JERICHO PROJECT

OCCUPATIONAL HEALTH AND SAFETY PLAN

Tahera Corporation
Suite 803
121 Richmond Street West
Toronto, Ontario
M5H 2K1

January 2, 2003

TAHERA CORPORATION

JERICHO DIAMOND MINE
HEALTH AND SAFETY PLAN

Revision Number: 0

ISSUED TO: _____

RECIPIENT'S NAME: _____

JOB TITLE: _____

LOCATION: _____

DATE OF ISSUE: _____

ISSUED BY: _____

As the registered recipient of this plan, you are responsible for keeping it up to date through the filing of all revisions and for returning the manual should you transfer job, location, or leave the company.

PREAMBLE

The Health and Safety Plan is effective from start-up of mine construction and applies to the Jericho Diamond Project Mine Site operated by Tahera Corporation at Carat Lake, Nunavut, all ancillary facilities including the Mine site, plant site, airstrip, outbuildings, explosives magazines, storage facilities, and all activities associated with operation of the Mine and Processing Plant.

The following formal distribution has been made of this Plan:

Workers' Compensation Board
Chief Inspector of Mines
P.O. Box 8888
Yellowknife, NWT
X1A 2R3

[Mining Contractor's Area Office]

Nuna Logistics
340 Park Place
666 Burrard Street
Vancouver, B.C.
V6C 2X8

Jericho Mine Health and Safety Committee
Jericho Mine Site

Jericho Mine Safety Coordinator
[To be announced]

Additional copies are located at the mine site at:
1. the mine office
2. the processing plant office
3. the first aid room
4. the mine lunch room
5. the processing plant lunch room
6. the accommodation rec room
7. WHMIS information stations

Additional copies and updates of this Plan may be obtained by writing to:

Tahera Corporation
Suite 803, 121 Richmond St. West
Toronto, Ontario, M5H 2K1

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1.0 INTRODUCTION

1.1 SCOPE OF THE OCCUPATIONAL HEALTH AND SAFETY PLAN

This plan addresses the requirement under *Northwest Territories Mine Health and Safety Act and Regulations* (the Act) for an occupational health and safety plan (OHSP) for the Jericho Mine. The plan covers diamond processing operations and activities of other Tahera Corporation employees at the Jericho site. Mining of the deposit will be by contract miner, who will be responsible for their own OHSP under Canadian and NWT legislation. Tahera Corporation will ensure the mining contractor has an OHSP that meets legislative requirements prior to work start up at the Jericho site.

Because mine planning has not been finalized, the plan is conceptual in nature. It covers the basic requirements under Canadian legislation. The OHSP will be finalized once the mine plan is finalized and in any case prior to construction of the mine. A spill prevention, countermeasures and control plan has also been developed to concept stage and is reported separately (Appendix D.2.3).

1.2 TAHERA CORPORATION POLICY STATEMENT

The following letter, which will be dated, will be provided to all employees for the Jericho Mine Project.

To all employees

At Tahera Corporation the safety and health of our employees is of the highest priority. Management is committed to providing all resources necessary to prevent injuries and to maintain a healthy work environment.

To this end:

- Senior management is responsible for making funds and other resources available to ensure the successful implementation of the Health and Safety Plan and for employee training, both of which are directed at ensuring a safe and healthy working environment at the Jericho Mine.

- All supervisors are responsible for ensuring that their employees are trained in approved work procedures to obtain optimal output without accidents and injuries and to ensure that employees follow safe work methods and all related regulations.

- All employees are required to support the Occupational Health and Safety program and make health and safety a part of their daily routine, and to ensure they are following safe work methods and relevant regulations.

- All employees are expected to provide their full support in implementation of this program. At the Jericho Mine safety will be everyone's business.

- All relevant laws and regulations are incorporated in Tahera Corporation's program as minimum standards.

- Management is legally required under the NWT Mine Health and Safety Act and Regulations to provide a safe and healthy work environment.

- Employees are legally required under the NWT Mine Health and Safety Act and Regulations to work safely and to report unsafe practices and conditions promptly to their supervisor.

- A Health and Safety Committee, co-chaired by management and employee representatives and composed of Tahera salaried and hourly employees, will be established at commencement of mining the Jericho deposit.

- The Health and Safety Plan will be reviewed annually, or more frequently as required, to evaluate effectiveness and to ensure continual improvement in the Plan.

- Tahera's health and safety policy will be regularly reviewed by the Health and Safety Committee; suggestions for improvements are welcomed by all employees.

Signed

_____

Chief Executive Officer

1.3 INDIVIDUAL RESPONSIBILITY

Both Tahera Corporation and its employees are jointly responsible for health and safety. Tahera Corporation is accountable for compliance with health and safety legislation and for providing a safe and healthy work environment. Individual responsibilities apply to every employee in the workplace, including the Chief Executive Officer. Individual employees must:

- know what their responsibilities are;

- have sufficient authority to carry them out;

- have the required ability and competence; and

- clearly recognize that health and safety are not just an extra part of the job but an integral, full-time component of each individual's responsibilities.

Attachment1.1 provides a list of responsibilities expected of Tahera employees. This list is also included in the corporate health and safety policy leaflet included in the employee orientation kit.

1.4 POLICY WITH RESPECT TO CONTRACTORS AND VISITORS

Major contractors, i.e., mining and hauling contractors will be required to have HSPs that meet legislative standards as set out in applicable acts and regulations, e.g. the NWT Mine Health and Safety Act, the Canadian Labour Code Part II and regulations. This fact will be verified by Tahera Corporation management prior to final engagement of the contractor. Minor contractors' employees will be given site orientations prior to working at the Jericho Mine site for the first time. Orientations will be mandatory and be given by the Health and Safety Coordinator, which may be one of the Health and Safety Committee co-chairs.

At a minimum, all non-mine personnel will be signed in to the site, provided a badge and personal protective equipment appropriate to the area in which they will be working. They will also be warned about when explosives will be set off and necessary precautions with respect to blasting, including minimum safe distances, obeying instructions of mine personnel, etc. Additional precautions will be put in place for underground operations. These include: a sign-in board for all people going underground; requirement for guides for all non-mining personnel; and clearance from the underground superintendent prior to any non-mining personnel going underground for any reason other than emergencies, which will be handled by the eme rgency coordinator.

2.0 JOINT OCCUPATIONAL HEALTH AND SAFETY COMMITTEE

2.1 LEGAL REQUIREMENTS

The Canada Labour Code, Part II, Sections 135 to 137 and the NWT Mine Health and Safety Act and Regulations require that a mining operation with more than 15 emp loyees must establish a joint management-employee occupational health and safety committee. Sections 11, 12 and 13 of the Act and Part III of the Regulations address the committee requirements. Key requirements of the Act and Regulations are as follows:

- the mine manager must establish an occupational health and safety committee (HSC) in accordance with the Regulations;
- the HSC must consist of management members appointed by management and an equal or greater number of hourly employee members appointed by hourly employees (at least 4 members total for mines of 15 to 100 employees; at least 8 members total for mines 100 to 250); HSC member names are to be posted at the mine and sent to the union local (if any) and the Chief Inspector of Mines;
- the HSC must be co-chaired by an appointee from management and hourly employees selected by each group; co-chairs alternate as meeting chairs;
- hourly employee HSC members must be drawn from representative job classifications at the mine;
- hourly employee HSC members are to be elected by hourly employees for a period of two years; hourly employee members may be re-elected for subsequent two-year terms;
- the mine manager will appoint management representatives for a period of two years and these representatives may be re-appointed;
- HSC member vacancies are to be filled by election or appointment, as appropriate, within 60 to 90 days (circumstances dependent) of the occurrence of the vacancy;
- decisions of the HSC are decided by majority participation in the decision;
- the mine manager must enable HSC members to participate in inspections, investigations and meetings required by the Regulations;
- the mine manager must ensure HSC members are paid their normal rate when attending to committee business;
- the mine manager must provide for a meeting place for the HSC and appropriate training for committee members; a record of training must be kept;

- HSC members must make monthly inspections of work sites as deemed appropriate by the committee; meetings are to be held within seven days of an inspection; minutes are to be kept of the meeting which must be circulated as per committee member names;

- HSC members must participate in accident investigations.

2.2 HEALTH AND SAFETY COMMITTEE ESTABLISHMENT

A Health and Safety Committee (HSC) will be established at the Jericho Mine immediately upon initiation of construction activities as required by the Act and Regulations. As per requirements of the Regulations, the HSC will be composed of a minimum of eight (8) members drawn from Tahera employees and those of the mining contractor. In the event it is decided to have separate committees for the processing plant and mine, a minimum of four members will be drawn from Tahera employees for the processing plant; Tahera will ensure the mining contractor meets his obligations for establishment of a mine HSC.

The HSC will include representatives from the mining contractor and Tahera personnel associated with the Project at the Jericho site (processing plant and other administrative if applicable) as per requirements of the Act and Regulations. This plan lays the groundwork for the HSC, provides Tahera Corporation's commitment to the effective functioning of the HSC and provides general terms of reference for committee operation.

2.3 HEALTH AND SAFETY COMMITTEE MEMBERSHIP

The HSC membership will be drawn from hourly employees and management as required by the Act and Regulations, specifically in consultation with employees and supervisors at the plant and mining operations. First aid personnel will be available as resources or as members of the HSC, as decided by the joint founding committee. The safety coordinator will attend all HSC meetings to act as a resource person and, at the discretion of the HSC, may be invited to be a member.

2.4 HEALTH AND SAFETY COMMITTEE TERMS OF REFERENCE

The HSC will be active participants in the development, implementation and monitoring of all phases of the health and safety program. Specifically duties will include:

- participating in development and implementation of programs to protect the employees safety and health;

- dealing with employee complaints and suggestions concerning safety and health;

- ensuring the maintenance and monitoring of injury and work hazard records;

- monitoring and follow-up on hazard reports and recommending action;

- setting up and promoting programs to improve employee training and education;

- participating in all safety and health inquiries and investigations;
- participating in resolving workplace refusals and work stoppages related to health and safety;
- making recommendations to management for accident prevention and safety program activities; and
- monitoring effectiveness of safety programs and procedures.

2.5 HEALTH AND SAFETY COMMITTEE TRAINING

The HSC training program provided by Tahera management will include (but not necessarily be limited to):

- committee responsibilities and authority;
- occupational health and safety law;
- principles of accident causation;
- hazard recognition;
- job safety analysis (hazard recognition training);
- industrial hygiene;
- methods of raising safety awareness;
- inspections;
- accident investigation;
- effective communication; and
- cross cultural awareness with respect to health and safety.

2.6 ASSURRANCE OF HS C EFFECTIVENESS

Tahera Corporation is committed to the establishment and operation of an effective HSC. To that end, the following check list of items will be completed by the joint founding committee and followed up in the health and safety audits:

- Members' duties will be clearly defined and provided in writing to all members.

- The founding committee and auditors will canvass members to determine whether they understand their duties and will take appropriate corrective action where necessary.

- The HSC will continually evaluate how effectively members are carrying out their duties and take appropriate corrective action where necessary; auditors will review HSC member effectiveness annually.

- The structure and duties of the HSC will be reviewed by the committee and auditors at least annually and revised as indicated in consultation with all stakeholders.

- Written statements of authority will be provided each HSC member, the co-chairs and the secretary, and will be reviewed with the member for understanding by the founding committee and by auditors annually. Authority issues will be reviewed periodically by the HSC, as appropriate or necessary.

- HSC performance will be evaluated by OHS auditors at least annually using the following indicators (or others to be determined by the HSC):

  - do workers know who members of the committee are
  - are the duties and authority of members known to the workers
  - is the committee seen by workers as being useful in providing leadership in safety
  - is the committee seen by management as correctly meeting its responsibilities and authority
  - do line supervisors see members as facilitating worker/supervisor communication in safety
  - is the distinction between management and committee responsibility for safety clearly understood by all employees
  - are members perceived as enforcers or advisors
  - do workers make suggestions to members
  - does management representation on the committee reflect its strong commitment to safety
  - does management fully support committee activities by providing comprehensive information, time, facilities and training
  - what proportion of members' time during paid work hours is spent on health and safety activities

- how many committee recommendations have been implemented in the past year and in total since inception
- when a recommendation is not implemented are the full reasons given to the committee
- is the full record of committee recommendations, their implementation, and reasons for non-implementation available to all workers

3.0 HEALTH AND SAFETY RULES

This section sets out the minimum requirements established by the federal and NWT governments in regulations governing the Jericho Mine workplace. Additional site specific rules will be established by the Health and Safety Committee as required to promote a safe and healthy work environment at the Jericho Mine.

3.1 TAHERA CORPORATION POLICY

Compliance with health and safety rules is a condition of employment at the Jericho Mine, both for mine contractor's employees and for Tahera Corporation employees. Explanation of rules and the rationale for them will be explained at the initial orientation of all new employees or to employees that transfer or change to a new (for the employee) position. The H&S Coordinator, or plant safety coordinator, will conduct all H&S briefings and will be responsible for periodic briefings of all employees. The interval for briefings will be decided by the HSC in consultation with the Plant Manager. To the extent possible briefings will be co-ordinated with the mining contractor's mine safety coordinator.

No violation of health and safety rules will be disregarded. Violations will be initially dealt with by an employee's supervisor and, at the discretion of the supervisor or his manager, by the HSC. Repeat breach of rules or repeated unsafe acts that endanger the safety or health of an employee or other workers will be grounds for disciplinary action, including dismissal. Coercion of other employees to break the rules by any employee of Tahera Corporation will not be tolerated and such action will be subject to disciplinary action, including dismissal.

3.2 LEGISLATED MINIMUM STANDARDS

The minimum health and safety standards for mining in Nunavut are set out in the *NWT Mine Health and Safety Act and Regulations, 1995*. Copies of this act will be available to Tahera employees upon request to the H&S Coordinator. Duties and responsibilities of the mine owner are set out in Section 2(3) as follows:

a) *provision is made for such supervision, instruction and training as is necessary to protect the occupational health and safety of the employees;*

b) *the mine is constructed, developed, reconstructed, altered or added to in accordance with the NWT Mine Health and Safety Act and the regulations;*

c) *machinery, equipment, material and protective devices that are required, by the regulations, to be used at the mine or available for the use of employees at the mine, are available for such use;*

d) *personal protective equipment required by the regulations to be provided to employees is so provided; and*

e) the mine is operated in accordance with the NWT Mine Health and Safety Act and the regulations.

The mine owner must appoint a manager and make this person known to the Worker's Compensation Board Chief Inspector. The duties of the mine manager are set out in Sections 10(2) and 10(3) of the Act as follows:

2. The manager shall:

a) comply with the NWT Mine Health and Safety Act and the regulations and any orders or directives issued under this Act or the regulations;

b) ensure that the requirements of this Act and the regulations are met in the operation of the mine; and

c) ensure that any orders and directives issued under this Act or the regulations are complied with in the operation of the mine.

3. In addition to the duties imposed under subsections (1) and (2), the manager shall:

a) ensure that machinery, equipment, materials and protective devices required to be used at or available at the mine are maintained in good condition;

b) ensure that the personal protective equipment required to be provided to employees by the regulations is maintained in good condition;

c) when appointing a supervisor or surveyor, appoint a person possessing the prescribed qualifications;

d) ensure that an employee is under the daily supervision of a person possessing the prescribed qualifications;

e) ensure that an employee receives the information, instruction and supervision necessary to protect his or her health and safety;

f) establish and maintain an occupational health and safety program as required under the regulations;

g) establish and maintain a medical surveillance program for employees as required under the regulation;

h) establish and maintain a mine rescue program as required under the regulations;

i) ensure that any order, directive, notice or other document that is required to be posted at a mine under this Act or regulations is maintained in a legible condition; and

j) where an owner is a corporation, send a copy of every order of an inspector and every order and directive of the chief inspector to the senior officer of the corporation designated under subsection 9(1) to review and consult with the manager in respect of such orders and directives.

Under the Act a mine with more than 15 persons employed must establish an occupational health and safety committee co-chaired by management and an employee representative. Duties and responsibilities of the HSC are outlined in Section 2.0 of this plan.

The mine manager is also responsible for maintaining a register of all persons employed at the mine in a manner satisfactory to the Chief Inspector of Mines. Duties of the mine manager extend to a contractor, where mining is conducted by a contractor.

Section 17 of the Act sets out responsibilities of the mine worker as follows:

A worker shall:

a) take every reasonable measure and precaution to protect the health and safety of employees and other persons at the mine; and

b) comply with this Act and the regulations and any orders and directives issued under this Act and the regulations.

Under the Act, a worker has the right to refuse to perform any work or operate any machinery that the worker has reasonable cause to believe would endanger the health or safety of any person. The worker has the responsibility to bring the condition of concern to the attention of his supervisor as quickly as possible. It is the responsibility of the mine owner or contractor to resolve the refusal to work and an employee cannot be discriminated against for refusing to work under conditions that do not comply with the NWT Mine Health and Safety Act and Regulations.

4.0 CORRECT WORK PROCEDURE

Correct work procedures for all processing plant positions will be developed through Job Hazard Analysis (JHA). Procedures as set out by the Canadian Centre for Occupational Health & Safety (CCOHS) will be used as a guide to material to be covered. A copy of the CCOHS recommended procedure is included in Attachment 4.1. In summary the following steps will be taken:

- select the job in the processing plant;
- break down the job into sequential steps;
- identify the hazards; and
- define preventive measures.

The JHA will be carried out by observing employees on the job in question. Members of the HSC will participate. Employees will be briefed as to the reasons for the observation, emphasizing the objective is to examine the task not the employee. Employees will be asked for their suggestions and assistance in these analyses.

5.0 EMPLOYEE ORIENTATION

All new employees and employees who commence a new job will be provided with a job-specific health and safety orientation and have the results of the JHA discussed with them. No employee will commence a new job until the supervisor and/or Plant Manager are satisfied the employee is adequately trained for the tasks to be performed. Orientation sessions will cover, at a minimum:

- function of the work unit;
- organizational relationships (how the various Plant positions interrelate);
- administrative arrangements (the employee's supervisor and the supervisor's manager);
- policies and rules pertaining to the specific job, the Plant operation, and the Jericho Mine site.

Items discussed will include:

- fire and other emergency procedures;
- location of first aid stations;
- locations of fire extinguishers, eye wash stations, first aid kits, WHMIS Right to Know stations (MSDS);
- health and safety responsibilities of the employee and employer, including those specified by the NWT Mine Health and Safety Act and Regulations;
- reporting of injuries, unsafe conditions and acts;
- use of personal protective equipment;
- right to refuse hazardous work, duty of the employee to report the situation and duty of Plant management to address the refusal;
- hazards, including those outside the employee's own work area; and
- reasons for each health and safety rule.

Because the Jericho Mine will be a mixed cultural environment with personnel from both western and aboriginal cultural backgrounds, all employees will be given advice and suggestions to keep the work place pleasant for all employees. Employees will be made aware that racial discrimination by any employee will not be tolerated and will be subject to disciplinary action, including dismissal.

A brochure outlining health and safety rules and reasons will be provided to each participant in the orientation sessions.

The following topics will be covered in job orientation sessions:

- hazards of the job;
- job safety training;
- required safety equipment and reasons for the need;
- required personal protective equipment, training provided, and reasons for the need;
- cold weather safety;
- who to report unsafe or unhealthy conditions to;
- who is responsible for safety-related questions; and
- what to do if injured or an accident occurs.

All new employees will be assessed as to their understanding of the items discussed in the orientation sessions within approximately one week of the session by the employee's supervisor or the Plant Manager, as appropriate. Assessments will be conducted in a helpful, non-threatening way and the employee will be made aware of the reasons for the assessment and that the assessment is not a job evaluation and does not in any way constitute a pass or fail. The supervisor or Plant Manager will complete an assessment evaluation form that will not identify the employee or the position, but will be structured so as to evaluate the orientation process and it's success in conveying essential health and safety information to new and transfer employees.

6.0 TRAINING

6.1 SUPERVISORY PERSONNEL

Under the NWT Mine Health and Safety Act, all supervisors must be certified. All supervisory personnel at the Jericho Mine will require, as a condition of employment, certification under the Act.

6.2 EMPLOYEES

As a minimum all employees will obtain an initial job orientation, Workplace Hazardous Materials Information System (WHMIS) training, and on the job supervision to ensure training has been successful. Documented correct work procedures and JHAs will be used as training guides for job training. On the job training will, at a minimum, consist of:

- steps in carrying out the job and each task involved in the job;
- all the hazards associated with the job and the required personal protective equipment;
- where to obtain personal protective equipment (PPE) and health and safety information;
- where to obtain information about any aspect of the job;

Each step in the job will be demonstrated, stressing key points. The employee will then be led through the job procedure. Initial frequent checks by the employee's supervisor will be used to ensure the employee is following correct and safe procedures.

Certain employees, as are willing and designated by the HSC, will be trained in mine rescue procedures applicable to the Jericho Mine. This training will be the primary responsibility of the mining contractor but will be reviewed and approved by Tahera Corporation as required under Section 45(g)(ii) of the Act. Initially employees hired with appropriate mine rescue training will be designated as the mine rescue team. Training of the mine rescue team will include emergency evacuation appropriate to the Jericho Mine operations.

6.3 HEALTH AND SAFETY COMMITTEE

Section 3.28 of the Act requires that the mine manager provide training relevant to the work of the HSC at least twice per year. A record of training must be kept by the manager and made available to a mines inspector. Tahera Corporation will proactively comply with the provision of the Act and will ensure its mining contractor complies as well. Training for the HSC will also include procedures and processes required for routine health and safety inspections and accident investigations. Health and safety inspections are covered in Section 7 of this plan and accident investigations in Section 8, both following.

7.0 WORKPLACE INSPECTIONS

7.1 LEGAL REQUIREMENTS

A requirement of the NWT Mine Health and Safety Act is workplace inspections by the Health and Safety Committee under Sections 12 and 13 of the Act which states:

> *12. A Committee shall*
>
> *(a) conduct inspections of work sites at the mine in accordance with the regulations;*
>
> *13. A manager shall*
>
> *(a) enable* [Health and Safety] *Committee members to participate in inspections, investigations and meetings required by the regulations*

Section 1.159 of the Regulations sets out requirements for inspections:

> *1.159(1) The manager shall prepare a procedure for the examination of worksites that provides for examination*
>
> *(a) of the condition of access routes, haulage roads and travelways;*
>
> *(b) of the suitability and safety of work practices;*
>
> *(c) of the general condition of equipment, tools and protective equipment and devices;*
>
> *(d) of the use of protective equipment and devices;*
>
> *(e) of the condition of refuge stations;*
>
> *(f) of the adequacy of ventilation;*
>
> *(g) for the presence of hazardous gases and toxic fumes;*
>
> *(h) of the security of ground conditions and effectiveness of the support;*
>
> *(i) of the emergency arrangements including safe means of egress;*
>
> *(j) of the provisions to ensure that work procedures are being properly followed; and*

(k) of any other matter that affects health and safety.

Under Part 3, Occupational Health and Safety Committee, Inspections subsection, subsection 3.19:

3.19 Every month the [Health and Safety] *Committee shall inspect as many of the worksites as it considers appropriate.*

Several other sections of the Regulations make reference to inspections by mine management, the Health and Safety Committee, or mine inspectors.

Tahera Corporation will comply with provisions of the Act and Regulations in a proactive manner. Management and employees, through the Health and Safety Committee, will evaluate previous accidents and the potential for serious accidents and injuries in assigning inspection frequencies beyond those mandated in the Act.

7.2 INSPECTION TEAM MEMBERS

7.2.1 Selection

The Health and Safety Committee members will ordinarily carry out inspections beyond those required by the Plant manager and contractor's mine foreman. At the discretion of the Committee additional members may be added to the inspection team. Choice of additional members will be made on the basis of:

- knowledge of the Mine Health and Safety Act and Regulations and company policies and procedures;
- knowledge of the hazards in the workplace involved in the inspection; and
- experience with work processes involved in the inspection.

7.2.2 Qualifications

Criteria used to judge qualifications of inspection team members will include (but not necessarily be limited to) the following:

- knowledge of previous injuries and illnesses in the workplace or similar mines and processing plants;
- familiarity with the hazards and with the standards, regulations, personal protective equipment and procedures that apply to the area to be inspected;
- ability and skills to assess situations requiring corrective action (job hazard recognition);
- training in inspection, and in handling personnel and situations;
- knowledge of the organization's operations, work flow, systems and products; and

- proper attitudes and influence to bring about improvements.

7.3 PURPOSE OF WORKPLACE INSPECTIONS

The purpose of workplace inspections will be to:

- listen to concerns of workers and supervisors;
- gain further understanding of jobs and tasks;
- identify existing and potential hazards;
- determine the underlying causes of hazards;
- monitor hazard controls; and
- recommend corrective action.

7.4 INSPECTION PLANNING AND PROCEDURES

Prior to an inspection, relevant documents including notes from previous inspections will be consulted by the inspection team. Where practical and indicated, inspection check lists will be used by team members to help ensure items are not overlooked. Check lists as required will be developed by the Health and Safety Committee.

During inspections both work conditions and procedures will be observed. If required, preventative actions will be instituted immediately. Inspection notes will include details of hazards, including exact locations, and hazards will be classified by the Committee either at the site or in the follow up meeting mandated by the Act. Recommendations for action, e.g. engineering controls, management actions, worker re-education, will be included in the inspection report.

7.5 POTENTIAL WORKPLACE HAZARDS

Potential workplace hazards relevant to the Jericho Mine include:

- safety hazards such as: inadequate machine guards, unsafe workplace conditions, unsafe work practices;
- chemical hazards caused by solids, liquids, vapours, dust, fumes, mist etc;
- ergonomic hazards caused by anatomical, physiological, and psychological demands on the worker, such as repetitive and forceful movements, vibration, temperature extremes, and awkward postures arising from improper work methods and improperly designed tools and equipment;
- physical hazards caused by noise, vibration, energy, blasting, heat and cold extremes.

7.6 INSPECTION SCHEDULING

7.6.1 Overall Scheduling

An overall schedule will be designed in consultation between the HSC and management to adequately address keeping the workplace free of hazards and will include:

- when to inspect each area within the workplace;
- responsibilities for the inspection including identifying team members; and
- the degree of detail required to inspect each area.

7.6.2 Frequency and Length of Inspections

The frequency of inspections required will be determined by the HSC and management based on:

- the number and size of different work operations;
- the type of equipment and work processes in each work area;
- the two-shifts per day operation, i.e., inspections will not be limited to day shift only when a work process has night shifts; and
- the introduction of new processes or machinery.

7.7 FOLLOW-UP MEETINGS

Following the inspection, the Health and Safety Committee will meet to evaluate inspection results. Minutes of the meeting will be forwarded to management and the Chief Inspector of Mines, WCB, as required by the Regulations. Minutes will also be posted for information of employees as required by the Regulations.

7.8 REPORT

Reports will include (but not necessarily be limited to):

- department or area inspected;
- date of inspection;
- inspection team's names and titles/positions
- unfinished items from previous reports;
- observed unsafe conditions;

- hazard classification of the condition (major, requiring immediate attention; serious, requiring short-term action; minor, requiring long-term action); and
- recommended methods of control.

7.9 FOLLOW-UP MONITORING

Follow-up monitoring will be the responsibility of the HSC and management and will consist of the following:

- review of information obtained from regular inspections to identify where immediate corrective action is needed;
- identification of trends and obtaining of timely feedback;
- analysis of inspection reports to identify (where applicable):
  - priorities for corrective action;
  - need for improving safe work practices;
  - insight about why accidents are occurring in particular areas;
  - need for training in certain areas;
  - areas and equipment that require more in-depth hazard analysis

7.10 HAZARD REPORTING BY EMPLOYEES

All employees will be informed of their requirement under the Act and Regulations to report hazards immediately to their supervisor during initial job orientation. Employees will be informed they are expected to report hazards as they are noticed and not wait for workplace health and safety inspections to bring hazards to the attention of management and fellow workers.

8.0 REPORTING AND INVESTIGATING ACCIDENTS

8.1 LEGAL REQUIREMENTS

Sections 24 to 33 of the Act and Part XVI of the Regulations set out procedures that must be followed and duties of the mine manager and mines inspectors. Tahera Corporation will proactively comply with all provisions of the Act and Regulations. It is Tahera's policy to investigate all accidents including "near misses".

8.2 ACCIDENT REPORTING PROCEDURES

Steps to be followed in accident investigation are standard for all workplaces and involve:

- a report of the accident occurrence to a designated person (usually a supervisor and the mine or plant manager);
- provision of first aid and medical care to injured person(s);
- investigation of the accident;
- identification of the causes;
- a report of the findings;
- development of a plan for corrective action;
- implementation of the plan;
- evaluation of the effectiveness of the corrective action; and
- making changes for continuous improvement.

Tahera's final HSP will specify the following:

- what is to be reported;
- to whom it will be reported;
- how it is reported;
- which incidents are investigated;
- who will investigate them;
- what forms are to be used;

- what training investigators will receive;
- what records are to be kept (legal and company policy requirements);
- what summaries and statistics are to be developed and whose responsibilities these are; and
- how often reports are to be prepared

Accident investigation procedures will be developed co-operatively between Tahera's mining contractor and Tahera's management and designates at the discretion of Tahera management. The procedures so developed prior to mine construction will be reviewed at an early opportunity by the HSC when it is formed, but no later than six (6) months after mine construction commences, taking due account of work stoppages or other unforeseen delays in commencement of commercial production.

9.0 EMERGENCY PROCEDURES

Tahera Corporation will develop an emergency response plan (ERP) prior to mine construction which will conform to requirements as set out in the NWT Mine Health and Safety Act and Regulations, specifically Part VIII, Division 3 of the Regulations, and will include at least the following:

- a list of the hazards;
- possible major consequences of each;
- required countermeasures;
- inventory of resources needed to carry out the planned actions; and
- make provision for establishment of the necessary emergency organization and procedures.

The ERP will be developed in co-operation with Tahera's mining contractor and will cover both the mining and processing operations at the Jericho mine; the HSC will be a key participant. A draft ERP is presented in Appendix D.2.5.

A draft spill prevention, countermeasures and control (SPCC) plan has been developed (Appendix D.2.4), and will be refined prior to construction.

10.0 MEDICAL AND FIRST AID

Section 10(3g) of the NWT Mine Health and Safety Act requires that the mine manager:

> *establish and maintain a medical surveillance program for employees as required under the regulations.*

Part VIII, Division 4 of the Regulations sets out the requirements for first aid at a mine site.

Tahera Corporation will proactively comply with the Act and Regulations at its Jericho Mine and will ensure that the mining contractor and all other contractors that may work at the mine site also comply. Specifically:

- a first aid, or nursing, station will be established at a convenient location at the mine site and conform to requirements as set out in the Regulation;
- a first aid attendant, or nurse, of appropriate qualifications as specified in the Regulations will be hired or contracted;
- first aid equipment, supplies and facilities will be kept clean, dry and ready for use;
- first aid equipment will meet requirements of the Regulations;
- all employees will be made aware of the location of first aid and how to call for first aid;
- signs indicating how to call and the location of first aid will be posted throughout the mine site;
- effective communication capabilities will be established between the first aid, or nursing, station and all work areas to be served;
- effective communication capabilities will be established to facilitate the person in charge of the first aid facility to summon additional aid. This likely will be a satellite phone for external communication and a site phone or radio, as appropriate, for mine communication;
- first aid equipment and supplies will be established at refuge stations, the processing plant, and other locations as required in the Regulations;
- first aid equipment and supplies will meet the requirements, as set out in the Regulations, and be inspected weekly and replenished or replaced as required; and
- supervisors and employees will have first aid training as required by the Regulations.

A policy on return to work after lost-time accidents will be established in consultation with the mining contractor to ensure internal consistencies at the Jericho Mine site between mining and processing operations. The following guidelines will be used in developing policies:

- productive work suitable to the employee will be offered;
- the worker's physician will be consulted and must agree that employment will not harm the worker or slow down recovery;
- no work will be offered that, if done by the worker in question, will pose a threat to other workers' health and safety;
- as far as practical, the policy will be applied to off-the-job injuries as well as those suffered on the job.

11.0 HEALTH AND SAFETY IMPLIMENTATION AND PROMOTION

Tahera Corporation realizes the importance of management commitment to the HSP and management commitment from the CEO down will be demonstrated. Managers and employees at all levels will be accountable for their individual performance with respect to health and safety on the job. Specific management actions taken in consultation with the HSC will include:

- providing sufficient time, money and personnel for job health and safety;
- ensuring that employees receive training or certification as required;
- setting of realistic goals and monitoring progress toward these goals;
- timely distribution of all pertinent information regarding job health and safety and related matters;
- including health and safety performance as part of employee performances appraisals at all levels;
- management attendance at HSC meetings;
- a system of individual recognition for superior performance, e.g. safety awards recognizing achievement;
- a system, such as a tally board placed in a prominent location, to provide a daily accounting of the number of accident-free days worked in the current period; and
- active support of general meetings on health and safety, briefings by supervisors where indicated, and one-on-one coaching.

12.0 WORKPLACE SPECIFIC ITEMS

This section contains a number of workplace specific items that will be addressed in the final OHSP; it assumes open pit operation:

- WHMIS training and location of MSDS;
- electrical lock out procedures including general information for all employees and specific procedures for employees requiring them;
- job-specific material handling rules;
- job-specific training for personnel handling materials that could pose a health or safety risk;
- general information on ammonium nitrate and explosives handling for all employees on jobs where explosives are used;
- all employees handling explosives will be licensed, without exception; note: ammonium nitrate is not an explosive unless mixed with fuel oil to produce ANFO;
- job-specific training and orientation for safe operation and maintenance for operators of mobile equipment, such as trucks, shovels and front-end loaders;
- fire guards and the location of fire fighting equipment including fire extinguishers;
- vehicle safety rules, including speed limits imposed by wildlife management considerations;
- working alone guidelines;
- job-specific personal protective equipment requirements;
- for employees requiring it, orientation on engineering standards in use at the mine;
- for employees requiring it, the purchasing standards policy of Tahera Corporation and the mining contractor;
- for all employees orientation on preventative maintenance and its value, and for employees requiring it, job-related training in preventative maintenance, e.g. mobile equipment operators; and
- for all employees orientation in off-the-job safety.

In addition to the above, all employees will be made familiar with the Emergency Response Plan (conceptual plan provided in Appendix D.2.5 and the Spill Prevention, Countermeasures and Control plan (conceptual plan provided in Appendix D.2.4. Relevant employees will also be made familiar with the Hazardous Materials Management plan (conceptual plan provided in D.2.3). Additional items will be added at such time as the underground operation is scheduled to begin. It is anticipated that a different mining contractor would be used for underground operations. Part of the process of engaging an underground mine contractor will be rationalization of the HSPs. This rationalization will occur prior to commencement of underground mining.

13.0 PLAN EVALUATION AND CONTINUOUS IMPROVEMENT

Consistent with guidelines for ISO-14000 environmental management systems, an occupational health and safety audit will be conducted annually in-house by Tahera Corporation to evaluate the effectiveness of the HSP. Periodically, as indicated and approved by senior management, an external organization will be contracted to conduct a check occupational health and safety audit. Tahera staff who conducted in-house audits will work closely with external auditors to ensure a thorough review of health and safety issues. Procedures will be established to follow up on both in-house and external audits, including target dates for remedial action and follow-up checks. An auditing protocol will be designed once the mine plan has been finalized and prior to the end of the first year of commercial production. Consultation with major contractors will be undertaken to complete the protocol, to ensure the audit adequately covers all health and safety aspects at the Jericho Mine. A generic example of an occupational health and safety audit questionnaire is presented in Attachment 13.1.

REFERENCES

Canadian Centre for Occupational Health and Safety (CCOHS). 2000. Job Hazard Analysis. At: www.ccohs.ca/oshanswers/hsprograms/job-haz.html.

Guidotti, T.L., J.W.F. Cowell, G.G. Jamieson. 2000. Occupational Health and Safety Audit Outline. University of Alberta.

ATTACHMENTS

ATTACHMENT 1.1

HEALTH AND SAFETY RESPONSIBILITIES

OF TAHERA JERICHO MINE EMPLOYEES

RESPONSIBILITIES OF INDIVIDUALS

Hourly Employees

1. Carry out work in a manner so as not to create a health and safety hazard to themselves or others.
2. Assist in the reduction and controlling of accidents and illness producing conditions.
3. Report any incidents, near misses, injuries, or illnesses.
4. Use the correct tools and equipment for the job.
5. Keep tools in good condition.
6. Use the required safety equipment and protective clothing.
7. Report defects in workplace equipment.
8. Develop a personal concern for health and safety - for themselves and for others, particularly newcomers and young people.
9. Suggest ways to eliminate hazards.
10. Read, understand, and comply with workplace health and safety policy, safe work practices and procedures.
11. Cooperate with health and safety committee members and representatives.

Safety Co-ordinators

1. Advise management and employees on:
   - preventing injury and illness to personnel and damage to plant equipment;
   - legal requirements affecting safety, health and welfare;
   - provision and use of protective clothing and equipment;
   - suitability, from a safety viewpoint, of new equipment, and validity of all appropriate test certificates;
   - potential hazards on new contracts before work starts and precautions required;
   - changes in legislation.
2. Record and analyze information on injuries, illness, damage and production loss.
3. Assess accident trends and review overall safety performance.
4. Maintain contact with regulatory professional bodies.
5. Take part in workplace discussions on injury, health and welfare, damage control.
6. Keep up-to-date with recommended codes of practice and new safety and health literature.
7. Administer safety program.
8. Assist in accident investigations, analysis and preparation of accident reports and summaries.
9. Prepare inspection reports.
10. Ensure that corrective action has been taken whenever deficiencies are identified.
11. Assist with safety seminars and training.

Senior Executive/Managers

1. Provide a statement of policy relating to the safety program.
2. Maintain overall control of the safety and loss prevention program.
3. Ensure that all established safety policies are administered and enforced in all areas.
4. Ensure that all personnel are aware of and effectively practice the policies and procedures set out in the health and safety program.
5. Provide information, instructions, and assistance to all supervisory staff in order to protect the health and safety of all employees.

6. Understand and enforce the accident prevention policy as well as the occupational health and safety legislation.
7. Provide all supervisory staff with proper, well-maintained tools and equipment, plus any special personal protective devices which may be required.
8. Provide ongoing health and safety education programs and approved first aid training courses as required.
9. Monitor departments and projects and hold them accountable for their individual safety performance.

Supervisors

1. Cooperate with health and safety committee members.
2. Provide instructions to employees about safe work procedures. As part of the routine duties, the supervisor will require employees to use personal protective equipment as appropriate.
3. Provide an example for others by always directing and performing work in a safe manner.
4. Conduct regular inspections for unsafe practices and conditions and ensure prompt corrective action.
5. Work in cooperation with others in determining safe practices, enforcing their observance, developing procedures for dealing with violations, and general safety and accident prevention.
6. Enforce all established safety regulations and work methods. Take corrective action as necessary to ensure compliance with the rules.
7. Know and apply the workplace safety policy and relevant occupational health and safety legislation.
8. Arrange for medical treatment as required, including transportation to a doctor or hospital as necessary.
9. Report all accidents immediately, investigate all accidents fully, and advise management on how to prevent similar accidents in future.
10. Carry out regular inspections of the work place to ensure a safe and healthy environment.
11. Hold regular safety meetings to review safety conditions and general safety policies.
12. Accompany the government mines inspector during mine and processing plant inspections.
13. Be aware of the hazards that exist for the short term, temporary and newly hired employee. Ensure that new employees receive detailed safety instruction before they are allowed to start work.

ATTACHMENT 4.1

CCOHS JOB HAZARD ANALYSIS

Job Hazard Analysis

What is a Job Hazard Analysis?

One way to increase the knowledge of hazards in the workplace is to conduct a job hazard analysis on individual tasks. A job hazard analysis (JHA) is a procedure which helps integrate accepted safety and health principles and practices into a particular operation. In a JHA, each basic step of the job is examined to identify potential hazards and to determine the safest way to do the job. Other terms used to describe this procedure are job safety analysis (JSA) and job hazard breakdown.

Some individuals prefer to expand the analysis into all aspects of the job, not just safety. This approach, known as total job analysis, job analysis or task analysis, is based on the idea that safety is an integral part of every job and not a separate entity. In this document, only health and safety aspects will be considered.

The terms "job" and "task" are commonly used interchangeably to mean a specific work assignment, such as "operating a grinder," "using a pressurized water extinguisher," or "changing a flat tire." JHAs are not suitable for jobs defined too broadly, for example, "overhauling an engine"; or too narrowly, for example, "positioning car jack."

What are the benefits of doing a Job Hazard Analysis?

The method used in this example is to observe a worker actually perform the job. The major advantages of this method include that it does not rely on individual memory and that the process prompts recognition of hazards. For infrequently performed or new jobs, observation may not be practical. With these, one approach is to have a group of experienced workers and supervisors complete the analysis through discussion. An advantage of this method is that more people are involved allowing for a wider base of experience and promoting a more

ready acceptance of the resulting work procedure. Members of the joint occupational safety and health committee should participate in this process.

Initial benefits from developing a JHA will become clear in the preparation stage. The analysis process may identify previously undetected hazards and increase the job knowledge of those participating. Safety and health awareness is raised, communication between workers and supervisors is improved, and acceptance of safe work procedures is promoted.

The completed JHA, or better still, a written work procedure based on it, can form the basis for regular contact between supervisors and workers on health and safety. It can serve as a teaching aid for initial job training and as a briefing guide for infrequent jobs. It may be used as a standard for health and safety inspections or observations and it will assist in completing comprehensive accident investigations.

What are the four basic steps?

Four basic stages in conducting a JHA are:

- selecting the job to be analyzed
- breaking the job down into a sequence of steps
- identifying potential hazards
- determining preventive measures to overcome these hazards

What is important to know when "selecting the job"?

Ideally, all jobs should be subjected to a JHA. In some cases there are practical constraints posed by the amount of time and effort required to do a JHA. Another consideration is that each JHA will require revision whenever equipment, raw materials, processes, or the environment change. For these reasons, it is usually necessary to identify which jobs are to be analyzed. Even if analysis of all jobs is planned, this step ensures that the most critical jobs are examined first.

Factors to be considered in assigning a priority for analysis of jobs include:

- Accident frequency and severity: jobs where accidents occur frequently or where they occur infrequently but result in disabling injuries.
- Potential for severe injuries or illnesses: the consequences of an accident, hazardous condition, or exposure to harmful substance are potentially severe.
- Newly established jobs: due to lack of experience in these jobs, hazards may not be evident or anticipated.
- Modified jobs: new hazards may be associated with changes in job procedures.
- Infrequently performed jobs: workers may be at greater risk when undertaking non-routine jobs, and a JHA provides a means of reviewing hazards.

How do I break the job into "basic steps"?

After a job has been chosen for analysis, the next stage is to break the job into steps. A job step is defined as a segment of the operation necessary to advance the work. See examples below.

Care must be taken not to make the steps too general, thereby missing specific steps and their associated hazards. On the other hand, if they are too detailed, there will be too many steps. A rule of thumb is that most jobs can be described in less than ten steps. If more steps are required, you might want to divide the job into two segments, each with its separate JHA, or combine steps where appropriate. As an example, the job of changing a flat tire will be used in this document.

An important point to remember is to keep the steps in their correct sequence. Any step which is out of order may miss potential hazards or introduce hazards which do not actually exist.

Each step is recorded in sequence. Make notes about what is done rather than how it is done. Each item is started with an action verb. Appendix A illustrates a format which can be used as a worksheet in preparing a JHA. Job steps are recorded in the left hand column, as shown below:

Sequence of Events	**Potential Accidents or Hazards**	**Preventive Measures**
Park vehicle		
Remove spare and tool kit		
Pry off hub cap and loosen lug bolts (nuts).		
And so on.....		

This part of the analysis is usually prepared by watching the worker do the job. The observer is normally the immediate supervisor but a more thorough analysis often happens by having another person, preferably a member of the joint occupational health and safety committee, participate in the observation. Key points are less likely to be missed in this way.

The worker to be observed should be experienced and capable in all parts of the job. To strengthen full co-operation and participation, the reason for the exercise must be clearly explained. The JHA is neither a time and motion study in disguise, nor an attempt to uncover individual unsafe acts. The job, not the individual, is being studied in an effort to make it safer by identifying hazards and making modifications to eliminate or reduce them. The worker's experience can be important in making improvements.

The job should be observed during normal times and situations. For example, if a job is routinely done only at night, the JHA review should also be done at night. Similarly, only regular tools and equipment should be used. The only difference from normal operations is the fact that the worker is being observed.

When completed, the breakdown of steps should be discussed by all the participants (always including the worker) to make that all basic steps have been noted and are in the correct order.

How do I "identify potential hazards"?

Once the basic steps have been recorded, potential hazards must be identified at each step. Based on observations of the job, knowledge of accident and injury causes, and personal experience, list the things that could go wrong at each step.

A second observation of the job being performed may be needed. Since the basic steps have already been recorded, more attention can now be focused on potential hazards. At this stage, no attempt is made to solve any problems which may have been detected.

To help identify potential hazards, the job analyst may use questions such as these (this is not a complete list):

- Can any body part get caught in or between objects?
- Do tools, machines, or equipment present any hazards?
- Can the worker make harmful contact with objects?
- Can the worker slip, trip, or fall?
- Can the worker suffer strain from lifting, pushing, or pulling?
- Is the worker exposed to extreme heat or cold?
- Is excessive noise or vibration a problem?
- Is there a danger from falling objects?
- Is lighting a problem?
- Can weather conditions affect safety?
- Is harmful radiation a possibility?
- Can contact be made with hot, toxic, or caustic substances?
- Are there dusts, fumes, mists, or vapours in the air?

Potential hazards are listed in the middle column of the worksheet, numbered to match the corresponding job step. For example:

Sequence of Events	**Potential Accidents or Hazards**	**Preventive Measures**

	b) Vehicle on uneven, soft ground c) Vehicle may roll.	
Remove spare and tool kit	a) Strain from lifting spare.	
Pry off hub cap and loosen lug bolts (nuts).	a) Hub cap may pop off and hit you b) Lug wrench may slip	
And so on.....	a) ...	

Again, all participants should jointly review this part of the analysis.

How do I "determine preventive measures?"

The final stage in a JHA is to determine ways to eliminate or control the hazards identified. The generally accepted measures, in order of preference, are:

1. Eliminate the hazard

This is the most effective measure. These techniques should be used to eliminate the hazards:

- Choose a different process
- Modify an existing process
- Substitute with less hazardous substance
- Improve environment (ventilation)
- Modify or change equipment or tools

2. Contain the hazard

If the hazard cannot be eliminated, contact might be prevented by using enclosures, machine guards, worker booths or similar devices.

3. Revise work procedures

Consideration might be given to modifying steps which are hazardous, changing the sequence of steps, or adding additional steps (such as locking out energy sources).

4. Reduce the exposure

These measures are the least effective and should only be used if no other solutions are

possible. One way of minimizing exposure is to reduce the number of times the hazard is encountered. An example would be modifying machinery so that less maintenance is necessary. The use of appropriate personal protective equipment may be required. To reduce the severity of an accident, emergency facilities, such as eyewash stations, may need to be provided.

In listing the preventive measures, use of general statements such as "be careful" or "use caution" should be avoided. Specific statements which describe both what action is to be taken and how it is to be performed are preferable. The recommended measures are listed in the right hand column of the worksheet, numbered to match the hazard in question. For example:

Sequence of Events	**Potential Accidents or Hazards**	**Preventive Measures**
Park vehicle	a) Vehicle too close to passing traffic b) Vehicle on uneven, soft ground c) Vehicle may roll.	a) Drive to area well clear of traffic. Turn on emergency flashers b)Choose a firm, level area c) Apply the parking brake; leave transmission in gear or in PARK; place blocks in front and back of the wheel diagonally opposite to the flat
Remove spare and tool kit	a) Strain from lifting spare.	a) Turn spare into upright position in the wheel well. Using your legs and standing as close as possible, lift spare out of truck and roll to flat tire.
Pry off hub cap and loosen lug bolts (nuts).	a) Hub cap may pop off and hit you b) Lug wrench may slip	a) Pry off hub cap using steady pressure b) Use proper lug wrench; apply steady pressure slowly.
And so on.....	a) ...	a) ...

How should I make the information available to everyone else?

JHA is a useful technique for identifying hazards so that measures can be taken to eliminate or control them. Once the analysis is completed, the results must be communicated to all workers who are, or will be, performing that job. The side-by-side format used in JHA worksheets is not an ideal one for instructional purposes. Better results can be achieved by using a narrative-style format. For example, the work procedure based on the partial JHA

developed as an example in this document might start out like this:

1. Park vehicle.

a) Drive vehicle off the road to an area well clear of traffic, even if it requires rolling on a flat tire. Turn on the emergency flashers to alert passing drivers so that they will not hit you.

b) Choose a firm, level area so that you can jack up the vehicle without it rolling.

c) Apply the parking brake, leave the transmission in gear or PARK, place blocks in front and back of the wheel diagonally opposite the flat. These actions will also help prevent the vehicle from rolling.

2. Remove spare and tool kit.

a) To avoid back strain, turn the spare up into an upright position in its well. Stand as close to the trunk as possible and slide the spare close to your body. Lift out and roll to flat tire.

3. Pry off hub cap, loosen lug bolts (nuts).

a) Pry off hub cap slowly with steady pressure to prevent it from popping off and striking you.

b) Using the proper lug wrench, apply steady pressure slowly to loosen the lug bolts (nuts) so that the wrench will not slip and hurt your knuckles.

4. And so on.

▭Appendix A: Sample form for Job Hazard Analysis Worksheet

Job Hazard Analysis Worksheet

Appendix B: Sample forms for Tasks and Job Inventory

Tasks with Potential Exposure to Hazardous Materials or Physical Agents		
Analysis By:	Reviewed By:	Approved By:
Date:	Date:	Date:
Tasks	Name of Material or Physical Agent	Location

Job Inventory of Hazardous Chemicals		
Analysis By:	Reviewed By:	Approved By:
Date:	Date:	Date:
Name of Chemical	Route of Entry and Physical State	Controls

Document last updated on March 5, 1998

ATTACHMENT 13.1

T.L. Guidotti, J.W.F. Cowell, G.G. Jamieson

2000

Occupational Health and Safety Audit Outline

University of Alberta

APPENDIX 1

An Occupational Health Audit

This audit has been presented in a questionnaire format. The questionnaire has been divided into ten sections, each with a series of questions and associated measures. The measures have been kept simple and qualitative. No two areas of a company are in the same situation and no two companies are the same. The audit must therefore be adaptable to many working units in many different types of organization. Where a rating is less than satisfactory, corrective action must be initiated.

Needs Extensive Needs Some

Inadequate
Improvement

Improvement
Adequate

A. Employee Training

1. To what extent are all new employees:

(a) Given a health and safety orientation

course covering: job hazards;

hazardous agents; use of protective

equipment; and health safety regulations?

(b) Fully trained in the job by a competent instructor?

(c) Closely supervised until he/she demonstrates a full understanding of the job and its safety requirements?

2. To what extent are all current employees:

(a) Aware of potential hazards associated with the job, the use of protective equipment, and safety regulations?

(b) Trained to work safely on the job?

(c) Given refresher courses where required to encourage safe work practices?

(d) Trained in first aid?

_____

Needs Extensive Needs Some

Inadequate
Improvement

Improvement
Adequate

_____

B. Supervisors

To what extent are all supervisors:

(a) Competent to provide job training or

have the services of a competent

instructor?

(b) Willing and able to discuss safety

with employees and to encourage

a safety-minded attitude?

(c) Held accountable for promotion
and advancement for the safety
record in their areas?

(d) Knowledgeable of the job hazards
in their units?

(e) Willingly acting to improve work-
place safety and safety performance

(f) Enforcing health and safety regulations
consistently?

C. Health and safety committee:

1. Does a committee exist with representation
from employees and management?

2. Does the committee meet regularly enough
to deal effectively with the problems
referred to it?

3. Does the committee function as a problem

solving team?

4. Do both the union and management repre-

sentatives have respect and credibility?

5. Do the members have sufficient knowledge

of health and safety matters to function

effectively?

6. Does the committee issue open minutes of

the meetings regularly?

Needs Extensive Needs Some

Inadequate
Improvement

Improvement
Adequate

---

7. Is there generally a positive response to

actions of the committee?

8. Is the committee perceived as effective by both the employees and management?

D. Line Management

1. Is each level of management in the production of goods or the performance of a service held accountable for safety performance?

2. Does line management:

(a) (i) participate in safety tours,

(ii) investigate accidents

(iii) follow up on safety committee recommendations?

(b) consider health and safety concerns when planning new facilities or changing equipment or processes

(c) receive training in their responsibility for occupational health and safety, as

expressed in company policy and in law?

3. Is there a written company policy holding line managers responsible for occupational health and safety in their work areas?

E. Business Management

Does the administrative and financial management:

(a) Consider safety as a normal part of doing business rather than a burden or unnecessary cost?

(b) Have a basic understanding of occupational health principles?

(c) Hold line managers accountable for safety results?

Needs Extensive Needs Some

Inadequate
Improvement

Improvement
Adequate

(d) Initiate and periodically review company policies relating to:

(i) Health and safety practices

(ii) Health and safety rules enforcement

(iii) Accident and exposure investigation

(iv) Workplace hazard control?

(e) Encourage training programs to upgrade employee's skills in occupational health and safety protection?

F. Corporate Management

1. Are there corporate policies affirming a company's commitment to high standards of health and safety for

both employees and users of the
product or service?

2. Do company officers openly embrace these principles and encourage business managers to follow them?

G. Safe Workplaces

1. Housekeeping

(a) Are workplaces clean, well illuminated and uncluttered?

(b) Are aisles clear of obstructions and projecting material.

2. Material Handling and Storage

(a) Are storage areas well maintained?

(b) Are there sufficient mechanical aids for lifting or moving heavy objects in storage areas and workplaces?

(c) Are powered trucks driven with skill

and caution?

(d) Are cranes manned by qualified

persons?

(e) Is lifting gear regularly inspected?

Needs Extensive Needs Some

Inadequate
Improvement

Improvement
Adequate

---

3. Workplace Hazards

(a) Are moving parts of machines

adequately guarded?

(b) Are there adequate guards on

electrical test equipment?

(c) Has an inventory of hazardous

materials and physical agents
in the plant been carried out?

(d) Are material safety data sheets
on file for all potentially
hazardous materials in the plant?
(e) Have occupational hygiene
measurements been made of the
exposure level of employees to
potentially hazardous fumes,
vapours, dusts or physical agents
in the workplaces?

(f) Are hazardous chemicals clearly
labeled?

(g) Is information available to employees
on properties of hazardous chemicals
and physical agents that may be
present and precautions to be followed?

(h) Is there adequate ventilation to each
work station and adequate removal of

fumes, vapours or dust from processes?

4. Maintenance

Is there a planned maintenance program

which includes all equipment and related

critical parts that could create hazardous

conditions in the event of equipment failure?

Needs Extensive Needs Some

Inadequate
Improvement

Improvement
Adequate

---

5. Workplace Design

(a) Have ergonomic factors been taken

into consideration in the design of

each workplace?

(b) Are policies in place which require

the review of new or changed work-
places or processes by an occupa-
tional health and safety specialist
before they are put into operation?

(c) Are occupational safety and health
authorities consulted during the design
stage of any new or changed work-
place or process?

(d) Have those who design or specify
manufacturing processes and work-
places in manufacturing, engineering
and/or facilities engineering been
formally trained in the basics of
occupational health principles?

H. General

1. Does the plant have a comprehensive
emergency plan?

2. Are fire extinguishers placed in suitable

positions and properly maintained?

3. Are there clear escape routes from every workplace?

I. Occupational Health and Safety Specialist

1. Is one person in the plant assigned responsibilities for co-ordinating health and safety matters?

2. Are this person's duties, responsibilities and relationships clearly documented?

3. Does this person have enough time and a sufficient budget to fully carry out occupational health and safety re-sponsibilities?

4. Is this person provided with opportunities to improve his qualifications by attending seminars and courses?

5. Is this person provided with adequate re-
sources and assistance to carry out his
responsibilities? Such as:
(a) equipment to measure potential
occupational hazards
(b) audio visual equipment and a meeting
room
(c) budget for conducting occupational
hygiene surveys and obtaining necessary
consultations
(d) health and safety literature.

6. Does the health and safety specialist
provide a regular and detailed report
of accidents and occupational health
problems arising in the plant?

7. Are regular reports from the health and
safety specialists circulated to upper
levels of management, read, and acted upon
when recommendations are made?

J. Medical Support

l. Are there adequate first aid facilities and personnel available during all working hours?

2. Is a plant physician or nurse regularly available?

3. Is outside medical assistance easily available when needed to back up personnel at the plant?

4. Are all compensation cases reviewed?