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MINISTRY
OF MINING

SMALL-SCALE MINERS' OCCUPATIONAL SAFETY AND HEALTH

A Simplified
Handbook



Sustainable Artisanal Mining Project
Ulaanbaatar
2015

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CHAPTER ONE

Small-scale miners' occupational safety and health

"Small-scale mining" refers to the activities of citizens organized into unregistered partnerships who are operating with the purpose of extracting minerals from non-commercial and non-economic value deposits, artificial deposits formed by previous extraction and technological waste, and areas where there are minerals, allocated for local special use.

Small-scale miners can create their own safe working conditions by following occupational safety and health rules and regulations.



1.1 Objective and significance of occupational safety and health

The first priority of any worker is to ensure that he or she is not at risk of accidents and occupational diseases by adhering to occupational safety and health standards.

The objective of occupational safety and health is to provide workers with healthy and safe working conditions and to ensure those conditions remain in place.




In order to achieve this objective, the following issues need to be addressed:





- Law, regulations and rules on labour;

- Socio-economic conditions and organisation;
- Techniques and technology; and
- Health and hygiene.

A basic prerequisite in small-scale mining safety and health, and one that is in accordance with the legal framework, is the use of personal protection equipment. Choosing the correct equipment in the right size and using them regularly will help prevent accidents. The information contained in the following table denotes the purpose of different forms of personal protection equipment:

Personal protection equipment

Personal protection equipment	Role of personal protection equipment
<p>Safety goggles</p> 	<p>Goggles protect the eyes from dust, dirt and such flying objects as stones and bits of wood.</p>
<p>Earplugs</p> 	<p>Working in environments in which there is excessive noise can be detrimental to the health, leading to headaches and potential deafness. It is therefore important to wear earplugs to prevent damage to the ears.</p>
<p>Protective masks</p> 	<p>Masks should be worn in dusty and dirty workplaces to prevent damage to respiratory organs and the development of occupational diseases.</p>

<p>Helmets</p> 	<p>Helmets are used to protect the head from falling objects.</p>
<p>Gloves and elbow protectors</p> 	<p>Gloves and elbow protectors are used to prevent bodily damage resulting from cuts, scratches, burns, and piercing by metal and stones.</p>
<p>Feet and knee protectors</p> 	<p>Feet and knee protectors protect the legs and feet from damage caused by slipping, falling and the dropping of heavy and/or sharp objects.</p>
<p>Work uniforms</p> 	<p>A proper work uniform consisting of overalls and a jacket with reflective ribbons is important. Work clothes must be comfortable to wear and work in, and must be protective.</p>

1.2 Assessing workplace safety

Everyone should assess workplace safety conditions before starting work in order to prevent accidents.

A workplace hazard is something that has the potential to injure or kill workers or cause health-related problems, as well as damage property, equipment, machinery and other possessions.

Hazards are classified as: i) Visible; ii) Concealed; and iii) Aggravating.

Type of hazard	Characteristic
Visible	Damage and defects detected during investigations.
Concealed	A hazard that is not directly detected during investigations or processes.
Aggravating	Hazards detected but for which no action is taken to eliminate.

Timely action taken to eliminate hazards can prevent potential accidents and damage.

Workplace hazards are primarily the result of two factors: Carelessness and abnormalities.

Category of damages and risks



Hazards with less risk

- A minor injury that does not impact upon a worker's ability to function;
- A minor equipment malfunction that does not result in the suspension of operations.



Hazards with medium-level risks

- Accidents that result in the temporary disability of the worker;
- Operations are suspended; however, the damage is at a medium level.



Hazards with high-level risks

- Loss of lives;
- The permanent disability of workers;
- A high level of damage to property and equipment.

1.3 Accidents



Small-scale miners are often at risk of accidents and face becoming permanently disabled, losing their lives, and losing their equipment and possessions resulting from improperly created and supported shafts as well as by not following occupational safety and health rules and regulations.

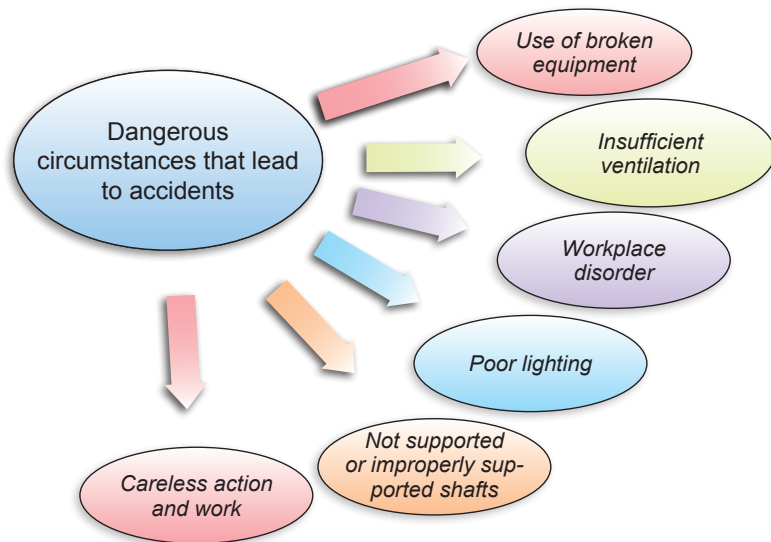
They risk being buried under collapsed earth due to pits incorrectly dug, suffocation in non-ventilated shafts, using the wrong ropes, steel rope breaches, and sleeping in their working areas.

An accident refers to the injury or loss of health that occurs in natural disasters, industrial accidents and other hazardous circumstances.

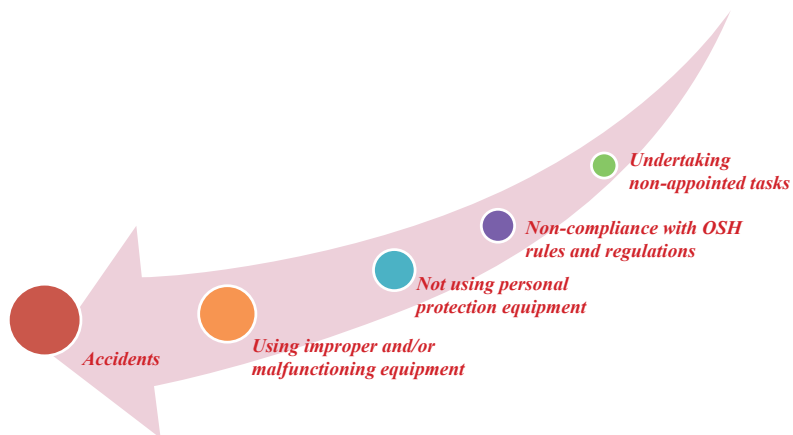


Accident risk management

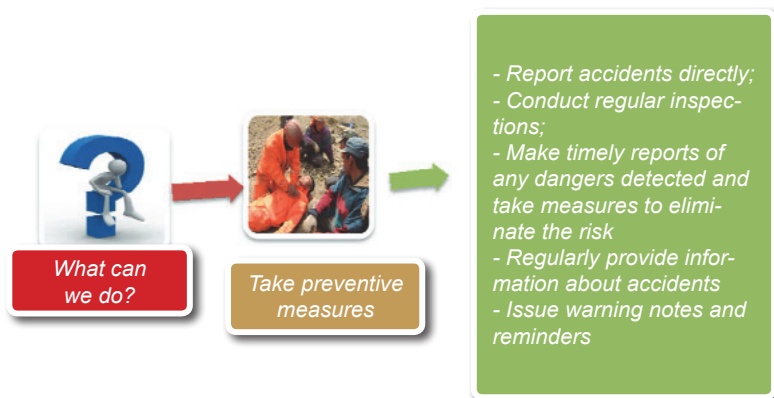




Picture 1. Hazardous circumstances that lead to accidents



Picture 2. Causes of accidents



Picture 3. Methods to prevent accidents

1.4 Role and responsibilities of the partnership leader



- To ensure the safety of partnership members and providing the overall supervision and coordination;
- To provide operational safety and health instructions to members at the start of work, with the renewal in each quarter;
- To provide operational safety and health instructions to new members of the partnership;
- To provide daily operational instructions based on the tasks to be performed on the current day;
- Daily workplace safety and health inspections; if any hazards are detected, measures must be taken to rectify the situation;
- To be responsible for the health of partnership members, their use of personal protection equipment, and ensuring no alcohol is consumed.



In relation to safe working conditions, the partnership leader must pay attention to the following:



- The adequacy and security of shaft supports and timbering;
- The adequacy of ventilation;
- The adequacy and security of equipment, tools and other materials used;

Determining:

- if there is any hazard related to impediments to the moving parts of equipment;
- If there are any conditions that may cause slips and falls;
- If there is any hazard that might result in workers being struck by objects;
- If there are any materials or objects that could burn or explode;
- If there is anything hazardous to human health;
- If the power supply is sufficient to power equipment;
- If the emergency exit is clear and accessible;
- If the fire extinguisher and other protective equipment are complete and ready to be used.



The partnership leader will assess workplace safety and health conditions and provide instructions to partnerships; partnership members will then be required to assess their workplace safety and health conditions before starting work.

1.5 Role and responsibilities of the partnership members

Partnership members will study occupational health and safety rules and regulations, and regularly issue instructions pursuant to their daily work. Partnership members must receive operational safety instructions which are to be repeated in each quarter. Before starting work each day, they must receive specific operational safety and health instructions from partnership leaders based on the tasks assigned.



- Adhere to operational safety regulations and instructions:
 - Assess the completeness of their personal protection equipment;
 - Avoid undertaking any harmful and/or hazardous actions;
 - Ensure the work area is in order;
 - Distribute information on any situation that presents potential hazards;
- Not to perform the tasks they are unsure about;
- Regularly assess potential workplace hazards;
- Learn the techniques required to perform the tasks properly;
- Attend operational safety and health trainings.



- Always remember that if detected hazards are not attended to, they can become aggravated and hence pose a threat to workers' lives, health and possessions!
- If an emergency situation that has the potential to threaten workers' lives and health is detected, it must be immediately reported to the partnership leader with steps taken to eliminate the hazard;
- If necessary, everyone must evacuate the hazard area;
- Sleeping and resting in the workplace is prohibited.

Ten things workers must never forget



1. Do not start work without receiving occupational safety and health instructions;
2. Do not work without personal protection equipment;
3. Use a complete set of personal protection equipment;
4. Do not use equipment that is not complete and/or has not been previously tested;
5. Keep the work area in order and create a safe and comfortable working environment;
6. Do not violate technological instruction/guidance related to tasks;
7. Stay alarmed during the work;
8. Comply with fire safety instructions;
9. If any violations of occupational safety and health requirements are detected, immediately report them to the supervisor;
10. If there is an industrial accident, report it to the supervisor and perform first aid, if possible.



CHAPTER TWO

Important points to pay attention to in the extraction of minerals



Citizens extracting minerals from small-scale mines must adhere to the “Small-scale Mining Operational Safety Rule” approved by Government Resolution No. 308 in 2010.

2.1 Points to pay attention to in surface mining operations

1. Surface mining pits should not be too high and should be upright with overhangs and roofs.
2. In order to comply with safety requirements and mining techniques, benches should be made in the pit.
3. The pit height must not exceed 2.5m.
4. Bench slope angles should not exceed 50° in soft and stable rock areas; in hard rock areas, should not exceed 80° .
5. The width of the pit should be no less than 2m and be sufficient for miners to work safely and freely.
7. When shifting from one bench to the next, use a strong ladder at least 0.8m wide or create an egress inclined no more than 45° .
8. Mined out pits must be refilled or fenced and warning signs placed for safety.
9. Overhangs must not be created while establishing a shaft.



2.2 Accident prevention measures

1. Build an obstruction or dam in order to prevent animals from entering the mining area.
2. Make a cover and barrier around blasting shafts, drainage, trenches and water basins.
3. Build drainage and trenches in the mining area in order to prevent flooding when it rains.
4. Place operational safety reminder and warning boards in the mining area.



2.3 Points to pay attention to in underground mining operations

- Small-scale miners must use special head lights when working in underground mining shaft. The head lights must be effective continuously for eight hours.
- Depending on the characteristics of the mineral deposit, such as the ore vein location and the hardness of the rock, entrances to the mine will be vertical, horizontal or inclined. The area for the entrance needs to be chosen after carefully inspecting the solidity of the rock in order to ensure the mine entrance not to be collapsed. In addition, it is important to locate the mine entrance in an area where there is no slippage or risk of flooding.
- Mining operations can begin after at least two entrances have been built and connected to the underground tunnel with the purpose of reaching the ore and of ensuring that miners are able to easily exit the shaft.



The following requirements need to be fulfilled in order to operate in underground mines:

1. The angle of the inclined entrance should be no more than 45° in hard and solid rock area; in softer and more unstable areas it should be no more than 10° .
2. The distance between two vertical entrances should be no less than 20m.
3. The collars of vertical and inclined shafts need to be properly supported with frames made of strong materials. A warning sign stating "danger" should be placed at the shaft collar.
4. The shaft height should be no less than 1.5m; its width should be no less than 1.2 m.
5. The angle of the shaft inclination where miners walk should be no more than 15° ; if greater, a strong handle, ladder or footboards need to be securely installed.
6. If the depth of small-scale underground mines is 5m or more, a windlass should be used for lifting the ore and other loads.
7. Mining shafts need to be properly supported in softer and unstable rock areas using the following methods:
 - Create pillars out of waste ore and rocks;
 - Use wood or metal pipes for support poles;
 - Pile bags of sand and earth for support;
 - Make a frame using wood and metal and fill it with rocks and stones to be placed in critical areas for support;
 - Set up wooden and metal supports along the length of the shaft.
8. Demolish unused shafts that have the potential to cause accidents.

9. A proper ventilation system must be installed in underground mining shafts in order to supply miners with fresh air. A ventilation fan must be installed on the surface. When installing a ventilation system, the following must be considered:

- The side of the ventilator that draws in air must be open and free from any blockages or impediments from other objects;
- The ventilation fan must be protected by metal mesh;
- The ventilation pipe must be safe and whole.



Picture 4. Support methods for small-scale underground mines

2.4 Points to pay attention to in installing a ventilation system

1. Use natural and artificial ventilation systems for long underground mining shafts.
2. For natural ventilation systems, the shaft entrance points must be at two different levels. If it is not possible to meet this standard due to the characteristics of the area, use a regular pipe to differentiate between the levels of the shaft collars.
3. An artificial ventilation system is required for underground mine shafts with a length of 10m or more.

4. Fans are used for artificial ventilation systems. A pipe transferring air must be made of a wind-proof material. In order to transfer air over a long distance, the pipe must be straight and whole, without any holes or breaks.



Prohibitions:

1. Mining operations cannot be conducted in mines with only one entrance.
2. When miners are working in the shafts, a windlass operator should not leave his or her work area. Windlasses must be complete with strong and proper locks.
3. The frozen and solid rock parts of horizontal and inclined shafts can be exploited without making mine supports; however, the shaft must not be so large that there is the possibility to collapse.
4. Miners must not enter an underground mine without head lights; those lights must always remain on.
5. Miners are prohibited from sleeping inside underground mining shafts.
6. Miners must not work in underground mines without the proper personal protection equipment.

CHAPTER THREE

General instructions for using mining equipment



Small-scale miners must ensure the completeness of mining equipment before starting work and then report to the supervisor. If equipment is incomplete or broken, it must be replaced or fixed before work is undertaken. Equipment must be cleaned and be free from dust and dirt before starting work in order to prevent damages.

Dry processors, sluices, power motors, pumps, compressors, windlasses and steel ropes are widely used in the extraction of minerals from small-scale mines.

General instructions for using mining equipment:

- Ensure workplace safety;
- Follow the operational instructions for each piece of equipment;
- Regularly ensure the completeness of equipment;
- Wear protective goggles when working with equipment;
- Ensure no external objects have entered into equipment;
- Lubricate the moving parts of equipment;
- Regularly check sluice inclination angles;
- After equipment had been used, the power must be shut off and then it must be cleaned and prepared for the next use;
- Processing equipment must be placed under shelter and be properly guarded.

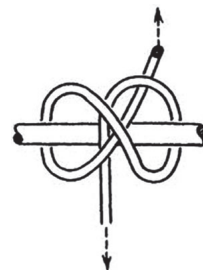
3.1 Safety instructions for welding and metal-cutting equipment

- The operator must wear protective goggles or a special welding mask that protects the face;
- Ensure safety spatial dimensions for welding and metal-cutting areas;
- Wear dry gloves and protective clothes, and keep them dry
- Ensure electricity connections are complete, safe and dry.



3.2 Safety instructions for ropes and steel wires

1. The strength of a loading steel wire must be three times stronger than its breaking pressure. The strength of a regular rope must be 4.5 times stronger than its potential load.
2. Tightening steel wire strength must be 3.5 times stronger than its potential load.
3. The connecting, the end, and the transferring grippers of loading steel wires are cast from quick-melting metals or can be replaced by wedges in order to tighten a wire rope.
4. The strength of the connection part of a steel wire and pulley must be no less than 1.25 in fixed movement and 1.5 in irregular movement.
5. Steel wires should be used within usage duration norms; if it is overdue, the wires need to be changed.
6. Steel wires should be inspected at least



twice a month in accordance with regulations and recorded in a record book.

7. Moving and rotating parts located below 2.5m - in other words, within the reach of people - should be properly guarded.
8. A lock must be installed to prevent the cart sliding back in the event that the steel wire is disclosed from the riffle.
9. The loading steel wire must not be twisted or knotted.
10. Ropes and steel wires that are scraped and abraded must not be used.

3.3 Safety instructions for pumps

1. The rotating parts of the pump must be properly guarded.
2. Clean the oil dipped timely and always keep floor and stairs dry.
3. It is prohibited to make a fire, smoke or weld within a 40m radius of an operating pump.
4. Cleaning, dismantling and repairing of the pump must be done after turning off the power.



3.4 Safety instruction of windlasses

Windlasses are used for lifting loads and miners from mining shafts.

1. Do not lift a load that is heavier than the maximum carrying capacity.
2. Regular maintenance work on windlass frames must be conducted in accordance with the standards.
3. Do not drag the load when it is lifted.
4. Do not swing the load.
5. Undertake regular inspections of the windlass and replace worn-out parts.
6. Windlass chains must be regularly cleaned and painted once a year in order to prevent rusting.



3.5 Safety instructions for crushers

- Before starting the crushers, remove objects around them and inform the shift supervisor.
- Maintain the required safe distance from the crusher in order to prevent being hit by flying rocks.
- After the ore is crushed, the power must be turned off. Check and clean the crusher to prepare it for the next load to be crushed.
- During maintenance work, the crusher must be completely disconnected from its power source. In order to prevent the accidental connection of power, a sign marked "DANGER! DO NOT OPERATE" must be placed on the starter.
- Use a water spray to reduce dust around the crusher.



3.6 Safety instructions for hammer mills

1. An earthing or grounding system must be installed for hammer mill motor and other parts.
2. Moving parts must be covered by strong metal guards.
3. Check the hammer, sieve and connection nuts and bolts before and after work and then hand it over to the next shift.
4. Before starting the hammer mill, a signal must be given by honking or using a light.
5. If the crusher breaks down while being used, it must be stopped immediately for repair.



3.7 Safety instructions for mills

- The ladder rail must be gripped while climbing up and getting down to the mill platform to prevent falling;
- Keep the mill platform tidy by removing any unnecessary items;

- Mill feeding must be done at defined intervals of time; maintain a safe distance while feeding the mill;
- Check the ore-grinding level after turning off the mill and completely disconnect it from the power source;
- Mill window sieves must be regularly cleaned;
- Checking, repairing and cleaning of the mill must be conducted after disconnecting the power and informing the shift supervisor;
- Prevent water spilling on the mill motor and other electrical parts; do not lean on the mill and its parts.



3.8 Safety instructions for sluices

1. Regularly check the sluice inclination angle.
2. Check the sluice carpets and wash the carpets regularly.
3. Remove unnecessary items and objects from around the sluice.



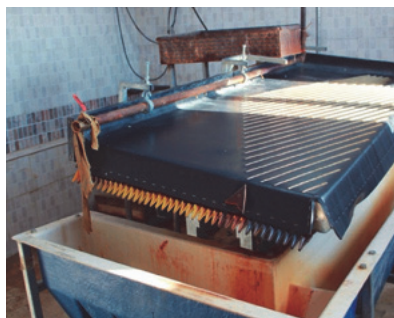
3.9 Safety instructions for dry processing equipment

- Constantly feed the dry processor in order to avoid producing too much dust;
- Do not lean over, grip and press the pump motor;
- Use a proper mask when working on a dry processor to protect the respiratory system.



3.10 Safety instructions for shaking tables

- Always keep the shaking table area clean and tidy;
- Before starting the operation, processing water must first be provided for the table and then the gear started; and
- Do not lean on and apply pressure to the shaking table and its parts.



CHAPTER FOUR

Operational safety regulations for ore-processing plants

General requirements

The plant should be managed by a competent person; someone who has knowledge on the safe use of plant equipment, electricity, chemicals and occupational safety and health procedures.

- Equipment should be operated by at least one person;
- Only permitted ore can be processed at the plant;
- Provide adequate lights in the plant area;
- Keep the plant clean and tidy;
- Ensure there is a fire extinguisher in the plant area, and set up a fire safety instruction board in the plant.



Safety rules to be followed:

- Daily operational safety and health instructions must be given to workers before they start work;
- All workers must use personal protection equipment;
- If a customer/visitor needs to enter to a processing plant, he or she must inform the shift supervisor and wear the appropriate clothing;
- Keep equipment and tools in order and place them in the tool racks provided after use;
- Place guards over all the moving parts of machines;
- Clean all equipments after use;

- Clean up oil and chemical spills;
- Seal water leaks and exposed electrical connections and cables;
- After the use of equipment and tools, clean them properly and prepare them for the next use.

**Prohibitions:**

- Operators must not leave their post while equipment is in use; sleep during working hours or wander around;
- No distractions allowed in the plant;
- Alcohol or drug use is not allowed in the plant;
- Do not drink plant water;
- Do not loiter around equipment or machinery, and do not lean on moving equipment.

4.1 Operational safety regulations for gold smelting laboratory

General information:

Gold does not dissolve in acid. The acid is used to dissolve the sulphides and other heavy minerals and impurities which are part of the concentrate. Acid treatment improves gold purity and makes gas smelting easier. Clean concentrate can be smelted directly without acid treatment.

Common minerals which dissolve in nitric acid: Copper, pyrite, galena and iron.





Points to pay attention to:

- A competent person should use the acid for the treatment of concentrate;
- Assess workplace safety and health, receive operational safety instructions and wear personal protection equipment before starting the work;
- Ensure there are sufficient ventilation and natural and artificial lights in the laboratory;
- The laboratory, equipment and tools must be kept clean and organised;
- Store nitric acid in a cool, dry, locked, and rust-free cabinet;
- Acid treatment must be carried out in a carbon-filtered fume hood to extract the fumes;
- Neutralise used acid with sodium carbonate;
- Place the residual neutralised solution in a safe, centralised container and dispose of in accordance with operational safety regulations;
- Avoid adding water directly to the acid as a violent reaction may occur;
- If neutralised acid comes into contact with eyes and skin, immediately wash with soap and warm water and rinse thoroughly;
- The laboratory operator should receive milk each working day.



4.2 Gold smelting operations

- Smelting must be done by a person who is trained in smelting and safety procedures;
- Gold melts at 1064°C , hence smelting temperatures are very high;
- Do not touch the smelt with bare hands; use a spoon or tongs to remove the hot gold button;
- Cool the gold button in the water container provided;
- Ensure the safety of the gas torch by closing valves and checking the pressure meter.



Points to pay attention to while working with oxygen tank:

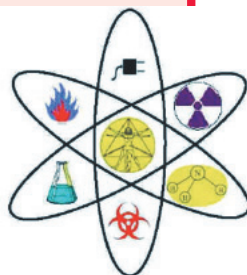
- Place the oxygen tank on a protective stand to prevent it from falling and shaking;
- Regularly check the oxygen tank indicator and keep a record in the laboratory control book;
- The oxygen tank must always have a pressure of no less than 0.05MPa (0.5kg/cm²);
- The oxygen tank valve must be turned to open slowly and carefully to avoid damaging the liner;
- Store oxygen tanks in special storage protected from thunder, avoiding exposure to direct heat, sunlight and damp air.

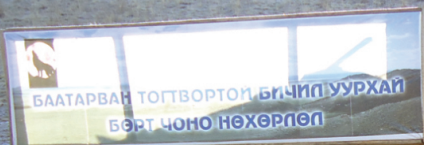
- An oxygen tank that is in use at the laboratory must be placed at least 1m from the heating system and stove, and 5m from an open fire;
- Avoid exposure to grease and oil; and
- Adhere to safety regulations while transporting oxygen tanks.



Prohibitions:

- Do not start work before receiving operational safety instructions and wearing personal protection equipment (a mask with a filter, acid-proof gloves, goggles, rubber boots and a work apron);
- Do not conduct acid treatment and smelting in an un-ventilated environment;
- Do not add water directly to the acid;
- Do not dispose of used acid before neutralising;
- Do not dispose of used neutralised acid in a non- designated area;
- Do not place oxygen tanks in hot places;
- Do not use tools that might spark, such as hammers and scrapers, in order to remove the oxygen tank lid;
- Do not dispose of fuel and oil or start an open fire close to oxygen tank storage.





Ашигт малтмалыг гар аргаар ашиглахад мөрдөх Хөдөлмөр хамгаалал, аюулгүй ажиллагааны зааварчилгаа.

Уулын ашигт малтмал, малтмалт, нөмрөгтэй бэлгээг хэлж үед:

1. Аюул үүсгэж гүйцэтгэх байдла тухай нөмрөгтэйг харуулан ажлаах бус алдаа нь ажлын байрны ХХАА-ны зааварчилгааг боловсруулж мөрдүүлж ажиллах.
2. Нөмрөгтэй ажлын нэр ажиглагчдад өөр бүр ажлын тосгоны нэрд, тухайн өдрийн ХХАА-ны зааварчилгаа өгч хүн түс бүрээр гарын үсэг /хуучуулсан дараа хяналт оруулна.
3. Ажилтай бүр хүмүүс нь Тухайн нөмрөгтэй тосгонон ажлын тусгай хувиас, алтан, гэрэл каскеттай байна. Хувийн гэрэлтүүлэгэнд өнгөтэй алмазтай гэрэлтэй.
4. Өөр бүр ажил ажилчин өөсөө уулын малтмалтын бэлгээний байдлаа ханга тавьна тогтвортой, ашигтайтай тогтмол шалгах үүсгийн ажил үүрэг даалгаврыг гүйцэтгэж байх.
5. Ажлын дундуур илэрсэн аятаа ХХАА-ны дүрмийн зөрчилгүй өмч илэрснийг ажлын нэр эв тухай ажил үүрэгдээ байгаа хүмүүст нэг дараа мэдэгдэх болно хуучуулсан гэрэлтэх арга хэмжээ авах ууртай.
6. Хүмүүст ажил үүрэг боловсруулж малтмалтад уг аюулгүй ажиллагааг буцаад ажил гүйцэтгэхийг хориглоно.
7. Тосгонон ажлын нэрд, ХХАА-ны зааварчилгаа аяагүй хүмүүсийн гарын үсэг ажиглагчийг хориглоно.
8. Уурхай орж байгаа хүмүүст ажлын нөмрөгтэй тосгонон тусгай тухай, тусгай гэрэл каскеттай байна.
9. Бөмбөн зүүн мөчлөх байдла хэвээр бус болон сотгуу хүмүүс.

Малтмалт нөмрөг болон бусад өөр малтмалт нөмрөгдөн олгогчийн талбай малтмалтын нөмрөг үнэс нэрэн тооцож байх.

19. Бэлгээний хөрөөнийг зай нь нэрлэж бус хэрэг чухулгын бат бэлгээ хамгаалал /Ом-ээс хэлжэ сайн/.
20. Хөдөлмөр бус малтмалтын нөмрөг олгогчийн талбайг үйлдвэрлэж бус аргаар ашигт малтмалын олборлолж буй үед, хүн нөмрөгдөн хяналт мөчлөх, ажлаа тусгай үйлдвэрлэлд нөмрөгдөх саадгүй байхад болно. Ажлаа-аас илүү.
21. Өөсөө нөмрөгдөн тооцож сун шороонон чулуулгын нуралтайг ашиглахгүй. Хэрэг шороо сунтай нөмрөгдөн малтмалт нөмрөг олгогчид түр байрладаг байна. Малтмалтын нөмрөгдөн олгогчийн талбайг хэлбэрийн илэрснээс тоо болон боловгүй, мөч-аас илүү!
22. Нэрсэн орнон босоо малтмалтад ажил үүрэг гүйцэтгэхэд хяналт үнэсээс өнгөтэй боловч бусад, хамгаалалтын олсны нөмрөгтэй байдлыг байгаа үзэх шалгах.
23. Ашигт байгаа бус малтмалтын бэлгээний байдлыг байгаа шалгах үзэх мэдэ нэрлэж илэрснээс тооцогчид цаг тухайд нь засварлах байх хэрэгтэй.
24. Хөдөлмөр олгогчид уулзварт хүн нөмрөгдөн бэлгээг үнэс өмч ашиглахгүй.
25. Малтмал мөчлөгч ажил гүйцэтгэхэд ажил гүйцэтгэх дээс дараа гарын бэлгээг, бие биеэ охиж гэмтээхээс болгоомжилно.

ХӨДӨЛМӨРИЙН АЮУЛГҮЙ АЖИЛЛАГААГ ҮРЬДЧИЛАН ХАНГААГУЙ АЛТААА АЖИЛ ТИЙМ ЧУХЛАЛ БИШ ГЭДГИЙГ ҮРГЭЖ САНД.

Аваран туслах бэр

эмгэгтэйчүүд, 18 насанд хүрээгүй хүүхдийг гарын дор ажил гүйцэтгүүлэхийг хориглоно.

10. Уурхай орж байгаа хэрэг бүрийг бүртгэж, хяналт тавих асуудлыг Уурхайн дарга харуулна.
11. Уурхайд орлодоо хүрч уурхайн буюу нэртэй багаж хэрэгсэлт тусгай хяналтааг сайн аж мэд.
12. Шаардлагатай үед уулын малтмалтын байдла болон агаарын нөмрөгтэй мөчлөгчийн байгууллагаар хяналт үнэсээ хяналт байх.
13. Алтааа уурхайн ам мөчлөгч бүр нь хүмүүсийн газар дээр гарахад асуулсан нэг нэгээсээсээ хяналт тавих асуудлыг гаргалт байх.
14. Уурхайгаас гарах гарын аяа нэг нь босоо ам байхат хуучуулсан гарахад зориулж тогтвортой.
15. Хануу амьдрал хүмүүсийн оро гарахад хамгаалал гүйцэтгэхээс болгоомжилж дараагаар шалт хийж өсгөн байна.
16. Уурхайн ажил гарын дээр хэрэг шороо чулуулж тусгай үнэсээс хяналтааг гаргалт хийж өсгөн байх шаардлагатай. /Хэрэгш үнэсээс хяналт/.
17. Уулын бус малтмалт цаг тухайд нь бэлгээсн байх шаардлагатай. Малтмалт бэлгээсн материал нь стандартын шаардлага хангасан байна. Бэлгээсний мөчлөгч диаметр 18-ээс багагүй байна.
18. Хэрэгш чулуулгын бэлгээ, тухайн бат бэлгээсн малтмалт бэлгээгүй.

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