

SOLID WASTE MANAGEMENT PLAN
For the
KINGAMYAMBO MUSUNOI TAILINGS PROJECT
KATANGA PROVINCE
DEMOCRATIC REPUBLIC OF CONGO

In partnership with:

SRK Consulting (Johannesburg, RSA)

Date: April 2008

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1 Introduction

1.1 Background

Kolwezi, in the Katanga province of the Democratic Republic of Congo (DRC), is about 240 km west of Lubumbashi, the provincial capital. A location map is shown in Figure 1, and the proposed site layout is shown in Figure 2. Mining of sulphide and oxide ores has been taking place in Kolwezi for almost hundred years, primarily for copper and cobalt. As a result of these mining operations, over 110 million tonnes of ore have been processed and the oxide tailings deposited in two principal areas, the Kingamyambo tailings dam and the Musunoi river tailings. The tailings have an average grade of 1.49% copper and 0.32% cobalt, levels at which economic recovery is possible. Kolwezi is a town of around 240,000, with much of the working age population formerly employed by Gécamines, the state mining company, which has operated the mines in the area since 1967. The mine and processing plant are currently run down, the tailings deposits are poorly maintained, and mining activity of the open pit is sporadic. There is considerable artisanal mining activity in the area, on the tailings dam and along the side of the road near the main Gecamines entrance

This document is the second draft of the Waste Management Plan (Draft 2) prepared for the revised Environmental and Social Impact Assessment (ESIA) of the Kingamyambo Musunoi Tailings Project. The first draft version was developed by Congo Minerals Development (CMD), the project proponents, in conjunction with SRK Consulting, who carried out the ESIA. These studies were undertaken in accordance with the IFC guidelines and EHS standards and procedures. The ESIA is currently being updated as the project has changed owners and has been re-engineered in some respects. The new owners of the project, First Quantum Minerals, will adopt the principles of the first draft, which has been updated to reflect the engineering changes.

The Waste Management Plan will be updated as needed during the course of the development of the project, initially to cover the construction phase, and then for the operational phase. During the operational phase the Plan will be reviewed and updated regularly as part of the ongoing management of environmental and social issues documented in the Environmental and Social Action Plan (ESAP). International good practice as well as major lending institutions requires these independent, regular reviews, which are likely to take place every 2 to 5 years, depending on the phase of the project and the need for review relative to a changed operational plan, or issues relevant to waste management being identified. This Waste Management Plan specifically excludes mineral process waste, i.e. tailings and industrial waste water.

This first draft sets out the principles of waste management, lists the waste streams likely to arise, and recommends management measures and final disposal routes. The detail of the plan will initially be drawn up to cover the construction phase and then modified to cover the operational phase. Thus this draft draws heavily on the various good practice notes described below, but does not aim to reproduce those or to provide all the possible detail of the process; various documents are available that serve that purpose very adequately.

1.2 Project Description

1.2.1 Overview

The Kingamyambo Musonoi Tailings Project (the Project) aims to reprocess tailings generated by past Gécamines operations, currently stored in unreclaimed tailing storage facilities, in order to extract available residual copper and cobalt. The current working assumption for the Project life is approximately 23 years. The Project will include a new state-of-the-art solvent extraction and electro-winning (SX-EW) facility to reprocess the tailings, a new tailings dam to receive process tailings and the reclamation of the areas beneath the existing tailings disposal areas to a final condition that will return the land to alternative uses. Senior management accommodation will be built on the concession. Both the Kingamyambo and Musonoi tailings deposits will be mined simultaneously to achieve the required grade and grain size distribution.

The Kingamyambo tailings dam is a conventional paddock dam, the outer walls of which have been constructed from spigotted tailings, which contains 42.3 million tonnes of tailings and reaches a height of 20m. No reclamation work has taken place on the dam surface, which is therefore exposed to wind and rain, is badly eroded and is a major source of dust in the area.

The Musonoi river tailings have been deposited in the valley of the Musonoi River and comprises a low-lying area, through which the river still flows, of about 11 km in length and up to 2,5 km wide. At the far end, the tailings and the river are retained by the Kasobantu Dam, immediately upstream of which lies open water. A spillway decants occasional high flows during the wet season into the original course of the Musonoi as it flows northwards over an escarpment. Another spillway leads via a specially constructed channel to Nzilo Lake, some 5km to the north-north-east, built for hydro electric power generation.

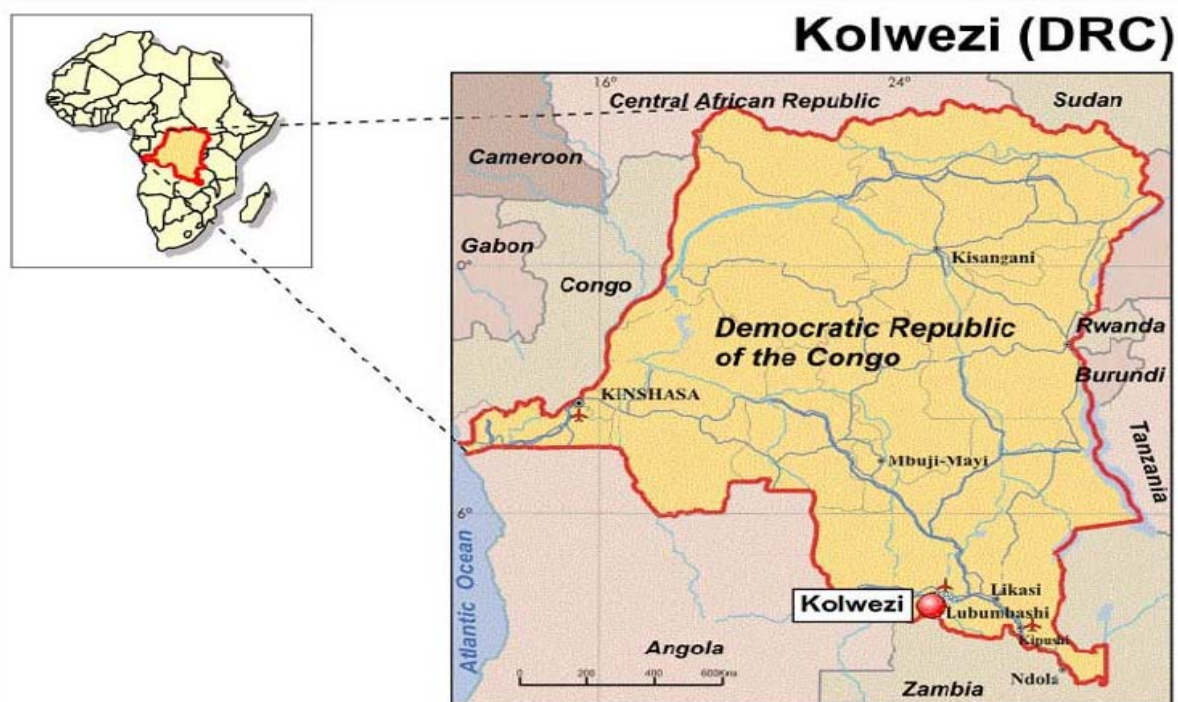


Figure 1: Location of project in DRC

1.2.2 New Project Facilities and Main Project Features

The proposed Project involves Hydraulic mining of the tailings deposited on both the Kingamyambo tailings facility and in the Musonoi River using high pressure water monitors. In the first four years mining of the Musonoi will be by dredging.

The proposed process flow sheet will extract copper and cobalt using sulphuric acid leaching followed by solvent extraction and, for copper, electro-winning. During this first phase, cobalt hydroxide rather than cobalt metal will be produced. During a second phase, cobalt metal will be produced and during a third phase production will increase. The tailings resulting from this process will be deposited in a dam engineered to modern standards close to the proposed plant site. The project will remove tailings from the Musonoi River valley and will remove the majority of the existing Kingamyambo Tailings Dam, leaving a smaller footprint after rehabilitation and a net environmental benefit. The proposed project layout is shown in Figure 2.

The operational dimensions envisage an initial production rate of up to 70,000 tpa copper per annum and 14,000 tpa Cobalt, mining both the Musonoi River tailings and the Kingamyambo Dam simultaneously. At this potential mining rate the project life is envisaged to be a minimum of 23 years. Further expansion to produce 105,000 tpa copper and 20,000 tpa cobalt will further shorten the project life.

1.2.3 Project Sponsor

The commercial vehicle for implementation of the Kolwezi project is Kingamyambo Musonoi Tailings Project (KMT), owned by First Quantum Minerals (FQM), Gécamines, the Government of the Democratic Republic of the Congo, the International Development Corporation (IDC) and the International Finance Corporation (IFC). KMT is a wholly owned subsidiary of FQM Minerals Inc (FQM), a company listed on the Toronto Stock

Exchange and the London Stock Exchange Main Listing. FQM has other interests in DRC, Zambia and Mauritania.

Figure 2: Proposed Project Layout

1.2.4 Summary environmental and social baseline conditions

The concession covers an area of 6100 hectares and extends 13.75 km from north to south and up to 9 km from east to west. The original concession boundary has been modified by the Ministry of Mines of the DRC to an area bounded by a grid system which includes other mining facilities such as waste rock dumps, part of another tailings dam, a zinc processing plant and parts of some larger settlements close to Kolwezi. However, with the exception of Samukonga village, for which a Resettlement Action Plan is being developed, these facilities will be a minimum of 200 m from the planned operations, and many much further away.

The original habitat of the area was Miombo woodland. This is a form of dry, open gallery woodland common to central and south-central Africa and is the dominant habitat in the southern DRC. Today, the concession area consists mostly of degraded Miombo and land used for slash and burn and shifting agriculture, criss-crossed by paths and tracks and transmission lines. There are two dambos (seasonal wetlands) in the concession area, and two tributary streams, the larger one being the Kanamwamwa River. Large termitaria are prominent features in the regional and site landscapes.

The concession area also contains a few small hamlets or villages. The existing mining infrastructure, Kolwezi town, Gécamines villages and other villages lie largely outside and south and south-west of the concession area.

2 Framework and Requirements

This section sets out the requirements of the DRC and the IFC and outlines best practice guidance from other international organisations. Chapter 2 of the main ESIA summarises the legislation (other than the Mining Code and Mining Regulations) which may relate to the project. None of this legislation pertains to waste management. The Mining Code (Loi no 007/2002 of July 11 2002) does not mention waste, other than mineral waste, but the Mining Regulations (Decret No 038/2003 of March 26 2003) define the following:

“Hazardous Waste: material that constitutes, due to its volume, concentration, composition, corrosive, inflammable, reactive, toxic, infectious or radioactive properties or any other factor, either separately or in combination with one or more other substances, a real or potential threat to public health, safety and well-being or to the environment if not properly stored, treated (processed), transported, eliminated, used or otherwise managed. Mine waste (tailings) are not considered hazardous waste.

Solid Waste: residual material that is solid at 20 °C; residues of incinerated solid waste; household refuse; debris, rubble as well as any other scrap that is solid at this temperature.”

There are a number of references to waste management during prospecting and exploration, and the following relating to operations:

“Article 84: Management in respect of chemicals, solid waste and hazardous waste

The operator shall be required to observe appropriate mitigation measures in respect of chemicals, solid and dangerous waste

Article 86: Measures in respect of solid waste

If the disposal site of trash, timber, scrap and household waste is located within the permit area, the operator shall be required to provide a brief description of the properties of the disposal site, its location and the name of the company designated to perform the work, as the case may be.

Article 87: Measures in respect of hazardous waste

The operator shall provide a description of how hazardous waste, such as used oil, oil containing PCB (polychlorinated biphenyl) is managed and indicate whether there is a storage site within the permit area.”

Further, a number of articles cover the Closure phase and how waste is managed during this time:

“Article 122: Measures in respect of hazardous waste

Shall be considered as hazardous waste in the mining industry: contaminated oil and grease, used solvents, contaminated containers or material, expired products and also PCB contaminated oil and equipment. Mine waste (tailings) shall not be considered as hazardous waste.

No hazardous waste may be left on site following the definitive cessation of the activities. However, if no disposal and treatment technique exists, on site storage may be authorised by the Directorate responsible for the Protection of the Mining Environment (DPEM)

Used oil may be transported to a waste transfer centre or to an authorised recycling or re-utilisation site. Other hazardous waste must be sent to an authorised disposal, treatment, recycling or re-utilisation site for hazardous waste. PCB-contaminated oils and equipment with a concentration less than 50 ppm may be transported to a disposal site authorised thereto by the Directorate responsible for the Protection of the Mining Environment.

Mobile treatment units may decontaminate and reduce the PCB concentration. If, notwithstanding treatment, PCB concentrations remain in excess of 50 ppm, the operator shall store these oils and equipment until an adequate disposal technique is available.

Article 123 : Measures in respect of solid waste

Vehicles chassis, hydrocarbon impregnated / soaked sands, mine waste (tailings), sludge and hazardous waste in the sense of this Directive shall not constitute solid waste in the sense of this Schedule.

Waste generated by industrial processing and of which the leachate contains a concentration of contaminants in excess of the standards of Schedule I shall also not be considered as solid waste.

Solid waste may be sent to:

- [a] a landfill site or in-trench disposal site authorised by the Directorate responsible for the Protection of the Mining Environment;
- [b] a disposal site for dry material especially authorised for the mining site. However, such practice shall be restricted to backfill and non-fermentable material;
- [c] an in-trench disposal site of solid waste especially authorised for the mining site.

Generally, it is forbidden to burn waste in the open, including the partial recovery of it, except for branches of trees, dead leaves, etc. Burning shall be tolerated in an in-trench disposal site insofar the emissions of smoke / fumes do not cause any environmental damage.”

This document aims to comply with these requirements, which will be referred to in other sections of the document.

2.1 International Finance Corporation (IFC) guidelines

The ESIA process has been being undertaken in accordance with the policies, guidelines and procedures of the IFC. The IFC Performance Standards and the Equator Principles, which generally follow the requirements of the IFC, have been adopted for this project.

The Performance Standards that relate to Waste Management are PS3, Pollution Prevention and Abatement, and PS4, Community Health and Safety. This document aims to address the waste management requirements of both PS3 and PS4.

Performance Standard 3 – Pollution Prevention and Abatement

The client will avoid or minimise the generation of hazardous and non-hazardous waste materials as far as possible. Where waste generation cannot be avoided but has been minimised, the client will recover and re-use waste; where waste cannot be recovered or re-used, the client will treat, destroy and dispose of it in an environmentally sound manner.

If the generated waste is considered hazardous¹, the client will explore commercially reasonable alternatives for its environmentally sound disposal considering the limitations applicable to its transboundary movement².

When waste disposal is carried out by third parties, the client will use contractors that are reputable and legitimate enterprises that are licensed by the applicable regulatory agencies.

1 As defined by local legislation and international conventions

2 Consistent with the objectives of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes.

Performance Standard 4 – Community Health and Safety

Hazardous Materials Safety

The client will prevent or minimize the potential for community exposure to hazardous materials that may be released by the project. Where there is a potential for the community (including workers and their families) to be exposed to hazards, particularly those that may be life-threatening, the client will exercise special care to avoid or minimize their exposure by modifying, substituting or eliminating the condition or substance causing the hazard.

Where hazardous materials are part of existing project infrastructure or components, the client will exercise special care when conducting decommissioning activities in order to prevent exposure to the community. In addition, the client will exercise commercially reasonable efforts to control the safety of deliveries of raw materials and of transportation and disposal of wastes, and will implement measures to avoid or control community exposure to pesticides in accordance with the requirements outlined in Performance Standard 3.

2.2 Environmental Health and Safety (EHS) Guidelines

The EHS Guidelines serve as a technical reference source to support the implementation of the IFC Performance Standards, particularly in those aspects related to Performance Standard 3: Pollution Prevention & Abatement and Performance Standard 4: Community Health and Safety.

The EHS guidelines for mining pay particular attention to waste management:

Wastes

Mines generate large volumes of waste. Structures such as waste dumps, tailing impoundments/dams, and containment facilities should be planned, designed and operated such that geotechnical risks and environmental impacts are appropriately assessed and managed throughout the entire mine cycle.

Tailings

Tailings management strategies vary according to site constraints and the nature/type of tailings.

Tailings management strategies should consider how tailings will be handled and disposed of during operation, in addition to permanent storage after decommissioning. Strategies should consider the site topography, downstream receptors and the physical nature of tailings.

Recommended tailings management strategies include:

- Design, operation and maintenance of structures according to specifications of ICOLD3 and ANCOLD4;
- Where structures are located in areas where there is a risk of high seismic loadings, the stability of the structures should be examined;
- Design of tailings storage facilities should take into account the specific risks/hazards associated with geotechnical stability or hydraulic failure;
- Seepage management and related stability analysis should be a key consideration in design and operation of tailings storage facilities;
- Design specification should take into consideration the probable maximum flood event and the required freeboard to safely contain it.

General Non-Hazardous Waste

Recommended practices for the management of household and non-process related industrial waste include the following:

- Non-hazardous solid wastes should be managed according to the recommendations presented in the General EHS Guidelines;
- Non-hazardous solid waste should be collected for recycling or disposal at an approved sanitary landfill
- Non-hazardous solid waste should not be disposed of with waste rock or overburden.

Hazardous Waste

Recommended practices for the management of hazardous waste include the following:

- Hazardous waste, including waste oils and chemicals, spent packaging, should be managed;
- Hazardous waste should be handled by specialized providers of hazardous waste management facilities specifically designed and operated for this purpose;
- Combustion of waste oils should preferably be undertaken as a supplementary fuel in power generation facilities

3 Waste Characterisation for the KMT Project

3.1 Waste streams arising during construction phase

Precise details of the waste streams that will arise during the two main phases of the project, construction and operation, cannot be provided until all the details of the supply of materials is known. However, an informed list can be developed, which can be amended as appropriate when the full details are available.

During construction the following waste streams may/will be produced:

- Vegetation cleared during construction activities which will be shredded and added to soil stockpiles in accordance with the soil management plan;
- Putrescible waste from construction camp catering facilities;
- Paper, card, toner and other office consumables from offices;
- Plastic, card, wooden pallets and polystyrene from packaging of goods delivered to site;
- Steel and plastic drums/containers from packaging of goods delivered to site;
- Cement, rubble, wood and metal off-cuts from the construction of buildings;
- Electrical cable and plastic fittings from electrical wiring work;
- Pipework off-cuts;
- Tyres, waste oils and obsolete parts from vehicle maintenance;
- Scalpings from road maintenance;
- Spent process chemical (reagents etc) used during construction/commissioning
- Spent domestic chemicals (incl. herbicides, pesticides) plus containers
- Batteries, fluorescent tubes
- Clinical waste from health centre.
- Other wastes as may subsequently be identified

It is currently assumed that there will be no existing buildings, plant structures, infrastructure, pipelines and roads or foundations requiring demolition or refurbishment, creating associated solid rubble, as all buildings for the project will be new. It is also assumed that there are no existing transformers on-site containing PCB based oils requiring refurbishment, or asbestos containing materials etc.

3.2 Waste streams arising during operations phase

During operations the waste streams will be similar, but with the addition of waste arising from the plant and the mining operation itself. Thus, waste streams will include:

- Vegetation (shrubs, vegetation) produced during hydraulic mining activities;
- Scrap metal from hydraulic mining activities, plant and infrastructure refurbishments;
- Other assorted waste (such as wood) from hydraulic mining activities;
- Containers and packaging from the delivery of reagents and other goods, including plastic, card, wooden pallets and polystyrene;
- Spent organic materials from the SX-EW process (crud);
- Spent anode blanks;
- Metallurgical laboratory waste;
- Putrescible waste from residential catering facilities;
- Paper, card, toner and other office consumables from offices;
- Cement, rubble, wood and metal off-cuts from the maintenance of buildings;
- Electrical cable and plastic fittings from electrical wiring work;
- Pipework off-cuts;
- Tyres, waste oils and obsolete parts from vehicle maintenance;
- Scalpings from road maintenance.
- Spent gas cylinders (ie welding and process gases, possibly including chlorine for disinfection of water and treated sewage)
- Obsolete equipment incl. transformers (as time goes by)
- Sewage sludge (not covered in this plan)
- Spent domestic chemicals (incl. herbicides, pesticides), paints, solvents etc plus containers
- Batteries, fluorescent tubes
- Other wastes as may subsequently be identified

It is assumed that there will be no radioactive materials used or created as waste during the operation of the project.

3.3 Waste Disposal

3.3.1 Waste Disposal Options

Once a full inventory of waste streams has been prepared, and the wastes categorised in terms of their nature (hazardous or non-hazardous) according to accepted classification procedures the final disposal route for each can be decided.

As there are currently no suitable solid waste disposal facilities in the Kolwezi, it is assumed that as much of the waste as possible will be recycled or reused (onsite or offsite), that as little waste as possible will have to be disposed of at site.

The volumes of conventional recyclable materials, such as wood, paper, plastics and glass are unlikely to warrant transportation to an alternative recycling or disposal facility outside of the DRC, and similarly the volumes of hazardous waste for off-site disposal. It is expected that recycling will be undertaken as far as possible within the informal sector in the vicinity of the project, although it is possible that bulk scrap may be accumulated for possible transportation for recycling or disposal in Zambia or elsewhere.

Waste disposal options that should be considered for non-recyclable wastes include:

- Conventional landfill site;
- Hazardous landfill cell;
- High temperature incinerator for clinical waste;
- Low technology incinerator for paper, wood and card
- Controlled burning in an appropriate facility for spent explosives, wood, paper etc
- Shredder for vegetation which can then be used as a mulch in reclamation activities

As far as practical combustible materials i.e. wood, paper, card etc would be made available for recycling or available to the informal sector in a controlled manner. In the absence of such outlets the a simple low technology incinerator is envisaged for controlled combustion.

The waste streams identified above are grouped by type and recommended for the disposal methods specified in the table below.

Type of Waste	Disposal method/issues	Arising during Construction	Arising during Operations
Vegetation matter	Shredding for addition to soil rehabilitation activities, or landfill as bulking aid	Yes	Yes
Putrescible waste	Landfill to assist in the degradation of less readily degradable waste fractions. Composting if adequate quantities and control permits	Yes	Yes
Paper, card	Low technology incineration, controlled open burning, or landfill (limited amounts of corrugated cardboard can be composted)	Yes	Yes
Plastic, polystyrene	Landfill for non-recyclables	Yes	Yes
Wood offcuts and pallets	Recycle or incinerate	Yes	Yes
Cement, rubble Scalpings	Landfill; may be suitable as bulking or cover material	Yes	Yes
Metal offcuts Electrical cable Pipework offcuts; Obsolete parts	Landfill for non-recyclables	Yes	Yes
Tyres	Recycle in local community. Reuse as roadside markers and barriers and slope erosion protection around the mine site.	Yes	Yes

	Landfill as slope and cover stabilisation		
Waste oils	Recycle in local community. Limited quantities may be adequately assimilated in landfill or landfarmed	Yes	Yes
Clinical waste	Incinerate at high temperature	Yes	Yes
Scrap metal	Recycle on-site or in local community. Stockpile for off-site disposal/reuse or landfill	Yes	Yes
Spent organic, metallurgical lab waste	Destroy by combustion in limited quantities, immobilise or provision of dedicated hazardous waste cell in landfill for drummed/stabilised wastes. Small quantities may be adequately assimilated in landfill		Yes
Spent anodes	Stockpile for off-site disposal/reuse or provision of dedicated hazardous waste cell in landfill. Small quantities may be adequately assimilated in landfill		Yes
Reagent packaging	Recycle, destroy by combustion limited quantities, immobilise or provision of dedicated hazardous waste cell in landfill for drummed/stabilised wastes. Small quantities may be adequately assimilated in landfill		Yes

Other disposal options may be identified as the Waste Management Plan is further developed and all waste streams to be generated are identified and characterised. In principle best international practice will be applied to the wastes generated by the Kingamyambo Musunoi Tailings Project as appropriate to waste volumes, character and site conditions.

3.3.2 Waste disposal during the construction phase

As waste will begin to be generated as soon as activities begin on site, it may be necessary to store some wastes until a suitable disposal facility can be constructed. At the moment a small landfill site, with a lined cell for hazardous materials, is planned for the plant site. However, this will be carefully reviewed in terms of the soil and geological formations underlying the site and the potential for groundwater contamination from leachate, and practical waste generation rates and characteristics, and the most favourable position chosen. It may also be prudent to create another landfill site close to Kingamyambo for the disposal of material screened out during the hydraulic mining process to keep these separate from more general process wastes and prevent undue transportation of waste volumes through the plant area to a common disposal site. It may also be prudent to have access to the landfill site at the plant from a road which does not pass through the plant, to avoid refuse collection lorries and trucks containing cover materials traversing the plant site.

Waste management during construction will be closely controlled through binding agreements with contractors, as sites can quickly become untidy and waste can become a nuisance. It is likely that during the early phases of construction most waste will be buried as other disposal methods may not yet be available. Putrescible waste particularly must be buried and covered timeously with inert material to prevent the ingress of disease vectors such as birds and insects. Combustion of waste should only be practiced in a controlled manner which ensures minimal environmental risk or nuisance. The possibility of developing a small business project for composting will be explored.

Waste management during construction should be co-ordinated by the KMT HSEC Manager, as it is possible that a number of contractors will be working at site at any one time, all producing waste. Central control of the disposal of this waste therefore becomes important, or waste may be buried in numerous uncontrolled locations over the two year construction period. Controlled burial of waste in identified location may be permitted, such as a small number of local sites for collective geographical use – such as the quarry, new tailings dam area, plant site, Kingamyambo, Kolwezi town (office and guest house) but the creation of ad-hoc shallow dumps across the site is to be discouraged.

3.3.3 Waste Disposal during operational phase

Waste that has been stockpiled or disposed to local burial sites etc during the construction phase will be transferred to the new landfill site, or other appropriate disposal facility or route, as appropriate to minimise environmental and human health risk. Where wastes that have been less formally managed during the construction phase are confirmed to represent no undue environmental or human health risk, they may remain in place and such facilities will be formally decommissioned and closed.

Waste generated during the operational phase, after appropriate prevention, minimisation, segregation and handling for recycle and/or reuse will be transferred to the new landfill site, or other appropriate disposal facility or route.

Wastes classified as hazardous will be managed according to the proposed strategies, as identified above. Where the volumes and/or character of hazardous waste is such that it can be responsibly co-disposed with the general waste in the landfill, without representing an undue environmental or human health risk, this will be undertaken. Where the volumes and/or character of hazardous waste is such that it cannot responsibly be co-disposed with the general waste in the landfill, it will be stabilised in an appropriate manner, and/or disposed to a proposed hazardous waste cell within the landfill system.

Waste management during the operational phase will also be closely controlled and co-ordinated by the KMT HSEC Manager through binding agreements with contractors, appropriately designed IWMP procedures and protocols and appropriate waste management operational staff training, monitoring and reporting and acting upon incidents and issues that occur.

4 Resources and Responsibilities

The development of the Waste Management Plan will be the responsibility of HSEC Manager who will be appointed during the second quarter of 2008. This HSEC Manager's appointment will be at the same level as the Production, Engineering, Tailings and Logistics Managers.

During the construction phase, the Environmental & Community Managers will work with the various construction contractors and the Environmental and Social Consultants (SRK Consulting) to develop the necessary systems. These plans will involve sitting with the engineering team to identify the potential waste streams both during construction, the movement of goods to site, commissioning and operations, and how these should be dealt with. In particular, any specialist equipment needed to deal with these wastes (such as a clinical waste incinerator) must be identified so that it can be obtained and sent to site in readiness as the clinic is established. This exercise will also assist in determining the training requirements which can be scheduled into the timetable for the construction workforce and also for the operations staff as they are brought on stream.

During the construction phase the Environmental Manager (to be appointed in May-June 2008) will work with the Resource & Optimisation manager to organise a waste management plan, to cover the storage of waste if necessary, until the landfill site can be built, and the training necessary for staff to fulfil their waste management functions competently. (S)he will commence an integrated waste management plan process so that a comprehensive plan is in place once operations begin. The equipment supplies or facilities required may need to be increased as the potential for new waste streams increases, and the training requirements may also be different.

The plan will be reviewed at regular intervals as a matter of course and when particular events occur that trigger a review, such as a new facility manager or a new activity taking place at site.

5 Reporting

The status of the Waste Management Plan will be reported each year in the Environmental Managers' report to the Board and will contain details of any significant changes to the plans, and whether the plans were reviewed during the reporting period. The report will also quantify the waste streams as far as possible. This information will be derived from the proposed Environmental & Social Management System which FQM will implement at the Kolwezi site, along the lines of ISO 14001.

6 Closure Planning

As noted in Section 2 above, Articles of the DRC legislation refer to waste disposal during the closure phase of the project, when operations have ceased and the plant site and associated facilities are being dismantled. Large quantities of bulky waste will be generated during this time, and the closure planning process will take into consideration the need for landfill and other waste disposal measures to accommodate these waste streams, which will include opportunities to co-dispose of site wastes with the tailings as a component of the tailings closure plan, particularly for slope stabilisation and erosion control.

Contaminated waste, possibly including contaminated soils, will almost certainly arise from the decommissioning of the plant, and this will be assessed in terms of the material risk that it represents to the environment or human health, according to hazard characterisation of the wastes generated during demolition and their leachate characteristics, and dependent upon the disposal decisions. Highly hazardous waste may require stabilisation and/or to be disposed of to a lined landfill waste site cell within the landfill site planned for the plant site. However, the closure plan will also assess the capacities of the existing landfill sites, including the proposed hazardous waste cell, towards the end of mine life. Through this process, alternative management measures (not necessarily new landfill cells) can be identified, developed or implemented prior to the commencement of mine closure.