

|                |            |
|----------------|------------|
| Reference      | SOP 11     |
| Inception date | March 2013 |
| Version        | 4          |
| Last Reviewed  | Jan 2016   |
| Author         | G. Ward    |
| Approved by    | BPG        |

### 1. Purpose

The purpose of this procedure is to ensure that samples are submitted into Wednesbury Laboratory safely and compliantly and are routed through a system that allows samples to be monitored from arrival to completion.

### 2. Scope

This procedure is to be followed by any member of personnel wishing to submit a sample to the Laboratory for analysis.

### 3. Health & Safety

Disposable latex gloves and safety glasses must be worn at all times when handling waste samples. Additional PPE will be required if carrying out laboratory analysis or sampling.

**Any Biffa staff intending to take a sample of waste must ensure that they are fully familiar with guidelines given in Guidance Note GNHW 01 'Sampling of waste' before doing so.**

### 4. Process flow

#### Sample reception

- When a Sales rep/customer brings a sample to the lab, this **must** be accompanied by a fully completed and signed WDD QF 659/89. The sample will not be accepted for analysis without the WDD.
- If samples are posted then care must be taken to ensure that the containers are of a suitable type, sealed and packaged with adsorbent material to prevent any spillage and fully comply with any statutory regulations.  
The lab staff will check the WDD to ensure that it is suitably completed and signed. If the WDD is incomplete it will be returned to the rep. If the sample is received by post the lab will notify the site/ rep.
- The lab staff will enter the sample details onto the tracker system on the date receipt.
- To ensure that the laboratory can carry out any analysis of samples safely and timely they must adhere to guidelines given in section 5 of this procedure



#### Enquiry setup – Customer Services

- A member of the lab staff will pass the WDD to customer services (enquiry tray) and log the date on the tracker system.
- The customer service team will set up a unique enquiry number on the Central System.
- An analytical request form QF 631/103 will be produced with the enquiry details filled in section 1.
- Section 2 of the form identifying what analysis is required must also be completed. The originator of the enquiry should stipulate this but seek advice if in doubt.
- A copy of the WDD will be attached to the Request form along with the Lab worksheet and placed in the Technical tray pending collection.



#### Third party enquiries

Samples can be presented at reception for administration by the bulk commercial team. The integrity of the container is to be checked and the WDD to ensure sufficient information is present to process the sample. The enquiry will be set up on the central system and a number generated. The completed paperwork will be placed in the technical tray.



### Sample analysis– Laboratory

- A member of the lab staff will do a daily **10:00 am collection** of all paperwork from technical. This paperwork must contain a copy of the WDD. The lab will also collect any samples with corresponding paperwork from the storage cupboard.
- No samples will be analysed after the 10:00 am deadline except in exceptional circumstances following authorisation by site management.
- The laboratory will carry out an analysis of the sample as requested in section 2 of the analytical request form. The originator of the enquiry and/or customer services/sales will be informed if this is not achievable.
- All analysis will be carried out in accordance with documented methods in the 'Analytical Methods Manual'.
- Analysis results along with any relevant comments or observations must be recorded on the workbook QF 631/103 (B&C) as the analysis is carried out.
- On completion of the analysis the laboratory will make a recommendation for acceptance of the waste and sign off section 4.



### Reporting

- The analysis will be reviewed and assessed for acceptance by the operations or process manager who will sign off on completion.
- A member of the lab staff will upload the results onto the Central System and close out on the tracker system noting the date completed. An email will be sent to all parties notifying them that the analysis has been completed.
- A printed copy of the results will be sent to technical for waste classification and consigning.

## 5. Notes

### Sample reception

Laboratory Analysis of some samples may not be undertaken due to safety concerns.

This will generally include waste containing water reactive chemicals, potentially explosive components and some oxidising compounds.

A request may also be refused in cases of inadequate information, unsuitable container, an insufficient quantity of sample or any other reason following the analyst's initial assessment.

The request may be refused if samples are submitted where the description on the label does not correspond to that on the WDD.

### Sample containers

- A 500ml sample is required to ensure that the laboratory has sufficient to carry out an adequate analysis.
- Samples submitted to the laboratory must be in a leak proof, chemical resistant container suitable for the waste it contains. Clear glass wide-neck jars are routinely used but HDPE plastic jars should be used if the waste contains
- Hydrofluoric acid or amber bottles for light sensitive chemicals. Food and drink containers are not considered suitable and will not be accepted at the laboratory.
- The external surface of sample containers must be clean and free of residues.

### Scope of analysis

- Wet Analysis - Includes determination of Cyanide, Phenol, Ammonia and Sulphide.  
Limitations: Samples need to be liquid, solid samples can be analysed if they are soluble.
- COD- A guideline figure for organic content in the waste. Samples must be soluble in water
- Basic screen- Includes: pH, Flash point, Odour, Oil & Solids content and oxidising properties. Will be applicable to most samples.
- Metals suite- The XRF scan includes most common metals such as, Iron, Nickel, Copper, Lead, Zinc, Chrome, Cadmium
- Anion suite- Salts analysis; scan analyses for Sulphate, Nitrate, Nitrite, Fluoride, Phosphate, Bromide, Chloride  
Limitations of instrument: oils/greasy or insoluble samples are unsuitable for analysis.
- GC suite- Chlorinated solvents and Organic species limited to Benzene, Xylene, Toluene, Styrene  
Limitations: samples must be completely soluble as they will require dilution and have a Flash point >35°C

- Composites- Where waste samples are to be mixed together to produce a representative sample. Sample ref's must be listed in the comments box along with ratio required. Samples need to have a pH difference no more than pH4 and they all need to have the same oxidising state. A 500ml of each sample will be required to make the correct ratio mix.
- Oil/Water- Assessment of oil content, solids content, chlorine & metals (XRF). Soluble oil/ coolant are all included in this category. Limitations: Due to their nature oil wastes are unsuitable for analysis by other methods.