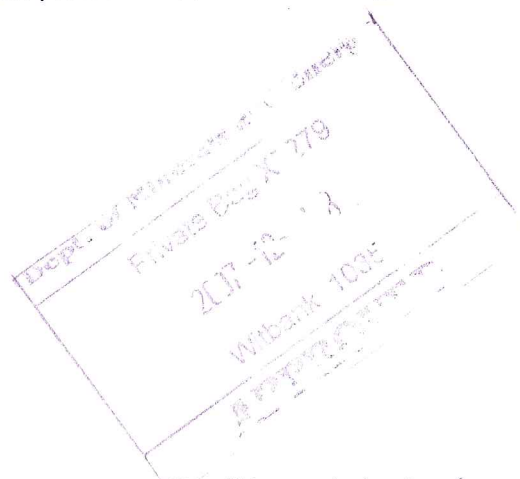


The environmental emergency activities were identified from risk assessment. The majority of this work was conducted as part of the EMS planning phase and is included into the EMS risk assessment.

5.1.6.2 Basic Emergency Activities Identified

Of all the potential areas of emergency, the following were identified as the key areas of focus (there are a number of other emergency situations where this procedure applies and those given here serve only as a guideline):

- Uncontrolled Fire / Explosion
- Burst / Overflowing Dams
- Oil Spills
- Burst pipelines
- Flooding
- Chemical Spills
- High wall sloughing



5.1.6.3 Review and Revision

During the course of the year a number of emergency response drills will be carried out and recorded (minimum of one per section every year). Emergency response drills will normally be carried out during operational hours to best evaluate the response and involve the highest number of employees. These are at the discretion of the General Manager and Site / Section Manager and may involve one or more of the emergency activities listed in this standard procedure. Emergency response drills should not be of the same type unless significant problems were experienced with the previous drill.

Regular auditing and questioning of the key personnel involved in emergency response will also be conducted. This will take the form of planned task observations (PTO). It is the responsibility of the Site / Section Manager to undertake these PTO's on a regular basis and record the response.

Information from PTO's and drills will be collated and the information assessed by the Projects Manager within a month after the drill has been executed. Alterations and modifications to the Emergency Response Procedure will also be conducted after the response drill evaluation. This task will be performed by the Projects Manager in co-ordination with the Section / Site Manager to which the drill applies. Assistance of the Environmental Coordinator or any other specialist will be given if required by the Projects Manager.

The Projects Manager or Environmental Co-ordinator will generate a report. This report will be distributed to the parties concerned for review and remedial action. Any significant problems will be addressed by altering the response plan in this procedure. Contact numbers for emergency personnel are attached below.

5.2 LANDAU COLLIERY: EMERGENCY PROCEDURES

5.2.1 Precaution Against Fire

At every mine and at every workplace where the number of employees is more than 50:

There shall be an established organisation for fire prevention and fire control and the Manager shall:

- (a) Provide and maintain suitable and adequate fire fighting equipment and materials.
- (b) Enforce a code of practice, approved by him, for organisation of fire prevention, fire fighting and fire drill, and
- (c) Appoint in writing one or more competent persons who shall examine at a prescribed frequency all the equipment and material provided for fire fighting and who shall record in a book provided for the purpose, the results of each examination, specifying what he considers defective or lacking. The report shall be examined and signed by the Manager within 3 days from compilation.

At every mine where the total number of underground employees is more than 50 there shall be provided and maintained for immediate use :

- (a) A supply of water sufficient for the purpose of fire-fighting underground, and
- (b) Efficient means of conveying the water and delivering it without undue delay at adequate pressure and in adequate volume to all parts of the underground workings in ordinary use for working or travelling.

At any mine and at any works:

- (a) No person shall place, throw or leave, or cause or permit to be placed, thrown or left, any naked light or flame or any burning lighting torch, match, cigarette, tobacco, paper or other burning material on or near any combustible material or inflammable substance where this may cause danger from fire or explosion;
- (b) No waste material of a combustible nature shall be stored anywhere in quantity sufficient to create a fire hazard;
- (c) No inflammable or explosive material shall be stored or kept in the immediate vicinity of a place where any transformer, switchgear or other electrical apparatus or heating apparatus is installed;
- (d) No welding, flame-cutting or flame-heating shall take place unless adequate means are immediately available for extinguishing any fire which may result from such operation;
- (e) On completion of any welding, flame-cutting or flame-heating, an examination shall be carried out by a competent person to ensure that no fire will result from such operation;

- (f) No person shall smoke or carry an open light in any cage, skip or other conveyance in any shaft or winze or in any elevator car in a hatchway;
- (g) No person shall take or cause or permit to be taken underground any calcium carbide unless it is in a lamp provided by the manager or in a water-tight receptacle of a type approved by the regional director. No person shall store or leave calcium carbide underground on coming off shift; and
- (h) All machinery shall be so constructed, installed, operated and maintained as to prevent as far as practical, dangerous heating.

On or in every mine and at a works where a belt conveyor is used in a confined space-

- (a) The manager shall enforce a code for safety practice, approved by him, for the installation, operation, maintenance and patrolling of the belt conveyor system;
- (b) Suitable and adequate means of extinguishing fires shall be available for immediate use along every belt conveyor and at the driving head of every belt conveyor;
- (c) Every accessible point along any belt conveyor shall be equipped with some effective means for immediately stopping the belt conveyor from any point along its length, or where an attendant is stationed at the driving head, effective means shall be provided for signalling to such attendant from any point along the length of the conveyor, and
- (d) Where 2 or more belt conveyors are used in series, sequence interlocking shall be provided which automatically will –
 - a. stop all other conveyors feeding a conveyor that has stopped, and
 - b. prevent a conveyor starting until the conveyor on to which it feeds is moving.

At every coal mine, in addition to the provisions of Regulation 11.4 –

- (a) Every conveyor belt which is installed or used in the workings shall be of incombustible or fire-resistant material;
- (b) All reasonable measures shall be taken to prevent coal or coal dust accumulating on or around the moving parts of any belt conveyor where friction is likely to cause heating; and
- (c) Every belt conveyor shall be equipped with a device which will stop the drive automatically should the belt break, jam or slip excessively.

At every mine or part of a mine not exempted in writing by the Principal Inspector of Mines where there is a longer interval between shifts than 6 hours, the manager shall provide for the early detection of any fire or spontaneous heating which may be taking place in the underground workings.

5.2.2 Emergency Organisation

5.2.2.1 Introduction

This emergency procedure is a guideline and is designed to assist officials to take prompt action to **combat** any emergency. The nature and severity of the occurrence will, however, determine the course of action in each case. It is imperative that every person thoroughly acquaints himself with his duties and fully understands his role in the emergency organisation.

The sequence in which the duties are set out does not govern the order of importance since many activities will occur simultaneously. It is important that panic is not allowed to develop and no person, other than those directly involved, is allowed to interfere.

Prevention is better than cure, thus, it becomes every person's duty to **prevent** negligence and carelessness since this may lead to a catastrophe.

The best equipment is of little value if used by persons who are not safety-conscious at all times or properly trained.

The diligent installation, maintenance and use of emergency equipment is of equal importance in order to obtain maximum benefit during an emergency. Under no circumstances must any person communicate with the news media or general public during an emergency. Any statements or press releases will be given by the General Manager in consultation with the PRO at Head Office.

Every official on the mine will be on 24-hour standby during an emergency and must obtain permission from the General Manager before leaving the property or his residence.

Forms have been produced which should be utilised during an emergency. Current mine telephone directories must be kept on hand at all telephones and offices. A standby list is generated and distributed by e-mail every week by management. This list should also be available at the relevant control centres and section control rooms.

5.2.2.2 Control Centres

To control and co-ordinate any action to be taken during an emergency, control rooms will be set up as follows:

- Control Centre - Main office boardroom.
- Secondary Control - Assistant or Section Manager's Office (Area specific).

Information is to be initially forwarded to the section control rooms and then to the relevant personnel until the control and secondary control centres have been established.

5.2.3 Recognised Emergency Occurrence

- Outbreak of fire
- High wall sloughing
- Explosion
- Accumulation or outburst of gas in large quantities
- Inrush of water or mud
- Extensive ground subsidence
- Riot or strike
- Pollution incident (other than permitted discharge)

5.2.4 Emergency Procedures Spills Occurrence

5.2.4.1 Petrochemicals

In the event of a small occurrence, the fire team in conjunction with the environmental staff must draw the Emergency Spill kit from allotted storage area and use this to **contain the spill until an outside firm of specialists** can be contacted to come and clean up the residue and render the area harmless or safe. If the spill is large, the same measures can be applied but the outside contractor should be called immediately. The area should be fenced and demarcated and people must be kept away from the area.

5.2.5 Emergency Response / Actions

There are six main steps in managing an emergency, from the identification of the situation to final close off. These are as follows:

- Find and identify.
- Ensure human safety.
- Reporting.
- Containment and clean-up.
- Corrective action.
- Monitoring.

Any emergency should be handled based on the decision-making and process-flow framework presented in the emergency response plan.

In handling any emergency remember to assess the situation. Take into consideration all factors, including:

- Is there a fire, a spill or a leak?
- What are the weather conditions?
- What is the terrain like?
- Who / what is at risk: people, property and/or the environment?
- What actions should be taken: Is an evacuation necessary?
- What resources (human and equipment) are required and are they readily available?
- What can be done immediately?

Where deemed necessary by the instructor, a letter of appointment may be signed by the appointed person to ensure that instructions will be carried out as indicated. It can either be done by a job card or a signed document.

Emergency contact numbers will be updated distributed by the Safety Officer on a regular basis. It is the responsibility of each section head to ensure that these numbers are displayed at relevant places.

5.2.5.1 Discoverer

- Remove any person from danger.
- Report occurrence to nearest responsible person/control room.
- In the case of fire, try to extinguish the fire with fire extinguishers, sand, stone dust or water if fire is small. Do not use water on electrical fires.
- Stop all work and warn all persons in the immediate vicinity.
- Do not allow the situation to run out of control before reporting.

5.2.5.2 Control room

- Notify nearest foreman.
- Phone the ambulance, fire department etc.
- Ask what assistance is needed.
- Supply foreman with a list of contact numbers, and the fire team.
- Set the alarm so that all personnel can evacuate the area and group at the assembling point..

5.2.5.3 Responsible Person / Miner / Artisan

- Check nature and extent of occurrence.
- Ensure that all reasonable measures are taken to deal with the occurrence.
- Remove all injured persons to surface.
- Withdraw all persons from the area affected and warn persons in other affected working areas to evacuate the mine (if necessary).
- Inform shift overseer / foreman or more senior official of the nature and extent of the occurrence and the steps taken.

5.2.5.4 Foreman

- Ensure that all persons have been withdrawn from the affected area to a safe place – surface if necessary in the case of an underground incident.
- Check the nature and extent of the occurrence.
- Ensure that all reasonable steps have been taken to deal with the occurrence.
- Inform the Pit / Plant Superintendent or more senior official, if the Pit / Plant Superintendent is not available.
- Place temporary guards to prevent access to the area.
- Alert mine clinic and ensure that injured persons are being treated.

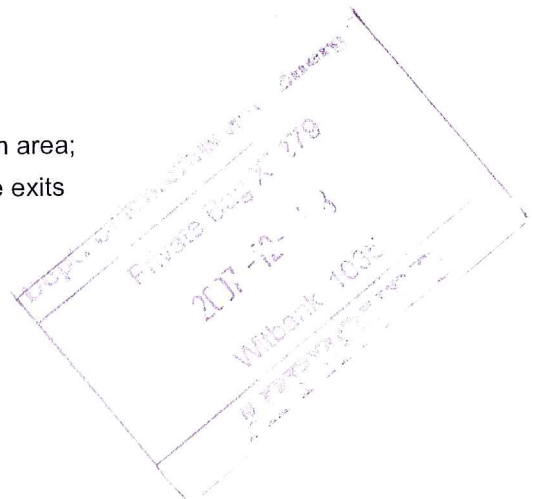
- Organise supervisors to take a roll call.
- Record names and contact numbers of any and all eyewitnesses.

5.2.5.5 Pit / Plant Superintendent

- Withdraw labour from affected and adjoining areas as necessary;
- Ascertain nature & extend of occurrence;
- Ensure that all reasonable steps are taken to deal with occurrence;
- Place temporary guards to prevent access to area;
- Ensure that all injured persons are attended to;
- Organise supervisors to take roll call;
- Print out shift clearance report;
- Ensure that all windows and doors are closed prior to evaluation if a building fire occurs;
- If fighting a fire, ensure that you stay upstream of smoke, fumes or use appropriate PPE to prevent inhalation of harmful smoke / fumes;
- Notify Head of Department.

5.2.5.6 Head of department

- Call out required officials;
- If warned, withdraw all except rescue workers from area;
- Place skilled (able to read and write) guards at the exits
- Hold & obtain any witness reports;
- Prevent disorder or panic;
- Check safety of unaffected areas;
- Check for missing persons;
- Proceed to & take charge of secondary control;
- Stand by for instructions;
- Appoint a secondary scribe;
- Notify Assistant Manager, General Manager, Safety Officer, Environmental Coordinator and Chief Surveyor;



5.2.5.7 Engineering Manager

- Call out surface engineers & supervisors;
- Ensure electrical & fitter foreman stand by at secondary centre area board room;
- Arrange loud speaker telephone links between fresh air base and control;
- Arrange for electricity in affected area to be isolated when required;
- Arrange with Eskom for uninterrupted power supply;
- Ensure that Section Engineers:
 - Standby at workshops;
 - Arrange for sufficient supply of all equipment;

- Call out officials & standby personnel;
- Check power supply to all areas;
- Supply transport where necessary;
- Assemble fire fighting crew;
- Barricade off affected area;
- Call out additional labour if necessary.

5.2.5.8 Security

- Senior skilled guard (able to write and read)
- Keep detailed written records of all entering / exiting affected area and / or mine;
- Prevent unauthorised entry to affected area;
- Remain at post at all times or until relieved by authorised person;
- Report any persons not returning from an area to Head of Department;

5.2.5.9 Assistant / Plant Manager

- Check that all persons are withdrawn from the area;
- Establish emergency control centre;
- Keep record of all information received and instructions given;
- Check guarding arrangement;
- Ensure that names and numbers of all exiting and entering mine are recorded;
- Liase with personnel manager regarding feeding & accommodation arrangements;
- If necessary, call the police for assistance;
- Discuss strategy with emergency responders;
- Make out full report of occurrence;
- Plan briefs for rescue team;
- Issue authorisation for entering and exiting mine;
- Provide escorts for visiting teams;
- Ensure that control posts are functioning efficiently;

5.2.5.10 General Manager

The General Manager, and the investigation team, must make a decision on what measures can be taken to limit the damage caused by the incident, and if possible, any remediation measures can be taken. The General Manager must also advise the HR Manager to communicate any necessary information to any affected parties and must ensure that the relevant government authorities are notified.

- Inform the Senior Vice President;
- Inform the appropriate Principal Inspector of Mines, depending on the incident;
- Ensure that all reports to the media are routed via P.R.O. at Head Office;
- Ensure that no unauthorised persons including the press are allowed access to information or property;

- Inform community members where necessary;
- Notify press if SVP authorises it;
- Give notice of the occurrence to any adjoining mine that might be affected or I&AP's,
- Ask assistance of Eskom, Regional Services Council, Witbank Municipal Services, Local community etc, where deemed necessary;
- Notify Financial Controller and Personnel Manager.
- Ensure that all reports to the media are routed via PRO in Head Office.

5.2.5.11 Health and Safety officer

- Report to control centre;
- Call applicable full time Safety and Health Representative to the control centre;
- Provide ventilation instrument as required;
- If required by General Manager, call members of safety and health advisory committee to control centre;
- Prepare document for DME;
- Prepare AA plc report if required;
- Report back to General Manager

5.2.5.12 Personnel Manager

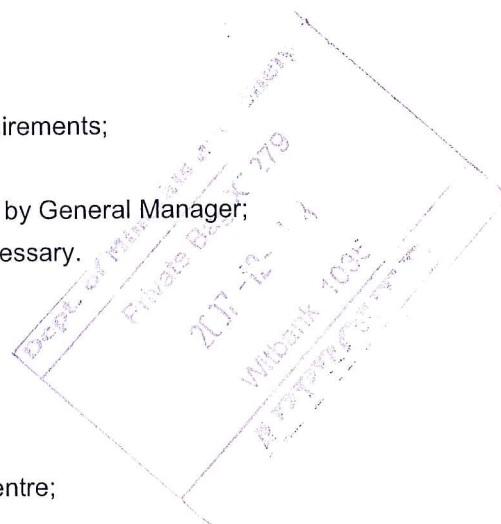
- Call out medical doctor;
- Report to control centre;
- Take charge of catering and accommodation requirements;
- Liase with General Manager;
- Inform next of kin of occurrence, once sanctioned by General Manager;
- Contact EAP to assist with counselling where necessary.

5.2.5.13 Mine Surveyor

- Call out staff as required;
- Provide plans to predict conditions of incident;
- Provide any other plans required by the control centre;
- Report to General Manager;
- Standby at Control centre.

5.2.5.14 Environmental Coordinator

- Call out environmental staff as required (Anglo Coal Environmental Services);
- Call out of an approved environmental specialists in the event of a chemical spillage;
- Advise on appropriate PPE for unplanned events;
- Notify Interested and Affected parties and Government Department should the emergency situation have a direct impact on them;



- After the emergency: Identify workers, responders & community members who may have been exposed for medical evaluation;
- Report back to General Manager.

5.2.5.15 Financial controller

- Arrange scribe for General Manager;
- Open special fire / incident account for stores, labour, etc.;
- Ensure that a record is kept of all telephone calls;

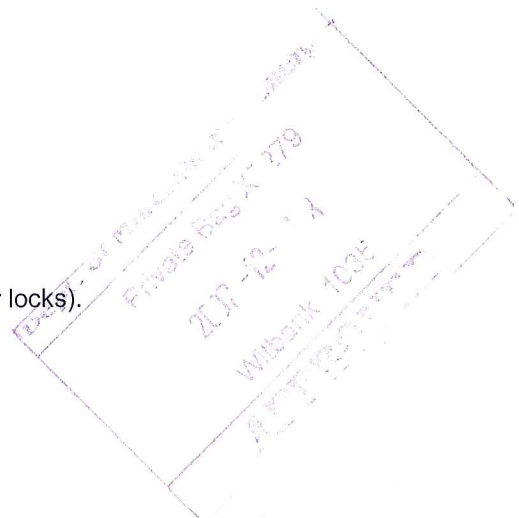
5.2.5.16 Stores

- Stores controller to proceed to mine stores;
- Make arrangements for emergency issues.

5.2.6 Emergency Stores and Equipment

The following minimum stores and equipment should be available at the mine store or fire extinguisher repair bay, i.e.:

- Rolls fireproof brattice cloths.
- 4" brattice nails.
- 0,9kg hammers and spare handles.
- 1,8kg hammers and spare handles.
- 3,5kg or 6,3kg hammers and spare handles.
- Wire clippers.
- 1,2m x 1m steel doors with frames (emergency air locks).
- Pipe wrenches.
- 450mm or 600mm pipe wrenches.
- Hacksaw frames and blades.
- Timber bow saws and several blades.
- 17mm x 19mm flat pipe bolt spanners or sockets.
- Complete range of couplings, nipples, unions (25mm and 50mm) reducers, spuds, T-piece (25mm and 50mm), plugs, adapters, steel to polythene piping, bonds, flanges, 50mm and 100mm – 25mm and 50mm steel and/or polythene piping. 25mm hose piping, bricks, sand, cement or slagment, picks, pinch bars and shovels should always be in stock.



- Proto trolley equipment.

5.3 ENVIRONMENTAL AWARENESS PLAN

Landau Colliery has developed an environmental awareness plan for the entire mine, which is explained in more detail below. Since Navigation West Section will be within the mining area of Landau Colliery the above-mentioned environmental awareness plan will be applicable to the Navigation West Section project area.

Note that the responsible person will revise the environmental awareness procedures from time to time. The date of commencement of the revised procedure will always be indicated to prevent confusion.

5.3.1 Scope

The Environmental Training Management Procedure sets out the mine's training objectives regarding the Environmental Management System. This procedure will serve to improve awareness, training and competency in the environmental field for all persons working for or on behalf of Landau Colliery. The procedure makes provision for the establishment, implementation and training of the SHE Policy, significant environmental aspects and EMS procedures.

The following are the objectives set for the standard Environmental Training Management Procedure:

- To implement an EMS training and awareness course at the mine.
- To identify environmental training and development needs.
- To clarify the EMS training and to ensure that all employees and applicable contractors are correctly instructed with regards to the environment.
- To train all Managers, Supervisors and Employees as the need arise and where required. Safety Risks Associated with Activity.

There were no hazards identified in applying this standard procedure.

5.3.2 Responsibilities

The Training Officer and Mining Training Officer are the persons responsible for the management / co-ordination of this Management Procedure. These persons must ensure that the relevant persons, who have responsibilities under the procedure, follow the instructions in this procedure. Each of the relevant persons shall have a copy of the Environmental Training Management Procedure.

The following legislation and standards apply to this Standard Procedure:

- Employment Equity Act 55 of 1998 – *Areas Where Employment Equity are Defined, Including Training & Development*

- National Environmental Management Act 77 of 1998 – *Recommendations for Institutional Cooperation*
- Minerals and Petroleum Resources Development Act, 2002 (Act 28 of 2002) – *Development of an Environmental Awareness Plan*

5.3.3 Activity Procedures

5.3.3.1 Induction Programme

Training programmes shall be established and maintained for newly appointed and permanent staff as well as all Permanent Contractors. The Line Manager shall ensure that all persons working for, or on behalf of, the mine receives training in their respective areas of responsibility that includes:

- SHE Policy.
- Environmental conservation.
- Environmental procedures applicable to each area (as per their related aspects and impacts) and environmental reporting.
- General environmental awareness for mine related environmental issues.
- Maintaining conformance with the mines EMS.
- Refresher training on environmental procedures will take place once a year when employees report for induction training. If an employee does not pass the environmental procedure tests, they are incompetent and are required to re-do the test till they pass (competent). These records will be available at the Training department.
- Since permanent contractor staff receives General Induction and refresher training at an Anglo approved company called (KBC) and not at the Landau training Centre. It will be the responsibility of the Line Manager to ensure that the applicable contractor staff that work within the supervisor's area of responsibility, are trained and briefed on all mine environmental applicable requirements.

Contractors that are employed on the colliery must prior to any starting of working activities complete the contractor's package. This package requires the contractor to perform SHE (Safety, Health and Environmental) Risk assessments on the activities to be undertaken. The entire risk assessment process and the applicable EMS procedures are referenced within the contractor's package.

5.3.3.2 Training Needs

These shall be identified:

(a) By management or staff through:

- Performance appraisal.
- At time of recruitment (in the work place).
- Training needs analysis.
- In-task observation of performance.
- Aspect Register.

(b) Analysis of change resulting from:

- Additions to scope in services provided.
- The updating of procedures (quality, technical and administrative).

(c) By management and staff for the induction of:

- New appointed permanent, contract or temporary staff.

Training needs will be identified through work performance, request by employee and work area review. Once training needs have been established it is up to the supervisor to notify the Training Department of the requirements. The training department will then identify pertinent and relevant courses (if not already done so by employee / supervisor) and schedule training accordingly.

5.3.3.3 Training Planning

Identified and agreed training needs shall be included in budgets and processed as described below. Course attendance (other than at the internal induction courses) shall be scheduled on the basis of the importance of task contribution to the maintenance, effectiveness and improvement of the objectives.

Training expenses, including conferences and symposia should be checked and approved by the Head of Department. The Training Department shall complete a course authorisation form and ensure that the procedures are followed regarding course bookings, confirmations and payments.

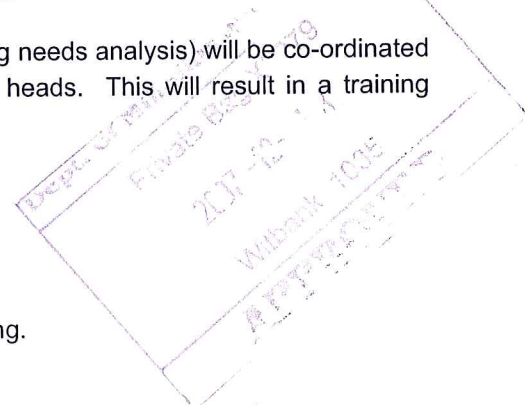
Planning of training for job specific training (done through training needs analysis) will be co-ordinated between the Training Superintendent and the relevant section heads. This will result in a training schedule for job specific training on the mine.

The trainee shall:

- Obtain approval from the Head of Department.
- Request Training Department to make official booking.

External training courses shall be assessed through:

- Attendance by, and the formal reports and recommendations of, staff.
- Recommendation by known competent external personnel.

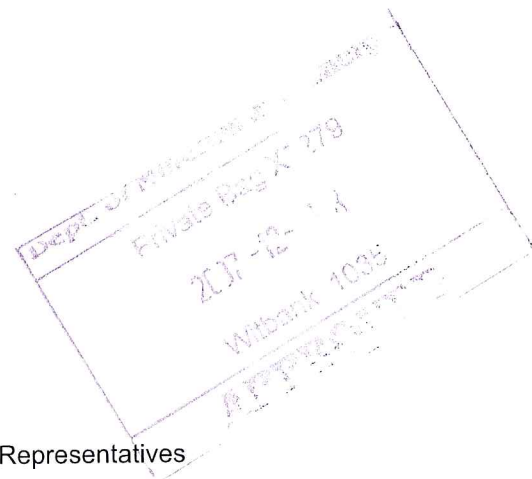


- Review of course content, presenters, location and facilities by knowledgeable personnel.

5.3.3.4 EMS Training

A basic environmental awareness course will be introduced and all mine officials, employees and applicable contractor staff will receive training on the environmental course, covering the following basics:

- Water Management
- Land Management
- Air and Noise
- Living things
- Resource Control
- Waste Control
- EMS ISO 14001 and using PIVOT for EMS Representatives
- Legal and other requirements.



- (a) All employees, current and new, and contractors will undergo induction, a part of which is environmental awareness training and includes the environmental policy. At the end of this training, personnel will be required to complete the awareness test and the level of awareness assessed by the Training Department. Re-testing or induction may be required. The Computer Based Assessments forms part of this process.
- (b) All personnel performing tasks that can cause significant or major environmental impacts shall be competent on the basis of training, education and/or experience. This applies to, but is not limited to, supervisor level and above, i.e. operators, artisans.

Type

- (a) Awareness training must include the potential consequences of departure from specified operating procedures as well as significant environmental impacts, actual or potential, of their work activities.
- (b) Training will be appropriate to the activity of individual employees.

Evaluation

Evaluation of awareness and competency training (implementation of training in the work place) will be carried out by the Environmental Coordinator, the Environmental Officer, Activity Managers and