

# F & R Cawley Limited

## Part B4 – Section 4 a and 4b

### Monitoring Emissions

The only emissions created from the lithium-ion battery shredding process is to air via a local exhaust vent stack (LEV).

In the event of an incident, such as a fire or leak from quench tank, there may be releases to the sewer. These would be controlled by the site's Emergency Spillage Procedures and are not considered routine emissions that would require monitoring.

#### Air Emissions

Monitoring of the following parameters to air will be completed annually:

- Aluminium
- Cobalt
- Copper
- Iron
- Sum of VOCs (dimethyl carbonate, ethylene carbonate, propylene carbonate and diethyl carbonate)
- Lithium
- Manganese
- Nickel
- Phosphorus

Testing will be conducted by SOCOTEC, wherever possible, by the hierarchy of method selection outlined in Environment Agency Technical Guidance 'Monitoring stack emissions: techniques and standards for periodic monitoring'.

Details of the sampling location at the LEV (Stack 1) and its compliance with M1 Sampling Requirements for Stack Emissions is provided below.



**Photo 1: Sampling Location on Stack 1**

DUCT CHARACTERISTICS		
	Value	Units
Shape	Circular	-
Depth	0.40	m
Width	-	m
Area	0.13	m <sup>2</sup>
Port Depth	0	mm

  

SAMPLING LINES & POINTS		
	Isokinetic	Non-Iso & Gases
Sample port size	3" Square hole	3" Square hole
Number of lines used	2	1
Number of points / line	2	1
Duct orientation	Vertical	Vertical
Filtration	In stack	Out stack
Filtration for TPM	QF	QF

  

SAMPLING PLATFORM	
General Platform Information	
Permanent / Temporary Platform / Ground level / Floor Level / Roof	Scaffold
Inside / Outside	Outside

  

M1 Platform requirements	
Is there a sufficient working area so work can be performed in a compliant manner	Yes
Platform has 2 levels of handrails (approximately 0.5 m & 1.0 m high)	Yes
Platform has vertical base boards (approximately 0.25 m high)	Yes
Platform has removable chains / self closing gates at the top of ladders	Yes
Handrail / obstructions do not hamper insertion of sampling equipment	Yes
Depth of Platform = >Stack depth / diameter + wall and port thickness + 1.5m	Yes

**Sampling Platform Improvement Recommendations (if applicable)**

The sampling location meets all the requirements as specified in current EA Guidance.

**Figure 1: Sampling Location Compliance with M1 Guidance**

The results will be evaluated against the proposed compliance limits as outlined in document Part B4 – Section 2 – Table 2 – Emissions. An annual report will be prepared to demonstrate compliance. If exceedances are noted, checks will be undertaken to ensure that the abatement measures are functioning correctly, carbon filters do not require changing and additional testing will be completed to cross check the results. Open dialogue with the Environment Agency will be maintained at all times should continued exceedances occur and a review of the abatement techniques would be undertaken.

# Appendices

## Appendix I – Site Plan

