

Appendix F: Mine Closure/Rehabilitation Plan

**IMERY'S REFRACTORY MINERALS SOUTH AFRICA
t/a
CAPE BENTONITE MINE**

**MINE CLOSURE/REHABILITATION PLAN
for
BENTONITE AND ZEOLITE MINING RIGHT
ON ERVEN 1401, 1199 and 2924
HEIDELBERG**

Prepared by: Eco Impact Legal Consulting (Pty) Ltd
P.O. Box 45070
Claremont
South Africa
7735
Tel: 021 671 1660
Email: admin@ecoimpact.co.za



Date: January 2019

TABLE OF CONTENTS

1.	INTRODUCTION	4
2.	A DESCRIPTION OF THE CLOSURE OBJECTIVES AND HOW THESE RELATE TO THE MINE OPERATION AND ITS ENVIRONMENTAL AND SOCIAL SETTING	4
3.	A PLAN CONTEMPLATED SHOWING THE LAND OR AREA UNDER CLOSURE	8
4.	A SUMMARY OF THE REGULATORY REQUIREMENTS AND CONDITIONS FOR CLOSURE NEGOTIATED AND DOCUMENTED IN THE ENVIRONMENTAL MANAGEMENT PROGRAMME OR ENVIRONMENTAL MANAGEMENT PLAN	8
5.	A SUMMARY OF THE RESULTS OF THE ENVIRONMENTAL RISK REPORT AND DETAILS OF IDENTIFIED RESIDUAL AND LATENT IMPACTS	10
6.	A SUMMARY OF THE RESULTS OF PROGRESSIVE REHABILITATION UNDERTAKEN	10
7.	A DESCRIPTION OF THE METHODS TO DECOMMISSION EACH MINING COMPONENT AND THE MITIGATION OR MANAGEMENT STRATEGY PROPOSED TO AVOID, MINIMIZE AND MANAGE RESIDUAL OR LATENT IMPACTS.....	12
8.	DETAILS OF ANY LONG-TERM MANAGEMENT AND MAINTENANCE EXPECTED	12
9.	DETAILS OF A PROPOSED CLOSURE COST AND FINANCIAL PROVISION FOR MONITORING, MAINTENANCE AND POST CLOSURE MANAGEMENT	13
10.	A SKETCH PLAN DRAWN ON AN APPROPRIATE SCALE DESCRIBING THE FINAL AND FUTURE LAND USE PROPOSAL AND ARRANGEMENTS FOR THE SITE	13
11.	A RECORD OF INTERESTED AND AFFECTED PERSONS CONSULTED	13
12.	REFERENCES	13

1. INTRODUCTION

There is growing demand throughout the world to confront the issue of mine closure and to create successful mine closure systems as already, according to IIED (2002), the *pollution legacy* makes the sustainability of mining activities difficult to achieve. Ideally, appropriate planning for closure of mining operations should be performed during the feasibility, design and permitting phases of a mine, and be improved during the operational life of the mine (Mudder & Harvey, 1999). This approach has become the standard and is a required practice today. According to Robertson & Shaw (2005), there has been a global trend since the 80's towards '*Designing for Closure*', with environmental protection and closure measures being designed into existing mine operations, and being mandatory for opening new mines.

The lack of a complete or revised mine closure plan can result in severe environmental and economic consequences. Inadequate closure activities, water management, and waste rock disposal plans have prompted unexpected and, in some instances, unwarranted secondary Environmental Impact Assessments (EIAs) (Mudder & Harvey, 1999). Therefore through prior and progressive planning and implementation of measures, the costs and impacts on the environment can be minimized.

Legislation governing mining within South Africa has been in existence for many years and periodically undergoes review and amendment. The last major change was the enactment of the Mineral and Petroleum Resources Development Act, 2002 (No. 28 of 2002) ("MPRDA"). This law has national scope for the operation, prospecting and the governance of all minerals rights and has furthermore set the requirement of a closure plan to form part of a mine's EMPR (Section 43 (3)(d)).

Eco Impact has been appointed to draft the closure plan. The MPRDA, Mineral and Petroleum Resources Development Regulations 56 to 62, outline the entire process of this mine closure. To ensure that the mine right/permit holder has complied with all of these requirements and prepared:

- A closure plan (Regulation 62) (this plan);
- An environmental risk report (Regulation 60); and

Annual performance reports as well as a final performance assessment report (Regulation 55(9)) will be submitted to DMR on completion of the mine operation and all the right/permit requirements.

2. A DESCRIPTION OF THE CLOSURE OBJECTIVES AND HOW THESE RELATE TO THE MINE OPERATION AND ITS ENVIRONMENTAL AND SOCIAL SETTING

Main closure/rehabilitation objectives are to rehabilitate the 80ha proposed mining activities area on transformed cultivated agricultural land to previous agricultural potential/state.

If during the mining activities any indigenous vegetation areas or associated watercourse areas within the No-Go Areas are impacted upon by the mining activities these areas must be rehabilitated immediately and prevention measures must be put in place to prevent re-occurrence. Depending on the extent and type of impacts that occurred a qualified Environmental Control Officer must recommend and supervise rehabilitation measures that must be implemented. A suitable specialist must also be appointed to assess the impact/s on the affected environment within the No-Go area and provide suitable rehabilitation measures to be implemented. The ECO must consult with the specialist when determining rehabilitation and prevention measures that must be implemented. Only vegetation indigenous to the applicable area and suitable for the specific impacted site must be used for rehabilitation of any impacted indigenous vegetation areas. After rehabilitation measures have been implemented the specialist must inspect the rehabilitated areas and if successful provide written confirmation to the ECO that all impacted indigenous vegetation areas and/or associated watercourse areas within the No-Go Areas have been successfully rehabilitated, or if not successful must provide further rehabilitation recommendations which must be implemented. The mining company will be responsible for the rehabilitation on these areas until written confirmation has been obtained from the specialist that the impacted sites have been successfully rehabilitated. Specialist rehabilitation progress reports and/or written confirmation of successful rehabilitation must be appended to the ECO inspection reports to be submitted to the competent authority with the annual environmental compliance audit reports.

Before any mining activities commence, soil fertility samples (in terms of agricultural potential) must be taken at each of the proposed mining areas, by a qualified person and samples must be tested at a certified laboratory. Samples should be taken from the surface to a depth of 25cm so as to include equal amounts of soil over the full depth range between 0 and 25cm.

Topsoil and overburden materials must be stored separately adjacent to the mining areas with effective storm water runoff and erosion prevention measures to be implemented in order to protect the materials. Topsoil stockpiles should be protected against losses by water and wind erosion. The mining plan should be such that topsoil is stockpiled for the minimum possible time by rehabilitating different mining blocks progressively as the mining process continues.

As the excavation of the quarry advances the stored overburden material must be replaced to backfill the excavations. The backfilled area must then be contoured according to existing surrounding contours of the cultivated land to prevent erosion. After contouring has been completed the stored topsoil material must be spread over the backfilled area. The topsoil must not be compacted after spreading to allow the disturbed area to be restored for agricultural use. The site must be monitored regularly (at least 6 monthly and after heavy rains) and all signs of erosion immediately rectified to prevent potential siltation and erosion of natural areas and drainage lines. Only use topsoil as derived and conserved from the proposed mining area to be rehabilitated after mining activities have ceased on the property.

During rehabilitation, the stockpiled topsoil must be evenly spread over the mining surface. Topsoil spreading should be done just before the winter season so that a cover crop can be

seeded and established during the winter rains and to control erosion on the newly spread topsoil. If topsoil is spread long before the winter, it will be subject to wind erosion before vegetation can be established on it.

To ensure minimum impact on drainage, it is important that no surface depressions are left after mining. In other words the surface slope must be maintained throughout, including through the edge of the mined area. Surface depressions will result in ponding of water on the surface and accumulation of excess moisture in depression areas. There is sufficient slope and elevation in the proposed mining area to avoid the creation of depressions, provided that mining depths are controlled to ensure the maintenance of a slope. No compaction in the soil should remain after rehabilitation. Compaction will impede water movement through the soil profile. The engineered constructed contours must be reinstated as soon as a phase is completed.

If ripping is required to loosen compaction, this should be done to a depth of at least 30cm, and in such a way that no mixing of the subsoil into the topsoil layer occurs. A cover crop must be established immediately after spreading of topsoil and ripping, to stabilize the soil and protect it from erosion. Any chemical ameliorants should be spread on the soil before loosening or ploughing or should be done as part of the farmer's planting program.

Alien invasive and weed vegetation monitoring and removal must be undertaken annually during mining and for at least a year after mining activities have ceased on disturbed areas or until the landowner starts with the annual cultivation activities on the affected land. This must be done by the applicant, landowner or their appointed contractor, using CapeNature approved methodology depending on the contract agreement that the applicant has with the landowner. All invasive alien species as listed by the Conservation of Agricultural Resources Act (CARA) must be removed during these surveys. Declared weeds and aliens must be removed before annual seeding.

Double stripping. Double stripping is a rehabilitation technique that is recommended by the Chamber of Mines (2007). It involves stripping a layer of topsoil, and then a second additional layer below the topsoil. Both of these layers are stockpiled separately and during rehabilitation are spread on the surface in their original sequence. In other words, the subsoil layer is spread immediately on top of the profiled overburden, and the topsoil layer is then spread on top of that. The topsoil layer should be stripped to approximately 30cm depth. Care must be taken by the stripping operator to strip as great a depth of topsoil as possible (up to a maximum of 30cm) without including any of the underlying clay layer as part of the topsoil. So where the clay layer occurs at a shallower depth than 30cm, the stripping must only occur to that shallower depth. The second subsoil stripping should be done to an additional depth of 30cm below the depth to which the subsoil was stripped. The double stripping ensures that the rehabilitated profile contains the original soil material to a depth of 60cm, and that none of the deeper underlying material, that is likely to be too saline to be part of the root zone, occurs within it.

The crop that is sown on the first season of the rehabilitated soil should be a hardy, annual crop that is sown primarily for soil stabilisation and biomass and not necessarily for production. It should be dosed with a high level of nitrogen fertiliser in order to maximise vegetative growth and therefore biomass production (both above and below ground). This is likely to be a higher level of fertilisation than would be determined for economic viability in terms of input costs versus production. The increased fertilisation costs should therefore be borne by the mine's rehabilitation budget, and not by the farmer.

Soil fertility samples (in terms of agricultural potential) must be taken at the restored areas similar to soil fertility samples that were taken before mining activities commenced. The fertility of the soil must at least be restored to the soil quality levels that were recorded before mining activities commenced. Samples should be taken in the same way as pre-mining samples to a depth of 25cm. Soil chemical deficiencies must be corrected, based on these samples. A chemical analysis from an agricultural laboratory will include a recommendation of the appropriate quantities of chemical ameliorants (for example lime, phosphate etc) that should be applied to optimize the soil chemistry for the relevant crop. Any chemical ameliorants should be spread on the soil before loosening or ploughing or should be done as part of the farmer's planting program.

When no evidence of erosion and alien vegetation encroachment are visible and similar soil quality levels are reached as before mining activities commenced the mined areas can be considered as successfully rehabilitated.

The mine permit/right holder commits to post-closure maintenance during rehabilitation of the site until the time of receipt of a closure certificate for all or parts of the impacted mining areas, except for the areas which the landowner plants crops after rehabilitation. In other words once the landowner plants the first crops on the rehabilitated areas the landowner takes further responsibility for impact maintenance of the cultivated areas.

At a rate of R 213 184/ha, the estimate global cost for the rehabilitation of the proposed active quarries of 16.84ha will be R 3 590 018.50.

Total Proposed Rehabilitation Financial Provision for the Mining Right = R 3 590 018.50

Take note: The above mentioned proposed rehabilitation cost is only an estimate, in terms of section 1 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002) a holder "*in relation to a prospecting right, **mining right**, mining permit, retention permit, exploration right, production right, reconnaissance permit or technical co-operation permit, means the person to whom such right or permit has been granted or such person's successor in title.*" Therefore the holder of the mining right will remain financially responsible for implementing rehabilitation measures until the set rehabilitation objectives have been met no matter the final costs.

3. A PLAN CONTEMPLATED SHOWING THE LAND OR AREA UNDER CLOSURE

Please refer to the maps under Appendix B of the Scoping Report.

4. A SUMMARY OF THE REGULATORY REQUIREMENTS AND CONDITIONS FOR CLOSURE NEGOTIATED AND DOCUMENTED IN THE ENVIRONMENTAL MANAGEMENT PROGRAMME OR ENVIRONMENTAL MANAGEMENT PLAN

It is important to note that regulatory criteria are likely to change over time, and criteria selected for the purposes of closure planning during early operations, may not be applicable at the time of closure.

The following legislation and policies are applicable to mining operations and final closure procedures:

- **Constitution of the Republic of South Africa (Act No.108 of 1996, Section 24)**

‘The environment must be protected for present and future generations through reasonable legislation and other measures that will prevent pollution and environmental degradation, promote conservation and will ensure ecologically sustainable development and sustainable use of natural resources while striving for justifiable economic and social development.’

- **National Water Act, 1998 (Act No. 36 of 1998): Section 19**

Section 9 of the Regulations on use of water for mining activities focuses on the temporary or permanent closure of mines or related activities. Section 9 (1) states *‘any person in control of a mine or activity must at either temporary or permanent cessation of operations ensure that all pollution control measures have been designed, modified, constructed and maintained so as to comply with these regulations’* and Section 9(2) states that the same mine *‘...must ensure that the instream and riparian habitat of any water resource, which may have been affected or altered by a mine or activity, is remedied so as to comply with these regulations’*.

- **National Environmental Management Act, 1998 (Act No. 107 of 1998)**

Outlines the duty of care to prevent pollution. The polluter is liable for any rehabilitation costs and any damages caused by pollution as stated within the Act.

- **Mine Health and Safety Act, 1996 (Act No. 29 of 1996)**

Section 2 (2) states that *‘the owner of a mine that is not being worked, but in respect of which a closure certificate in terms of the MPRDA has not been issued, must take reasonable steps to continuously prevent injuries, ill-health, loss of life or damage of any kind from occurring at or because of the mine’*. Section 9 stipulates that a Code of Practice (CoP) is required for MRD. Provisions for rehabilitation and closure are made within these CoPs.

- **Minerals and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002)**

Section 43 places an obligation on the holder of mining related rights to apply to DMR for a closure certificate within 180 days of a prescribed event. The application must contain a risk

assessment. Section 44 states that when a prospecting right, mining right, retention permit or mining permit lapses, is cancelled or is abandoned or when any prospecting or mining operation comes to an end, no buildings, structures and other objects are to be demolished or removed in terms of any other law (e.g. National Heritage Resource Act, 1999 (Act No. 25 of 1999)) or which have been identified in writing by the Minister.

- **National Environmental Management Air Quality Act, 2004 (Act 39 of 2004)**

Section 33 states that if mining operations are likely to cease within a period of five years, the owner of that mine must promptly notify the Minister in writing-

- (a) of the likely cessation of those mining operations; and
- (b) of any plans that are in place or in contemplation for-
 - (i) the rehabilitation of the area where the mining operations were
 - (ii) the prevention of pollution of the atmosphere by dust after those conducted after mining operations have stopped; and operations have stopped.

- **Conservation of Agriculture Resources Act, 1983 (Act No. 43 of 1983)**

In terms of the amendments to the regulations under this Act, landowners are legally responsible for the control of alien species and to handle storm water to prevent erosion on their properties and to protect agricultural resources.

- **Broad-Based Socio-Economic Empowerment Charter for The South African Mining Industry**

Section 4.1. Through the Mines Qualifications Authority (MQA), shall undertake to provide skills training opportunities to miners during their employment in order to improve their income earning capacity after mine closure.

The possible risk factors that could be considered in the risk report are the rehabilitation of the mining area and impacts on agricultural land. Therefore close attention will be paid to these factors during the operational life of the project. The Company is aware that the holder of the mining permit or right is liable for any and all environmental damage or degradation emanating from the mining operation until a closure certificate is issued in terms of Section 43 of the MPRDA.

The principles for mine closure in accordance with the applicable legislative requirements for mine closure, the holder of a mine permit/right must ensure that:

- the closure of a mining operation incorporates a process which must start at the commencement of the operation and continue throughout the life of the operation
- risks pertaining to environmental impacts must be quantified and managed pro-actively, which includes the gathering of relevant information throughout the life of a mining operation
- the safety and health requirements in terms of the Mine Health and Safety Act, 1996 (Act No. 29 of 1996) are complied with
- residual and possible latent environmental impacts are identified and quantified

- the land is rehabilitated, as far as is practicable, to its natural state before mining operations commenced, which conforms with the concept of sustainable development; and
- mining operations are closed efficiently and cost effectively.

5. A SUMMARY OF THE RESULTS OF THE ENVIRONMENTAL RISK REPORT AND DETAILS OF IDENTIFIED RESIDUAL AND LATENT IMPACTS

The environmental risk report involves carrying out a screening level environmental risk assessment where all possible risks are identified and qualitatively ranked. During closure phases of the mine a higher level risk assessment should be implemented on those risks identified in this process.

See EIA Report and EMPr for detailed potential impact risk assessments conducted.

All significant environmental, cultural and socio-economic features applicable to the site were identified and informed the preferred activity, location and layout as proposed. The preferred mining activities, location and layout was assessed against the no go option of the site remaining as is.

Summary of Impacts Identified for the Proposed Mining Activities on 80ha Cultivated Agricultural Land:

All significant environmental, cultural and socio-economic features applicable to the site were identified and informed the preferred activity, location and layout as proposed. The preferred mining activities, location and layout was assessed against the no go option of the site remaining as is.

See below a summary of the significance of potential environmental impacts before and after mitigation for the proposed mining activities:

Mining Operational Phase

Most of the potential negative impacts are rated as medium which can be mitigated to a low status. The potential impacts rated as medium before mitigation measures are implemented includes potential mining impacts such as – Increased dust levels; Potential erosion due to proposed mining activities along steep slopes; Mining activities can result in increased sediment loads in water resources; The trapping of all storm water within excavations on the mine area; Waste from chemical toilets and litter; Hydrocarbon spill; Fire; Introduction of declared weed species; Increased traffic due to the mining activities requiring various vehicles to come onto and leave the site;

Potential negative impacts rated as low before and after mitigation include – Emissions; Impact on the naturally occurring fauna and avifauna present in the area; The potential impact of the proposed development on archaeological, paleontological and heritage remains; Noise due to mining machinery, trucks and people on site; A negative visual impact due to the creation of excavation pits

Potential negative impacts rated as high which can be mitigated to low status includes – Impact of proposed mining activities on secondary drainage lines and dams with associated wetland characteristics and aquatic vegetation as associated with mapped NFEPA's and aquatic CBAs and ESAs; Impact of proposed mining activities on terrestrial indigenous vegetation areas as associated with mapped terrestrial CBAs, ESAs and buffer areas; Mining of agricultural land.

Potential positive impacts which also outweighs the potential negative impacts is related to ongoing socio-economic benefits to the local communities of Heidelberg and Riversdale due to extension of the lifespan of Cape Bentonite Mine and job opportunities created.

Decommissioning/Closure/Rehabilitation Phase

The potential impacts of decommissioning the mine include soil erosion and alien species spreading during the rehabilitation phase. The site will be rehabilitated after mine closure and this is detailed in the EMP and Mine Closure/Rehabilitation Plan.

A potential high negative impact during the decommissioning phase is the potential loss of socio-economic benefits to the local communities of Heidelberg and Riversdale. This can be mitigated by sourcing and authorising additional viable bentonite deposits to ensure sustainability of the Cape Bentonite Mine operations.

It was concluded by the EAP that the proposed development will not have a significant negative environmental impact if proposed mitigation measures are implemented and it was recommended that the Environmental Management Programme be adhered to accordingly.

All the potential negative impacts with their mitigation measures are included and described in the EMP.

6. A SUMMARY OF THE RESULTS OF PROGRESSIVE REHABILITATION TO BE UNDERTAKEN

There are three main categories of rehabilitation for the *after-use* of land that will be sustainable in the long term (Robinson & Shaw, 2005):

Walk-away status: there are no remaining residual constraints on the future land use after rehabilitation has been performed and no additional monitoring or maintenance requirements.

Passive care: there is minimal need for monitoring and infrequent maintenance of noncritical structures.

Active care: requires regular operations, monitoring and maintenance of the site that is not typical of normal land management practices. There may be permanent constraints on the beneficial use of the land, such as high metal concentrations.

Rehabilitation for the specific site will occur by means of passive care. However the ultimate objective would be to reach *walk-away status* after a closure certificate has been issued.

The mine operator is responsible to rehabilitate the mining area in terms of the contract

entered into with the landowner. The contract entails removal of all manmade structures and equipment, with the entire area then to be rehabilitated to be used for agricultural activities such as cultivation and livestock grazing.

7. A DESCRIPTION OF THE METHODS TO DECOMMISSION EACH MINING COMPONENT AND THE MITIGATION OR MANAGEMENT STRATEGY PROPOSED TO AVOID, MINIMIZE AND MANAGE RESIDUAL OR LATENT IMPACTS

During the decommissioning and closure phases consideration of the following is essential (Robertson & Shaw, 2005):

- Physical stability – mine area and access road must be stable so as to eliminate any hazard to the public health and safety or material erosion to the terrestrial or aquatic receiving environment at concentrations that are harmful. Engineered structures must not deteriorate and fail.
- Surface waters and groundwater must be protected against adverse environmental impacts resulting from mining and processing activities.
- Land use - the closed mine site should be rehabilitated to pre-mining conditions or conditions that are compatible with the surrounding lands.

Refer to point 2 above for closure/rehabilitation objectives which will also be applicable in the case of decommissioning.

8. DETAILS OF ANY LONG-TERM MANAGEMENT AND MAINTENANCE EXPECTED

Ideally, a properly designed and executed rehabilitation plan will leave the rehabilitated mining areas in a condition requiring no continuing, long-term maintenance to achieve an enduring, high quality environment. The mine permit/right holder commits to post-closure maintenance during rehabilitation of the site until the time of receipt of a closure certificate for all or parts of the impacted mining areas, except for the areas which the landowner plants crops after rehabilitation. In other words once the landowner plants the first crops on the rehabilitated areas the landowner takes further responsibility for impact maintenance of the cultivated areas. Long-term care will include maintenance of all storm water contour infrastructures and clearing of weed and alien vegetation species until a closure certificate has been obtained or until the landowner starts with crop planting on the rehabilitated areas. Thereafter, the responsibility for the ongoing maintenance and monitoring of the site will rest with the landowners.

Management and maintenance is expected to continue until after the first winter rain season and the closure certificate is issued or once the land has been cultivated by the landowner. Maintenance will be focused on erosion prevention and removal of weed and alien vegetation species on the mined area.

9. DETAILS OF A PROPOSED CLOSURE COST AND FINANCIAL PROVISION FOR MONITORING, MAINTENANCE AND POST CLOSURE MANAGEMENT

At a rate of R 213 184/ha, the estimate global cost for the rehabilitation of the proposed active quarries of 16.84ha will be R 3 590 018.50.

Total Proposed Rehabilitation Financial Provision for the Mining Right = R 3 590 018.50

Take note: The above mentioned proposed rehabilitation cost is only an estimate, in terms of section 1 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002) a holder “*in relation to a prospecting right, **mining right**, mining permit, retention permit, exploration right, production right, reconnaissance permit or technical co-operation permit, means the person to whom such right or permit has been granted or such person’s successor in title.*” Therefore the holder of the mining right will remain financially responsible for implementing rehabilitation measures until the set rehabilitation objectives have been met no matter the final costs.

10. A SKETCH PLAN DRAWN ON AN APPROPRIATE SCALE DESCRIBING THE FINAL AND FUTURE LAND USE PROPOSAL AND ARRANGEMENTS FOR THE SITE

Refer to Appendix B of the Scoping Report for detailed maps of proposed mining site to be rehabilitated upon completion of the activities.

11. A RECORD OF INTERESTED AND AFFECTED PERSONS CONSULTED

Registered Interested and Affected Parties and key departments will be afforded several commenting opportunities on the Draft Scoping Report, EIR, EMP and Closure/Rehabilitation Plan. The comments are recorded and the EAP (specialists) respond to the comments and compile the comments and response report where after it is submitted to DMR in the final reports for a decision. Proof of the public participation process conducted will be included in Appendix C of the Scoping Report.

12. REFERENCES

IIED (2002). *Research on Mine Closure Policy*. Mining, Minerals and Sustainable Development Project. Report Number 44. International Institute for Environment and Development (IIED).

Mudder, T & Harvey, K (1999). *Closure Concepts*. Mineral Resources forum. UNEP, 1999.

Robertson & Shaw (2005). *Mine Closure*. Robertson GeoConsultants Inc. www.infomine.com. Date Accessed 2005.