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EYE LANDFILL

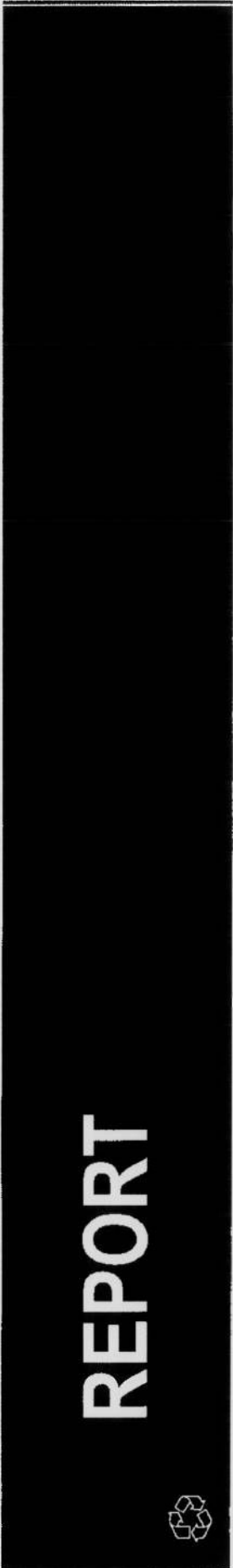
Asbestos Management Plan

Submitted to:
 Biffa Waste Services Ltd
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1.0 INTRODUCTION

Biffa Waste Services Ltd ('Biffa') has requested Golder Associates (UK) Ltd ('Golder') to prepare an Asbestos Management Plan in support of the Environmental Permit ('EP') Variation Application (hereafter referred to as the 'Variation Application') for Eye Landfill Site, Eyebury Road, Tanholt Lane, Eye, Peterborough PE6 7TH (the 'Site').

This Asbestos Management Plan has been written in line with the following Agency guidance:

- Waste Acceptance at Landfills, November 2010;
- Understanding the Landfill Directive, Regulatory Guidance Series LFD1; and
- Monitoring of particulate matter in ambient air around waste facilities, M17.

This plan is only applicable to the Southern Extension area of Eye Landfill as this is the only area where asbestos waste will be deposited.

2.0 WASTE ACCEPTANCE AND DEPOSITION OF ASBESTOS WASTE

2.1 Waste Acceptance Procedures

The asbestos waste must be pre-assessed to ensure that it meets the leaching limits set out in the waste acceptance criteria for Stable Non Reactive Hazardous Waste prior to acceptance at the Site for disposal.

Once assessed and deemed acceptable for landfill, the waste acceptance procedures for the asbestos waste will be the same as for the non-hazardous waste and inert waste, as detailed in Appendix 1 Version A.0 (ref. 07514290224.526 dated May 2008) of the original permit application.

2.2 Waste Deposition and Emplacement Procedures

The asbestos cell will be clearly marked as it is in close proximity to the closest active non-hazardous waste cell and there is the need to eliminate the possibility of waste being deposited in the wrong landfill area. Biffa will maintain a record of the location of all asbestos waste deposits made in light of the potential for future need to disturb the waste mass, for example the drilling of additional or replacement boreholes.

The machine operator working in the asbestos cell will ensure that appropriate PPE is available within the cab. A bowser complete with spraying equipment will also be available in the asbestos cell.

Prior to allowing the vehicle to unload, the machine operator will ensure that all other vehicles have left the tipping area, thus ensuring that only one vehicle is tipping within the cell at any one time. The machine operator will control the flow of traffic and thus manage the tipping within the asbestos cell. In addition, signs will be put in place indicating traffic flow directions and stating the rules concerning tipping within the asbestos cell.

All unloading and emplacement of the waste shall be carried out by the contractor delivering the waste and the machine operator must not leave his cab until the waste is adequately covered. The driver of the delivery vehicle must discharge the load progressively and without undue speed or jolting of the vehicle until the entire contents of the load has been discharged into the designated tipping area.

Immediately after discharge of the waste the delivery vehicle body/skip must be covered or closed so as to prevent the escape of any fibres which may be remaining. The Weighbridge Operator shall, when booking the vehicle out of the Site, check as far as is possible that the vehicle/skip has been closed/covered and remind the driver that he has a duty to do so.

2.3 Covering Procedure for Asbestos

Once deposited, the asbestos waste will immediately be covered by inert materials to a depth of at least 250 mm using appropriate plant. At the end of the day at least 1 m of cover will be placed on all flanks and

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surfaces to ensure that no asbestos waste is left exposed. This will prevent the aerial dispersion of asbestos fibres from the zone of deposit.

When asbestos waste has reached a depth of 3 m below post restoration levels it will be covered by 2 m of suitable material prior to placement of the restoration material. Biffa will ensure that the suitable cover material is a granular material which is free from any objects capable of disrupting the waste or any packaging. This cover material will subsequently be overlain by cover soils and a minimum 200 mm top soil to achieve a minimum total restoration layer thickness of 1 m. The soils will comprise sand and soil forming materials retained in existing stockpiles for use at the Site, to achieve the standard required for restoration to agriculture. In any areas where it is intended to plant shrubs, trees or hedge rows on the cap, soil thickness will be locally increased. The total cover above the asbestos will therefore be a minimum of 3 m.

2.4 Additional Particulate Management

In addition to the specific asbestos deposit emplacement and cover procedures, particulates are monitored and managed at the Site in accordance with the detail in the Amenity Management Plan (Version A.1, dated May 2011) and Amenity Risk Assessment (Version A.0, dated May 2008). Management in relation to particulates specifically includes the following:

- Vehicle speeds are restricted along the haul road to the active area;
- Dampening of site roads;
- Compaction of waste and use of daily cover;
- No waste disposal will occur during adverse weather conditions; and
- All waste will be appropriately covered on incoming waste carrying vehicles.

3.0 MONITORING OF ASBESTOS

3.1 General

Asbestos fibres have the potential to cause serious health affects if ingested which could have an impact upon both Site operatives and visitors in addition to people outside of the Site. The asbestos waste will arrive at the Site within enclosed vehicles and fibrous asbestos will be additionally bagged. The asbestos will be carefully unloaded and covered by suitable cover materials as detailed above. It is necessary to undertake monitoring for asbestos fibres to check that fibres are not being released into the atmosphere. Asbestos monitoring will be undertaken at the Site as identified below.

3.2 Asbestos Monitoring within 10-15 m of the Asbestos Waste Cell

Asbestos monitoring will be undertaken at two locations downwind and one location upwind of the currently active asbestos cell, whilst disposal is taking place. This will enable comparisons of data as suggested by Figure C1 in Technical Guidance Document M17 Appendix C: Guidelines for Locating Monitoring Stations. The monitoring location will be at a distance of 10-15 m from the active asbestos cell.

The assessment level for the monitoring within 10-15 m of the asbestos cell is 0.01 fibres/ml.

3.3 Asbestos Monitoring at the Southern Extension Installation Boundary

If the monitoring undertaken in Section 3.2 above identifies an exceedence of the assessment level it will be necessary to also undertake monitoring at the installation boundary. Installation boundary monitoring will take place at one upwind and two downwind monitoring locations within 100 m of the active asbestos cell.

The assessment level for the installation boundary monitoring is 0.002 fibres/ml.



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3.4 Sampling Methodology

The monitoring will comprise the use of air-sampling pumps and cellulose acetate filters (0.8 µm pore size), with samples being taken at a height of 1.5 to 2 m above ground. The sampling volume will be set at 5 l/min. The sampling flow rate will be set to achieve a minimum sample volume of 480 litres between the point of the first asbestos being deposited and the appropriate burying of asbestos bearing waste for the monitoring being undertaken within 15 m of the asbestos cell. The minimum flow volume for the Southern Extension installation boundary monitoring will be 2400 litres of air at each sampling location between the point of the first asbestos being deposited and the appropriate burying of asbestos bearing waste.

The filter papers from the samples will be retained and cut in half. One half will be sent to a UKAS approved laboratory for testing and the second will be retained within the sample container. Fibres on the cleared filter will then be counted using phase contrast microscopy (PCM) to obtain the fibre number concentration in air. If the number of particles in the downwind samples is shown to exceed the number of particles in the upwind samples it will be assumed that the fibres have stemmed from on-Site asbestos disposal operations.

Where an upwind sample at 10-15 m from the active asbestos cell has fibre concentrations similar to or above the assessment level, retained samples from the downwind locations shall be subject to scanning/transmission electron microscopy (TEM/SEM) to establish the PCM equivalent asbestos fibres concentrations. If the test identifies that the asbestos concentration of 0.01 fibres/ml has been exceeded then installation boundary monitoring and additional controls as detailed in Section 4.0 below will be instigated.

3.5 Sampling Frequency

Sampling will be undertaken quarterly to establish that the acceptance, placement and cover procedures being undertaken are working effectively. If quarterly monitoring identifies an exceedence of the installation boundary assessment level, monitoring will increase to monthly. Where two consecutive monthly readings are within the 0.002 fibres/ml limit, monitoring will revert to quarterly.

3.6 Quality Assurance

An effective quality assurance/quality control (QA/QC) system will be put in place to ensure high-quality results and to eliminate invalid data.

4.0 ACTION PLAN

If the asbestos monitoring level of 0.01 fibres/ml is exceeded then installation boundary monitoring will be undertaken. If installation boundary monitoring identifies that the assessment level of 0.002 fibres/ml has been exceeded the following action plan will be implemented

1. Temporarily cease accepting any new loads of asbestos waste;
2. Continue to deposit the asbestos waste if deposition is already in progress;
3. Cover all visible asbestos waste with 250 mm of cover material ensuring that all flanks are covered and that no asbestos is visible;
4. Dampen down the entire asbestos cell area;
5. Complete monitoring at the boundary
6. If levels are no longer exceeding the assessment levels then resume the acceptance of asbestos waste and consider the implementation of new procedures to prevent the release of asbestos fibres, for example
 - a. Depositing asbestos waste in a smaller area of the cell;
 - b. Depositing small quantities of waste and then dampening down before depositing the next part of the load;
 - c. Cover and then dampen down the asbestos waste area;
 - d. Dampen down the vehicles as they leave the asbestos cell.



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7. Complete a new round of asbestos monitoring, if levels now acceptable revise the asbestos management plan to incorporate the new procedures relating to the acceptance, deposition and covering of asbestos.

5.0 REFERENCES

- 1) Golder Associates (UK) Limited, Eye Southern Extension PPC Variation Application, *Appendix 1 - Permitted Wastes, Deposit and Emplacement*, Version A.0, May 2008.
- 2) Golder Associates (UK) Limited, Eye Southern Extension PPC Variation Application, *Section E - Amenity Risk Assessment*, Version A.0, May 2008.
- 3) Golder Associates (UK) Limited, Eye Southern Extension PPC Variation Application, *Appendix 2 - Amenity management Plan*, Version A.0, May 2008.