.41	831.764	100.00	8709.636	100.00
0.079	0.00	0.832	9.91	8.710	66.46	91.201	90.17	954.993	100.00	10000.000	100.00
0.091	0.00	0.955	12.16	10.000	68.73	104.713	91.33	1096.478	100.00		

Measured by: w xpauwin01mp... **Result units:** Volume **Measured:** Tuesday, 2 August 2011 6:00:32 PM

Particle RI: 1.544 **Obscuration:** 10.32 % **Weighted Residual:** 1.347 %

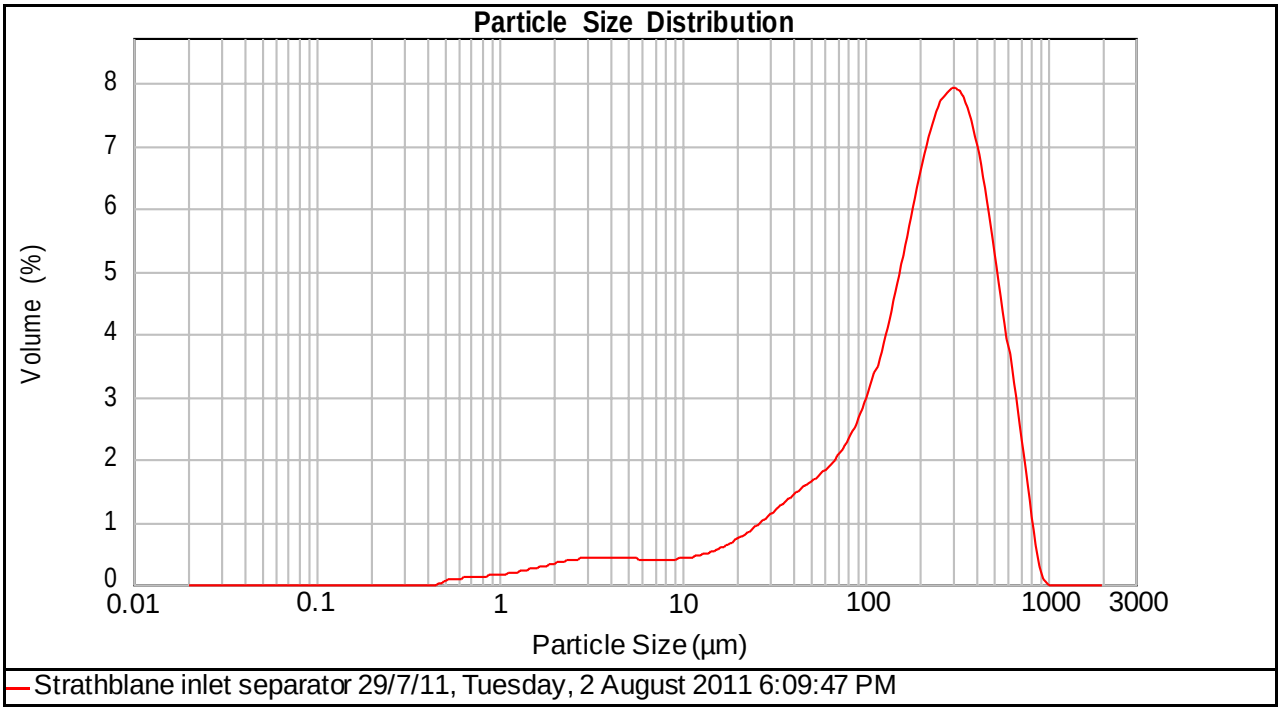
Dispersant Name: Water **Concentration:** 0.0026 %Vol **Vol. Weighted Mean D[4,3]:** 22.164 um

Disclaimer: The laser sizing analysis was determnied using a refractive index (RI) value selected as being typical of the material tested. The actual RI for the sample was not measured. Variations in RI could result in a variation in the particle size distribution measured by the laser sizing. The valiidity of the RI used is represented by the weighted residual value shown on the laser sizing report. A value of <1% is considered very accurate.

Sample Name: Strathblane inlet separator 29/7/11

Result Analysis Report

d(0.1): 27.253 um **d(0.5): 220.236 um** **d (0.8) : 401.151 um** **d(0.9): 511.844 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.010	0.00	0.105	0.00	1.096	0.62	11.482	6.24	120.226	28.83	1258.925	100.00
0.011	0.00	0.120	0.00	1.259	0.79	13.183	6.66	138.038	32.44	1445.440	100.00
0.013	0.00	0.138	0.00	1.445	0.98	15.136	7.12	158.489	36.75	1659.587	100.00
0.015	0.00	0.158	0.00	1.660	1.21	17.378	7.64	181.970	41.81	1905.461	100.00
0.017	0.00	0.182	0.00	1.905	1.48	19.953	8.25	208.930	47.61	2187.762	100.00
0.020	0.00	0.209	0.00	2.188	1.79	22.909	8.95	239.883	54.06	2511.886	100.00
0.023	0.00	0.240	0.00	2.512	2.13	26.303	9.77	275.423	61.00	2884.032	100.00
0.026	0.00	0.275	0.00	2.884	2.49	30.200	10.71	316.228	68.15	3311.311	100.00
0.030	0.00	0.316	0.00	3.311	2.88	34.674	11.79	363.078	75.19	3801.894	100.00
0.035	0.00	0.363	0.00	3.802	3.27	39.811	13.00	416.869	81.76	4365.158	100.00
0.040	0.00	0.417	0.00	4.365	3.65	45.709	14.33	478.630	87.55	5011.872	100.00
0.046	0.00	0.479	0.00	5.012	4.04	52.481	15.78	549.541	92.31	5754.399	100.00
0.052	0.00	0.550	0.06	5.754	4.41	60.256	17.37	630.957	95.93	6606.934	100.00
0.060	0.00	0.631	0.14	6.607	4.77	69.183	19.10	724.436	98.43	7585.776	100.00
0.069	0.00	0.724	0.24	7.586	5.13	79.433	21.03	831.764	99.74	8709.636	100.00
0.079	0.00	0.832	0.35	8.710	5.49	91.201	23.23	954.993	100.00	10000.000	100.00
0.091	0.00	0.955	0.48	10.000	5.85	104.713	25.79	1096.478	100.00		

Measured by: wxpauwin01mp... **Result units:** Volume **Measured:** Tuesday, 2 August 2011 6:09:47 PM

Particle RI: 1.544 **Obscuration:** 10.60 % **Weighted Residual:** 0.299 %

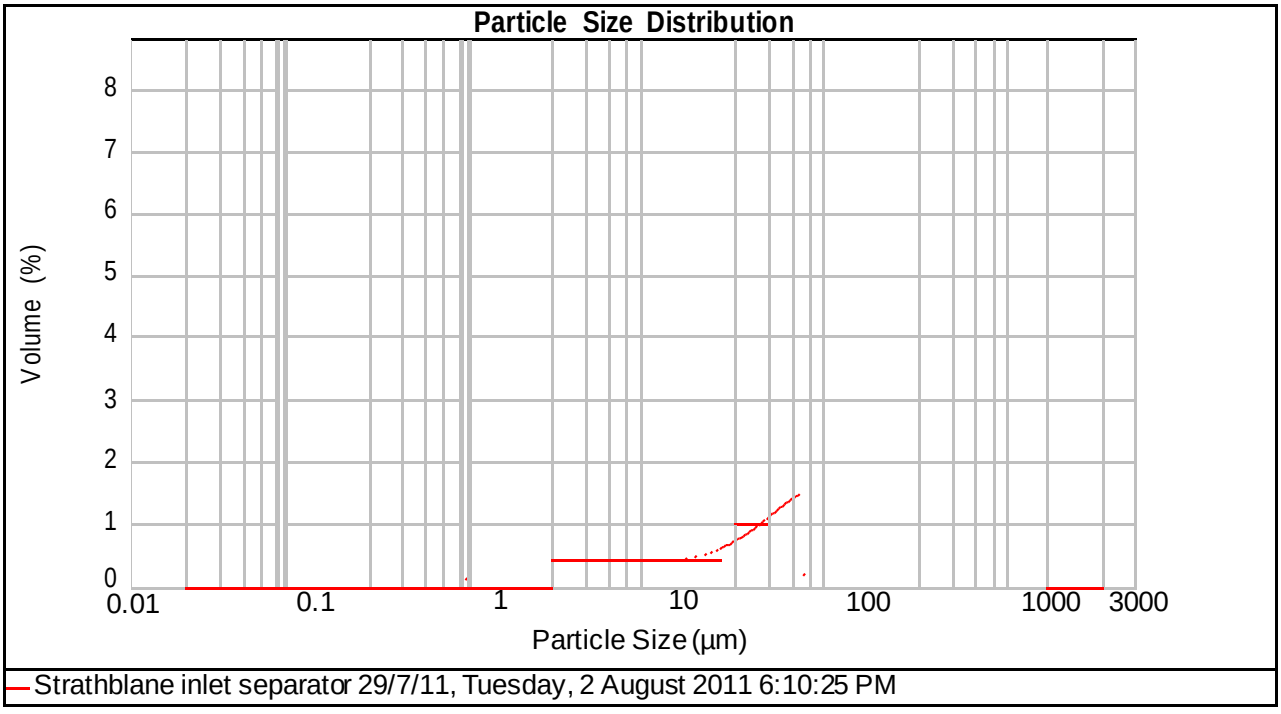
Dispersant Name: Water **Concentration:** 0.0424 %Vol **Vol. Weighted Mean D[4,3]:** 249.226 um

Disclaimer: The laser sizing analysis was determnied using a refractive index (RI) value selected as being typical of the material tested. The actual RI for the sample was not measured. Variations in RI could result in a variation in the particle size distribution measured by the laser sizing. The valiidity of the RI used is represented by the weighted residual value shown on the laser sizing report. A value of <1% is considered very accurate.

Sample Name: Strathblane inlet separator 29/7/11

Result Analysis Report

d(0.1): 28.786 um **d(0.5): 234.282 um** **d (0.8) : 424.320 um** **d(0.9): 546.184 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.010	0.00	0.105	0.00	1.096	0.60	11.482	6.01	120.226	26.86	1258.925	100.00
0.011	0.00	0.120	0.00	1.259	0.76	13.183	6.42	138.038	30.19	1445.440	100.00
0.013	0.00	0.138	0.00	1.445	0.95	15.136	6.86	158.489	34.23	1659.587	100.00
0.015	0.00	0.158	0.00	1.660	1.18	17.378	7.37	181.970	39.08	1905.461	100.00
0.017	0.00	0.182	0.00	1.905	1.44	19.953	7.95	208.930	44.74	2187.762	100.00
0.020	0.00	0.209	0.00	2.188	1.74	22.909	8.63	239.883	51.14	2511.886	100.00
0.023	0.00	0.240	0.00	2.512	2.06	26.303	9.42	275.423	58.09	2884.032	100.00
0.026	0.00	0.275	0.00	2.884	2.41	30.200	10.33	316.228	65.30	3311.311	100.00
0.030	0.00	0.316	0.00	3.311	2.78	34.674	11.37	363.078	72.45	3801.894	100.00
0.035	0.00	0.363	0.00	3.802	3.15	39.811	12.53	416.869	79.19	4365.158	100.00
0.040	0.00	0.417	0.00	4.365	3.52	45.709	13.80	478.630	85.18	5011.872	100.00
0.046	0.00	0.479	0.00	5.012	3.89	52.481	15.17	549.541	90.20	5754.399	100.00
0.052	0.00	0.550	0.05	5.754	4.24	60.256	16.63	630.957	94.13	6606.934	100.00
0.060	0.00	0.631	0.13	6.607	4.59	69.183	18.20	724.436	96.96	7585.776	100.00
0.069	0.00	0.724	0.23	7.586	4.94	79.433	19.92	831.764	98.82	8709.636	100.00
0.079	0.00	0.832	0.34	8.710	5.28	91.201	21.87	954.993	99.82	10000.000	100.00
0.091	0.00	0.955	0.46	10.000	5.64	104.713	24.13	1096.478	100.00		

Measured by: wxpauwin01mp... **Result units:** Volume **Measured:** Tuesday, 2 August 2011 6:10:25 PM

Particle RI: 1.544 **Obscuration:** 10.54 % **Weighted Residual:** 0.286 %

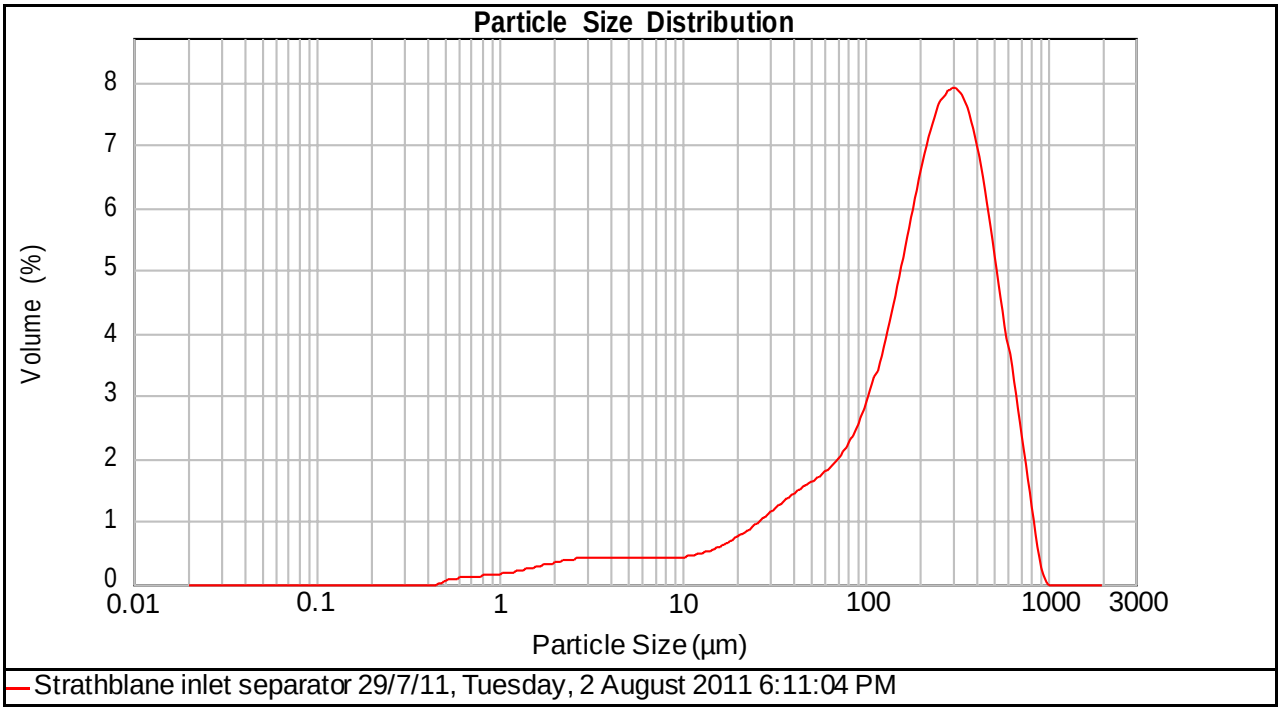
Dispersant Name: Water **Concentration:** 0.0438 %Vol **Vol. Weighted Mean D[4,3]:** 266.630 um

Disclaimer: The laser sizing analysis was determnied using a refractive index (RI) value selected as being typical of the material tested. The actual RI for the sample was not measured. Variations in RI could result in a variation in the particle size distribution measured by the laser sizing. The valiidity of the RI used is represented by the weighted residual value shown on the laser sizing report. A value of <1% is considered very accurate.

Sample Name: Strathblane inlet separator 29/7/11

Result Analysis Report

d(0.1): 25.741 um **d(0.5): 220.552 um** **d (0.8) : 402.454 um** **d(0.9): 515.233 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.010	0.00	0.105	0.00	1.096	0.67	11.482	6.46	120.226	28.95	1258.925	100.00
0.011	0.00	0.120	0.00	1.259	0.85	13.183	6.90	138.038	32.50	1445.440	100.00
0.013	0.00	0.138	0.00	1.445	1.05	15.136	7.38	158.489	36.75	1659.587	100.00
0.015	0.00	0.158	0.00	1.660	1.30	17.378	7.93	181.970	41.77	1905.461	100.00
0.017	0.00	0.182	0.00	1.905	1.58	19.953	8.56	208.930	47.55	2187.762	100.00
0.020	0.00	0.209	0.00	2.188	1.90	22.909	9.29	239.883	53.99	2511.886	100.00
0.023	0.00	0.240	0.00	2.512	2.25	26.303	10.14	275.423	60.92	2884.032	100.00
0.026	0.00	0.275	0.00	2.884	2.62	30.200	11.11	316.228	68.06	3311.311	100.00
0.030	0.00	0.316	0.00	3.311	3.01	34.674	12.22	363.078	75.07	3801.894	100.00
0.035	0.00	0.363	0.00	3.802	3.41	39.811	13.45	416.869	81.60	4365.158	100.00
0.040	0.00	0.417	0.00	4.365	3.80	45.709	14.79	478.630	87.34	5011.872	100.00
0.046	0.00	0.479	0.00	5.012	4.19	52.481	16.24	549.541	92.06	5754.399	100.00
0.052	0.00	0.550	0.06	5.754	4.57	60.256	17.81	630.957	95.67	6606.934	100.00
0.060	0.00	0.631	0.15	6.607	4.94	69.183	19.50	724.436	98.20	7585.776	100.00
0.069	0.00	0.724	0.25	7.586	5.31	79.433	21.38	831.764	99.63	8709.636	100.00
0.079	0.00	0.832	0.37	8.710	5.68	91.201	23.51	954.993	100.00	10000.000	100.00
0.091	0.00	0.955	0.51	10.000	6.06	104.713	25.99	1096.478	100.00		

Measured by: wxpauwin01mp... **Result units:** Volume **Measured:** Tuesday, 2 August 2011 6:11:04 PM

Particle RI: 1.544 **Obscuration:** 10.45 % **Weighted Residual:** 0.305 %

Dispersant Name: Water **Concentration:** 0.0402 %Vol **Vol. Weighted Mean D[4,3]:** 250.006 um

Disclaimer: The laser sizing analysis was determnied using a refractive index (RI) value selected as being typical of the material tested. The actual RI for the sample was not measured. Variations in RI could result in a variation in the particle size distribution measured by the laser sizing. The valiidity of the RI used is represented by the weighted residual value shown on the laser sizing report. A value of <1% is considered very accurate.

AMDEL LTD – GEOANALYTICAL

REPORT No. 1AD4312 / 1AD4456 / 1AD4606

Elemental analysis by inductively coupled plasma optical emission spectroscopy (ICP) and carbon and ash content of the solids recovered from the inlet water samples.

Compound	Symbol	Method	Detection Limit	Strathblane Inlet	Spring Gully Inlet	Talinga Inlet
Silver	Ag	IC3E	1	<1	9	<1
Arsenic	As	IC3E	3	<3	<3	8
Bismuth	Bi	IC3E	5	<5	<5	<5
Calcium	Ca	IC3E	10	1865	18000	1925
Cadmium	Cd	IC3E	5	<5	<5	<5
Cerium	Ce	IC3E	10	15	40	75
Cobalt	Co	IC3E	2	5	16	15
Chromium	Cr	IC3E	2	20	45	29
Copper	Cu	IC3E	2	70	150	23
Iron	Fe	IC3E	100	34300	67300	43500
Potassium	K	IC3E	10	4035	7795	8700
Magnesium	Mg	IC3E	10	650	12300	4215
Manganese	Mn	IC3E	5	320	775	340
Molybdenum	Mo	IC3E	3	<3	4	<3
Sodium	Na	IC3E	10	2325	26800	15900
Niobium	Nb	IC3E	5	<5	10	10
Nickel	Ni	IC3E	2	19	50	20
Phosphorus	P	IC3E	5	295	760	200
Lead	Pb	IC3E	5	20	25	20
Strontium	Sr	IC3E	2	105	<2	250
Titanium	Ti	IC3E	10	815	2665	5820
Vanadium	V	IC3E	2	17	60	100
Yttrium	Y	IC3E	2	4	13	36
Zinc	Zn	IC3E	2	180	490	85
Carbon	C	MET6A	0.02	44.2	14	1.3
Ash		GRAV9	0.01	43.5	68.4	nd

UNITS

IC3E ppm (mg/kg)
MET6A wt %
GRAV6 wt %

nd = not determined

AEC ENVIRONMENTAL

MINERAL IDENTIFICATION REPORT No. 64601/64364

1. INTRODUCTION

Three samples were received from Bureau Veritas Australia Pty Ltd with a request for determination of mineralogy.

2. PROCEDURE

The samples were examined using a stereomicroscope. A portion was pulverized then analyzed by XRD

3. RESULTS

Talinga, solids recovered from Inlet Separator Water
The sample consists of brown silt- and sand-sized soil.

Spring Gully, solids recovered from Inlet Separator Water
The sample is a grey powder.

Strathblane, solids recovered from Inlet Separator Water
The sample is black coal particles, white sand and a low amount of rust flakes and white crust.

The semi-quantitative mineralogy follows.

Mineral Name	Composition	Relative Abundance		
		Talinga	Spring Gully	Strathblane
Non-crystalline	Coal			D
Clay (poorly crystalline) (unidentified)	Silicate	D	D	
Quartz	SiO_2	A	Tr-A	SD
Siderite	$FeCO_3$		A	
Kaolinite	Silicate $Al_2Si_2O_5(OH)_4$	SD	Tr	Tr
Calcite	$CaCO_3$		Tr	
Halite	NaCl		Tr	Tr
Feldspar	Silicate $(Na,Ca)(Si,Al)_4O_8$	Tr-A		Tr
Mica	$KAl_2Si_3AlO_{10}(OH)_2$	Tr		
?Stilpnomelane	$(Fe,Mg)_6(Si,Al)_8O_{19}(OH)_9$	Tr		
Anatase	TiO_2	Tr		
Magnetite	Fe_3O_4			Tr

Semiquantitative Abbreviations

D = Dominant. Used for the component apparently most abundant, regardless of its probable percentage level.
SD = Sub-dominant. The next most abundant component(s) providing its percentage level is judged above about 20.
A = Accessory. Components judged to be present between the levels of roughly 5 and 20%.
Tr = Trace. Components judged to be below about 5%.

TESTING OFFICER: Michael Till (Senior Mineralogist)
REPORT DATE: 16 August 2011

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