



2139

## Certificate of Analysis

Date: 02/08/2013

Certificate Number: 13-85880

Client: Ronald Hull JNR. Limited  
PO Box 590  
Mangham Works  
Mangham Road  
Rotherham  
S62 6WT

Our Reference: 13-85880

Client Reference:

Contract Title: RDF Sample

Description: 1 fuel sample


Date Received: 26 July 2013

Date Started: 26 July 2013

Date Completed: 02 August 2013

Test Procedures: Identified by prefix DETSn, details available upon request.

Notes: Observations and interpretations are outside the scope of UKAS accreditation

Approved By:   
Mark Hughes, Contracts Manager

This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

# Information in Support of the Analytical Results

## **Analysis**

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425um sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28oC +/-2oC.

### ***Key***

- \* Denotes test not included in laboratory scope of accreditation
- # Denotes test that holds MCERTS accreditation, however, MCERTS accreditation is only implied if the report carries the MCERTS logo
- \$ Denotes tests completed by an approved subcontractor
- I/S Denotes insufficient sample to carry out test
- U/S Denotes that the sample is not suitable for testing

## **Disposal**

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month

Liquids - 2 weeks

Asbestos (test portion) - 6 months

# Summary of Chemical Analysis

## Fuel Samples

Our Ref: 13-85880

Client Ref:

Contract Title: RDF Sample

				Lab No.	539404
				Sample ID	RDF
				Depth	
				Sample Ref	
				Sample Type	FUEL
				Sampling Date	/ /
				Sampling Time	
Test	Units	DETSxx	LOD		
Total Moisture	%	DETSC 5004	0.1		4.8
Bulk Density	Kg/m <sup>3</sup>	DETSC 5020*	0.5		52
Gross Calorific Value (as received)	MJ/kg	DETSC 5007	1		28.9
Gross Calorific Value (dry basis)	MJ/kg	DETSC 5007	1		30.3
Gross Calorific Value (dry ash free)	MJ/kg	DETSC 5007	1		32.7
Net Calorific Value (as received)	MJ/kg	DETSC 5007	1		26.9
Net Calorific Value (dry basis)	MJ/kg	DETSC 5007	1		28.4
Ash Content (as received)	%	DETSC 5002	0.1		6.9
Ash Content (dry basis)	%	DETSC 5002	0.1		7.2
Carbon (as received)	%	DETSC 5013	0.1		58.3
Carbon (dry basis)	%	DETSC 5013	0.1		61.2
Carbon (dry ash free)	%	DETSC 5013	0.1		66.0
Hydrogen (as received)	%	DETSC 5013	0.3		8.68
Hydrogen (dry basis)	%	DETSC 5013	0.3		9.12
Hydrogen (dry ash free)	%	DETSC 5013	0.3		9.83
Nitrogen (as received)	%	DETSC 5013	0.3		0.57
Nitrogen (dry basis)	%	DETSC 5013	0.3		0.60
Nitrogen (dry ash free)	%	DETSC 5013	0.3		0.64
Oxygen - by difference (as received)	%	DETSC 5013	4		20.7
Oxygen - by difference (dry basis)	%	DETSC 5013	4		21.7
Oxygen - by difference (dry ash free)	%	DETSC 5013	4		23.4
Sulphur (as received)	%	DETSC 5016	0.01		0.09
Sulphur (dry basis)	%	DETSC 5016	0.01		0.09
Sulphur (dry ash free)	%	DETSC 5016	0.01		0.10
Bromine	%	DETSC 5017	0.01		< 0.01
Chlorine (as received)	%	DETSC 5017	0.01		0.05
Chlorine (dry basis)	%	DETSC 5017	0.01		0.05
Chlorine (dry ash free)	%	DETSC 5017	0.01		0.05
Fluorine	%	DETSC 5017	0.01		< 0.01
Iodine	%	DETSC 5018*	0.01		< 0.01

# Summary of Chemical Analysis

## Fuel Samples

Our Ref: 13-85880

Client Ref:

Contract Title: RDF Sample

Test	Units	DETSxx	LOD	
Total Halides	%	*	1	< 1.0
Arsenic	mg/kg	DETSC 5014	0.1	0.6
Cadmium	mg/kg	DETSC 5014	0.1	0.5
Cobalt	mg/kg	DETSC 5014	0.1	3.7
Chromium	mg/kg	DETSC 5014	0.2	31
Copper	mg/kg	DETSC 5014	0.2	40
Mercury	mg/kg	DETSC 5015	0.3	< 0.3
Manganese	mg/kg	DETSC 5014	0.1	55
Nickel	mg/kg	DETSC 5014	0.1	25
Lead	mg/kg	DETSC 5014	0.1	8.7
Antimony	mg/kg	DETSC 5014*	0.1	55
Selenium	mg/kg	DETSC 5014	0.1	0.5
Tin	mg/kg	DETSC 5014	0.1	21
Thallium	mg/kg	DETSC 5014	0.2	< 0.2
Vanadium	mg/kg	DETSC 5014	0.1	2.5
Zinc	mg/kg	DETSC 5014	0.1	190
Biomass (dry basis)	%	DETSC 5012	5	40.6
Passed through 4mm	%	*	0.1	3.5
Retained on 4mm	%	*	0.1	23.5
Retained on 16mm	%	*	0.1	66.9
Retained on 30mm	%	*	0.1	6.2

Lab No. 539404

Sample ID RDF

Depth

Sample Ref

Sample Type FUEL

Sampling Date / /

Sampling Time

## Sample Comments

DETS cannot be held responsible for the integrity of sample(s) received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating.

Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note "Guidance on Deviating Samples".

All samples received are listed below. However, those samples that have additional comments in relation to hold time and/or inappropriate containers are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations.

If no sampled date (soils) or date/time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters), this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Lab No.	Sample ID	Date Sampled	Containers Received	Deviating due to holding time being exceeded for test(s)	Deviating due to inappropriate container for test(s)	Deviating due to headspace presence in container for test(s)
539404	RDF FUEL		Plastic Bag			