



Friday, 27 November 2015

Ms Amanda Langstaff,
Natural Resources Wales,
Chester Road,
Buckley,
Flintshire.
CH7 3AJ

Dear Ms Langstaff,

Data Submission October 2015

Please find enclosed the monthly data submission for routine environmental monitoring undertaken at our Ruabon Landfill Site during October 2015.

We trust this is satisfactory, please do not hesitate to contact us should you require further clarification.

**Yours sincerely,
for FCC ENVIRONMENT**

Geoff Forrest

Compliance Advisor, North Wales



Ruabon Landfill Site

Routine Environmental Monitoring Data Submission

October 2015

Prepared by G.Forrest
28th November 2015

APPENDIX 1

Field Logs

Field log report

Ruabon

02-October-2015

Equipment 01 Calibration Due	21/10/2015
Equipment 01 Last Calibration	21/04/2015
Equipment 01 Last Calibration	08/04/2015
Equipment 01 Serial No.	GEM2000Plus + GM10338
Equipment 01 Serial No.	GA11581
Equipment 01 Type	GA2000plus
Personnel 01	L Terrace
Personnel 01	INF00925 Alan.Parry
Time OFF	09:42
Time OFF	11:30
Time ON	08:35
Time ON	08:09
Weather	Clear
Weather	Sunny

Issued By:

Signed By :

Name :

Field log report

Ruabon

05-October-2015

Equipment 01 Last Calibration	08/04/2015
Equipment 01 Serial No.	GEM2000Plus + GM10338
Personnel 01	INF00925 Alan.Parry
Time OFF	13:26
Time ON	11:36
Weather	Drizzle

Issued By:

Signed By :

Name :

Field log report

Ruabon

07-October-2015

Equipment 01 Last Calibration	08/04/2015
Equipment 01 Serial No.	GEM2000Plus + GM10338
Personnel 01	INF00925 Alan.Parry
Time OFF	15:48
Time ON	08:57
Weather	Fog

Issued By:

Signed By :

Name :

Field log report

Ruabon

08-October-2015

Equipment 01 Calibration Due	21/10/2015
Equipment 01 Last Calibration	01/10/2015
Equipment 01 Last Calibration	14/09/2015
Equipment 01 Serial No.	LT1
Equipment 01 Serial No.	GA5000 + G501011
Equipment 01 Type	Hannah Instruments HI98130
Equipment 02 Last Calibration	N/A
Equipment 02 Serial No.	30858
Equipment 02 Type	Dip Meter, In Situ Rugged Level tape 200
Personnel 01	L.Terrace
Personnel 01	INF00925 alan.parry
Time OFF	16:23
Time OFF	15:20
Time ON	09:05
Time ON	11:00
Weather	Clear
Weather	Overcast

Issued By:

Signed By :

Name :

Field log report

Ruabon

09-October-2015

Equipment 01 Last Calibration	14/09/2015
Equipment 01 Serial No.	GA5000 + G501011
Personnel 01	INF00925 alan.parry
Time OFF	15:33
Time ON	08:57
Weather	Cold

Issued By:

Signed By :

Name :

Field log report

Ruabon

12-October-2015

Equipment 01 Last Calibration	14/09/2015
Equipment 01 Serial No.	GA5000 + G501011
Personnel 01	INF00925 Alan.Parry
Time OFF	15:53
Time ON	11:25
Weather	Clear

Issued By:

Signed By :

Name :

Field log report

Ruabon

14-October-2015

Equipment 01 Last Calibration	10/07/2015
Equipment 01 Serial No.	GA5000 + G500906
Personnel 01	INF00880 Ian.Jones
Time OFF	11:03
Time ON	08:23
Weather	Clear

Issued By:

Signed By :

Name :

Field log report

Ruabon

16-October-2015

Equipment 01 Calibration Due	21/10/2015
Equipment 01 Last Calibration	21/04/2015
Equipment 01 Last Calibration	14/09/2015
Equipment 01 Serial No.	GA5000 + G501011
Equipment 01 Serial No.	79281-10
Equipment 01 Serial No.	GA11581
Equipment 01 Type	GA2000plus
Equipment 01 Type	Geotechnical Atex Dip Meter
Personnel 01	L Terrace
Personnel 01	S Williams
Personnel 01	INF00925 Alan.Parry
Time OFF	16:01
Time OFF	12:00
Time OFF	11:15
Time ON	08:25
Time ON	10:30
Time ON	12:50
Weather	Clear
Weather	o/c, cool
Weather	Overcast

Issued By:

Signed By :

Name :

Field log report

Ruabon

19-October-2015

Equipment 01 Last Calibration	14/09/2015
Equipment 01 Serial No.	GA5000 + G501011
Personnel 01	INF00925 Alan.Parry
Time OFF	16:36
Time ON	09:05
Weather	Clear

Issued By:

Signed By :

Name :

Field log report

Ruabon

20-October-2015

Equipment 01 Last Calibration	14/09/2015
Equipment 01 Serial No.	GA5000 + G501011
Personnel 01	INF00925 alan.parry
Time OFF	15:44
Time ON	13:35
Weather	Clear

Issued By:

Signed By :

Name :

Field log report

Ruabon

21-October-2015

Equipment 01 Calibration Due	02/04/2016
Equipment 01 Last Calibration	30/09/2015
Equipment 01 Serial No.	G501869
Equipment 01 Type	GA5000
Personnel 01	L Terrace
Time OFF	14:40
Time ON	11:50
Weather	Raining

Issued By:

Signed By :

Name :

Field log report

Ruabon

22-October-2015

Equipment 01 Last Calibration	14/09/2015
Equipment 01 Serial No.	GA5000 + G501011
Personnel 01	INF00925 Alan.Parry
Time OFF	15:26
Time ON	09:43
Weather	Clear

Issued By:

Signed By :

Name :

Field log report

Ruabon

23-October-2015

Equipment 01 Last Calibration	14/09/2015
Equipment 01 Serial No.	GA5000 + G501011
Personnel 01	INF00925 Alan.Parry
Time OFF	13:37
Time ON	08:56
Weather	Clear

Issued By:

Signed By :

Name :

Field log report

Ruabon

26-October-2015

Equipment 01 Last Calibration	14/09/2015
Equipment 01 Serial No.	GA5000 + G501011
Personnel 01	INF00925 Alan.Parry
Time OFF	15:47
Time ON	14:09
Weather	Clear

Issued By:

Signed By :

Name :

Field log report

Ruabon

28-October-2015

Equipment 01 Last Calibration	14/09/2015
Equipment 01 Serial No.	GA5000 + G501011
Personnel 01	INF00925 Alan.Parry
Time OFF	14:56
Time ON	09:01
Weather	Clear

Issued By:

Signed By :

Name :

Field log report

Ruabon

30-October-2015

Equipment 01 Calibration Due	02/04/2016
Equipment 01 Last Calibration	30/09/2015
Equipment 01 Serial No.	G501869
Equipment 01 Type	GA5000
Personnel 01	L Terrace
Time OFF	12:20
Time ON	08:45
Weather	Raining

Issued By:

Signed By :

Name :

APPENDIX 2

Perimeter Borehole Gas Data

Ruabon Perimeter Borehole Gas & Water Level Data - October 2015



From : 02/10/2015

To : 30/10/2015

02/10/2015

Sample Point	AtPress (mBar)	CH4 (%v/v) (%)	CO2 (%v/v) (%)	H2S (ppm)	O2 (%v/v)	Rel Press (mBar)
RUBH0006	1014	0	0.3	0	20.4	-0.04
RUBH0007	1014	4.7	6.7	0	3.6	0.03
RUBH0008	1014	0	2.7	0	18.1	-0.02
RUBH0009	1014	0	1.3	0	19.8	-0.04
RUBH0010	1013	0	0.8	0	20.3	-0.03
RUBH0013	1012	0	1.4	0	19.2	0.01
RUBH0014	1012	0	3.4	0	13.8	0.92
RUBH0015	1013	0	1.8	0	18.5	-0.01
RUBH0016	1013	0	0.2	0	20.6	-0.01
RUBH001A	1014	0	0.6	0	20.2	-0.02
RUBH001B	1014	0	0.9	0	19.4	0.01
RUBH002A	1014	0.4	2.4	0	12.8	0.03
RUBH002B	1014	0	0.1	0	20.7	0.05
RUBH003A	1014	0	1	0	19.8	0.06
RUBH003B	1014	0	0.2	0	20.8	0.06
RUBH004A	1014	0	1.7	0	18.9	0.21
RUBH004B	1014	0	4	0	16.6	0
RUBH011A	1012	0	1.6	0	19.1	-0.03
RUBH011P	1012	0	0.1	0	20.7	-0.02
RUBH012A	1012	0	3.1	0	17.6	-0.01
RUGBH001	1014	0	3	0	18.6	0.03
RUGBH002	1015	0	4.6	0	13.7	-0.01
RUGBH003	1015	0	0.1	0	20.8	-0.02
RUGBH004	1014	0	0.1	0	20.9	-0.03
RUGBH005	1014	0	1.5	0	18.6	0.05
RUGBH006	1014	0	4	0	17.9	-0.01
RUGBH007	1012	0	0.1	0	20.4	0.02
RUGBH008	1012	0	1.2	0	19.1	0.06
RUGBH009	1012	0	0.2	0	20.4	0.44
RUGBH010	1012	0	0.3	0	20.4	0.12
RUGBH02A	1014	0	1.8	0	18.7	0
RUGP0001	1014	27.4	7.6	0	1.8	-0.04
RUGP0002	1014	0	5.1	0	16.4	-0.07
RUGP0003	1014	0	0.1	0	15.9	-0.04
RUGP0004	1014	0	2.6	0	18.7	0.01
RUGP0008	1014	0	1.3	0	19.5	0
RUGP0009	1014	0	2.7	0	17.7	0.09
RUGP0010	1014	0	2	0	19.2	0.06
RUGP0011	1014	0	1.8	0	19.3	0.06
RUGP0012	1014	0	0.8	0	20.3	0.06
RUGP0013	1014	0	0.5	0	20.6	0.06
RUGP0014	1014	0	3.9	0	18.4	0.01
RUGP0015	1013	0	2.7	0	14.4	0.08
RUGP0016	1012	0	1.1	0	19.8	0.05
RUGP0018	1013	0	0.1	0	20.3	-0.09
RUGP0019	1012	0	0	0	20.4	0.01
RUGP0020	1012	0	0	0	20.5	0.04
RUGP0021	1012	0	0.9	0	19.4	0.05
RUGP00A1	1014	0	0.1	0	20.8	0

Issued By:

Ruabon Perimeter Borehole Gas & Water Level Data - October 2015



From : 02/10/2015

To : 30/10/2015

02/10/2015

	AtPress (mBar)	CH4 (%v/v) (%)	CO2 (%v/v) (%)	H2S (ppm)	O2 (%v/v)	Rel Press (mBar)
RUGP00A2	1014	0	2.3	0	14.4	0.02
RUGP00A3	1014	0	0	0	20.7	-0.23
RUGP00B1	1015	0	0	0	19.3	1.24
RUGP00B2	1015	1	9.3	0	2.1	0
RUGP00B3	1015	0	0	0	20.8	0
RUGP00C1	1014	0	0	0	20.9	0
RUGP00C2	1014	0	0	0	19.8	-0.13
RUGP00C3	1014	0	0.1	0	20.7	-1.19
RUGP00D1	1014	0	0	0	20.8	0
RUGP00D2	1015	0	0	0	20.8	-0.07
RUGP00D3	1015	0	0	0	20.8	0
RUGP00E1	1014	0	0.1	0	20.7	-0.01
RUGP00E2	1015	0	0	0	20.8	0
RUGP00E3	1015	0	0	0	20.5	-0.01
RUGP00F1	1015	0	0.1	0	19.8	-0.09
RUGP00F2	1015	0	0	0	20.3	0.02
RUGP00F3	1015	0	0	0	20.7	0
RUWB001A	1014	0	0.1	0	20.4	0.07
RUWB001B	1014	0	2.4	0	18.3	0.07
RUWB002A	1014	0	0.1	0	19.6	0.04
RUWB002B	1014	0	1.1	0	20.1	0.05
RUWB002C	1014	0	0.9	0	20.3	0.04
RUWB002D	1014	0	0.1	0	20.9	0.05
RUWB003A	1012	0	0.4	0	16	0.48
RUWB003B	1012	0	0.5	0	11.5	-17.22
RUWB004A	1012	0	0.2	0	16.9	0.09
RUWB004B	1012	0	2.7	0	16.6	0.08
RUWB005A	1013	0	0	0	20.6	0.29
RUWB005B	1014	0	0.7	0	20	0.09

Issued By:

Ruabon Perimeter Borehole Gas & Water Level Data - October 2015



From : 02/10/2015

To : 30/10/2015

08/10/2015

Sample Point	AtPress (mBar)	CH4 (%v/v) (%)	CO2 (%v/v) (%)	Dip to Water (m)	H2S (ppm)	O2 (%v/v)	Rel Press (mBar)	TD (m)
RUBH0006	1007	0	3.1	3.47	0	9.4	0.13	11.71
RUBH0007	1007	5.5	7.4	4.48	0	1.6	0	38.67
RUBH0008	1007	0	2.7	6.38	0	17.8	0	42.38
RUBH0009	1007	0	0.9	5.21	0	19.5	0	7.5
RUBH0010	1006	0	0.5	5.47	0	19.9	0	36.14
RUBH0013	1005	0	1.1	2.83	0	19.3	-0.01	34.63
RUBH0014	1005	0	3.1	5.88	0	14	0.23	10.72
RUBH0015	1006	0	1.8	6.12	0	17.9	-0.01	41.58
RUBH0016	1006	0	0.2	10.89	0	20.1	0.01	47.14
RUBH001A	1007	0	0.5	4.88	0	19.7	0.07	12.77
RUBH001B	1006	0	1.1	5.25	0	18.8	0.06	6.38
RUBH002A	1006	0	0	5.19	0	20.2	0.09	6.48
RUBH002B	1007	0	0.1	5.22	0	20.1	0.39	11.71
RUBH003A	1007	0	1.2	5.83	0	19	0.14	13.08
RUBH003B	1007	0	0.1	5.79	0	20.3	0.17	6.37
RUBH004A	1007	0	1.7	6.37	0	18.6	-0.13	9.58
RUBH004B	1007	0	4.3	6.27	0	15.9	0.11	6.33
RUBH011A	1005	0	1.6	4.05	0	18.1	-0.01	12.79
RUBH011P	1005	0	0	4.5	0	20.3	-0.01	14.42
RUBH012A	1005	0	3	4.46	0	17.2	0.01	5.37
RUGBH001	1007	0	2.7	6.05	0	18.6	0.09	6.05
RUGBH002	1007	0	2	4.03	0	17.9	0.04	7
RUGBH003	1008	0	0	4.27	0	20.3	0.1	4.9
RUGBH004	1008	0	0.1	4.25	0	20.3	0.13	21.89
RUGBH005	1008	0	0.1	4.25	0	20.3	0.19	6.31
RUGBH006	1007	0	3.5	3.9	0	18	0	6.88
RUGBH007	1005	0	0.1	1.35	0	20.2	-0.06	2.94
RUGBH008	1005	0	0.8	1.46	0	19.4	-0.02	6.17
RUGBH009	1005	0	0.3	1.43	0	20	-0.08	8.23
RUGBH010	1005	0	0.2	0.87	0	20.1	-0.01	3.95
RUGBH02A	1007	0	1.1	1.36	0	19	0.05	1.4
RUGP0001	1007	28.1	7.6		0	1.2	-0.21	
RUGP0002	1007	0	5.8		0	15.7	-0.06	
RUGP0003	1007	0	0.1		0	13.1	-0.15	
RUGP0004	1006	0	2.7		0	18.3	0.08	
RUGP0008	1007	0	1.5		0	18.7	0.07	
RUGP0009	1007	0	2.8		0	17.6	0.11	
RUGP0010	1007	0	2.8		0	18	0.14	
RUGP0011	1007	0	1.9		0	18.7	0.16	
RUGP0012	1007	0	0.9		0	19.7	0.15	
RUGP0013	1007	0	0.5		0	20	0.17	
RUGP0014	1007	0	4.1		0	17.9	0.09	
RUGP0015	1006	0	3.2		0	13.7	0	
RUGP0016	1005	0	0.8		0	19.9	-0.05	
RUGP0018	1006	0	0.2		0	19.8	1.11	
RUGP0019	1005	0	0.1		0	20.2	-0.01	
RUGP0020	1005	0	0.1		0	20.1	0.43	
RUGP0021	1005	0	1.5		0	18.4	-0.39	
RUGP00A1	1007	0	0		0	20.1	0.19	

Issued By:

Ruabon Perimeter Borehole Gas & Water Level Data - October 2015



From : 02/10/2015

To : 30/10/2015

08/10/2015

	AtPress (mBar)	CH4 (%v/v) (%)	CO2 (%v/v) (%)	Dip to Water (m)	H2S (ppm)	O2 (%v/v)	Rel Press (mBar)	TD (m)
RUGP00A2	1007	0.5	4.6		0	7.9	0.18	
RUGP00A3	1007	0	0		0	19.9	0.19	
RUGP00B1	1007	0	0		0	17.6	0.14	
RUGP00B2	1008	1.7	8.9		0	2.9	0.18	
RUGP00B3	1008	0	0		0	20.2	0.2	
RUGP00C1	1007	0	0		0	20.3	0.14	
RUGP00C2	1007	0	0		0	19.2	0.24	
RUGP00C3	1007	0	0		0	20.3	-0.27	
RUGP00D1	1007	0	0		0	20.2	0.12	
RUGP00D2	1008	0	0		0	20.3	-0.17	
RUGP00D3	1008	0	0		0	20.1	0.13	
RUGP00E1	1007	0	0.1		0	20.2	0.02	
RUGP00E2	1008	0	0		0	20.2	0.09	
RUGP00E3	1008	0	0		0	20.1	-0.08	
RUGP00F1	1007	0	0		0	19.9	0	
RUGP00F2	1007	0	0		0	19.9	0.11	
RUGP00F3	1007	0	0		0	19.5	-0.18	
RUWB001A	1007	0	0.1	3.01	0	19	0.13	48.9
RUWB001B	1007	0	4.5	4.74	0	15.7	0.13	7.87
RUWB002A	1007	0	0.1	5	0	19.1	0.1	21.37
RUWB002B	1007	0	0.8	6.12	0	19.8	0.11	10.46
RUWB002C	1007	0	0.6	6.35	0	19.9	0.18	8.05
RUWB002D	1007	0	0.1	6.28	0	20.3	0.16	21.65
RUWB003A	1005	0	0.3	9.08	0	16.5	-1.79	10.7
RUWB003B	1005	0	0.4	1.61	0	9.9	-9.63	7.56
RUWB004A	1005	0	0.2	3.22	0	16.2	0.03	48.83
RUWB004B	1005	0	3.1	1.33	0	16.1	-0.03	8.54
RUWB005A	1007	0	0	3.35	0	20.2	0	25.31
RUWB005B	1007	0	0.3	5.6	0	19.9	0	8.4

Issued By:

Ruabon Perimeter Borehole Gas & Water Level Data - October 2015



From : 02/10/2015

To : 30/10/2015

16/10/2015

Sample Point	AtPress (mBar)	CH4 (%v/v) (%)	CO2 (%v/v) (%)	H2S (ppm)	O2 (%v/v)	Rel Press (mBar)
RUBH0006	1013	0	0.2	0	20.7	0.02
RUBH0007	1013	5.3	8.1	0	0	0.06
RUBH0008	1012	0	2.7	0	18.3	0.06
RUBH0009	1012	0	0.4	0	20.5	0.07
RUBH0010	1012	0	0.6	0	20.5	0.05
RUBH0013	1010	0	1.1	0	19.9	0.02
RUBH0014	1009	0	2.2	0	16.6	1.62
RUBH0015	1011	0	1.6	0	19	0.09
RUBH0016	1011	0	0.2	0	20.6	0.11
RUBH001A	1012	0	0.5	0	20.2	0
RUBH001B	1012	0	1.1	0	19.2	0
RUBH002A	1012	0	0.1	0	20.6	0.01
RUBH002B	1012	0	0.1	0	20.6	0
RUBH003A	1012	0	1.3	0	19.2	0.04
RUBH003B	1012	0	0.1	0	20.8	0.04
RUBH004A	1012	0	1.8	0	18.9	1.87
RUBH004B	1012	0	4.1	0	16.6	0.01
RUBH011A	1010	0	1.5	0	19.1	0.07
RUBH011P	1010	0	0	0	20.8	0.05
RUBH012A	1010	0	2.9	0	18.6	0.07
RUGBH001	1012	0	3.2	0	18.7	0.02
RUGBH002	1013	0	3.6	0	15.4	0
RUGBH003	1013	0	0	0	20.9	0.02
RUGBH004	1013	0	0.1	0	20.8	0.04
RUGBH005	1013	0	0.1	0	20.8	0.05
RUGBH006	1013	0	4	0	18.1	-0.09
RUGBH007	1010	0	0.1	0	20.7	0
RUGBH008	1010	0	0.5	0	20.3	0
RUGBH009	1010	0	0.6	0	20.5	1.49
RUGBH010	1010	0	0.5	0	20.6	-0.11
RUGBH02A	1012	0	1.3	0	19.4	0.04
RUGP0001	1012	14.7	8.1	0	1.2	-0.59
RUGP0002	1012	0	5.5	0	16.4	-0.49
RUGP0003	1012	0	0.4	0	7.2	-0.61
RUGP0004	1012	0	3	0	17.9	0
RUGP0008	1012	0	1.5	0	19.2	0.03
RUGP0009	1012	0	3.3	0	16.5	0.03
RUGP0010	1012	0	1.8	0	19.4	0.03
RUGP0011	1012	0	1.8	0	19.4	0.03
RUGP0012	1012	0	0.8	0	20.2	0.03
RUGP0013	1012	0	0.4	0	20.5	0.03
RUGP0014	1012	0	3.5	0	19	0.02
RUGP0015	1010	0	3.7	0	15	0.05
RUGP0016	1010	0	0.8	0	20.1	0
RUGP0018	1011	0	0.2	0	20.3	-0.13
RUGP0019	1010	0	0.1	0	20.7	-0.02
RUGP0020	1010	0	0	0	20.9	-0.01
RUGP0021	1010	0	1.7	0	19	-0.01
RUGP00A1	1013	0	0	0	20.8	0.06

Issued By:

Ruabon Perimeter Borehole Gas & Water Level Data - October 2015



From : 02/10/2015

To : 30/10/2015

16/10/2015

	AtPress (mBar)	CH4 (%v/v) (%)	CO2 (%v/v) (%)	H2S (ppm)	O2 (%v/v)	Rel Press (mBar)
RUGP00A2	1013	0	2.7	0	13.2	0.07
RUGP00A3	1013	0	0	0	20.6	0.07
RUGP00B1	1013	0	0	0	18	0
RUGP00B2	1013	0	8.6	0	4.1	0.05
RUGP00B3	1013	0	0	0	20.7	0.06
RUGP00C1	1013	0	0	0	20.8	0.04
RUGP00C2	1013	0	0	0	19.8	-0.19
RUGP00C3	1013	0	0	0	20.6	-0.65
RUGP00D1	1013	0	0	0	20.8	-0.04
RUGP00D2	1013	0	0	0	20.8	0.03
RUGP00D3	1013	0	0	0	20.8	0.04
RUGP00E1	1013	0	0.1	0	20.8	0.01
RUGP00E2	1013	0	0	0	20.7	0.03
RUGP00E3	1013	0	0	0	20.5	0
RUGP00F1	1013	0	0.1	0	20.4	0.01
RUGP00F2	1013	0	0	0	19.5	-0.06
RUGP00F3	1013	0	0	0	20.7	-0.03
RUWB001A	1012	0	0.1	0	19.6	0.02
RUWB001B	1012	0	1.4	0	19.2	0.04
RUWB002A	1012	0	0.1	0	19.9	0.03
RUWB002B	1012	0	0.2	0	20.7	0.02
RUWB002C	1012	0	0.5	0	20.4	-0.16
RUWB002D	1012	0	0	0	20.8	0.05
RUWB003A	1010	0	0.4	0	16.4	1.19
RUWB003B	1010	0	0.3	0	10	-0.01
RUWB004A	1010	0	0.2	0	17.7	1.33
RUWB004B	1010	0	3.1	0	16.7	-0.01
RUWB005A	1012	0	0	0	20.7	0
RUWB005B	1012	0	0.8	0	20.2	0

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Sample Point	AtPress (mBar)	CH4 (%v/v) (%)	CO2 (%v/v) (%)	H2S (ppm)	O2 (%v/v)	Rel Press (mBar)
RUBH0006	1004	0	0.6	0	18.9	-0.21
RUBH0007	1004	3.9	7.5	0	0.9	-0.09
RUBH0008	1004	0	2.7	0	18.3	-0.03
RUBH0009	1003	0	0.5	0	20.2	-0.03
RUBH0010	1002	0	0.4	0	20.4	-0.03
RUBH0013	1001	0	0.8	0	19.9	0.03
RUBH0014	1001	0	2.9	0	14.8	0.21
RUBH0015	1002	0	1.4	0	19.1	0.02
RUBH0016	1002	0	0.2	0	20.5	0
RUBH001A	1003	0	0.5	0	19.8	-0.05
RUBH001B	1002	0	0.9	0	19.2	-0.1
RUBH002A	1003	0.8	4.3	0	5.7	-0.07
RUBH002B	1003	0	0.2	0	20.1	0.29
RUBH003A	1003	0	1.4	0	18.7	3.42
RUBH003B	1003	0	0.1	0	20.4	0.12
RUBH004A	1003	0	1.7	0	18.7	-0.07
RUBH004B	1003	0	3.4	0	16.6	-0.26
RUBH011A	1002	0	0.6	0	20.1	-0.09
RUBH011P	1002	0	0.1	0	20.6	0.74
RUBH012A	1002	0	2.5	0	18.7	-0.02
RUGBH001	1003	0	2.8	0	18.6	-0.12
RUGBH002	1004	0	1.9	0	16.7	0.67
RUGBH003	1004	0	0.2	0	20.2	0.03
RUGBH004	1004	0	0.1	0	20.4	0.36
RUGBH005	1004	0	0.1	0	20.5	-0.12
RUGBH006	1004	0	3.2	0	18.3	-0.02
RUGBH007	1001	0	0.1	0	20.8	0.07
RUGBH008	1002	0	0.3	0	20.6	-0.15
RUGBH009	1002	0	0.7	0	20.1	0.55
RUGBH010	1002	0	0.8	0	20	0
RUGBH02A	1004	0	0.5	0	20.1	0.03
RUGP0001	1001	8.1	8.2	0	1.7	-0.1
RUGP0002	1003	0	5.2	0	16	-0.17
RUGP0003	1003	0	0.3	0	12.4	0.02
RUGP0004	1002	0	3.1	0	17.8	0.21
RUGP0008	1003	0	1.9	0	18.4	0.02
RUGP0009	1003	0	3.4	0	17	-0.07
RUGP0010	1003	0	2.2	0	18.6	0
RUGP0011	1003	0	1.8	0	18.9	-0.05
RUGP0012	1003	0	0.8	0	19.9	-0.57
RUGP0013	1003	0	0.8	0	19.8	0.03
RUGP0014	1003	0	3.2	0	18.7	-0.09
RUGP0015	1002	0	3.8	0	14.4	-0.05
RUGP0016	1001	0	0.9	0	20.3	-0.02
RUGP0018	1003	0	0.2	0	20.5	4.73
RUGP0019	1002	0	0.1	0	20.8	10.57
RUGP0020	1002	0	0.1	0	20.9	0.05
RUGP0021	1001	0	1.1	0	19.9	-0.02
RUGP00A1	1004	0	0.1	0	20.3	1.77

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	AtPress (mBar)	CH4 (%v/v) (%)	CO2 (%v/v) (%)	H2S (ppm)	O2 (%v/v)	Rel Press (mBar)
RUGP00A2	1003	0	3.9	0	9.7	-0.28
RUGP00A3	1004	0	0.1	0	20.1	0.14
RUGP00B1	1004	0	0.1	0	18.6	-0.03
RUGP00B2	1004	0	7.1	0	7	0.62
RUGP00B3	1004	0	0.1	0	20.4	-0.21
RUGP00C1	1003	0	0.1	0	20.4	0.02
RUGP00C2	1003	0	0.1	0	19.5	0.33
RUGP00C3	1004	0	0.1	0	20.4	-0.03
RUGP00D1	1004	0	0.1	0	20.2	-0.21
RUGP00D2	1004	0	0.1	0	20.4	-0.05
RUGP00D3	1004	0	0.1	0	20.4	-0.02
RUGP00E1	1004	0	0.1	0	20.4	-0.05
RUGP00E2	1003	0	0.1	0	20.4	0.19
RUGP00E3	1004	0	0.1	0	20.1	-0.05
RUGP00F1	1004	0	0.1	0	20.2	0.24
RUGP00F2	1003	0	0.1	0	19.9	-0.07
RUGP00F3	1004	0	0.1	0	20.4	0.83
RUWB001A	1003	0	0.2	0	19.1	0.26
RUWB001B	1003	0	3.2	0	16.8	-0.15
RUWB002A	1003	0	0.1	0	19.8	-0.03
RUWB002B	1003	0	0.9	0	19.9	0.02
RUWB002C	1003	0	1.6	0	19.3	-0.03
RUWB002D	1003	0	0.2	0	20.4	0.05
RUWB003A	1001	0	0.4	0	16.2	-0.03
RUWB003B	1001	0	0.3	0	15.5	1.98
RUWB004A	1002	0	0.2	0	17.5	2.39
RUWB004B	1002	0	2.9	0	16.9	-0.03
RUWB005A	1003	0	0.1	0	20.8	-0.03
RUWB005B	1003	0	0.2	0	20.7	0.15

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Sample Point	AtPress (mBar)	CH4 (%v/v) (%)	CO2 (%v/v) (%)	H2S (ppm)	O2 (%v/v)	Rel Press (mBar)
RUBH0006	1000	0	4	0	7.7	-0.14
RUBH0007	1000	4.2	7.9	0	0.5	-0.36
RUBH0008	1000	0	2.8	0	17.7	-0.09
RUBH0009	1000	0	0.7	0	20.1	-0.07
RUBH0010	1000	0	0.5	0	20.2	-0.1
RUBH0013	998	0	0.9	0	19.6	-0.03
RUBH0014	998	0	2.5	0	15.3	0.1
RUBH0015	999	0	1.6	0	18.3	-0.09
RUBH0016	999	0	0.5	0	20.2	-0.14
RUBH001A	999	0	0.5	0	20	-0.1
RUBH001B	999	0	0.8	0	19.6	-0.02
RUBH002A	999	0	0.1	0	20.6	-0.12
RUBH002B	999	0	0.2	0	20.6	-0.14
RUBH003A	999	0	1.5	0	19.2	-0.02
RUBH003B	999	0	0.1	0	21.1	0.03
RUBH004A	1000	0	1.9	0	18.9	-0.14
RUBH004B	999	0	4.3	0	17	0.05
RUBH011A	999	0	1.4	0	18.8	0.03
RUBH011P	999	0	0.1	0	20.6	-1.43
RUBH012A	999	0	2.7	0	17.8	-0.1
RUGBH001	999	0	2.9	0	19	-0.65
RUGBH002	1000	0	2.9	0	14.7	-0.1
RUGBH003	1000	0	0.2	0	20.5	-0.19
RUGBH004	1000	0	0.1	0	20.6	0.64
RUGBH005	1000	0	0.1	0	20.6	-0.03
RUGBH006	1001	0	3.5	0	18.4	0
RUGBH007	998	0	0.1	0	20.6	-0.15
RUGBH008	999	0	0.4	0	20.3	-0.09
RUGBH009	1000	0	0.8	0	20.1	0.14
RUGBH010	1000	0	0.9	0	20.3	-0.12
RUGBH02A	1000	0	2.5	0	17.7	-0.1
RUGP0001	999	9.1	8.1	0	2	0.07
RUGP0002	999	0	5.6	0	16	-0.12
RUGP0003	999	0	0.3	0	11.5	-0.15
RUGP0004	999	0	2.3	0	19.4	0.46
RUGP0008	999	0	1.6	0	19.3	-0.1
RUGP0009	999	0	2.9	0	17.8	0
RUGP0010	999	0	2.1	0	19.3	-0.15
RUGP0011	999	0	2	0	19.4	-0.14
RUGP0012	999	0	0.5	0	20.5	0.14
RUGP0013	999	0	0.8	0	20.1	-0.09
RUGP0014	1000	0	3.6	0	18.6	-0.12
RUGP0015	1000	0	2.1	0	17.7	-0.1
RUGP0016	999	0	1	0	20.1	0.19
RUGP0018	1000	0	0.2	0	20.2	0.59
RUGP0019	999	0	0.1	0	20.5	0.22
RUGP0020	999	0	0.1	0	20.5	5.23
RUGP0021	998	0	1.2	0	19.3	0.03
RUGP00A1	1000	0	0.1	0	20.2	0

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	AtPress (mBar)	CH4 (%v/v) (%)	CO2 (%v/v) (%)	H2S (ppm)	O2 (%v/v)	Rel Press (mBar)
RUGP00A2	1000	0	5.2	0	6	-0.19
RUGP00A3	1001	0	0.1	0	20	0.31
RUGP00B1	1000	0	0.1	0	17.5	-0.09
RUGP00B2	1001	0	4.6	0	11.4	-0.03
RUGP00B3	1000	0	0.1	0	20.3	-0.09
RUGP00C1	1000	0	0.1	0	20.5	0.1
RUGP00C2	1000	0	0.1	0	19.3	0.65
RUGP00C3	1000	0	0.1	0	20.5	-0.14
RUGP00D1	1000	0	0.1	0	19.8	-0.02
RUGP00D2	1000	0	0.1	0	20.6	-0.1
RUGP00D3	1000	0	0.1	0	20.3	0.38
RUGP00E1	1000	0	0.1	0	20.7	-0.15
RUGP00E2	1000	0	0.1	0	20.6	0.41
RUGP00E3	1000	0	0.1	0	20.6	0.07
RUGP00F1	1000	0	0.1	0	19.9	-0.15
RUGP00F2	1000	0	0.1	0	20.2	-0.26
RUGP00F3	1000	0	0.1	0	20.1	0
RUWB001A	999	0	0.2	0	19.1	0.05
RUWB001B	999	0	3.3	0	16.7	-0.21
RUWB002A	999	0	0.1	0	20.3	-0.1
RUWB002B	999	0	0.8	0	20.3	0.62
RUWB002C	999	0	1	0	20.1	-0.14
RUWB002D	999	0	0.2	0	20.6	0.03
RUWB003A	998	0	0.4	0	15.3	-8.9
RUWB003B	998	0	0.3	0	13.5	-8.38
RUWB004A	1000	0	0.2	0	16.6	-2.65
RUWB004B	999	0	2.8	0	17.3	12.37
RUWB005A	1000	0	0.1	0	20.4	0.29
RUWB005B	1001	0	0.4	0	20.3	-0.1

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APPENDIX 3

Landfill Gas Field Extraction and Balancing Data

RUABON LANDFILL GAS EXTRACTION AND BALANCING DATA - October 2015

Well ID	Date & Time	CH4 (%)	CO2 (%)	O2 (%)	Balance Gas (%)	Vacuum (mbar)	Atmos Press (mb)	CO (ppm)	H2S (ppm)	Original Valve (%)	Depart Valve (%)
RUAW065R	01/10/2015 11:07	40.1	25	0.3	34.6	-1.94	1018	4	2	5	5
RUAW011R	01/10/2015 11:08	36.3	18.8	9	35.9	-2	1018	4	1	-	0
RUAW1405	01/10/2015 11:10	40.6	25.6	0.2	33.6	-3.16	1018	4	1	20	20
RUAMW005	01/10/2015 11:13	37.3	25.6	0	37.1	-9.8	1018	4	1	10	10
RUAW0061	01/10/2015 11:14	69.1	30.8	0.2	0	-1.37	1018	4	2	1	5
RUAW0061	01/10/2015 11:16	61.3	30.1	0	8.6	-4.43	1018	4	1	5	5
RUAMW006	01/10/2015 11:18	53.2	31.1	0	15.7	-5.06	1018	4	2	5	10
RUAMW006	01/10/2015 11:19	52.5	31.3	0	16.2	-6.68	1018	4	1	10	10
RUAMW09R	01/10/2015 11:21	69.8	32.2	0.9	0	-0.33	1018	4	2	5	10
RUAMW09R	01/10/2015 11:22	68.5	33.3	0	0	-3.75	1018	4	1	10	10
RUAW1402	01/10/2015 11:24	63	34.8	0.7	1.5	-0.48	1018	4	1	1	5
RUAW1402	01/10/2015 11:25	37.3	30.3	0.5	31.9	-4	1018	4	1	1	1
RUAW1401	01/10/2015 11:26	66.8	35.7	0.9	0	-0.27	1018	4	2	1	5
RUAW1401	01/10/2015 11:28	65.6	36.4	0	0	-1.19	1018	4	1	5	5
RUAW0048	01/10/2015 11:29	33.5	26.8	7.4	32.3	-67.99	1017	4	3	0	0
RUAW050R	01/10/2015 11:32	61.3	40	0	0	0.16	1017	4	2	0	1
RUAW050R	01/10/2015 11:33	61.2	40.1	0	0	-0.45	1017	4	1	5	5
RUAW0067	01/10/2015 11:35	48.6	33.6	0.5	17.3	-1.76	1018	4	1	5	5
RUAW057R	01/10/2015 11:38	40.7	32.3	0.1	26.9	-22.41	1018	4	2	20	20
RUAW032R	01/10/2015 11:40	36	30.8	1.1	32.1	-29.93	1018	4	1	10	10
RUAW031R	01/10/2015 11:41	35	30.6	1.6	32.8	-12.66	1018	4	1	1	1
RUAW034R	01/10/2015 11:43	19.1	24.6	0.3	56	-16.33	1019	4	2	5	5
RUAW0036	01/10/2015 11:45	26.4	25.4	2.2	46	-32.25	1019	4	2	5	0
RUAW0036	01/10/2015 11:46	26.5	25.6	2.1	45.8	-27.85	1019	4	1	0	0
RUAW0059	01/10/2015 11:48	58.5	34.7	0.2	6.6	-8.54	1019	4	1	5	5
RUAW1403	01/10/2015 11:50	50	31.5	0	18.5	-1.92	1019	4	2	1	1
RUAMW003	01/10/2015 11:52	16.5	15	0	68.5	-0.03	1019	4	1	0	-

Well ID	Date & Time	CH4 (%)	CO2 (%)	O2 (%)	Balance Gas (%)	Vacuum (mbar)	Atmos Press (mb)	CO (ppm)	H2S (ppm)	Original Valve (%)	Depart Valve (%)
RUAW0052	01/10/2015 11:54	30.1	13.6	10.1	46.2	-50.53	1019	4	1	5	1
RUAW0052	01/10/2015 11:57	30.2	13.6	10.7	45.5	-50.88	1019	4	1	1	1
RUAW0035	01/10/2015 11:58	68.2	30.9	0.4	0.5	-38.6	1019	4	1	5	5
RUAW033R	01/10/2015 12:00	21.6	22.4	2.6	53.4	-53.36	1020	4	1	5	5
RUAW030R	01/10/2015 12:01	36.2	30.5	1.3	32	-51.18	1020	4	2	10	10
RUAW026R	01/10/2015 12:03	13.9	22.4	0.1	63.6	-5.66	1020	4	1	5	5
RUALCM10	01/10/2015 12:05	45.9	31.3	0.4	22.4	-49.21	1019	4	1	20	20
RUAW0027	01/10/2015 12:07	62.4	36.8	0.3	0.5	-47.78	1019	4	1	20	30
RUAW0027	01/10/2015 12:08	63	37.3	0.1	0	-50.05	1019	4	1	0	20
RUAW056R	01/10/2015 12:09	59.6	41.1	0	0	-1.33	1019	4	2	-	1
RUAW0028	01/10/2015 12:11	0.5	2.9	19.4	77.2	-4.83	1018	4	1	5	0
RUAW0028	01/10/2015 12:13	0.4	1.6	19.9	78.1	-29.22	1018	4	1	0	0
RUAW0024	01/10/2015 12:14	48.6	30	2.2	19.2	-39.28	1019	4	1	30	30
RUAW0023	01/10/2015 12:19	65.7	31.7	0.5	2.1	-16.75	1018	4	2	10	20
RUAW0023	01/10/2015 12:20	64.6	32	0.6	2.8	-36.81	1018	4	1	20	20
RUAW0066	01/10/2015 12:22	33.5	29.5	0	37	-0.13	1018	4	1	-	0
RUAW0022	01/10/2015 12:23	48.5	32.8	0.6	18.1	0.72	1018	4	1	0	5
RUAW0022	01/10/2015 12:25	45.2	33.2	0	21.6	-5.39	1018	4	1	10	10
RUAW029R	01/10/2015 12:26	46	35.2	0	18.8	-0.66	1018	4	1	1	5
RUAW029R	01/10/2015 12:28	45	35.2	0	19.8	-2.32	1018	4	1	5	5
RUAW0049	01/10/2015 12:30	53.2	30	2.8	14	-1.85	1017	4	15	1	1
RUAW0021	01/10/2015 12:34	56.6	34.5	0.1	8.8	-2.75	1017	4	2	5	10
RUAW0021	01/10/2015 12:35	55.8	35	0	9.2	-8.33	1017	4	1	20	20
RUAW0020	01/10/2015 12:37	30.2	26.1	1.1	42.6	-1.83	1017	4	1	10	1
RUAW0020	01/10/2015 12:38	29.1	28.5	0	42.4	-1.14	1017	4	1	0	-
RUAW0024	02/10/2015 08:19	48.9	29.9	2	19.2	-52.36	1011	4	3	40	40
RUAW0027	02/10/2015 08:23	64.6	36.6	0.4	0	-41.49	1012	4	2	20	20
RUAW025R	02/10/2015 08:26	56.1	27.1	0.1	16.7	-3.46	1012	4	2	5	10
RUAW025R	02/10/2015 08:27	52.2	28.7	0	19.1	-8.48	1012	4	2	10	10

Well ID	Date & Time	CH4 (%)	CO2 (%)	O2 (%)	Balance Gas (%)	Vacuum (mbar)	Atmos Press (mb)	CO (ppm)	H2S (ppm)	Original Valve (%)	Depart Valve (%)
RUAW026R	02/10/2015 08:30	15.7	22.4	0.5	61.4	-5.31	1012	4	2	5	5
RUAW030R	02/10/2015 08:36	38.4	31.2	1.3	29.1	-51.34	1012	4	1	10	10
RUAW031R	02/10/2015 08:46	39.6	32.4	1.2	26.8	-7.56	1011	4	1	10	10
RUAW057R	02/10/2015 08:51	45	33.2	0.8	21	-17.22	1011	4	1	10	10
RUAW032R	02/10/2015 08:54	39.9	32.9	0.2	27	-18.08	1011	4	2	10	10
RUAW034R	02/10/2015 08:57	23.3	25.6	0.2	50.9	-8.28	1011	4	1	5	5
RUAW033R	02/10/2015 09:01	33.4	23.4	3.6	39.6	-33.77	1012	4	1	5	5
RUARW042	02/10/2015 09:05	27.3	24.9	0.9	46.9	-13.37	1013	4	1	5	5
RUARW041	02/10/2015 09:07	0	1.8	19.9	78.3	-18.95	1013	4	1	0	0
RUARW040	02/10/2015 09:09	14.6	20	2.3	63.1	-42.98	1013	4	1	10	-
RUARW039	02/10/2015 09:10	43.7	26.6	0.2	29.5	-25.86	1013	4	2	20	20
RUARW038	02/10/2015 09:12	65.4	32.9	0.1	1.6	-50.96	1013	4	1	100	100
RUARW037	02/10/2015 09:14	27.5	27.2	0.3	45	-50.74	1012	4	1	70	70
RUAW0024	05/10/2015 11:50	53.3	29.1	1.9	15.7	-55.74	982	4	3	40	40
RUAW0027	05/10/2015 11:56	63.1	36.1	0	0.8	-57.84	983	4	2	20	20
RUAW025R	05/10/2015 12:00	22.7	23.2	0.5	53.6	-12.22	983	4	3	10	10
RUAW026R	05/10/2015 12:06	11.2	21.4	0.1	67.3	-12.98	983	4	3	5	5
RUAW030R	05/10/2015 12:11	37.9	29.9	1	31.2	-44.83	984	4	2	10	10
RUAW031R	05/10/2015 12:16	37.5	30.8	1	30.7	-8.04	982	4	2	10	10
RUAW032R	05/10/2015 12:20	38.5	31.8	0.2	29.5	-27.98	982	4	2	10	10
RUAW034R	05/10/2015 12:25	25.8	25.5	0.3	48.4	-9.34	983	4	2	5	5
RUAW033R	05/10/2015 12:48	32.3	20.9	4.4	42.4	-39.77	983	4	2	10	10
RUARW042	05/10/2015 13:01	28.3	25.3	0.3	46.1	-31.32	984	4	2	5	5
RUARW041	05/10/2015 13:04	0	1	19.2	79.8	-18.59	984	4	1	0	0
RUARW040	05/10/2015 13:06	15.1	18.6	2.5	63.8	-47.34	985	4	1	10	10
RUARW039	05/10/2015 13:08	45.7	27.2	0	27.1	-54.6	985	4	3	30	30
RUARW038	05/10/2015 13:10	64.5	32.5	0.1	2.9	-56.32	985	4	4	80	100
RUARW038	05/10/2015 13:11	63.9	33.2	0	2.9	-56.38	985	4	2	100	100
RUARW037	05/10/2015 13:13	34.8	27.6	0.2	37.4	-56.08	985	4	2	70	70

Well ID	Date & Time	CH4 (%)	CO2 (%)	O2 (%)	Balance Gas (%)	Vacuum (mbar)	Atmos Press (mb)	CO (ppm)	H2S (ppm)	Original Valve (%)	Depart Valve (%)
RUAW0054	07/10/2015 09:13	16.9	23.2	0	59.9	-0.57	992	0	2	1	1
RUAW0054	07/10/2015 09:16	16.6	22.9	0.3	60.2	-0.92	992	4	2	1	1
RUAW0008	07/10/2015 09:18	25.5	21.1	0	53.4	-0.52	992	4	2	1	1
RUAW0063	07/10/2015 09:20	6.4	19.3	0	74.3	-1.54	991	4	2	0	0
RUAW0007	07/10/2015 09:23	42.2	20.8	0	37	-5.12	991	4	2	5	5
RUAW0062	07/10/2015 09:26	6.9	11.1	11	71	-5.47	991	4	1	5	0
RUAW0062	07/10/2015 09:27	9	12.4	9.7	68.9	-6.04	991	4	2	0	0
RUAMW07R	07/10/2015 09:30	32.7	25.2	2.4	39.7	-5.15	991	4	1	5	5
RUAMW004	07/10/2015 09:32	12.5	22.5	0.3	64.7	-3.97	991	4	1	0	0
RUALMP4a	07/10/2015 09:34	46.2	19.1	0	34.7	-5.26	991	4	2	1	1
RUAW0044	07/10/2015 09:36	43.5	29.9	0.1	26.5	-8.25	991	4	2	5	5
RUAW0043	07/10/2015 09:38	19.8	23.3	0.2	56.7	-26.75	991	4	1	5	1
RUAW0043	07/10/2015 09:39	19.9	23.8	0.2	56.1	-23.82	991	4	2	1	1
RUAW0013	07/10/2015 09:41	13.2	14.1	9.9	62.8	-2.85	991	4	1	1	1
RUAW0014	07/10/2015 09:47	69.9	32	0.3	0	24.4	991	4	1	0	-
RUAW0014	07/10/2015 09:49	69.1	32.8	0	0	-35.65	991	4	1	5	5
RUAW0015	07/10/2015 09:51	66.9	34.6	0.2	0	-0.34	991	4	2	1	1
RUAW0044	07/10/2015 09:53	20.7	21.7	0.2	57.4	-6.3	991	4	1	5	0
RUAW0044	07/10/2015 09:54	20.6	21.9	0	57.5	-3.61	991	4	1	0	0
RUAMW08R	07/10/2015 09:58	40.9	25	0	34.1	-4.34	991	4	1	5	5
RUAW0046	07/10/2015 10:00	52.2	28.7	0	19.1	-1.09	990	4	1	1	1
RUAW0016	07/10/2015 10:03	27.1	25.5	0	47.4	-0.4	991	4	1	0	0
RUAW0017	07/10/2015 10:05	65.8	33.9	0.4	0	-0.82	990	4	2	1	5
RUAW0017	07/10/2015 10:06	64.7	34.7	0	0.6	-1.51	990	4	1	10	10
RUAW0064	07/10/2015 10:08	62.4	34.3	0	3.3	-1.48	990	4	2	1	1
RUAW0047	07/10/2015 10:10	62.2	31.5	0.8	5.5	0.89	990	4	2	0	5
RUAW0047	07/10/2015 10:11	61.6	31.7	0.7	6	-34.41	990	4	2	5	5
RUAW0018	07/10/2015 10:14	61.4	32	0.1	6.5	-1.34	990	4	2	1	5
RUAW0018	07/10/2015 10:15	60.9	32.5	0	6.6	-2.27	990	4	1	5	5

Well ID	Date & Time	CH4 (%)	CO2 (%)	O2 (%)	Balance Gas (%)	Vacuum (mbar)	Atmos Press (mb)	CO (ppm)	H2S (ppm)	Original Valve (%)	Depart Valve (%)
RUAW0019	07/10/2015 10:17	59.2	34.3	0	6.5	-2.25	990	4	1	1	5
RUAW0019	07/10/2015 10:19	58.3	33.7	0	8	-5.29	990	4	1	10	10
RUAW050R	07/10/2015 10:22	56.1	35	0.5	8.4	-0.5	990	4	1	1	5
RUAW050R	07/10/2015 10:23	55.6	35.4	0	9	-1.28	990	4	1	5	5
RUAW0067	07/10/2015 10:26	54.1	33.1	0	12.8	-5.02	991	4	1	5	5
RUAW057R	07/10/2015 10:28	52.7	35.6	0	11.7	-14.5	991	4	2	10	-
RUAW057R	07/10/2015 10:30	52.2	35.6	0	12.2	-21.17	991	4	2	20	20
RUAW0051	07/10/2015 10:33	62.5	38.3	0.1	0	-151.81	991	4	2	5	5
RUAW1404	07/10/2015 12:16	32.3	26.7	0	41	-5.06	995	4	2	10	5
RUAW1404	07/10/2015 12:18	32.1	26.8	0	41.1	-4.94	995	4	2	5	5
RUAW0035	07/10/2015 12:21	51.1	29.9	1	18	-40.68	995	4	2	20	20
RUALCM10	07/10/2015 12:24	54.7	32.9	0.5	11.9	-40.74	995	4	2	20	30
RUALCM10	07/10/2015 12:26	54.1	33.6	0	12.3	-41.09	995	4	2	30	30
RUAW056R	07/10/2015 12:29	5.6	5.6	17.4	71.4	-2.49	994	4	2	10	0
RUAW056R	07/10/2015 12:30	5.7	5	17.6	71.7	-0.35	994	4	2	0	0
RUAW029R	07/10/2015 12:33	47.2	34.9	0	17.9	-3.15	994	4	2	10	10
RUAW0022	07/10/2015 12:40	59.5	37.2	0	3.3	-2.24	993	4	2	5	10
RUAW0022	07/10/2015 12:42	54.5	36	0	9.5	-5.81	993	4	2	10	10
RUAW0068	07/10/2015 12:47	67.6	34.1	0	0	29.13	993	4	2	0	5
RUAW0068	07/10/2015 12:48	66.2	35	0	0	-1.01	993	4	2	5	5
RUAW0021	07/10/2015 12:51	49.5	34.7	0	15.8	-10.73	993	4	1	10	10
RUAW0020	07/10/2015 12:53	47.9	32.8	0	19.3	-2.02	993	4	1	1	5
RUAW0020	07/10/2015 12:55	48.8	33.2	0	18	-3.4	993	4	1	5	5
RUAW0012	07/10/2015 13:01	67.2	33.3	0	0	-0.03	993	4	1	1	1
RUAW1401	08/10/2015 13:04	35	28.4	0	36.6	-5.19	1007	4	0	5	10
RUAW1401	08/10/2015 13:06	35.1	28.7	0	36.2	-9.34	1007	4	0	10	10
RUAW0019	08/10/2015 13:14	50.2	31.2	0	18.6	-3.52	1005	4	0	5	10
RUAW0019	08/10/2015 13:15	50.1	31.9	0	18	-6.5	1005	4	0	10	10
RUAW0024	09/10/2015 09:21	52.5	32.6	1.6	13.3	-50.53	1013	4	41	30	40

Well ID	Date & Time	CH4 (%)	CO2 (%)	O2 (%)	Balance Gas (%)	Vacuum (mbar)	Atmos Press (mb)	CO (ppm)	H2S (ppm)	Original Valve (%)	Depart Valve (%)
RUAW0024	09/10/2015 09:23	52.1	32.4	1.3	14.2	-51	1013	5	43	40	40
RUAW0027	09/10/2015 09:30	62	36.8	0.2	1	-55.91	1009	5	10	10	10
RUAW025R	09/10/2015 09:35	19.5	24	0.4	56.1	-9.58	1008	7	0	5	5
RUAW026R	09/10/2015 09:40	10.5	21.8	0	67.7	-10.43	1009	6	7	5	5
RUAW030R	09/10/2015 09:45	32.2	29.4	1.3	37.1	-48.53	1011	6	19	10	10
RUAW031R	09/10/2015 09:54	31.9	29	1.3	37.8	-23.3	1009	6	33	5	5
RUAW033R	09/10/2015 10:00	17.7	24.3	0	58	-13.53	1009	7	11	5	5
RUAW032R	09/10/2015 10:07	23.7	24.5	0.9	50.9	-44.62	1010	7	17	5	5
RUARW042	09/10/2015 10:13	26.6	26.2	0	47.2	-30.42	1010	7	1	5	5
RUARW041	09/10/2015 10:15	0	0.1	20.9	78.8	-19.27	1016	6	0	0	0
RUARW040	09/10/2015 10:17	13.8	20	2.5	63.7	-42.98	1010	7	0	10	10
RUARW039	09/10/2015 10:19	38.7	26.7	0.4	34.2	-52.83	1015	7	9	50	50
RUARW038	09/10/2015 10:21	62.5	33.8	0	3.7	-55.65	1016	7	6	100	100
RUARW037	09/10/2015 10:23	29.4	28.5	0	42.1	-56.17	1010	7	20	80	80
RUAW0024	12/10/2015 14:07	53.8	30.2	1.6	14.4	-42.02	1007	3	1	50	50
RUAW0027	12/10/2015 14:12	63.4	35.5	0.2	0.9	-42.55	1008	3	0	20	20
RUAW025R	12/10/2015 14:16	20.5	22.3	0.7	56.5	-5.98	1007	3	0	5	5
RUAW026R	12/10/2015 14:19	10	19.6	0.6	69.8	-11.12	1008	4	0	5	5
RUAW030R	12/10/2015 14:24	35.3	28.8	1.1	34.8	-43.28	1009	3	0	10	10
RUAW031R	12/10/2015 14:29	33.4	27.8	1.6	37.2	-12.82	1008	4	0	5	5
RUAW034R	12/10/2015 14:33	19.2	23.5	0.1	57.2	-8.93	1007	4	0	5	5
RUAW033R	12/10/2015 14:39	49.5	27.4	0.9	22.2	-40.68	1008	4	0	5	10
RUAW033R	12/10/2015 14:41	49.2	27.7	0.8	22.3	-42.71	1008	4	0	10	10
RUARW042	12/10/2015 14:47	25.7	25.8	0	48.5	-26.68	1008	4	0	5	5
RUARW041	12/10/2015 14:48	0.1	4.4	19.3	76.2	-16.6	1009	3	0	0	0
RUARW040	12/10/2015 14:54	12.8	18.9	3	65.3	-37.26	1009	4	0	10	10
RUARW039	12/10/2015 14:56	41.3	26	0	32.7	-42.16	1014	4	0	40	40
RUARW038	12/10/2015 14:59	63.6	31	0.5	4.9	-42.43	1015	6	0	100	100
RUARW037	12/10/2015 15:02	29.6	28	0	42.4	-42.3	1014	5	0	60	60

Well ID	Date & Time	CH4 (%)	CO2 (%)	O2 (%)	Balance Gas (%)	Vacuum (mbar)	Atmos Press (mb)	CO (ppm)	H2S (ppm)	Original Valve (%)	Depart Valve (%)
RUAW0019	14/10/2015 10:06	24.4	27.2	0	48.4	-11.66	1010	3	0	50	0
RUAW0019	14/10/2015 10:10	14.4	24.2	0	61.4	-7.71	1010	4	0	0	0
RUAW0047	14/10/2015 10:13	0.4	1.6	20.9	76.6	-48.39	1011	1	0	10	0
RUAW0047	14/10/2015 10:18	0.4	1.2	20.9	76.9	-37.52	1011	1	0	0	0
RUAW0024	16/10/2015 13:28	52	32.4	1.4	14.2	-58.96	1011	6	1	40	40
RUAW0027	16/10/2015 13:33	62.1	36	0.7	1.2	-59.96	1011	6	1	10	10
RUALCM10	16/10/2015 13:38	46.3	31.2	0.8	21.7	-56.19	1011	6	1	20	20
RUAW025R	16/10/2015 13:40	51.5	27.5	0.1	20.9	-6.65	1015	6	1	5	10
RUAW025R	16/10/2015 13:42	49.6	28.9	0	21.5	-11.31	1015	6	1	10	10
RUAW026R	16/10/2015 13:47	13.4	21.1	0.8	64.7	-6.12	1012	6	0	5	5
RUAW030R	16/10/2015 13:53	35.9	31.3	1	31.8	-59.74	1011	6	1	10	10
RUAW030R	16/10/2015 13:58	32.7	29.9	1.6	35.8	-12.77	1010	6	0	10	10
RUAW034R	16/10/2015 14:04	18	24.6	0.2	57.2	-13.75	1011	6	0	20	5
RUAW034R	16/10/2015 14:05	18	24.8	0.1	57.1	-13.63	1011	5	0	5	5
RUAW033R	16/10/2015 14:10	39.8	24.4	3.4	32.4	-57.48	1012	5	0	10	10
RUARW042	16/10/2015 14:15	26	24.7	0.4	48.9	-36.83	1012	5	0	5	5
RUARW041	16/10/2015 14:17	0	2.3	20.9	76.8	-22.7	1015	4	0	0	0
RUARW040	16/10/2015 14:21	0.6	1.6	20.4	77.4	-43.79	1015	5	0	5	1
RUARW040	16/10/2015 14:22	1.4	2.4	19.1	77.1	-42.78	1015	5	0	1	1
RUARW039	16/10/2015 14:26	40.6	26	0.2	33.2	-59.96	1014	6	0	50	50
RUARW038	16/10/2015 14:29	60.9	33	0.6	5.5	-59.91	1013	6	0	100	100
RUARW037	16/10/2015 14:31	22.1	24.9	0.7	52.3	-59.25	1016	11	0	80	50
RUARW037	16/10/2015 14:33	22.2	25.6	0.5	51.7	-53.48	1016	11	0	50	50
RUAW0035	16/10/2015 14:52	63.8	29.4	1.5	5.3	-59.7	1011	6	0	20	20
RUAW1404	16/10/2015 14:55	49.7	29.1	0.1	21.1	-3.81	1014	6	0	5	5
RUAW031R	19/10/2015 09:37	29.3	28.3	1.8	40.6	-19.8	1014	4	0	10	5
RUAW031R	19/10/2015 09:40	31.9	30.1	1	37	-16.65	1014	5	1	5	5
RUAW034R	19/10/2015 09:42	16.7	24.3	0	59	-13.37	1014	5	0	5	1
RUAW034R	19/10/2015 09:44	16.5	24.2	0.1	59.2	-13.22	1014	6	0	1	1

Well ID	Date & Time	CH4 (%)	CO2 (%)	O2 (%)	Balance Gas (%)	Vacuum (mbar)	Atmos Press (mb)	CO (ppm)	H2S (ppm)	Original Valve (%)	Depart Valve (%)
RUAW0036	19/10/2015 09:47	26.6	25.8	1.9	45.7	-24.66	1014	5	0	5	0
RUAW0036	19/10/2015 09:50	23.9	24.7	2.3	49.1	-17.98	1014	6	0	0	0
RUAW0059	19/10/2015 09:52	51.3	33.2	0.4	15.1	-58.31	1015	5	0	5	5
RUAW032R	19/10/2015 09:55	34.9	32.3	0	32.8	-27.8	1013	5	0	10	10
RUAW057R	19/10/2015 09:57	34.7	32	0	33.3	-55.26	1016	6	0	10	10
RUAW0051	19/10/2015 10:00	61.2	35.5	0.6	2.7	-50.71	1012	6	0	10	10
RUAW0067	19/10/2015 10:04	32.6	31.5	0.1	35.8	-20.49	1017	5	0	20	5
RUAW0067	19/10/2015 10:06	32	31.1	0.5	36.4	-19.49	1017	5	0	5	5
RUAW0060	19/10/2015 10:08	8.1	5.4	18.3	68.2	-0.14	1011	4	0	0	0
RUAW1401	19/10/2015 10:11	18.8	24.4	0	56.8	-6.22	1013	5	0	10	0
RUAW1401	19/10/2015 10:12	18.9	25	0	56.1	-3.57	1013	6	0	0	0
RUAMW09R	19/10/2015 10:15	61.2	32.2	1.3	5.3	-2.28	1017	6	0	5	10
RUAMW09R	19/10/2015 10:17	64.2	34.2	0	1.6	-5.91	1017	7	0	10	10
RUAW1402	19/10/2015 10:20	8.4	18.7	4.3	68.6	-2.02	1014	5	0	5	0
RUAW1402	19/10/2015 10:21	8.5	18.3	4.5	68.7	-2.15	1014	6	0	0	0
RUAW0061	19/10/2015 10:23	21.9	24.6	0	53.5	-3.5	1012	5	0	5	0
RUAW0061	19/10/2015 10:24	20.5	25	0	54.5	-3.96	1012	5	0	0	0
RUAMW006	19/10/2015 10:26	47.6	31.3	0	21.1	-8.98	1012	5	0	10	10
RUAMW005	19/10/2015 10:29	40.9	26.7	0	32.4	-8.69	1012	6	1	20	20
RUAW0024	19/10/2015 11:29	50.6	32.4	1.3	15.7	-59.98	1013	4	0	40	40
RUAW0027	19/10/2015 11:37	60.7	37.2	0.3	1.8	-58.94	1014	5	0	20	20
RUAW025R	19/10/2015 11:45	17.4	22.9	0.7	59	-9.32	1016	7	0	10	5
RUAW025R	19/10/2015 11:46	17.4	23.3	0.6	58.7	-4.53	1016	7	0	1	1
RUAW026R	19/10/2015 11:51	10.5	21.4	0.2	67.9	-11.12	1013	7	0	5	5
RUAW030R	19/10/2015 11:57	31.4	28.3	1.5	38.8	-62.5	1014	7	0	1	1
RUAW031R	19/10/2015 12:03	28.5	27.2	1.9	42.4	-16.96	1012	8	0	1	1
RUAW034R	19/10/2015 12:08	14.2	21.9	0.3	63.6	-7.08	1013	7	0	1	1
RUAW033R	19/10/2015 12:16	43.6	24.3	2.8	29.3	-57.91	1013	7	0	10	10
RUARW042	19/10/2015 12:21	23.5	25.3	0.2	51	-31.94	1013	6	0	5	5

Well ID	Date & Time	CH4 (%)	CO2 (%)	O2 (%)	Balance Gas (%)	Vacuum (mbar)	Atmos Press (mb)	CO (ppm)	H2S (ppm)	Original Valve (%)	Depart Valve (%)
RUARW041	19/10/2015 12:24	0	1.1	20.9	77.7	-16.18	1019	5	0	0	0
RUARW040	19/10/2015 12:27	0	0.6	20.9	78	-12.37	1014	5	0	5	1
RUARW040	19/10/2015 12:29	0	0.5	20.9	78	-16.11	1014	5	0	0	0
RUARW039	19/10/2015 12:31	39.2	24.6	0.2	36	-63.24	1020	6	0	30	20
RUARW039	19/10/2015 12:33	38.5	26.5	0	35	-61.19	1020	7	0	20	20
RUARW038	19/10/2015 12:35	61.3	33.4	0.1	5.2	-63.41	1020	6	0	100	80
RUARW038	19/10/2015 12:37	60.9	34	0	5.1	-61.32	1020	6	0	50	50
RUARW037	19/10/2015 12:39	20.3	24.8	0.3	54.6	-61.7	1018	10	0	50	20
RUARW037	19/10/2015 12:41	20.3	25.1	0.2	54.4	-55.95	1018	10	0	20	20
RUAW0019	19/10/2015 14:03	46.1	32.6	0.2	21.1	-0.1	1007	4	0	0	5
RUAW0019	19/10/2015 14:04	44.7	33.5	0	21.8	-0.43	1007	4	0	5	5
RUAMW08R	19/10/2015 14:08	33.2	25.2	0	41.6	-2.53	1013	4	0	1	1
RUAMW07R	19/10/2015 14:11	30.4	25.5	1.7	42.4	-8.15	1017	6	0	5	5
RUAW0007	19/10/2015 14:13	26.6	20.2	0.2	53	-2	1013	4	0	5	0
RUAW0007	19/10/2015 14:14	26.4	20.8	0	52.8	-2.03	1013	6	0	0	0
RUAW1403	19/10/2015 14:26	37.7	29.7	0	32.6	-2.29	1013	8	0	5	5
RUAW0035	19/10/2015 14:35	65.3	31.1	0.4	3.2	-58.72	1015	6	0	20	20
RUAW0035	19/10/2015 14:38	65.5	31.1	0.4	3	-58.98	1015	7	0	30	30
RUAW0023	19/10/2015 14:46	47.3	30.7	2.6	19.4	-56.12	1010	7	0	20	20
RUAW0022	19/10/2015 14:49	32.6	30.6	0.1	36.7	-9.29	1011	8	0	20	1
RUAW0022	19/10/2015 14:51	32.4	31.6	0	36	-4.69	1011	9	0	1	1
RUAW0021	19/10/2015 14:54	38.1	31.3	0	30.6	-15.39	1014	13	0	20	20
RUAW0049	19/10/2015 15:28	0.6	2.4	20.7	76.3	-66.56	1010	4	0	10	0
RUAW0049	19/10/2015 15:29	0.6	1.4	20.9	77	-56.48	1010	3	0	0	0
RUAW029R	19/10/2015 15:33	42	35	0	23	-3.48	1015	5	0	5	10
RUAW029R	19/10/2015 15:34	41.3	34.8	0	23.9	-3.86	1015	5	0	10	10
RUAW056R	19/10/2015 15:39	57.6	41.7	0	0.7	0.6	1013	5	0	0	5
RUAW056R	19/10/2015 15:42	17.1	14.9	14.2	53.8	-0.53	1013	5	0	0	0
RUALMP2a	19/10/2015 16:00	55.6	20.9	0	23.5	16.8	1012	6	0	0	1

Well ID	Date & Time	CH4 (%)	CO2 (%)	O2 (%)	Balance Gas (%)	Vacuum (mbar)	Atmos Press (mb)	CO (ppm)	H2S (ppm)	Original Valve (%)	Depart Valve (%)
RUALMP2a	19/10/2015 16:02	55.2	20.8	0	24	-64.46	1012	6	0	1	1
RUALMP2a	19/10/2015 16:05	54	20.8	0.2	25	-62.58	1012	5	0	1	1
RUAW0061	19/10/2015 16:07	46	29.4	0	24.6	-0.69	1013	5	0	0	5
RUAW0061	19/10/2015 16:10	45.9	29.4	0	24.7	-1.95	1013	5	0	5	5
RUAMW09R	19/10/2015 16:13	42.3	31.7	0	26	-0.71	1012	6	0	5	5
RUAW0001	20/10/2015 09:04	26.6	24.1	0.1	49.2	-0.07	1015	3	0	1	1
RUAMW001	20/10/2015 09:08	17.1	18.8	1	63.1	-0.45	1013	2	0	0	0
RUAW065R	20/10/2015 09:15	41.9	23.5	0.2	34.4	-2.29	1013	2	0	5	10
RUAW065R	20/10/2015 09:17	41	23.9	0	35.1	-4.31	1013	3	0	10	10
RUAW011R	20/10/2015 09:21	24.6	12.3	14.1	49	-2.93	1013	3	0	0	0
RUAW1405	20/10/2015 09:25	38.7	24.9	0.4	36	-2.64	1012	4	0	10	10
RUAMW005	20/10/2015 09:31	39.8	26	0.1	34.1	-9.07	1012	4	0	20	20
RUAW0061	20/10/2015 09:36	18.2	22.3	0.9	58.6	-3.21	1013	3	0	5	0
RUAMW006	20/10/2015 09:43	46.7	30.7	0.1	22.5	-13.84	1006	4	0	15	15
RUAW0060	20/10/2015 09:50	38.2	23.1	6.6	32.1	0.14	1013	4	0	0	0
RUAMW09R	20/10/2015 09:55	26.5	26.2	1.1	46.2	-4.1	1013	5	0	10	0
RUAMW09R	20/10/2015 09:56	26	26.6	1.1	46.3	-2.91	1013	5	0	0	0
RUAW1402	20/10/2015 10:05	0.7	7.6	12.7	79	-0.28	1012	3	0	0	0
RUAW1401	20/10/2015 10:09	50.4	34.8	0	14.8	-0.22	1012	5	1	0	5
RUAW1401	20/10/2015 10:11	50.9	35.1	0	14	-1	1012	4	2	10	10
RUAW0048	20/10/2015 10:19	29.4	20.1	10	40.5	-0.17	1013	3	0	0	0
RUAW050R	20/10/2015 10:22	12.7	20.6	3.9	62.8	-0.93	1014	3	0	5	0
RUAW050R	20/10/2015 10:23	12.8	21	3.7	62.5	-0.86	1014	4	0	0	0
RUAW0067	20/10/2015 10:29	36.8	32	0.2	31	-7.82	1013	4	0	5	5
RUAW0051	20/10/2015 10:36	61.7	35.1	0.6	2.6	-49.84	1013	4	0	10	10
RUAW056R	20/10/2015 10:44	34.2	31.9	0	33.9	-42.31	1016	4	0	10	5
RUAW056R	20/10/2015 10:46	34.2	31.9	0	33.9	-37.31	1016	5	0	5	5
RUAW032R	20/10/2015 10:54	35.7	32.2	0	32.1	-17.15	1015	5	0	5	5
RUAW031R	20/10/2015 10:59	33.3	28.6	1.6	36.5	-8.82	1013	5	0	5	5

Well ID	Date & Time	CH4 (%)	CO2 (%)	O2 (%)	Balance Gas (%)	Vacuum (mbar)	Atmos Press (mb)	CO (ppm)	H2S (ppm)	Original Valve (%)	Depart Valve (%)
RUAW034R	20/10/2015 11:07	16.8	22.4	0.3	60.5	-5.31	1018	5	0	5	5
RUAW0036	20/10/2015 11:16	33.1	27.2	1.1	38.6	-5.19	1016	5	0	0	0
RUAW0059	20/10/2015 11:23	47.8	32.3	0.2	19.7	-52.19	1015	4	0	10	10
RUAW0055	20/10/2015 13:35	0.1	3.8	17.7	78.4	-0.05	1013	2	0	0	0
RUAW0004	20/10/2015 13:42	5.4	12.3	1.2	81.1	-0.16	1013	3	0	0	0
RUAW0005	20/10/2015 13:48	19.9	20.7	0.2	59.2	-0.12	1013	3	0	0	0
RUAW1404	20/10/2015 13:56	51.6	26	0.6	21.8	-0.17	1013	4	0	5	10
RUAW1404	20/10/2015 13:59	47.3	29.6	0	23.1	-1.09	1015	4	1	10	10
RUAW0052	20/10/2015 14:04	22.6	10.1	13.4	53.9	-50.93	1013	4	0	0	0
RUAW0035	20/10/2015 14:09	65.8	30.7	0.5	3	-51.6	1012	4	0	50	50
RUARW037	20/10/2015 14:22	20.5	24.2	0.2	55.1	-41.73	1019	6	0	40	40
RUAW056R	20/10/2015 14:44	56.7	40.5	0	2.8	-0.09	1012	6	0	0	5
RUAW056R	20/10/2015 14:46	56.5	41.3	0	2.2	-0.48	1012	6	0	10	10
RUAW029R	20/10/2015 15:02	41.6	34.3	0	24.1	-2.74	1011	5	0	5	5
RUAW0023	20/10/2015 15:05	54.4	34.3	1	10.3	-47.31	1013	4	0	20	30
RUAW0023	20/10/2015 15:06	54.4	34.5	0.9	10.2	-48.12	1013	5	0	30	30
RUAW0066	20/10/2015 15:11	27.2	25.9	2.2	44.7	0.47	1014	5	0	0	0
RUAW0068	20/10/2015 15:21	55.5	32.3	2	10.2	-50.26	1016	5	0	10	10
RUAW0021	20/10/2015 15:24	41.7	32.3	0	26	-12.19	1015	9	0	20	20
RUAW0002	22/10/2015 11:04	3.9	7.8	9.6	78.7	-0.16	1001	4	0	0	0
RUAW0003	22/10/2015 11:08	17.1	19.6	0.3	63	-0.5	1002	3	21	0	0
RUAW0053	22/10/2015 11:11	9.3	18.7	0	72	-0.81	1002	3	17	0	0
RUAMW002	22/10/2015 11:13	42.9	21.6	0	35.5	-1.55	1002	4	17	1	1
RUARW037	22/10/2015 11:30	23.2	26	0.3	50.5	-62.36	1006	6	27	50	50
RUAW0019	22/10/2015 11:37	36.7	30.2	0.1	33	-1.03	1000	5	13	1	1
RUAW0018	22/10/2015 11:39	47.7	31	0	21.3	-1.07	1003	5	22	10	10
RUAW0017	22/10/2015 11:41	46.3	33	0.4	20.3	-1.03	1005	5	18	10	10
RUAW0064	22/10/2015 11:43	39.7	30.1	0.1	30.1	-2.38	1003	5	10	10	10
RUAW0045	22/10/2015 11:48	71.2	22.7	0.9	5.2	-0.19	1006	5	0	1	5

Well ID	Date & Time	CH4 (%)	CO2 (%)	O2 (%)	Balance Gas (%)	Vacuum (mbar)	Atmos Press (mb)	CO (ppm)	H2S (ppm)	Original Valve (%)	Depart Valve (%)
RUAW0045	22/10/2015 11:52	63	22.9	0.2	13.9	-30.73	1006	5	1	5	5
RUAW0024	23/10/2015 09:07	49.4	31.7	1.3	17.6	-56.69	1003	2	0	40	40
RUAW0027	23/10/2015 09:14	63.1	36.7	0.2	0	-59.98	1003	2	0	10	10
RUAW025R	23/10/2015 09:20	0.1	2	20.2	77.7	-11.01	1004	3	0	5	5
RUAW026R	23/10/2015 09:26	12.4	18	0.6	69	-8.84	1004	3	0	5	5
RUAW030R	23/10/2015 09:36	43.4	25.6	3.1	27.9	-65.43	1005	3	0	5	5
RUAW031R	23/10/2015 09:41	37.8	30.7	0.9	30.6	-7.1	1003	2	0	5	5
RUAW034R	23/10/2015 09:45	28.4	24.1	0.2	47.3	-4.69	1004	2	0	5	5
RUAW033R	23/10/2015 09:50	55.5	26.4	0.8	17.3	-55.91	1005	2	0	5	5
RUARW042	23/10/2015 09:55	27.6	21.1	1.2	50.1	-25.35	1005	1	0	5	5
RUARW041	23/10/2015 09:57	0.1	3.2	20.8	75.9	-11.36	1009	2	0	0	0
RUARW040	23/10/2015 10:01	4.8	12.6	3.2	79.4	-10.46	1005	2	0	1	1
RUARW039	23/10/2015 10:03	36.7	24.5	1.3	37.5	-66.08	1008	2	0	1	1
RUARW038	23/10/2015 10:10	58.6	32.8	0.7	7.9	-66.48	1009	2	0	10	10
RUARW037	23/10/2015 10:12	22.1	24.4	0.5	53	-66.48	1009	3	0	20	10
RUARW037	23/10/2015 10:13	21.9	25.7	0.3	52.1	-59.27	1009	2	0	10	10
RUAW0024	26/10/2015 14:37	55.8	23.6	2.2	18.4	-61.79	995	2	0	40	40
RUAW025R	26/10/2015 14:41	47.3	28.2	0.2	24.3	-7.93	995	3	0	10	10
RUAW0027	26/10/2015 14:52	67.7	31.6	0.8	0	-57.2	995	3	0	20	20
RUAW026R	26/10/2015 14:56	13	18.4	0.4	68.2	-0.84	996	3	0	1	1
RUAW030R	26/10/2015 15:00	56	32.4	0.7	10.9	-56.08	996	3	0	5	5
RUAW031R	26/10/2015 15:18	61	37.5	0.8	0.7	-6.17	997	3	0	5	10
RUAW031R	26/10/2015 15:19	60.4	38.6	0	1	-11.46	997	3	0	10	10
RUAW034R	26/10/2015 15:25	36.8	23.4	0.4	39.4	-1.84	997	2	0	1	5
RUAW034R	26/10/2015 15:26	34	27.2	0	38.8	-2	997	3	0	10	10
RUAW033R	26/10/2015 15:30	50.9	23.2	3.3	22.6	-46.26	995	2	0	10	10
RUARW040	26/10/2015 15:34	4.4	12.3	3.1	80.2	-9.57	996	3	0	1	1
RUARW039	26/10/2015 15:37	67.9	28.7	0.1	3.3	-11.82	1000	3	0	5	5
RUARW038	26/10/2015 15:39	63.4	32.1	0.3	4.2	-40.54	997	3	0	20	20

Well ID	Date & Time	CH4 (%)	CO2 (%)	O2 (%)	Balance Gas (%)	Vacuum (mbar)	Atmos Press (mb)	CO (ppm)	H2S (ppm)	Original Valve (%)	Depart Valve (%)
RUARW037	26/10/2015 15:40	25.7	22.7	0.7	50.9	-33.06	1000	3	0	10	10
RUAW0024	28/10/2015 09:23	52.2	33	1.2	13.6	-69.94	993	2	0	30	30
RUAW0027	28/10/2015 09:31	65.5	35.4	0.4	0	-66.3	993	2	0	20	20
RUAW025R	28/10/2015 09:35	22.4	24	0.4	53.2	-12.31	992	3	0	20	5
RUAW025R	28/10/2015 09:36	22.3	24.9	0.3	52.5	-6.67	992	3	0	5	5
RUAW026R	28/10/2015 09:40	13.8	22.8	0.1	63.3	-9.1	992	3	0	5	5
RUAW030R	28/10/2015 09:47	33.9	28.2	1.5	36.4	-77.21	993	2	0	5	5
RUAW031R	28/10/2015 09:51	31.4	26.7	1.8	40.1	-30.09	991	2	0	20	10
RUAW031R	28/10/2015 09:54	34.5	30.3	1.3	33.9	-23.82	991	3	0	10	10
RUAW034R	28/10/2015 10:04	30.8	26.8	0.2	42.2	-7.72	991	2	0	5	5
RUAW033R	28/10/2015 10:10	52.2	27.6	2.4	17.8	-60.01	992	2	0	10	10
RUARW042	28/10/2015 10:15	27.9	24.8	0.3	47	-29.08	993	2	0	5	5
RUARW041	28/10/2015 10:17	0.1	2.2	20.9	76.4	-11.79	998	1	0	0	0
RUARW040	28/10/2015 10:21	8	17.5	0.3	74.2	-9.41	993	2	0	5	5
RUARW039	28/10/2015 10:24	45.1	26.1	0.3	28.5	-69.98	998	2	0	10	10
RUARW038	28/10/2015 10:27	63.9	32.3	0.4	3.4	-67.68	995	2	0	10	10
RUARW037	28/10/2015 10:29	23.8	26.3	0.2	49.7	-52.02	997	2	0	10	10
RUAW0036	28/10/2015 11:42	61.2	36.4	0	2.4	-2.52	992	2	0	0	5
RUAW0036	28/10/2015 11:43	62	35.9	0	2.1	-9.74	992	2	0	5	5
RUAW0059	28/10/2015 11:46	50.5	33.9	0	15.6	-51.62	992	2	0	10	10
RUAW057R	28/10/2015 11:48	52.5	35	0.1	12.4	-19.08	994	1	0	5	10
RUAW057R	28/10/2015 11:50	51.6	36.5	0	11.9	-21.01	994	2	0	10	10
RUAW0051	28/10/2015 11:53	61.9	38.5	0.1	0	-50.36	993	2	0	5	5
RUAW0067	28/10/2015 11:55	45.4	33.3	0.1	21.2	-11.93	991	1	0	10	10
RUAMW09R	28/10/2015 12:00	66	35.3	0	0	1.38	992	2	0	0	5
RUAMW09R	28/10/2015 12:02	65.7	35.7	0	0	-3.57	992	2	0	5	5
RUAMW006	28/10/2015 12:04	44.2	30.8	0.1	24.9	-9.46	992	1	0	10	10
RUAMW005	28/10/2015 12:06	36.9	26.5	0	36.6	-5.36	992	2	0	10	10
RUAW0019	28/10/2015 12:11	44.7	32.8	0	22.5	-0.09	989	2	0	5	5

APPENDIX 4

Leachate Level Data

Ruabon Leachate Level Data - October 2015



From : 16/10/2015

To : 16/10/2015

16/10/2015

Sample Point	Depth of Liq (m)	Dip to Water (m)	TD (m)	Water Level (mAOD)
LMP006R	0.93	18.99	19.03	112.33
LMP007R	0.72	18.07	18.98	111.52
LMP008R	1.56	20.91	21.94	111.56
LMP009R	1.35	21.63	21.67	111.65
RUGW00M1	0.84	13.33	14.62	111.29
RUGW00M3	1.45	11.44	11.84	113.70
RUGW00M5	0.60	20.72	21.07	111.10
RUGW00M10	1.82	25.68	26.48	97.82
RUGWM4r	0.76	17.07	17.55	110.84
RULMP2r	0.72	15.49	15.93	110.72

Issued By:

APPENDIX 5

Groundwater Quality Data

Ruabon Groundwater Quality & Level Data - October 2015



From : 08/10/2015

To : 08/10/2015

08/10/2015

Sample Point	Alk (CaCO ₃ :m g/l)	Amm-N (N:mg/l)	BOD (mg/l)	Ca(D) (mg/l)	Cd(D) (mg/l)	Chloride (mg/l)	COD (mg/l)	Cond (uS / cm)	Cond(Fld) (uS / cm)	Cr(D) (mg/l)
RUBH0013	345	0.15	<2.0	138	<0.0001	12	<5	758	750	<0.001
RUWB002A	108	1.8	3.4	68	<0.0001	457	<5	1730	1740	<0.001
RUWB002B	291	0.8	<2.0	77	<0.0001	142	<5	1020	1070	<0.001
RUWB002C	921	0.8	<2.0	187	0.0001	367	16	2690	2730	0.003
RUWB002D	327	0.2	<2.0	13	<0.0001	28	<5	788	770	<0.001
RUWB003A	365	1.2	<2.0	7	<0.0001	24	<5	745	740	<0.001
RUWB004A	521	0.4	<2.0	2	<0.0001	21	<5	1090	1070	<0.001
RUWB005A	410	0.7	4.6	2	<0.0001	37	7	1200	1190	<0.001
RUWB005B	122	1.6	<2.0	88	<0.0001	140	6	761	790	<0.001

Sample Point	Cu(D) (mg/l)	Dip to Water (m)	Fe(D) (mg/l)	K(D) (mg/l)	Mg(D) (mg/l)	Mn(D) (mg/l)	Ni(D) (mg/l)	Pb(D) (mg/l)	pH (Lab)	pH(Fld)
RUBH0013	<0.001	2.83	0.12	3	10	0.324	<0.001	<0.001	7.1	7.04
RUWB002A	<0.001	5	1.91	26	41	0.275	0.004	<0.001	7.1	7.36
RUWB002B	<0.001	6.12	0.1	10	15	0.119	0.01	<0.001	7.5	7.48
RUWB002C	0.003	6.35	0.2	15	20	0.927	0.037	0.002	7.1	6.68
RUWB002D	<0.001	6.28	0.03	8	3	0.039	<0.001	<0.001	7.9	7.64
RUWB003A	<0.001	9.08	0.02	14	14	0.166	<0.001	<0.001	7.7	7.76
RUWB004A	<0.001	3.22	0.23	8	<1	0.004	0.001	<0.001	9.3	9.26
RUWB005A	<0.001	3.35	0.2	4	<1	0.005	<0.001	<0.001	10	9.85
RUWB005B	<0.001	5.6	0.1	13	14	0.421	0.001	<0.001	6.8	7.95

Sample Point	Na(D) (mg/l)	S.Solids (mg/l)	TD (m)	TOC (mg/l)	TON (mg/l)	Total S(D) SO ₄ :mg/l	WtrTemp (Deg C)	Zn(D) (mg/l)
RUBH0013	21	331	34.63	3.5	<0.2	70	12.1	<0.002
RUWB002A	178	200	21.37	3.3	<0.2	6	11.5	<0.002
RUWB002B	102	60	10.46	3.4	<0.2	4	11.5	<0.002
RUWB002C	382	2340	8.05	12	1.2	45	11.9	0.01
RUWB002D	161	25	21.65	1.6	<0.2	37	12.1	0.004
RUWB003A	136	46	10.7	3.4	<0.2	<3	11.1	0.002
RUWB004A	259	28	48.83	1.5	<0.2	16	11.6	<0.002
RUWB005A	273	48	25.31	0.86	<0.2	189	5.6	<0.002
RUWB005B	27	46	8.4	2.2	<0.2	<3	12	<0.002

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APPENDIX 6

Surface Water Quality Data

Ruabon Surface Water Quality Data - October 2015



From : 08/10/2015

To : 08/10/2015

08/10/2015

Sample Point	Amm-N (N:mg/l)	BOD (mg/l)	Chloride (mg/l)	COD (mg/l)	Cond (uS / cm)	Cond(Fld) (uS / cm)	DO(Lab) (mg/l)
RUWP004A	0.03	2.5	60	31	812	840	6.2

Sample Point	pH (Lab)	pH(Fld)	S.Solids (mg/l)	WtrTemp (Deg C)
RUWP004A	7.3	6.97	13	11.4

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