

HEALTH & SAFETY MANUAL

Completed By: Theophiles Devraj

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**Seavest Africa**

Seavest is a professional service provider to the hydrocarbon industry with outstanding customer satisfaction and referral rating. That means our future is on display everyday in how we carry out our work at any retail site around the country.

**Mission Statement**

Seavest Africa strives to provide the best quality workmanship and outstanding customer service in the most cost effective and safest manner possible. It is the goal of everyone at Seavest Africa to continue to expand our services and with this in mind we will provide the necessary tools, supervision and safe workplace to all employees.

**What We Do**

Seavest is a Durban based, South African company providing services to the petroleum industry in Durban, Cape Town & Johannesburg. The company provides an intensive building and maintenance service to cover almost every task at the retail sites.

Although the company was established in 2003, management has twenty two years experience in the industry. The services that Seavest provides are exclusively reserved for the petroleum industry. The company is therefore geared to serve safely what the industry requires. Seavest has undergone an intensive audit by Bitline SA and was HSSE accredited. Seavest is now level one BBEE certified.

**Goals and principles of HSE at Seavest**

**1. OVERALL GOALS AND PRINCIPLES OF HSE**

**1.1 Overall goals**  
Through ensuring that employees tasks are safe, meaningful and conducive to the development of their personalities, Seavest seeks to create a work environment that fosters creativity as well as constructive and critical thinking. Seavest seeks to offer a good learning environment by ensuring that training, welfare provisions and the physical environment are adapted to their needs. The work environment must support and promote its users capacity to work and learn, safeguard their health and well-being, and protect them against work-related illnesses and accidents.

Environmental awareness should permeate all parts of the company’s activities. By conducting its operations in an environmentally friendly manner, Seavest shall work continuously to reduce the strain on the environment.

Seavest shall comply with all existing HSE legislation.

**1.2 Principles**  
The health, safety and environmental (HSE) work at Seavest shall constitute continuous and systematic efforts that are integrated into the primary activities. A quarterly HSE review conducted in our HSE meetings shall form the basis for action plans with concrete goals and prioritised measures.

HSE-related problems should be solved consecutively at the lowest possible level, in order to prevent employees from developing work-related illnesses or suffering work-related accidents, and to prevent the activities from having a negative impact on the environment.

**1.2.1 Responsibility**  
HSE is the responsibility of employees on all levels of the organisation to carrier out to ensure a safe working environment at all times.

**1.2.2 Participation**  
Active participation from employees, clear allocation of responsibilities and clear organisation of the HSE work is a precondition for achieving an optimal work environment. Everyone in the organisation must take on his or her share of the responsibility. The methods of work chosen for the process of identifying needs and designing action plans should be such that they allow everyone to contribute with his or her experience and competence.

**1.3 Local goals**

HSE goals and measures must be integrated into the units operating and action plans. All units must design and adopt their individual HSE goals and action plans in accordance with Seavest’s overall goals and priority areas for HSE, based on identifying challenges in the work environment as well as conditions impacting on the physical surroundings. The goals should be as concrete as possible, enabling each unit to assess and document to what degree the goals have been fulfilled.

1. Employees shall  
   **a)** use the prescribed protective equipment, exercise caution and otherwise contribute to prevention of accidents and injury to health,  
   **b)** immediately notify the employer and the safety representative and to the extent necessary other employees when employees become aware of faults or defects that may involve danger to life or health and they themselves are unable to remedy the fault or defect,  
   **c)** interrupt work if the employees consider that it cannot continue without involving danger to life or health,  
   **d)** ensure that the employer or the safety representative is notified as soon as employees become aware of harassment or discrimination at the workplace,  
   **e)** notify the employer if an employee suffers injury at work or contracts diseases which the employee believes to result from the work or conditions at the working premises,  
   **f)** cooperate on preparation and implementation of follow-up plans in connection with total or partial absence from work owing to accidents, sickness, fatigue or the like,  
   **g)** obey instructions issued by the Labour Inspection Authority.

“Employees charged with directing or supervising other employees shall ensure that safety and health are taken into consideration when work that comes under their areas of responsibility is being planned and carried out.”

**SEAVEST COMPANY ORGANOGRAM**

**SENIOR MANAGER**

**NICKY JAMUN**

**(16.2)**

**DIRECTOR**

**HEMI GAYADEEN**

**(16.1)**

**ADMINISTRATING TEAM**

* **THEO DEVRAJ**
* **MAGESH GOVENDER**
* **COLLEEN MUNSAMY**
* **ELIJAH PILLAY**
* **FREDDIE McGEER**

**FIELD TECHNICIANS**

* **SURESH MOTHI**
* **DEEPAK KALLESSAR**
* **AVIN BUDHAN**
* **JAYSON NAIDOO**
* **CLINTON**

**FIELD TECHNICIANS**

* **ARVIND MOTHI**
* **DJ VAN HEERDEN**
* **KENNETH**
* **GOOLAM**
* **MELVIN**

**FIELD TECHNICIANS**

* **TOHIER CARLSE**
* **DEVAN SIMPSON**
* **FAIZEL HEUVEL**

**SEAVEST SAFETY ONGANOGRAM**

N. JAMUN

**Senior Manager**

M. GOVENDER

**Assistant to Senior Manager**

T. Carlse

**Construction Supervisor**

CPT Manager

1. Mothi

**Construction Supervisor**

JHB Manager

S. Mothi

**Construction Supervisor**

D. Kallessar

**Construction Supervisor**

Ben

**Subordinate**

**Supervisor**

Bennit

**Subordinate**

**Supervisor**

George

**Subordinate**

**Supervisor**

Thomas

**Subordinate**

**Supervisor**

**FIRE TEAM:**

* D. Kallessar
* S. Mothi

**FIRST AID TEAM:**

* D Kallessar
* S. Mothi

**EMERGENCY RESPONSE ORGANOGRAM**

**Incident commander (N. Jamun)**

**Operations Chief (M. Govender)**

**FIRE TEAM**

**FIRST AID TEAM**

* **M. Govender**
* **J. Pillay**
* **I. Moodley**
* **S. Mothi**
* **D. Kallessar**

Duties:

**Incident Commander**

* Calling Emergency Service
* Tactical Response
* Liaise with fire department
* Radio control
* Evacuation

**Operations Chief**

* Take instructions from IC
* Calling Emergency Services
* Ensuring equipment is available for emergency.
* Taking roll call
* Liaise with emergency service with regards to incidents.
* Ensure notifications are done to authorize and other relevant people.
* Check safety of response team
* Inspect site before returning to normal service.

**Basic requirements to work for Seavest Africa**

Skilled Labourer: Must know basic construction work, eg; excavation, mixing of cement, etc. Work that requires practically no training or experience for its adequate or competent performance.

Technicians: Our technicians must be trained or skilled in the technicalities of the projects on hand. They must perform basic quality techniques, possibly including analyzing, and reporting about the project. The individual qualified and authorized must provide specified care and maintenance to the area of work and perform inspection, repair, and testing beyond the level classified.

Administrative staff: An administrative personal must have a metric and/or higher education and must meet established criteria for managerial responsibilities, professional and technical competence and leadership responsibilities. The individual must have basic knowledge of the computer and sum experience in clerical work.

Management: Management is involved in the act of getting people together to accomplish desired goals and [objectives](http://en.wikipedia.org/wiki/Objective_%28goal%29) using available resources efficiently and effectively. Management operates through various functions, which is often classified as planning, organizing, staffing, leading/directing, controlling/monitoring and motivating the staff. Management must have skills that:

* Technical: used for specialized knowledge required for work.
* Political: used to build a power base and establish connections.
* Conceptual: used to analyze complex situations.
* Interpersonal: used to communicate, motivate, mentor and delegate.
* Diagnostic: ability to visualize most appropriate response to a situation.

**Hazards Associated with Seavest Africa**

|  |  |  |  |
| --- | --- | --- | --- |
| **Type Of Hazards** | **Exposure**  **(Low, Medium, High)** | **Control Step** | **Who will perform control step** |
| **Fall from height** | **High** | **Secure ladder/scaffold, wear safety harness** | **Artisan on site** |
| **Inhalation of dust & fumes** | **High** | **Dust mask, correct PPE** | **Artisan on site** |
| **Slipping on liquids** | **Low** | **Barricade, safety shoes & warning signs** | **Artisan on site** |
| **Objects falling on you** | **Medium** | **Wear hat** | **Artisan on site** |
| **Getting hurt while excavation** | **Low** | **Correct PPE** | **Artisan on site** |
| **Getting hurt while using tools** | **Medium** | **Correct PPE, check tools before use** | **Artisan on site** |
| Trench Collapses | **Low** | **Two exit ladder, waste kept same distant as excavation away from trench.** | **Artisan on site** |
| Compressed-Gas Explosion | **N/A** | **Not exposed to compressed gasses.** | **Artisan on site** |
| Faulty ladders | **Low** | **Ladder check & at 75\* angle away from structure** | **Artisan on site** |
| Stored pressure | **Medium** | **Shut of water main & release all pressure** | **Artisan on site** |
| Electrocuted | **N/A** | **We do not do electrical work** | **Artisan on site** |
| Noise | **Low** | **Very low noise level, use earplugs.** | **Artisan on site** |

**Health Effects of Toxic Chemicals**

There are many materials used in the workplace that can be hazardous. However, in order for them to affect your health, they must contact the body or be absorbed into the body. When assessing the potential health effects from working with a particular material it is necessary to understand difference between "toxicity" and "hazard".

1. **TOXICITY** is the ability of a substance to produce an unwanted effect when the chemical has reached a sufficient concentration at a certain site in the body.

The more toxic a material is, the smaller the amount of it necessary to be absorbed before harmful effects are caused. The lower the toxicity, the greater the quantity of it necessary to be absorbed. The toxicity of a chemical is generally measured by experiments on animals (*quite often rats*). If it is measured in terms of the amounts of material necessary to cause death in 50% of the test animals. These values are called LD50 (*lethal dose*) or LC50 (*lethal concentration*), and are usually given in weight of material per kg of body weight or airborne concentration of material per set time period respectively.

1. **HAZARD** is the probability that this concentration in the body will occur.

Toxicity is an inherent property of the material. A material may be very toxic, but not hazardous, if it is handled properly and is not absorbed into the body. On the other hand, a material may have a very low toxicity, but be very hazardous.

*Example*:

1. An open container of an acid is much more hazardous than a closed container of the same material.
2. Two liquids may possess the same degree of toxicity but present different degrees of hazard:-

One material may be non-irritating to the eyes and nose and odourless. The other may be irritating to the eyes or respiratory system and possess a pungent odour.

The latter material, because of its warning properties presents a lesser degree of hazard.

In order for toxicants to affect the human system either they must cause damage to external tissues, such as the skin or eyes, or they must be able to enter the body by some mechanism.

**Routes of Entry**

There are three primary routes of entry into the body: ingestion, skin or eye absorption, and inhalation.

**Ingestion**:- This means taking a material into the body by mouth (swallowing). Ingestion of toxic materials may occur as a result of eating in a contaminated work area.

**Absorption**- Substances that contact the eye and the skin may be either absorbed into the body or cause local effects. For the majority of organic compounds, the contribution from skin absorption to the total exposure should **not** be neglected.

**Inhalation**- This means taking a material into the body by breathing it in. In the lungs, very tiny blood vessels are in constant contact with the air we breath in. As a result, airborne contaminants can be easily absorbed through this tissue. In the occupational environment, this is generally the most important route of entry.

**Health Effects - Chronic vs Acute**

Once a toxic substance has contacted the body it may have either acute (*immediate*) or chronic (*long term*) effects.

*Example*: Spilling acid on your hand will cause ***immediate harm***, i.e. a burn to the skin.

Exposure to asbestos or tobacco smoke may result in lung cancer after as much as twenty years (*this is a long term effect*).

**Exposure - Chronic vs Acute**

Exposure can be classified as chronic or acute. In chronic exposures, the dose is delivered at some frequency (*daily or weekly usually*) over a period of time. In acute exposures, the dose is delivered in a single event and absorption is rapid. Usually, a chronic exposure occurs at low concentration and acute exposure at high concentration.

Some materials may only cause harm if given acutely, not having any effect in the long term. Other materials may not exhibit an effect in the short term, but may cause problems after prolonged exposure.

**Physiological Classification of Materials**

This classification identifies toxic materials on the basis of biologic action.

**Irritants** - refers to some sort of aggravation of whatever tissue the material comes in contact with.   
*e.g. ammonia, nitrogen dioxide.*

**Asphyxiants** - exert their effects through a depletion of oxygen to the tissues   
*e.g. - simple asphyxiants - carbon dioxide, nitrogen, methane, hydrogen   
chemical asphyxiants - carbon monoxide, hydrogen cyanide, hydrogen sulphide.*

**Narcotics or Anaesthetics** - the main toxic action is the depressant effect upon the Central Nervous System.   
*e.g. - many organics, chloroform, xylene.*

**Systemic Poisons** - the main toxic action includes the production of internal damage   
**e.g. Hepatotoxic agents** - *toxic effects produce liver damage. eg. carbon tetrachloride.*

**e.g. Nephrotoxic agents** - *toxic effects produce kidney damage eg. some halogenated hydrocarbons*

**Carcinogens** - agents/compounds that will induce cancer in humans.   
*e.g. benzene, arsenic, inorganic salts of chromium, nickel, beryllium.*

**Mutagens** - agents that affect the cells of the exposed people in such a way that it may cause cancer in the exposed individiual or an undesirable mutation to occur in some later generation.   
*e.g. radiation, variety of chemical agents that alter the genetic message.*

**Teratogens** - Agents or compounds that a pregnant woman takes into her body that generate defects in the fetus   
*e.g. Thalidomide, possibly steroids*

**Sensitizers**-Agents that may cause allergic or allergic-like responses to occur. After an initial exposure to a substance an individual may become sensitized to that substance. Subsequent exposures to the same substance, often at a much lower concentration than before, produce an allergic response. This response may be a skin rash (*dermatitis*) or an asthmatic-like attack, depending on the route of exposure.   
*e.g. cutting oils, isocyanates in polyurethane foam operations and paint spraying operations, some laboratory solvents.*

**HEALTH AND SAFETY POLICY**

**Seavest Africa Trading is committed to providing a safe and healthy environment for all personnel and visitors’ to our site. We will strive to continually improve the effectiveness of the health and safety system through the setting and measurement of health and safety objectives and by conforming to current, applicable occupational health and safety legislation.**

Our main aim is to implement and maintain, as far as is reasonably practicable, the activities of the company in such a manner, as to prevent harm or damage to persons and property respectfully.

Safety, health and protection of the environment will form an integral part of our planning and decision making. We will manage our company, wherever we do business, in an ethical way that strikes an appropriate and well reasoned balance between economic, social and environmental needs.

We are committed to:

* + Conducting our business with respect and care for people and the environment
  + Responsible utilisation of natural resources
  + Continually improving our safety, health and environmental performance
  + Complying, as a minimum, with all applicable legal and other agreed requirements
  + Promoting dialogue with stakeholders about safety, health and environmental performance

We will achieve these by:

* + Implementing safety, health, environmental management system
  + Informing and appropriately training all employees and contractors on safety, health and environmental matters
  + Responding effectively to safety, health and environmental emergencies involving our actives and products
  + As far as reasonably practicable, providing appropriate resources required to implement the above
  + Ensure that the health, safety and environmental policy is reviewed at periods not exceeding three years from the effective date or by a date set by the Chief Executive Officer.

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**CEO (H. Gayadeen) Date**

**Drug and Alcohol Policy**

* The consumption of drugs and alcohol while on duty is strictly forbidden. This is a general and long established regulation. No workplace is exception to this rules and nor is any employee.
* Consumption of alcohol and drugs cause impaired judgement. While executing work tasks this may lead or cause accidents. Any fatalities or loss of life resulting from this situation will hold you responsible. This means criminal charges like culpable homicide and manslaughter.
* Excessive consumption of alcohol on a off day preceding a work day results in a hangover. The alcohol level in your system will be tested at the beginning of the work day irrespective of when the consumption occurred.
* Any employee found in possession of forbidden substances or alcohol will be prosecuted. Any employee that finds forbidden substances or alcohol in the workplace needs to report their findings.
* Consumption of alcohol or drugs in tea or lunch breaks is forbidden. Staff ablutions and change rooms will be randomly monitored.
* Alcohol testing will be conducted randomly or when deemed necessary.
* Any employee refusing to take the test will not be allowed into the work premises.
* Any employee who suspects or becomes aware or a co worker engaging in forbidden consumption of drugs or alcohol needs to report this. Failure may lead to charge.
* Employees who think that they are addicted to a substance may approach the employer for help and rehabilitation. The employer will assist and help you to rehabilitate for your addition.
* Drivers of the company vehicles stand the risk of losing their licence while driving under the influence. This will also then result in the termination of their employment. This is a dismissible offence.
* You may be subjected to a drug test by a physician if it is found that your behaviour at the workplace is irrational.
* Your work is sometimes conducted in a toxic vapour area. If you feel that your vapours are impairing your judgement, stop and get help immediately.
* Let’s work soberly and have zero incidents

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**CEO (H. Gayadeen) Date**

**Environmental and Waste Management**

OUR Company will always strive to conduct its operations in accordance with the relevant local By-Laws and National Legislation. Furthermore, we will continuously strive to become responsible corporate citizens who place the safety of our employees and of our communities before our profit objectives. We pledge to treat our clients, their properties and backyards with all due care and decency. Incorporation of environmental considerations into our decision-making process. The company is committed to promoting and implementing the following core principles of its environmental policy at all levels in the organisation.

The core principals are:

* Conservation of natural resources
* Continuous reduction, including the prevention of pollution, of any adverse impacts of the company’s activities, products and services on air, water and land
* Compliance with all applicable legal and other requirements
* Prevention of environmental incidents
* Framework for setting and reviewing environmental objectives and targets

Waste management is also a very important issue when it coincides with the environment, therefore we need to introduce procedures to ensure waste is managed and utilised properly, these are some pointers on waste management:

* + **Waste avoidance:** The reduction of waste at source. Through a deliberate policy of minimising the creation of waste within an industrial process, many ‘waste-exchange’ opportunities (whereby one company’s waste becomes another’s raw material) can significantly reduce costs and increase the profitability of companies.
  + **Re-use:** The utilisation of a waste product without further transformation.
  + **Recycling:** The manufacturing of a product that is made from waste materials. This can only be done by a business that is technically equipped to change the properties of a former waste material into a new product (e.g. making plastic pellets out of plastic waste, melting waste glass to make new bottles, melting beverage cans for new steel appliances, etc.). There is a distinction between closed-loop and open loop recycling. Closed-loop recycling is a process within the same company that generated the waste, whereby the waste materials from one process is ‘internally recycled’ to be used for another process step or to make another product. Open-loop recycling means that the waste material leaves the location where it was generated and is sent elsewhere for recycling.

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**CEO (H. Gayadeen) Date**

**Driving Policy**

Seavest Africa Trading is committed to the delivery of its obligations under Health and Safety legislation with regard to driving at work, and recognizes that there are specific risks to employees who are driving on behalf of the company.

Seavest Africa has introduced this policy with the objective of identifying and minimising those risks and encouraging safe driving in order to reduce the number of accidents and comply with its legal obligations.

Seavest places great importance on the health and safety of employees, as well as members of the public and must rely on every employee to maintain a responsible attitude to the welfare of others.

The practice of safe driving is essential to maintain all our drivers’ ability to perform their jobs effectively. The Company endeavours to achieve the highest standards in all areas of health and safety and Company drivers are relied upon to observe all the rules of the road, in addition to guidance related to the use and maintenance of their vehicles.

On the basis that all accidents are preventable, all Company drivers are required to operate their vehicles, at all times, in a responsible and considerate manner, with due regard to the safety of themselves and others, the objective being to minimise the risk of accident.

Company vehicles are expensive items of business equipment that must be maintained in a legal, road worthy condition at all times. Drive within the speed limit at all times. Staff driving at work must not contravene the drink driving laws nor have taken drugs or medicines which adversely affect their ability to drive safely. Where a deficiency is highlighted, such as accidents and endorsements the company will offer the appropriate remedial training.

To manage the risks associated with driving both for business and to and from work, the Company requires management and drivers to treat every journey as a managed journey, not something to be treated casually or left to chance. Factors to be taken into account include the type of vehicle, the distance to cover, the type of journey (e.g. motorway, urban), the road and weather conditions and the tiredness of the driver. A responsible attitude is expected from all managers and drivers towards driving, having considered these and other factors which may be relevant, in an effort to reduce risk.

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**CEO (H. Gayadeen Date**

**Quality Policy**

**Our Quality Policy specifies the Degree of Excellence as “all activities of the organization will be carried out in a systematic manner in accordance with defined and documented Policies and Procedures, will meet applicable legislative requirements, will be visible and auditable, and will ensure that the needs of Staff and our customers are met. We realize that Quality is the responsibility of all personnel, and therefore will promote a Quality Culture within the organization by means of sharing information and including personnel in decision making.**

**Management responsibility**

Senior Management provides evidence of its commitment to the development and improvement of the quality management system through both words and actions. We ensure that our Mission, Quality Policy, Values, Beliefs and Organizational Culture are understood, implemented, and maintained at all levels of the organization through documented training, regular communication, verbal reinforcement and rewards.

**Employee Responsibility**

All employees are responsible for the quality of their work and for their part in the overall processes used to provide services to our customers. Employees will identify and record any problems relating to the process, and quality system. Employees are also the key participants in process improvements and the identification of measures needed to ensure the continued success of our continuous improvement process.

**Continual improvement**

We plan and manage the processes necessary for the continual improvement of the QMS through the establishment of objectives, the planning of the process, the provision of resources and information needed to carry out the process, the monitoring of related measures needed to assess process effectiveness and efficiency, and the identification/implementation of actions needed to achieve desired results.

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**CEO (H. Gayadeen) Date**

**INCIDENT INVESTIGATION POLICY**

**Investigation, Reporting and Follow-up**

1. **Introduction**

In our company we strive to minimize the risk as far as is reasonably practicable by identifying hazards and threats. Defences (policies, procedures, inspections, audits, supervisors etc.) are put in place to minimize the identified risks. Should an incident still occur we will investigate and learn from such incident to ensure that the incident will not occur again. Where applicable the existing control measure will be evaluated and where appropriate additional control measures will be put in place. Without discipline, all things will fall apart and where needed, discipline will be enforced.

1. **Definitions**

|  |  |
| --- | --- |
| **Word / phrase** | **Description** |
| **Exposure Hours (EH)** | Total number of hours worked during the year by all employees |
| **Total Reportable Cases (TRC)** | The sum of injuries resulting in fatalities, permanent total disabilities, lost workday cases, restricted work cases and medical treatment (by a qualified nurse or medical practitioner) cases. ***Note: Minor injuries treated by on-site first-aid workers are not classified as a Total Reportable Case.*** |
| **Total Reportable Case Frequency (TRCF)** | TRCF = TRC x 1,000,000 / EH  *Example: TRCF= 25 (TRC) x 1,000,000 / 3,456,123 (EH)*  *TRCF= 7.23* |
| **Incident** | means an incident as contemplated in section 24 (1) of the OHS Act; |
| **Major incident** | means an occurrence of catastrophic proportions, resulting from the use of plant or machinery, or from activities at a workplace; |
| **Near miss** | means an unplanned event that did not result in injury, illness, or damage - but had the potential to do so; |
| **Workplace** | means any premises or place where a person performs work in the course of his employment |

1. **Legal requirements**

**Occupational Health and Safety Act, Act 85 of 1993**

**Section 24 Report to inspector regarding certain incidents**

(1) Each incident occurring at work or arising out of or in connection with the activities of persons at work or in connection with the use of plant or machinery in which, or in consequence of which -

(a) any person dies, becomes unconscious, suffers the loss of a limb or part of a limb or is otherwise injured or becomes ill to such a degree that he is likely either to die or to suffer a permanent physical defect or likely to be unable for a period of at least 14 days either to work or to continue with the activity for which he was employed or is usually employed;

(b) A major incident occurred; or

(c) The health or safety of any person was endangered and where

(i) A dangerous substance was spilled;

(ii) The uncontrolled release of any substance under pressure took place;

(iii) Machinery or any part thereof fractured or failed resulting in flying, falling or uncontrolled moving objects; or

(iv) Machinery ran out of control, shall, within the prescribed period and in the prescribed manner, be reported to an inspector by the employer or the user of the plant or machinery concerned, as the case may be.

(2) In the event of an incident in which a person died, or was injured to such an extent that he is likely to die, or suffered the loss of a limb or part of a limb, no person shall without the consent of an inspector disturb the site at which the incident occurred or remove any article or substance involved in the incident there from: Provided that such action may be taken as is necessary to prevent a further incident, to remove the injured or dead, or to rescue persons from danger.

(3) The provisions of subsections (1) and (2) shall not apply in respect of -

(a) A traffic accident on a public road;

(b) An incident occurring in a private household, provided the householder forthwith reports the incident to the South African Police; or

(c) Any accident which is to be investigated under section 12 of the Aviation Act, 1962 (Act No. 74 of 1962).

(4) A member of the South African Police to whom an incident was reported in terms of subsection (3) (b), shall forthwith notify an inspector thereof.

**General Administrative Regulations**

**8. Reporting of incidents and occupational diseases**

(1) An employer or user, as the case may be, shall -

(a) Within seven days of any incident referred to in section 24(1)(a) of the Act, give notice thereof to the provincial director in the form of WCL1 or FEMA; and

(b) Where a person, in consequence of such an incident, dies, becomes unconscious, suffers the loss of a limb or part of a limb, or is otherwise injured or becomes ill to such a degree that he or she is likely either to die or to suffer a permanent physical defect, such incident, including any other incident contemplated in section 24(1)(b) and (c) of the Act, shall forthwith also be reported to the provincial director by telephone, facsimile or similar means of communication.

(2) If an injured person dies after notice of the incident in which he or she was injured was given in terms of sub regulation (1), the employer or user, as the case may be, shall forthwith notify the provincial director of his or her death.

(3) Whenever an incident arising out of or in connection with the activities of persons at work occur to persons other than employees, the user, employer or self-employed person, as the case may be, shall forthwith notify the provincial director by facsimile or similar means of communication as to the -

(a) Name of the injured person;

(b) Address of the injured person;

(c) Name of the user, employer or self-employed person;

(d) Address of the user, employer or self-employed person;

(e) Telephone number of the user, employer or self-employed person;

(f) Name of contact person;

(g) Details of incident:

(i) What happened;

(ii) Where it happened (place);

(iii) When it happened (date and time);

(iv) How it happened;

(v) Why it happened; and

(h) Names of witnesses.

(4) Any registered medical practitioner shall, within 14 days of the examination or treatment of a person for a disease contemplated in section 25 of the Act, give notice thereof to the chief inspector and the employer in the form of FEMA2.

(5) Any other person not contemplated in this regulation may in writing give notice of any disease contemplated in section 25 of the Act, to the employer and chief inspector.

**9. Recording and investigation of incidents**

(1) An employer or user shall keep at a workplace or section of a workplace, as the case may be, a record in the form of Annexure 1 for a period of at least three years, which record shall be open for inspection by an inspector, of all incidents which he or she is required to report in terms of section 24 of the Act and also of any other incident which resulted in the person concerned having had to receive medical treatment other than first aid.

(2) An employer or user shall cause every incident which must be recorded in terms of sub regulation (1), to be investigated by the employer, a person appointed by him or her, by a health and safety representative or a member of a health and safety committee within 7 days from the date of the incident and finalized as soon as is reasonably practicable, or within the contracted period in the case of contracted workers.

(3) The employer or user shall cause the findings of the investigation contemplated in sub regulation (2) to be entered in Annexure 1 immediately after completion of such investigation.

(4) An employer shall cause every record contemplated in sub regulation (1) to be examined by the health and safety committee for that workplace or section of the workplace at its next meeting and shall ensure that necessary actions, as may be reasonable practicable, are implemented and followed up to prevent the recurrence of such incident.

1. **Procedure**

**4.1 Reportable Incidents**

The following incidents must be reported to the manager as soon as possible after the incident namely:

* All minor incidents where only first-aid was applied;
* All incidents where the injured went to a medical practitioner for assistance;
* All fatal incidents;
* All traffic incidents;
* All “near miss” incidents.

**4.2 Action in case of minor incidents**

|  |  |
| --- | --- |
| **Action** | **Time frame** |
| 1. Notification:    1. to Manager 2. First-aid / medical:    1. First-aider to apply first-aid as required 3. Administration:    1. None 4. Investigation:    1. Manager to appoint investigator and report back to him/ her. 5. Report:    1. Report of incident investigation to Manager 6. Follow-up:    1. None | within 24 hours  within 24 hours  Within 2 weeks |

**4.3 Action in case of all other incidents (“near misses” included)**

|  |  |
| --- | --- |
| **Action** | **Time frame** |
| 1. Notification:    1. to Manager;    2. CEO (in case of fatal / major incident)    3. Family of injured person (in case of fatal). 2. First-aid / medical:    1. First-aider(s) to apply first-aid as required;    2. Get paramedics on scene;    3. Send to nearest hospital for treatment. 3. Administration:    1. Complete FEMA incident reporting form – send to Compensation Commissioner    2. Send copy of completed FEMA form to Local Department of Labour (See General Administrative Regulations 8(1)) 4. Investigation    1. Manager to appoint investigators to investigate incident    2. Manager to assist in investigation and report to CEO; 5. Report:    1. Draft report of incident investigation to CEO    2. Final report of incident investigation to CEO 6. Outcome    1. Internally circulate report so that all persons can learn from incident.    2. Keep incident investigation on record (incident Investigation Register. 7. Follow-up:    1. Any recommendations prescribed in investigation report   must be followed up to ensure similar incidents do not occur again.   * 1. Report on finding must be sent to CEO | Immediately  (phone)  Within 7 days  Immediately or within 7 days  Within 12 hours  Within 2 weeks  Within 4 weeks of incident  Within 1 year  Within 1 week after follow-up |

* 1. **Statistics**

The following statistics will be kept by the company namely:

* Hours worked by all employees of the company (Exposure Hours – EH)
* All incidents where a medical practitioner’s services were used (Total Recordable Cases – TRC).
* All near miss incidents;
* All incidents where first-aid was rendered;

1. **Records**

|  |  |
| --- | --- |
| **Form description** | **Identification** |
| Incident reporting to Compensation Commissioner / Department of Labour | FEMA, Annexure 1 to this Policy |
| Recoding and Investigation of incidents | Annexure 1 of GAR Annexure 2 to this Policy |
| Incident report | Annexure 3 to this Policy |

Where no person was involved in the incident or where a near miss took place, the Incident Report form (See annexure 3) must be used. Complete the form as follows:

## Incident description

A description of what happened in no more that 100 words. The description should factually state the work activity at the time and the sequence of events that led to the incident.

## Outcome

In no longer than 25 words provide a description of injuries and/or damage.

**Main findings from investigation**

Provide a list of the main findings based on factual and proven evidence from the final investigation report. Limit the number of main findings to 4-5

## Main causes

Provide a list of the main causes based on factual and proven evidence. These should typically come from identified failed defenses. Limit the number of main findings to 4-5

**Immediate actions**

Provide a list of the immediate actions taken to prevent re-occurrence of the incident. These should typically come from identified actions to ensure the above identified defences are in place in future. Limit the number of main findings to 4-5

## Underlying causes

Provide a list of the underlying causes in the company that led to the incident occurring. These should typically come from the final investigation report. Limit the number of underlying causes to 4-5.

## Management actions to address underlying causes

Provide a list of the actions for Management in the company to take to prevent re-occurrence of this incident or any other incident of similar nature occurring. These should typically come from the actions to address the identified latent failures in the company. Limit the number of Management actions to 4-5

All completed documents must be filed on the Incident Investigation Register.

1. **Responsibilities**

6.1 All personnel are responsible to study the contents of this policy and procedures to ensure that they are knowledgeable with the contents.

6.2 The HSSE Manager is responsible to ensure that the requirements in terms of safety in the offices are enforced.

6.3 The CEO is overall responsible to ensure compliance with this policy and procedure and the Occupational Health and Safety Act and Regulations.

1. **Title and allocation / Responsible person / Review**
   1. This procedure
      1. Shall be called the Incident Investigations, Policy and Procedure.
      2. Form part of the Health, Safety, Security and Environmental policies and procedures.
   2. The HSE Manager is the responsible person to ensure that revisions take place and that all correspondence in relation to this policy be kept and taken into consideration at the review.
   3. This procedure must be reviewed when need be, but not later than 24 months from the effective date of this policy and procedure.

**Seavest Trading**

**Short Service Employee Program**

**The intention of this programme is to prevent workers unfamiliar with a job from working, without appropriate Supervision.**

Short service employees can be regarded as:-

* A new employee who has just been employed by the Seavest. This employee could either be a very young person, who just left school or college, who has no or very little experience; or it could be a qualified person who has many years of experience, but is new to Seavest.
* It could also include temporary employees, who are hired to perform a specific task for a specified duration. This generally a short period.

The risks associated with Short Service Employees is that they may not fully understanding the policies, procedures and working conditions and hazards of a job, thereby exposing themselves to injury and/or to their co-workers, or cause damage to the environment or equipment.

**For this reason, Seavest does not make use of Short Service Employees on any High Risk jobs.**

All Short Service Employees are identified by the person wearing a WHITE HARD HAT, and a reflective vest. Long Service or Competent Employees wear BLUE HARD HATS and a Reflective Jacket. No SSE will be allowed to work on any jobs without being assigned a mentor. The SSE will be only take instructions and guidance from his/her mentor. Depending on the complexity of the job and the rate at which the SSE learns, the SSE will be under the control of his/her mentor for the first 6 weeks or until the mentor decides that the SSE is capable of performing the task or job without close supervision.

This programme is communicated to all teams and to all Short Service Employees during induction.

**Health, Safety and Environment Policy, Management System and Audits**

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| --- |
|  |

|  |  |
| --- | --- |
| |  | | --- | | Every Seavest employee has a duty to comply with the policy, which applies to all company-owned and -operated locations. The policy also requires contractors and suppliers to manage HSE in compliance with our standards.  For example, before starting a venture, in addition to evaluating the sustainability and business risks that we may encounter, we enlist the help of experts in specific areas to research and identify significant risks, including social and environmental concerns, and define how such risks will be managed. During the negotiation phases of a joint-venture project, we outline the risks identified, clearly state our expectations on environmental and social-issue performance, and discuss with potential co-ventures how these concerns should be managed.  Our HSE policy sets the foundation for our companywide HSE programs. We audit our facilities at least once every five years to ensure that they comply with our own policies and standards and applicable regulatory requirements. Large, complex facilities are audited more frequently. Our own corporate HSE audit group performed 41 such compliance and management system audits in 2008, covering roughly a quarter of our assets. Individual sites also performed their own HSE and management system self-assessments.  If any performance gaps are found, the business unit must develop a corrective action plan within 60 days. Our auditors review and approve these plans, and track them to completion.  We use a company-wide annual HSE compliance verification process to audit action items and risk assessments, and to process hazard analyses, incident investigations and similar corrective actions. Each year all operating business managers must certify their compliance with regulatory requirements and company standards, and attest that adequate action plans exist for any identified gaps. The system is designed to guide identified risk issues and HSE-related issues to conclusion.  The corporate HSE audit group also conducts reviews to determine the operational status for selected exploration and production assets that are new to the company’s portfolio. This helps ensure that the assets are commissioned and operated correctly, that the work force has been properly trained, and that effective inspection and maintenance programs are in place.  Beginning in January 2008, an assessment was required for all items identified in audits as lacking conformance with our standards, policies or procedures. A chart connecting each audit finding to the proper section of the HSE management system is now part of every audit report issued. This allows more systematic evaluation to identify the root causes or underlying factors associated with the nonconformance, and the process improves the quality of corrective action plans. This effort is designed to reduce the likelihood of recurring issues. For all issues identified in the assessment, improvements that are consistent with the company HSE management system must be identified to prevent recurrences.  A specific strength of our HSE audit program is the inclusion of guest auditors. Every audit team includes not only members of the permanent corporate HSE auditing staff, but also other experts nominated by their facility. This allows a more thorough evaluation by team members who are aware of current issues and likely weaknesses, and possess keen insights into the programs and procedures being audited. Additionally, the guest auditor process promotes networking and allows for mutually beneficial peer review. In addition to our corporate auditing process, we also conduct self assessments and inspection processes. | |

**Asbestos Policy**

**Purpose**

To manage risk associated with the exposure to asbestos

**Requirements**

The contractor is responsible for implementing the following requirements:

* Manage Asbestos risks via a Job Hazard Analysis (JHA) and Permit to Work.
* Appoint an Authorized Person or approved contractor for Asbestos for work on or removal of this substance including exposure monitoring and clearance testing.
* Seavest are not authorized to conduct any asbestos work.

Apply the following for work on and removal of asbestos including:

* Enclosure, segregation and signposting of the work area that may be contaminated
* Protective clothing and respiratory protection
* Personal hygiene facilities
* Waste collection, labelling and disposal
* Exposure monitoring and Clearance Testing

And where appropriate:

* Ventilation or air filtration equipment
* Decontamination unit

Do not introduce Asbestos into new or existing facilities

In most cases, there is no danger from the asbestos in your home. As long as the materials that contain the asbestos are intact and undamaged, there is no reason to worry. Asbestos is only a health hazard when tiny fibers of it become airborne. This can happen if you disturb asbestos containing materials during renovations or repairs, or if a material containing asbestos becomes damaged.

**Removing Asbestos**

In general, removing asbestos-containing materials from your home yourself is not recommended. Asbestos is extremely hazardous, and there is no safe level of exposure to asbestos. Even a few fibers have the potential to be inhaled and eventually cause asbestosis, mesothelioma or another cancer. Currently, there are no mesothelioma treatments that result in a cure. Before you consider removing asbestos from your home yourself, consider the following cautions:

* Never sand, drill or saw asbestos containing materials. Do not use power tools on asbestos containing materials.
* Seek professional advice if you’re considering removing materials containing asbestos, or are planning renovations that my disturb materials that contain asbestos.
* Do not attempt to remove asbestos spray coatings, insulation or insulation board by yourself. These are complex jobs that require the training and equipment available to professionals.

**Important Precautions**

Before you begin work:

* Clear the area where the asbestos is to be removed to cut down on the risk of contaminating furniture, clothing and other items with asbestos fibers.
* Cover anything that can’t be removed with thick polyethylene sheeting.
* Isolate the area where work is to be done from the rest of the house by building a containment area and air lock of polyethylene sheeting.
* Cover walls and floors in the area where asbestos is to be removed with polyethylene sheeting.
* Post signs to alert visitors, family and friends of the work in process and the possible exposure risk.

**Protecting yourself while you work:**

* Wear a respirator that is approved for asbestos removal at all times that you are in the containment area.
* Wear a disposable coverall, disposable rubber gloves, rubber boots and protective eye goggles the entire time that you are in the containment area.
* Remove all protective clothing and gear inside the air lock before you leave the containment area. This will prevent the spread of asbestos fibers outside the containment area.

**While working with asbestos:**

* Keep other people away from the working area.
* When possible, saturate the material to be removed with water containing dishwashing liquid to help reduce the dust created by the work.
* Always remove asbestos containing materials whole if possible. Do not break up components or sheets.
* Have an adequate supply of waste bags approved for asbestos disposal on hand.

**Handling Asbestos during Removal**

* Never handle asbestos with your bare hands. Wear disposable rubber gloves.
* Place all removed materials into asbestos waste disposal bags for later disposal
* Keep the floor and any debris on it damp while you work to reduce the amount of dust in the air. Remove the asbestos without breaking it up.

**Seavest is not authorized to conduct any asbestos work. We are not equipped to handle asbestos. If we encounter or need to remove asbestos, specialist are contacted to take action**. **This is just a guideline to highlight and make us aware of dangers and risks.**

**Malaria Policy**

**Overview of Malaria**

Symptoms of malaria can begin a month or more after the infecting mosquito bite. Early symptoms of malaria are non-specific and can easily be mistaken for those of influenza. Rapid diagnosis and early treatment are important, particularly for falciparum malaria, which is fatal in up to 20 percent of infected people and can kill within 24 hours. Drugs taken for prevention are not 100 percent effective. In Sub-Saharan Africa the most important strain of malaria is falciparum malaria, which can cause fatal infections.

**What is Malaria?**

Malaria has been recognised as a disease for thousands of years. Descriptions of the disease date from as far back as 1700 BC in China, and 1570 BC in Egypt. The association between malaria and marshes (where mosquitos breed) has also been long recognised. In fact, the name “malaria” (from “bad air” in the marshes) is based on this association.   
  
Malaria is an infection of red blood cells caused by a single-celled parasite. Malaria is almost always spread by the bite of an infected female Anopheles mosquito, but also potentially by a transfusion with contaminated blood, or an injection with a needle that was previously used by a person with the infection.   
  
Malaria occurs most commonly in tropical areas of the world, such as Africa, Asia, and Central and South America. It was endemic in the United States and Canada at the beginning of the 20th century, but due to extensive programmes to eradicate it, is now usually only seen in the US in travelers from other parts of the world. Malaria occurs in the North Eastern parts of South Africa, particularly during rainy periods of the year.

**Signs & Symptoms of Malaria**

The first symptoms are usually very similar to flu – aches and pains, fever, headache and more. After a few days, the typical paroxysms may occur – chills, followed firstly by a high fever for a few hours, and then by profuse sweating. Between these paroxysms, the patient may feel well, depending on the type of malaria that has been contracted. Some forms of malaria are more severe than others, and the time between the paroxysms differs, depending on the type of malaria. Malaria should be suspected in anybody with these sorts of symptoms who has been to a malaria area. 

**Plasmodium vivax, ovale and malariae**  
  
The incubation period (the time between being bitten by the mosquito and developing symptoms) is variable – usually between 2 and 3 weeks. However, in some cases it may take months for the disease to manifest itself. The initial symptoms are often similar to those of influenza:  
  
•     an intermittent mild fever   
•     headache   
•     muscle aches and chills   
•     a general feeling of illness (malaise).  
  
After a few days (three to five) the typical malarial paroxysms start. These are usually characterised by chills, followed by fever (up to 40 degrees Celsius), and then sweating. The paroxysms normally last about 8 to 10 hours. In between paroxysms patients often feel remarkably well. In vivax and ovale malaria the paroxysms typically recur every 48 hours, while in malariae malaria, the paroxysms recur every 72 hours. The paroxysms occur at about the same time that the red blood cells burst and release more parasites, and this explains the 48 or 72 hour cycle. Eventually, the body will eliminate the parasites from the blood, and the paroxysms will get less and less severe and disappear.   
  
**Plasmodium falciparum**  
  
Symptoms usually begin 10 to 35 days after a mosquito injects the parasite into a person. Again, there are initial “prodromal” symptoms, followed by the malarial paroxysms. However, unlike the other forms of malaria, the paroxysms are not usually as regular, and patients often have a fever between paroxysms.   
  
Although P. falciparum also causes rupture of the red cells every 48 hours, the timing is not as well co-ordinated as with the other forms of malaria, hence the less well delineated paroxysms. In addition, there are usually more parasites in the blood with falciparum malaria than with the other forms, which is one of the reasons that falciparum malaria is more severe than the other forms.   
  
Malaria caused by Plasmodium falciparum is the most severe form of malaria. The most important, and potentially life threatening complication is cerebral malaria. Symptoms of cerebral malaria include:  
   
•     high fever   
•     severe headache   
•     drowsiness   
•     delirium and confusion.   
  
Cerebral malaria can be fatal. It most commonly occurs in infants, pregnant women, and travelers to high-risk areas.

**Cause of Malaria**

**The parasite**  
  
There are four species of the parasite that cause malaria: Plasmodium vivax, Plasmodium ovale, Plasmodium falciparum, and Plasmodium malariae. The life cycle of the malaria parasite begins when a female mosquito bites a person with malaria.   
  
The mosquito ingests blood containing malarial parasites, which reproduce in the mosquito’s gastro-intestinal tract, and then move to the salivary glands. When the mosquito bites another person, the parasites are injected along with the mosquito's saliva. Inside the human, the parasites move to the liver, where they multiply. They mature over an average of 2 to 4 weeks, then leave the liver and enter the blood stream. The parasites infect red blood cells, multiply inside the red blood cells and eventually cause the infected cells to rupture.   
  
Plasmodium vivax, ovale and falciparum usually cause the red cells to rupture every 48 hours, and P. malariae cause rupture every 72 hours. The parasites released from the ruptured red blood cells go and infect more red blood cells, setting up the cycle once more. Occasionally, sexual forms of the parasites (called gametocytes) develop in the blood. These are the forms that reproduce in the mosquito if they are ingested.  
  
P. ovale and P. vivax parasites preferentially infect young red blood cells, while P. malariae prefers to infect older red blood cells. For this reason the number of parasites in the blood is limited if one contracts any of these three forms of malaria. P. falciparum can infect red blood cells of any age, which means infection with this form of malaria results in a much higher number of parasites in the bloodstream.   
  
Some of the liver stages of Plasmodium vivax and Plasmodium ovale can remain dormant in the liver. Periodically, mature parasites will be released into the bloodstream, causing recurrent attacks of malaria. Plasmodium falciparum and Plasmodium malariae do not remain dormant in the liver. However, if the infection is untreated or inadequately treated, the mature form of Plasmodium falciparum may persist in the bloodstream for months, and the mature form of Plasmodium malariae may remain in the bloodstream for years. This causes repeated attacks of malarial symptoms. In Africa the predominant strain is Plasmodium falciparum, which has a very high mortality rate.

**Treatment for Malaria**

The choice of which drug to use to treat malaria depends on where the patient acquired malaria (ie whether chloroquine resistance is common or not), whether prophylaxis was taken, and what form of malaria the patient has.   
  
If the patient has P. vivax, P ovale, P. malariae, or has been in an area where there is no chloroquine resistance in P. falciparum, chloroquine is the best drug to use to treat malaria.If the patient is infected with P. vivax or P. ovale, primaquine needs to be given as well. This drug is able to kill the liver stages of the parasites, unlike chloroquine. If primaquine is not used, the chloroquine will cure the acute attack, but the dormant liver stages will be able to cause recurrences in the future.   
  
In cases where chloroquine resistant P. falciparum is suspected, either quinine, mefloquine, halofantrine or the artemesinins can be used. Parasites that are resistant to mefloquine are also often resistant to halofantrine. Mefloquine is also not licensed for use as treatment in South Africa. Halofantrine has been associated with cardiac side effects, and should not be used for routine treatment. Quinine was the first drug used to successfully treat malaria, and with increasing chloroquine resistance, it is making something of a “comeback”. It is thought to be the best available agent for treating complicated chloroquine resistant falciparum malaria. Unfortunately, resistance to this drug is also being described.   
  
A new class of drug is the artemesinin derivatives. This drug has been known for centuries in China and is derived from the wormwood plant. It shows great potential in being able to treat resistant falciparum malaria, and has been used often in SE Asia. Unfortunately, resistance to this agent is also being described. When these drugs are used to treat malaria, they should be combined with a second agent to try and reduce the development of resistance.  
  
In South Africa, treatment is usually with either an artemesinin derivative called artemether in combination with lumefantrine (Coartem), or with quinine combined with doxycycline. The artemether/lumefantrine combination has been used since 2001 in Kwazulu Natal with good results. It can be used for uncomplicated malaria if the patient is able to take medication orally. For severe or complicated malaria, quinine given intravenously is still the recommended treatment in South Africa.

**HEARING POLICY**

**Policy:** In compliance with the Occupational Health and Safety (OHS) Regulation, the GSC will take all reasonable precautions to protect its employees from hazardous noise exposure in the workplace. The intent of this policy is to add further details and highlight portions of the PHSA Employee Wellness & Safety Program document titled Hearing Conservation Program dated February 2008.

**Procedure:** This program applies to all staff who work in noise hazard areas or who have the potential to develop noise-induced hearing loss as a result of their occupation. At the GSC, Engineering and/or administrative controls are the preferred methods for reducing noise exposure. If these are not feasible or practical, hearing protection must be used where noise levels regularly exceed 85 dBA. For regular noise exposures between 80 and 85 dBA, hearing protection is not mandatory but is encouraged and will be provided on request. Earplugs and earmuff type hearing protection are available from Lab Operations.

**MANAGERS/SUPERVISORS RESPONSIBILITIES**

Managers and supervisors will:

* Ensure that all components of the Hearing Conservation Program are implemented and enforced in noise hazard areas
* Identify noise hazard areas and workers who may be exposed to noise in excess of permissible limits
* Take appropriate steps to minimize the risk of noise-induced hearing loss, including, but not limited to, implementation of noise-control measures where feasible and the provision of appropriate hearing protection devices
* Ensure that employees who are exposed to excessive noise participate in the Audiometric Testing Program
* Ensure that all new employees who may be exposed to hazardous noise levels undergo audiometric testing
* Ensure noise-exposed employees who have terminated employment undergo audiometric testing prior to departure
* Maintain records of current noise levels, and noise-control and hearing-conservation measures
* Maintain an up-to-date list of employees who are at risk for noise-induced hearing loss. This list must indicate whether the employees have received noise hazard awareness training and whether they are participating in the audiometric testing program

**EMPLOYEES RESPONSIBILITIES**

Staff members will:

* Participate in the Audiometric Testing Program
* Use hearing protection as required and ensure its maintenance
* Report noise concerns to their supervisor

**NOISE IDENTIFICATION AND ASSESMENT**

The identification of noise hazard areas and employees who are at risk of excessive noise exposure must be carried out by means of workplace noise surveys and dosimetry in accordance with CSA Standard Z107.56-94, “Procedures for the Measurement of Occupational Noise Exposure.” Whenever workplace conditions in these areas change (i.e., when new equipment is introduced or the design of the workspace is changed), an assessment to determine changes in noise exposure should be conducted.

The GSC is not required to measure the noise exposure of a worker if(a) based on other information, the supervisor identifies the worker as being exposed to noise in excess of an exposure limit, and(b) the supervisor establishes an effective noise control and hearing conservation program for that worker.

**NOISE CONTROL**

In a noise hazard area, where noise cannot be eliminated, engineering controls to reduce noise levels must be considered as a first option and, where feasible or practical, be implemented. Depending on the circumstances, possible engineering controls could include:

* Barriers between the noise source and exposed staff
* Vibration damping
* Isolation of the noise source
* Sound-absorbing enclosures

Before new equipment is purchased, consideration must be given to the noise levels it will generate and the potential exposure of employees working with or near the equipment. Before equipment is purchased, its noise specifications must be checked. Consideration must be given to the long-term implications of equipment that produces sustained noise levels in excess of 85 dBA in the workplace and impact noise above 135 dBA. In instances where engineering controls are not practical or feasible, administrative controls such as changes in work procedures, rescheduling of the noisy activity or decreasing the duration of exposure must be considered.

**HEARING PROTECTION**

Engineering and/or administrative controls are the preferred methods for reducing noise exposure. If these are not feasible or practical, hearing protection must be used where noise levels regularly exceed 85 dBA. For regular noise exposures between 80 and 85 dBA, hearing protection is not mandatory but is encouraged and should be provided on request. The hearing protection will be selected and maintained in accordance with CSA Standard Z94.2.

**PROGRAM REVIEW**

The Hearing Conservation Program will be reviewed annually by Employee Wellness & Safety.

Where needed and/or identified the review will address:

* Noise surveys and assessments, conducted due to either equipment or design change or newly
* identified areas of concern
* Effectiveness of education and training in regards to hearing conservation
* Adequacy of existing noise controls
* Selection and use of hearing protection and its effectiveness
* Audiometric results and their implications
* Information on the rate and extent of occupational hearing loss Provincial Health Services Authority

RISK ASSESSMENT POLICY AND PROCEDURE

* 1. **Introduction**

This policy forms part of and should be read in conjunction with the Health, Safety, Security and Environment Policy and the Personal Protective Equipment Policy and Procedure. It is designed to provide guidance for managers and staff on the arrangements to conduct the risk / hazard assessments and thereby confirm how Seavest will comply with section 8 of the Occupational Health and Safety Act, Act 85 of 1993.

The policy requires all managers, on behalf of Seavest to:

1. Make suitable and sufficient assessments of the hazards presented to staff and clients by their activities.
2. Prevent those hazards where reasonably practicable.
3. Where the hazards cannot be prevented implement appropriate protective risk control measures, including the provision of PPE necessary to reduce the risks presented.
   1. **Scope**

This policy applies to all the personnel, learners, clients of Seavestand any other person who may be affected by our activities.

* 1. **Definitions**

**Danger** means anything which may cause injury or damage to persons or property;

**Hazard** means a source of or exposure to danger;

**Safe** means free from any hazard;

**Therefore:**

**Safe** means free from any source of or exposure to anything which may cause injury or damage to persons or property;

**Risk** means the probability that injury or damage will occur;

**Personal Protective Equipment (PPE)** means allequipment (including clothing affording protection against the weather) which is intended to be worn or held by a person at work, and which protects them against one or more risks to their health or safety. Such equipment includes safety helmets, gloves, eye protection, high-visibility clothing, safety footwear and safety harnesses.

**Method statement** means a document detailing the key activities to be performed in order to reduce as reasonably as practicable the hazards identified in any risk assessment;

**Safe work procedure** means a documented plan to mitigate, reduce or control the risks and hazards that have been identified

**Hazard identification** means the identification and documenting of existing or expected hazards to the health and safety of persons, which are normally associated with the type of work being executed or to be executed;

**Risk / hazard assessment** means a program to determine any risk associated with any hazard at a site, in order to identify the steps needed to be taken to remove, reduce or control such hazard;

**ALARP –** means as low as reasonably practicable according to the guidelines in Annexure 3 to this policy.

* 1. **Legal Requirements**

**Occupational Health and Safety Act, Act 85 of 1993**

**8. General duties of employers to their employees**

(2) Without derogating from the generality of an employer's duty under subsection (1), the matters to which those duties refers include in particular -

(a) The provisions and maintenance of systems of work, plant and machinery that as far as is reasonably practicable, safe and without risks to health;

(b) Taking such steps as may be reasonably practicable to eliminate or mitigate any hazard or potential hazard to the safety or health of employees, before resorting to personal protective equipment;

(c) Making arrangements for ensuring, as far as is reasonably practicable, the safety and absence of risks to health in connection with the production, processing, use, handling, storage or transport of articles or substances;

(d) Establishing, as far as is reasonably practicable, what hazards to the health or safety of persons are attached to any work which is performed, any article or substance which is produced, processed, used, handled, stored or transported and any plant or machinery which is used in his business, and he shall, as far as is reasonably practicable, further establish what precautionary measures should be taken with respect to such work, article, substance plant or machinery in order to protect the health and safety of persons, and he shall provide the necessary means to apply such precautionary measures;

(e) Providing such information, instructions, training and supervision as may be necessary to ensure, as far as is reasonably practicable, the health and safety at work of his employees;

(f) As far as is reasonably practicable, not permitting any employee to do any work or to produce, process, use, handle, store or transport any article or substance or to operate any plant or machinery, unless the precautionary measures contemplated in paragraphs (b) and (d); or any other precautionary measures which may be prescribed, have been taken;

(g) Taking all necessary measures to ensure that the requirements of this Act are complied with by every person in his employment or on premises under his control where plant or machinery is used;

(h) Enforcing such measures as may be necessary in the interest of health and safety;

(i) ensuring that work is performed and that plant or machinery is used under the general supervision of a person trained to understand the hazards associated with it and who have the authority to ensure that precautionary measures taken by the employer are implemented; and

(j) Causing all employees to be informed regarding the scope of their authority as contemplated in section 37 (1)(b).

**Construction Regulations**

**7. Risk assessment**

(1) Every contractor performing construction work shall before the commencement of any construction work and during construction work, cause a risk assessment to be performed by a competent person appointed in writing and the risk assessment shall form part of the health and safety plan to be applied on the site and shall include at least -

(a) the identification of the risks and hazards to which persons may be exposed to;

(b) the analysis and evaluation of the risks and hazards identified;

(c) a documented plan of safe work procedures to mitigate, reduce or control the risks and hazards that have been identified;

(d) a monitoring plan; and

(e) a review plan.

(2) A contractor shall ensure that a copy of the risk assessment is available on site for inspection by an inspector, client, client's agent, contractor, employee, representative trade union, health and safety representative or any member of the health and safety committee.

(3) Every contractor shall consult with the health and safety committee or, if no health and safety committee exists, with a representative group of employees, on the development, monitoring and review of the risk assessment.

(4) A contractor shall ensure that all employees under the his or her control are informed, instructed and trained by a competent person regarding any hazard and the related work procedures before any work commences, and thereafter at such times as may be determined in the risk assessment.

(5) A principal contractor shall ensure that all contractors are informed regarding any hazard as stipulated in the risk assessment before any work commences, and thereafter at such times as may be determined in the risk assessment.

(6) A contractor shall ensure that as far as is reasonably practicable, ergonomic related hazards are analyzed, evaluated and addressed in the risk assessment.

(7) Notwithstanding the requirements laid down in sub regulation (4), no contractor shall allow or permit any employee or person to enter any site, unless such employee or person has undergone health and safety induction training pertaining to the hazards prevalent on the site at the time of entry.

(8) A contractor shall ensure that all visitors to a construction site undergoes health and safety induction pertaining to the hazards prevalent on the site and shall be provided with the necessary personal protective equipment.

(9) Every employee on site shall -

(a) be in possession of proof of the health and safety induction training as determined in sub regulation (7), issued by a competent person prior to the commencement of construction work; and

(b) Carry the proof contemplated in paragraph (a) for the duration of that project or for the period that the employee will be on the construction site.

* 1. **Policy and Procedure**

**Risk / Hazard assessment and Safe Work Procedures**

**5.1 Risk / Hazard Assessment**

The hazard assessment is a process of identifying the hazards associated with a defined task and prescribing personal protective equipment along with other relevant protection measures which must be employed to reduce the risk from the hazards. The supervisor shall assess each work assignment to determine if hazards are present or likely to be present and require the use of personal protective equipment.

The Risk / Hazard Assessment consists of the following namely:

(a) The identification of the risks and hazards to which persons may be exposed to;

(b) The analysis and evaluation of the risks and hazards identified;

(c) A documented plan of safe work procedures to mitigate, reduce or control the risks and hazards that have been identified;

(d) A monitoring plan; and

(e) A review plan.

**5.2 Risk / Hazard Assessment Process**

The following process shall be taken to ensure all the risks / hazards have been identified.

**NOTE:** PPE devices alone should not be relied on to provide protection against hazards, but should be used in conjunction with guards, engineering controls, and sound work practices.

5.2.1 All the tasks performed by Seavest employees must be identified and listed. The following main activities have been identified within Seavest which must be managed namely:

* Office Administration Services;
* Engineering maintenance services;

5.2.2 Identify the risks / hazards to which the persons may be exposed to. The following must be considered to ensure all risks / hazards have been identified namely:

* Impact, Compression, Penetration;
* Tasks
* Machinery
* Chemical / Harmful dust risks/ hazards
* Explosive / oxygen deficient atmosphere hazards
* Light radiation
* Other contractors/ tasks
* Public

During the survey, the safety officer should observe:

* Sources of motion; i.e. machinery or process where any movement where any movement of tools, machine elements or particles could exist, or movement or personnel that could result in collision with stationary objects;
* Sources of high temperatures that could result in burns, eye injury of ignition of protective equipment, etc.;
* Types of chemical exposures;
* Sources of harmful dust;
* Sources of light radiation, i.e. welding, brazing, cutting, furnaces, heat treating, high-intensity lights, etc.;
* Sources of falling objects or potential for dropping objects;
* Sources of sharp objects which might pierce the feet or cut the hands;
* Sources of rolling or pinching objects which could crush the feet;
* Layout of workplace and location of co-workers; and
* Any electrical hazards; in addition; injury/accident data should be reviewed to help identify problem areas.

Following the survey, it is necessary to organize the data and information for use in the assessment of hazards. The objective is to prepare for an analysis of the hazards in the environment to enable proper selection of protective equipment. (See annexure 2 – Generic Risk Assessment Table).

5.2.3 Analyse and evaluate the identified risks. Having gathered and organized data at a workplace, an estimate of the potential for injuries should be made. Each of the basic hazards should be reviewed and a determination made as to type, level of risk, and seriousness of potential injury from each of the hazards found in the area. The possibility of exposure to several hazards simultaneously should be considered. (See annexure 1 – Risk Assessment Matrix)

5.3.4 Put a documented plan of controls together for each of the risks / hazards that have been identified. Where the Risk Assessment Matrix indicates the risk to be in the medium and high, a Job Hazard Analysis/ Method Statement must be completed for the activity.

* Management processes (Policies and Procedures)
* Risk Assessment Table
* Job Hazard Analysis / Method statements;

5.3.5 Put a monitoring plan together to ensure compliance with the prescribed controls is followed.

5.3.6 Review your Risk / Hazard Assessment when any of the following has taken place namely:

* Changes in the workplace render previous assessments obsolete;
* Changes in the work procedures render previous assessments obsolete;
* Other types of machinery are used;
* An incident took place whilst all the controls were in place; or
* A year has lapsed since the previous assessment.
  1. **Records**

A record of the Risk Assessment with the corresponding protective and preventative measures must be retained.

Records for the issue of PPE as well as the training records for the PPE issued will be kept (See Personal Protective Equipment Policy and Procedure.)

* 1. **Responsibilities**

7.1 All personnel are responsible to study the contents of this policy and procedures to ensure that they are knowledgeable with the contents.

7.2 The CEO is overall responsible to ensure compliance with this policy and procedure and the Occupational Health and Safety Act and Regulations.

* 1. **Title and allocation / Responsible person / Review**
  2. This procedure
     1. Shall be called the Hazard / Risk Assessment Policy and Procedure; and
     2. Form part of the Health, Safety and Environmental policies and procedures.
  3. The CEO is the responsible person to ensure that revisions take place and that all correspondence in relation to this policy be kept and taken into consideration at the review.
  4. This procedure must be reviewed when need be, but not later than 24 months from the effective date of this policy and procedure.

**Annexure 1**

**RISK ASESSMENT MATRIX**

The matrix is divided into blue, yellow and red areas to illustrate the increasing level of Risk.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Severity** | **CONSEQUENCES** | | | | **INCREASING LIKELIHOOD** | | | | |
| **People (P)** | **Assets (A)** | **Environment (E)** | **Reputation (R)** | **A** | **B** | **C** | **D** | **E** |
| Never heard of in the Industry | Heard of in the Industry | Has happened in the Organisation or more than once per year in the Industry | Has happened at the Location or more than once per year in the Organisation | Has happened more than once per year at the Location |
| **0** | No injury or health effect | No damage | No effect | No impact |  |  |  |  |  |
| **1** | Slight injury or health effect | Slight damage | Slight effect | Slight impact |  |  |  |  |  |
| **2** | Minor injury or health effect | Minor damage | Minor effect | Minor impact |  |  |  |  |  |
| **3** | Major injury or health effect | Moderate damage | Moderate effect | Moderate impact |  |  |  |  |  |
| **4** | PTD or up to 3 fatalities | Major damage | Major effect | Major impact |  |  |  |  |  |
| **5** | More than 3 fatalities | Massive damage | Massive effect | Massive impact |  |  |  |  |  |

*Figure 1: Risk Assessment Matrix*

**The blue, yellow and red areas are labeled Low, Medium and High to illustrate increasing level of Risk.**

**Consequence Categories and Severities**

The following tables contain the description and definition of the Severity levels in each of the PAER categories, followed by examples as bullet points.

**Harm to People**

|  |  |
| --- | --- |
| **Level** | **Definition** |
| **0** | **No injury or health effect** |
| **1** | **Slight injury or health effect** – Not affecting work performance and not affecting Daily Life Activities. Examples:   * First aid cases and medical treatment cases. * Exposure to health hazards that give rise to noticeable discomfort, minor irritation or transient effects reversible after exposure stops. |
| **2** | **Minor injury or health effect** – Affecting work performance, such as restriction to work activities or need to take up to 5 days to fully recover. Or affecting Daily Life Activities for up to 5 days. Or reversible health effects.  Examples:   * Restricted work day cases or lost work day cases resulting in up to 5 calendar days away from work. * Illnesses such as skin irritation or food poisoning. |
| **3** | **Major injury or health effect** – Affecting work performance in the longer term, such as absence from work for more than 5 days. Or affecting Daily Life Activities for more than 5 days. Or irreversible damage to health.  Examples:   * Long term disabilities (previously called Permanent Partial Disabilities). * Illnesses such as sensitisation, noise induced hearing loss, chronic back injury, repetitive strain injury or stress. |
| **4** | **Permanent total disability or up to three fatalities** – resulting from injury or occupational illness. Examples:   * Illnesses such as corrosive burns, asbestosis, silicosis, cancer and serious work related depression. * Car accident resulting in 1, 2 or 3 fatalities. |
| **5** | **More than three fatalities** – resulting from injury or occupational illness. Examples:   * Multiple asbestosis cases traced to a single exposure situation. * Cancer to a large exposed population. * Major fire or explosion resulting in more than 3 fatalities. |

**Asset Damage and other Consequential Business Loss**

|  |  |
| --- | --- |
| **Level** | **Definition** |
| **0** | **No damage** |
| **1** | **Slight damage** - Costs less than R100,000. Example:   * No disruption to operation. |
| **2** | **Minor damage** - Costs between R100,000 and R1000,00. Example:   * Brief disruption to operation. |
| **3** | **Moderate damage** - Costs between R1000,000 and R10 million. Example:   * Partial shutdown. |
| **4** | **Major damage** - Costs between R10 and R100 million. Example:   * Up to two weeks shutdown. |
| **5** | **Massive damage** - Costs in excess of R100 million. Example:   * Substantial or total loss of operation. |

**Environmental Effect**

The bullet points in the environmental effect table are a mixture of:

* Effects, e.g. groundwater contamination.
* Events with the potential for environmental effect, e.g. exceeding a limit.
* Indicators of potential effects, e.g. complaints.

|  |  |
| --- | --- |
| **Level** | **Definition** |
| **0** | **No effect.** |
| **1** | **Slight effect** – Slight environmental damage – contained within the premises. Example:   * Small spill in process area or tank farm area that readily evaporates. |
| **2** | **Minor effect** – Minor environmental damage, but no lasting effect. Examples:   * Small spill off-site that seeps into the ground. * On-site groundwater contamination. * Complaints from up to 10 individuals. * Single exceedance of statutory or other prescribed limit. |
| **3** | **Moderate effect** – Limited environmental damage that will persist or require cleaning up. Examples:   * Spill from a pipeline into soil/sand that requires removal and disposal of a large quantity of soil/sand. * Observed off-site effects or damage, e.g. fish kill or damaged vegetation. * Off-site groundwater contamination. * Complaints from community organisations (or more than 10 complaints from individuals). * Frequent exceedance of statutory or other prescribed limit, with potential long term effect. |
| **4** | **Major effect** – Severe environmental damage that will require extensive measures to restore beneficial uses of the environment. Examples:   * Oil spill at a jetty during tanker (off) loading that ends up on local beaches, requiring clean-up operations. * Off-site groundwater contamination over an extensive area. * Many complaints from community organisations or local authorities. * Extended exceedances of statutory or other prescribed limits, with potential long term effects. |
| **5** | **Massive effect** – Persistent severe environmental damage that will lead to loss of commercial, recreational use or loss of natural resources over a wide area. Example:   * Crude oil spillage resulting in pollution of a large part of a river estuary and extensive clean-up and remediation measures. |

**Impact on Reputation**

|  |  |
| --- | --- |
| **Level** | **Definition** |
| **0** | **No impact** |
| **1** | **Slight impact**   * Local public awareness but no discernible concern. * No media coverage |
| **2** | **Minor impact**   * Local public concern. * Local media coverage. |
| **3** | **Moderate impact** - Significant impact in region or country   * Regional public concern. * Local stakeholders, e.g. community, NGO, industry and government, are aware. * Extensive attention in local media. Some regional or national media coverage. |
| **4** | **Major impact** - Likely to escalate and affect Group reputation   * National public concern. * Impact on local and national stakeholder relations. National government and NGO involvement with potential for international NGO action. * Extensive attention in national media. Some international coverage. * Potential for regulatory action leading to restricted operations or impact on operating licenses. |
| **5** | **Massive impact** - Severe impact on Group reputation   * International public concern. * High level of concern amongst governments and action by international NGOs. * International media attention. * Significant potential for effect on national/international standards with impact on access to new areas, grants of licenses and/or tax legislation. |

**Likelihood Scale**

The scale of increasing Likelihood is intended to represent a range from highly unlikely to frequent. It is expressed in terms of frequency of events per period per Industry, Organisation or Location.

These descriptions should be used in every application of the Risk Assessment Matrix so as to promote consistent assessment of risk.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Increasing Likelihood** | | | | |
| **A** | **B** | **C** | **D** | **E** |
| Never heard of in the Industry | Heard of in the Industry | Has happened in the Organisation or more than once per year in the Industry | Has happened at the Location or more than once per year in the Organisation | Has happened more than once per year in the Location |

For most applications of the Risk Assessment Matrix it is recommended not to express Likelihood in terms of decimal or percentages, as this cannot be supported by the quality of the input data. For the few applications where historical incident or failure data is available to calculate Likelihood, e.g. quantified risk assessment (QRA) and layer of protection analysis (LOPA), caution must be exercised in using numerical Likelihood scales, for the following reasons:

* Quantified risk assessments, and semi-quantitative risk determinations using the Risk Assessment Matrix can inform a decision, but it is still necessary to judge the acceptability of Risks against all the applicable Tolerability Criteria.
* If the Risk Assessment Matrix is used for quantitative assessments ensure that the Likelihood ranges selected for each column are consistent with the Likelihood scale descriptions of the standard Risk Assessment Matrix.

**Instructions for Use of the Risk Assessment Matrix**

The starting point for a Risk Assessment Matrix assessment is an understanding of the Hazard in its context (activity, location etc.), or an understanding of the particular incident being considered. An assessment consists of the following steps.

**Step 1 Identify potential consequences**

Identify the consequences that could develop from a release of the Hazard under the prevailing conditions. Ask the question: ‘What could happen if the controls don’t work or they fail?’

For example, the operation of a pump in crude oil service involves the potential for a release of crude oil in the event of a pump seal failure. Some of the consequences that could result are:

a) Leak of crude oil into the drain system and then into the sea.

b) Ignition of the crude oil resulting in a small fire around the pump.

c) Inadequate fire fighting and escalation of the fire to the point where other process equipment fails and a major fire and explosion occurs.

**Step 2 Estimate the Severity of each potential Consequence**

For each of the identified consequences assess the Severity (0 - 5) in the four Consequence categories - people, assets, environment and reputation (PAER). The severities for the PAER categories are defined above.

In the crude oil pump example above, for the consequence in which crude oil leaks from the pump seal and flows through the drain system into the sea, there could be impacts in 3 Consequence categories - asset, environment and reputation.

**Step 3 Estimates the Likelihood**

For each of the potential consequences make an estimate of the Likelihood of the Consequence in terms of the Likelihood levels A to E.

The Likelihood level should be judged from past experience, by asking the question: ‘How often in the past has a hazard release resulted in a Consequence similar to the one that we are considering?’

The approach is one of applying history to predict the future. The estimate of Likelihood should be based on the Likelihood of the particular Consequence under consideration, not on the Likelihood of the Hazard being realised or incident occurring.

In the example above an estimate should be made of the likelihood of the crude oil pump seal leak resulting in oil into the sea, not the likelihood that the pump seal will leak.

The reliability of the Likelihood estimate, and therefore of the Risk Assessment Matrix assessment, depends to a large extent on the availability of data on previous incidents and on the knowledge and experience of the assessors. It is therefore important to maintain databases of previous incidents and make them available to everyone who will be making Risk Assessment Matrix assessments.

The hazard release scenario or the incident under consideration will often not be identical to the previous incidents that are being used to predict likelihood. Also, detailed information on previous incidents outside the Organisation, or even outside the Location, may not be readily available in some companies. Therefore, a combination of available information and judgment from experience has to be applied to make a best estimate of the Likelihood level A to E.

**Step 4 Estimate the risk rating**

For each potential Consequence determine the risk rating for each of the applicable PAER categories in terms of the product of the Consequence Severity and the Likelihood. The risk ratings (up to 4 for each potential Consequence) can be plotted on the matrix to provide a visual representation of the risk profile of the hazard release scenario under consideration.

The recommended convention for expressing risk ratings is in the form ‘People 2B’ or ‘Reputation 4C’.

Risk ratings derived in this way reflect the controls that have typically been applied in the Location or Organisation over the period for which previous incidents were used to estimate Likelihood.

There is normally insufficient data on these previous incidents to allow the Likelihood estimates, and therefore the Risk Assessment Matrix ratings, to be re-estimated for the situation with additional controls in place. It is therefore recommended not to use the Risk Assessment Matrix to assess the effect of additional controls on the level of Risk. The residual risk after applying additional controls should be judged against the applicable Tolerability Criteria.

**Annexure 2**

**RISK ASSESSMENT TABLE**

**Introduction**

This table will ensure that the Seavest HSE Management is effectively working and will be used as a local management tool to ensure the Company’s strategic business objectives are met. In practical terms this means, to achieve continuous risk reduction whilst following the fundamental guidelines of the concept ALARP, “As Low As Reasonably Practicable”, as defined.

**Objectives**

1. To ensure that an effective Risk Assessment Process is implemented and maintained for all activities;
2. To ensure that appropriate and effective procedures exist to protect the structures belonging to Seavest and to other parties, as well as protecting the environment;
3. To ensure that in case of an incident, and especially an incident with significant impact, a prompt and effective response will be provided to mitigate the consequences;
4. To provide assurance that risks associated with Seavest HSE Critical operations and activities are managed to ALARP.

**Table all HSE Critical Activities, Tasks and associated Hazards**

A table of all activities associated with Seavest activities must be compiled and each activity must be ranked in accordance with the guidelines for risk using the Risk Assessment Matrix. All **HIGH** and **MEDIUM** risks must be included in the Hazard Control Register and for further detailed analysis on the Hazard Control Sheets.

**Generic Risk Assessment Table**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Hazard No** | **Hazard** | **Activity** | **Location** | **Threats** | **Top Event** | **Consequences/Incident considered for RAM rating** | **RISK POTENTIAL** | | | | **ALARP**  **Documentation** | **Comments** |
| **P** | **A** | **E** | **R** |
| **1** |  |  |  |  |  |  |  |  |  |  |  |  |
| **2** |  |  |  |  |  |  |  |  |  |  |  |  |

Sample of table used.

**HSE Critical positions**

HSE Critical Positions must be identified as relevant to the development, implementation and maintenance of controls for the hazards identified in this Table.

**Job Hazard Analysis/ Method Statement forms**

Following the risk assessment, each activity listed in the Generic Risk Assessment Table must be analysed to identify relevant Hazards, Threats and Consequences in order to consider and develop appropriate controls for the identified threats. For each of the listed HSE Critical Activities a Risk Assessment Table, a Job Hazard Analysis/ Method Statement must be developed.

**Generic Risk Assessment Table**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Hazard No** | **Hazard** | **Activity** | **Location** | **Threats** | **Top Event** | **Consequences/ Incident considered for RAM rating** | **RISK POTENTIAL** | | | | **ALARP**  **Documentation** | **Comments** |
| **P** | **A** | **E** | **R** |
| **1** |  |  |  |  |  |  |  |  |  |  |  |  |
| **2** |  |  |  |  |  |  |  |  |  |  |  |  |
| **3** |  |  |  |  |  |  |  |  |  |  |  |  |
| **4** |  |  |  |  |  |  |  |  |  |  |  |  |
| **5** |  |  |  |  |  |  |  |  |  |  |  |  |
| **6** |  |  |  |  |  |  |  |  |  |  |  |  |
| **7** |  |  |  |  |  |  |  |  |  |  |  |  |
| **8** |  |  |  |  |  |  |  |  |  |  |  |  |
| **9** |  |  |  |  |  |  |  |  |  |  |  |  |
| **10** |  |  |  |  |  |  |  |  |  |  |  |  |
| **11** |  |  |  |  |  |  |  |  |  |  |  |  |
| **13** |  |  |  |  |  |  |  |  |  |  |  |  |
| **14** |  |  |  |  |  |  |  |  |  |  |  |  |
| **15** |  |  |  |  |  |  |  |  |  |  |  |  |
| **16** |  |  |  |  |  |  |  |  |  |  |  |  |
| **17** |  |  |  |  |  |  |  |  |  |  |  |  |
| **18** |  |  |  |  |  |  |  |  |  |  |  |  |
| **19** |  |  |  |  |  |  |  |  |  |  |  |  |
| **20** |  |  |  |  |  |  |  |  |  |  |  |  |

**Annexure 3**

**ALARP**

1. **Scope**

The determination of ALARP is a management decision.

Seavest shall develop and document a procedure for demonstrating that identified HSE risks have been reduced to a level that is ‘As Low As Reasonably Practicable’ (ALARP). For consistency, across business units, the written procedure shall, as a minimum, incorporate each of the following elements.

1. **Definition**

ALARP cannot be defined in terms of a point on the Risk Assessment Matrix. To determine if an HSE risk has been reduced to ALARP requires an objective assessment that the risk is both tolerable AND is at a level where additional resources required to achieve further reduction measures become unreasonably disproportionate to the additional risk reduction obtained.This document describes the process and the criteria to demonstrate the ALARP has been achieved.

1. **Acceptability criteria**

As a minimum, all of the following acceptability criteria must be met, before a risk can be considered to be at ALARP level:

* The residual risk after applying all control and recovery measures must not be in the red area of the Risk Assessment Matrix (RAM).
* All regulatory requirements related to control of the risk have been met.
* Company requirements for managing the identified risk have been met.
* Generally accepted Industry Standards and Practices that are applicable to the considered hazard have been met.
* All Control and Recovery Measures that are in place to reduce the risk are both valid and effective and are sufficient to reduce the risk to an acceptable level.

Care should be exercised in identifying what is an applicable requirement for Design and Engineering Practices.

1. **ALARP determination**

The ‘Tolerability’ of all identified High and Medium HSE risks are demonstrated in the HSE MS and documented in the Hazards Control Register. Once it has been demonstrated that the residual risk is tolerable, further risk reduction opportunities must be considered and evaluated to determine if it is ALARP. If the considered risk reductions opportunity is credible and does not require a disproportionate amount of resources, it must be implemented regardless of the current residual risk level. If there are no further ‘credible’ improvement opportunities OR if the resources necessary to implement an improvement are disproportionate to the benefit gained, the Risk should be considered to be ALARP.

The methods and tools available for doing this determination include, but are not limited to:

**Experience & Judgment** – This is the preferred method. It is the easiest to use, but however, it is the most subjective. Therefore to be auditable and defensible, the subjective evaluation shall be made by a knowledgeable and experienced review team consisting at least three members one of whom must have Skill level competency in HSE, Operations and Engineering. The Team membership and competencies of each member must be documented.

**Cost-Benefit Analysis** – This tool is often difficult to use and time consuming. Cost and Benefit data is often difficult to obtain and may only be slightly less subjective than ‘Judgment’. Its use should therefore only be considered in cases where an ‘Experience & Judgment’ determination is just too close to call. This tool is best applied to decisions involving protection of assets. A generally accepted rule for the cost-benefit ratio is to implement the measure where the annualized cost of the improvement does not exceed 10% of the value of the benefit. This tool may not be used where the probable consequence would be a fatality.

**Quantitative Risk Assessment** – This is the most difficult tool to use properly and requires specialized knowledge and experience. This should only be considered where it is absolutely necessary to accurately determine the extent to which a risk has been reduced; that is determining the final consequence and a precise probability of occurrence. Generally, this is limited to issues where it is not possible to reduce the consequence, so it must be demonstrated that the potential of occurrence is so low that it may be considered negligible.

The final determination steps above must be completed and documented. ALARP Determination form or similar form may be used to document this determination. After the final determination has been made, all identified risks, including those that were assessed as LOW, shall be managed for continuous improvement. These Risks shall be reviewed periodically and the ALARP determination reassessed, with priority based on the Risk level. Identified improvement opportunities shall be added to the Remedial Action Plan.

**4.1 Demonstration of ALARP should include**:

* Business and local legal risk control expectations or requirements.
* A Risk Assessment Matrix or Quantified Risk Assessment of severity and scope of the risk.
* The state of knowledge reasonably available concerning the risk and its removal or mitigation – including industry guidance and best practice e.g. standards etc.
* The availability and suitability of means for removing or mitigating the risk.
* Consideration of the robustness, reliability and sustainability of control and recovery measures.

**Safe Working Procedures For:**

**Drills**

1. General safety - Safe Operations:

* Read All Instructions - failure to follow the safety rules listed below and other basic safety precautions may result in serious personal injury.

2. Work Area

* Keep children away
* Do not let visitors contact tool or extension cord. All visitors shall be kept away from work area.
* Do not use power tools in damp or wet locations.
* Keep work area well lit.
* Do not expose power tools to rain.
* Do not use the tool in the presence of flammable fluids or gases.

3. Personal safety

* Now your power tool - Read and understand the owner's manual and labels affixed to the tool. Learn its application and limitations as well as the specific potential hazards peculiar to this tool.
* Don't overreach - Keep proper footing and balance at all times.
* Watch what you are at all times doing.
* Dress properly -do not wear loose clothing or jewellery; they can be caught in moving parts. Rubber gloves and non-skid footwear are recommended when working outdoors. Wear protective hair covering to contain long hair.
* Disconnect tools from power source when not in use, before servicing, when changing wheels etc.
* Keep guards in place, in working order, and in proper adjustment and alignment.
* Remove adjusting keys and wrenches when not in use, before servicing, and when changing wheels.
* Ensure the switch is in the "off" position before plugging in tool.
* Never stand on tool or its stand.
* Check damaged parts for damaged parts before operating the tool.
* Only trained repairmen should attempt all repairs, electrical or mechanical.
* Don't leave tool until it comes to a complete stop.
* Do not operate electric tools in gaseous or explosive atmosphere.
* Keep handles dry, clean and free from oil and grease.
* Before connecting the tool to a power source (receptacle, outlet), be sure voltage supplied is the same as that specified on the nameplate of the tool
* Use the drill press in a well-lit area and on a level face, clean and smooth enough to reduce the risk of trips and falls.
* Never place your fingers in a position where they could contact the drill bit or other Cutting tool parts.
* Always support work piece so it won't shift or bind on the tool.
* Always position backup material underneath the work piece.
* Whenever possible, position the work piece to contact the left side of the column.
* When using a drill press vise, always fasten to the table.
* Never do any work "free hand". (Hand holding a work piece rather than supporting it on the table)
* Never move the head or table support while the tool is running.
* Before starting the operation, jog the motor switch to make sure the drill bit or other cutting tools do not wobble or cause vibration.
* If a work piece overhangs the table such that it will fall or tip if not held, clamp it to the table or provide auxiliary support.
* Use fixtures for unusual operations to adequately hold**,** guide and position the work piece.
* Use the spindle speed recommended for the specific operation and work piece material.
* Never climb on the drill press table; it could break or pull the entire drill press down on you.
* Turn the motor switch off and unplug from the power source when not in operation.
* To avoid injury from thrown work or tool contact, do not perform layout, assembly, or setup work on the table while the cutting tool is rotating.

**Angle Grinder**

Part 1: Preparation and safety

**Objective**

* Show the correct operating procedure for using an angle grinder.

**Personal safety**

Whenever you perform a task in the workshop you must use personal protective clothing and equipment that is appropriate for the task and which conforms to your local safety regulations and policies. Among other items, this may include:

* Work clothing - such as coveralls and steel-capped footwear
* Eye protection - such as safety glasses and face masks
* Ear protection - such as earmuffs and earplugs
* Hand protection – such as rubber gloves and barrier cream
* Respiratory equipment – such as face masks and valve respirators

If you are not certain what are appropriate or required, ask your supervisor.

**Safety check**

* Always wear impact-resistant protective glasses, ear protection and a full-face shield when using an angle grinder.
* Disconnect the power supply when changing any grinding attachments or discs.
* Wear safety shoes, leather gloves and an apron to protect your body from flying metal chips. Make sure the blade guard is firmly secured.
* Use the correct type of disc.
* Make sure the guard handles are secure.
* Use the correct flange or spindle nut for the type of disc being used. If you don't, the disc can shatter at high speed and injure you.
* Angle grinders, like all portable grinding tools, need to be equipped with safety guards to protect you from flying fragments in case the disc breaks apart.
* Always follow the manufacturer's recommendations to make sure the spindle wheel does not exceed the abrasive wheel specifications.
* Make sure there are no obvious defects or damage to the disc before you install it.
* Everyone who uses an angle grinder must receive training and instruction in safe work procedures.
* Make sure that you understand and observe all legislative and personal safety procedures when carrying out the following tasks. If you are unsure of what these are, ask your supervisor.

**Points to note**

* The angle grinder uses an electric motor to drive an abrasive disc at high speed.
* The grinder disc is turned at speeds that range from 5,000 rpm to 12,000 rpm.
* The turning disc is used to grind or cut metal.
* The grinder size relates to the diameter of the cutting disc. This can range from 100 mm to 230 mm (4 inches to 9 inches). The size of grinder you use depends on the type of job you are doing.
* The smaller the grinder, the higher the speed it turns.
* Sanding discs and wire wheels can be fitted on the grinder, making it a versatile electric tool.
* An extra handle is provided that is attached to the grinder head. This can be fitted to the left, right or top of the head to make it easy to use for left-handed as well as right-handed people.
* The abrasive disc or cutting wheel is attached to the grinder by a flange and nut. The nut is specially designed to fit in a recess in the center of the pad or wheel. It is tightened by a spanner that is provided with the grinder when purchased. Do not lose this wrench because it is the only tool that can tighten the nut properly.
* When using cutting discs you should always use the edge of the disc rather than the face.
* Do not confuse a grinder with a sander/polisher. The sander/polisher turns at lower speeds, typically 600 to 3,000 rpm. They are commonly used to sand and polish paint. The pads these tools use cannot be turned at high speed. If the polish pad were attached to an angle grinder, the higher rotational speed would cause the polishing pad to burn the paint and cause the polish pad to fly apart.

Part 2: Step-by-step instruction

1. **Position the disc**  
   Hold the face of the disc against the work, not the edge.
2. **Work carefully**  
   Be careful that the motor’s torque does not cause the grinder to slip out of your hand. Do not press too hard. Let the grinder do the work.
3. **Select the correct disc**  
   Use special discs for cutting, in places where a hacksaw can’t be used. With cutting discs, use the edge of the wheel, not the face

**Jig Saw**

**The Safety Procedure includes:**

* Personal Qualifications and Experience
* Preparation
* Pre-Start Checks
* Blade Replacement
* Operation
* On Completion
* General Maintenance

**Jigsaw Safety Notes   
  
Before Operating A Jigsaw:**

* Jig saws should always be used with a safety switch.
* Ensure the work area is clear of debris. Example – Previous off cuts have been moved to a safe position.
* Check the trigger switch and Lock-On button operates correctly and does not stick.
* Check the blade roller guide is adjusted so that it is in slight contact with the rear of the blade.

**Identify Risks and Hazards**

Hazards that arise when operating portable electrical power equipment include:

* Moving and rotating parts (blades and bits, tool disintegration)
* Movement of the work piece.
* Inhalation of fumes and dust particles
* Electrocution from power faults, faulty equipment or incorrect use
* Ejection of waste materials from cutting blades
* Burns from hot material or friction

**General Safety Precautions**

* Always obtain permission from the teacher before using the jigsaw
* Obtain training and instructions in the safe and proper use of the jigsaw
* Never operate jigsaws in wet o damp conditions
* Switch off and remove the plug from the power outlet before fitting attachments.
* Never connect a portable jigsaw to a damaged power outlet
* Wear appropriate Personal Protective Equipment such a safety glasses
* Long hair must be contained with a suitable cap or net.

**Skill Saw**

### **PRE-OPERATIONAL SAFETY CHECKS**

1. Check workspaces and walkways to ensure that no slip/trip-hazards are present.
2. Check that all safety guards are in position and are set to the minimum clearance from the work piece being cut.
3. Locate and ensure you are familiar with the operation of the ON/OFF starter and E-Stop (if fitted).
4. Ensure all locks are securely tightened.
5. Ensure table and work area is clear of all tools, off-cut timber and sawdust.
6. Start the dust extraction unit before using the machine.
7. Faulty equipment must not be used. Immediately report suspect equipment.

## OPERATIONAL SAFETY CHECKS

1. Do not cut freehand.
2. Allow the saw blade to obtain maximum speed before making a cut.
3. Use push stick (at least 400 mm long) to guide timber through saw.
4. Always stand to one side of the line of cut.
5. Never remove off cuts or sawdust from the saw table while the saw is running.
6. Before making adjustments switch off and bring the machine to a complete standstill.
7. Never leave the machine running unattended.
8. Remove the rip fence when using the mitre gauge.
9. Make sure someone “tails out” when cutting long material.

**HOUSEKEEPING**

##### Switch off the machine.

##### Leave the machine in a safe, clean and tidy state.

**POTENTIAL HAZARDS**

1. Kickback - wood may catch or jam and be flung back violently

2. Airborne dust

3. Eye injuries

4. Contact with blade at point of operation

**FORBIDDEN**

1. Cutting irregular stock, branches or wood with embedded nails or screws

**Extension Cords**

1. Use extension cords only when necessary and only on a temporary basis.

2. Look for a certification label from an independent testing lab such as UL

(Underwriters Laboratories) or ETL (Electrical Testing Laboratories) on the package and on the product.

3. Use cords with polarized plugs or grounded three-pronged plugs.

4. High wattage appliances need special, heavy-duty extension cords.

5. Extension cords used outside should be specifically designed for outdoor use.

6. Always insert plugs fully so that no parts of the prongs are exposed.

7. Never cover cords with rugs or other objects because trapped heat may result in a fire.

8. Don’t overload cords with too many appliances.

9. If a cord feels hot to the touch, stop using it and throw it away.

10. Don’t drive over, or roll equipment over a cord.

**Ladders / Step Ladders**

To enable the Council to fulfil its legal obligations under the existing Health and Safety legislation the following instructions should be strictly observed:

1. All reasonable precautions should be taken when using ladders/step ladders to safeguard the health and safety of yourself and other persons who may affected by your acts or omissions at work.

2. All ladders/step ladders should conform to British and European Standards.

3. Ladders/step ladders should be inspected before use to ensure that they are sound and free from defects. Be on the look-out for split stiles and treads, broken or loose rungs and missing tie bars. Loose hinges to back flap of step ladders and defective ropes must be replaced.

4. Never paint ladders/step ladders as this could cover up defects. Clear varnish may be used to protect timber ladders.

5. Use the correct height of ladder/step ladder for the job in hand. Do not improvise by standing ladders on top of bricks, blocks, boxes, chairs, etc., to gain extra height. Never lash two ladders together to make a longer one.

6. Ensure that ladder/step ladders are placed on a firm, level base.

7. Wherever possible, the tops of ladders should be firmly secure, particularly with heights of 3 metres and over. If this is impracticable then see that a fixing is made at the base but remember that this will not prevent side slipping.

8. When ladder is erected in a position where traffic has access a man should be placed on guard at the base. Alternatively, a space around the ladder should be fenced off for protection.

9. If a ladder/step ladder is erected close to a door then the door should be shut and locked in the opening position with a man on guard to prevent people walking through the door opening.

10. Ensure always that ladders are set at a safe angle. A useful rule to bear in mind is ‘4 up - 1 out’. This means the base should be positioned 1ft. (0.13m) out from the wall for every 4ft. (1.2m) of height.

**Welding Machines**

**Do not use this machine unless a teacher has instructed you in its safe use and operation and has given permission.**

* Safety glasses must be worn at all times in addition to welding mask.
* Appropriate footwear with substantial uppers must be worn.
* Respiratory protection devices may be required for some operations.
* Rings and jewellery must not be worn.
* Long and loose hair must be contained.
* Close fitting/protective clothing to cover arms and legs must be worn.
* Oil free leather gloves and spats must be worn when welding.
* A welding mask with correct grade lens for GMAW must be worn.

### **PRE-OPERATIONAL SAFETY CHECKS**

1. Ensure no slip/trip hazards are present in workspaces and walkways.
2. Ensure the work area is clean and clear of grease, oil, and any flammable materials.
3. Keep the welding equipment, work area and gloves dry to avoid electric shocks.
4. Ensure the gloves, welding gun and work leads are in good condition.
5. Ensure other people are protected from flashes by closing curtain to welding bay or erecting screens.
6. Ensure fume extraction unit is on before beginning welding operation.
7. Ensure the work leads do not create a tripping hazard.

#### OPERATIONAL SAFETY CHECKS

1. Ensure machine is correctly set up for current, voltage, wire feed and gas flow
2. Ensure work return cables make firm contact to provide a good electrical connection.
3. Never leave the welder running unattended.
4. Take care to avoid flashes.

#### HOUSEKEEPING

1. Switch off the machine and fume extraction.
2. Close gas cylinder valve.
3. Hang up welding gun and welding cables.
4. Leave the work area in a safe, clean and tidy state.

## POTENTIAL HAZARDS

1. Electric shock

2. Fume

3. Radiation burns to eyes or body

4. Body burns due to hot or molten materials

5. Flying sparks

**Barricades**

**Barricades PPE Required:** Reflective safety vest, steel-toe boots, gloves, hard hat

**Steps:**

1. Load the truck with signs and barricades required for the job
2. Block off the street with a closed sign in order to install the proper barricades.
3. Install barricades and signs to protect workers and the public from injury.

4. Barricades should be removed in reverse order. In some instances, a flag person may be required to assist access and egress from the construction zone.

5. The barricades are to be inspected daily by the barricade personnel.

6. If barricades are damaged, they are to be repaired or replaced immediately.

**LOCKOUT PROCEDURE**

Often power sources are inadvertently turned on, or valves opened mistakenly before the work is completed, resulting in serious injuries and fatalities. Therefore, it is important not only to ensure that all energies are properly locked out, but also that they remain locked out until the work is completed.

**What is Lockout?**

“Lockout” means to physically neutralize all energies in a piece of equipment before beginning any maintenance or repair work. Lockouts generally involve:

* stopping all energy flows (for example, by turning off switches, or valves on supply lines)
* locking switches and valves
* securing the machine, device, or power transmission line in a de-energized state (for example, by applying blocks or blanks, or bleeding hydraulic or pneumatic pressure from lines)

**Why is a Lockout Necessary?**

If a lockout is not performed, uncontrolled energies could cause:

* electrocution (contact with live circuits)
* cuts, bruises, crushing, amputations, death, resulting from:

- Entanglement with belts, chains, conveyors, rollers, shafts, impellers

- Entrapment by bulk materials from bins silos or hoppers

- Drowning in liquids in vats or tanks

* burns (contact with hot parts, materials, or equipment such as furnaces)
* fires and explosions chemical exposures (gases or liquids released from pipelines)

**How is a Lockout Done?**

For lockouts to be effective, a clear, well-defined lockout policy supported by administrative and control procedures and proper training, is essential.

A systematic approach would be to:

* develop a lockout policy
* identify lockout situations
* develop procedures
* train workers
* enforce and update your policy

**Develop a Lockout Policy**

Your written lockout policy should make reference to your company’s general occupational health and safety policy. It should clearly outline responsibilities, and refer to procedures to be followed. It should state your company’s intent to protect all employees by:

identifying all activities and machines, equipment, and processes which require lockouts (for example, repairs, maintenance, and cleaning of pipelines, tanks, and machines)

**Equipment Operator**

* When assigned to operate equipment that had been locked out for any reason, review the condition of that equipment to ensure that all guards are in place and that the equipment is ready to begin operations
* If equipment is unsafe, report the condition to your supervisor. If you must leave the equipment to make this report and there is a possibility that someone else may operate it, lock the equipment out with your operator lock and tag before leaving the equipment.

**Person Installing Lock**

* Recognize that lock out is needed. If in doubt, ask your supervisor. Ensure that all energy sources are locked out and that ram blocks, etc., are used
* Attach the lock using the required attachments as appropriate. Test operating controls to see that the lockout has been effective
* Attach a tag to the lock or to equipment as required
* Remove lock and tag when your work is finished

**Develop Procedures**

Procedures should be in writing and communicated to all employees and departments. Administrative procedures for lockouts in general should include the following:

* supervisors to be notified of lockouts in their areas
* all lockouts to be authorized by a work permit
* lockout to stay in effect if work is not completed at the end of the shift
* completed work to be reported to the person in charge for signing off the work permit
* making the appropriate persons responsible for lockouts
* ensuring that lockouts are performed by authorized persons only
* developing procedures for each specific lockout situation
* training those who will perform lockouts
* verifying the effectiveness of such training
* reviewing, updating, and enforcing the lockout policy

**Identify Lockout Situations**

Assess all processes, machinery, energies, and work activities to identify where and when lockouts are needed. Maintenance work will probably be the major focus of lockout needs. A useful source of information may be workplace inspections, and recommendations from your joint health and safety committee or health and safety representative. List every machine, devise, or process that will require a lockout. Against each, list the energy forms involved. Different energy forms will require different procedures. More than one lockout may be required for a single machine or system.

**Safety Coordinator**

* Train all staff in lock out procedures and maintain records of this training
* Receive reports of locks being cut or removed because of lost keys, etc. and report to the General Manager any recommendations as needed

**Supervisor**

* Ensure that lockout procedures are understood and followed by all employees as required
* Co-ordinate work beyond shift with other supervisors as appropriate

Control procedures involve developing separate, detailed, written lockout procedures for each identified machine, device or process that may require to be locked out at some time. The procedure should identify:

* the person responsible for performing the lockout (for example, operator, millwright, electrician)
* the person responsible for ensuring that the lockout is properly performed (for example, maintenance supervisor and/or site supervisor)
* the energy sources to be controlled by the lockout
* the location of control panels, power sources (including electrical power boxes), switches, interlocks, valves, blocking points, relief valves and/or blanking and bleeding points (review schematics)
* special hazards (for example, a flywheel that spins for minutes after power is removed, electrical capacitors)
* the personal protective equipment that must be used or worn (for example, eye protection, electrically insulated foot protection)
* the step by step lockout procedure (that is, who does what, and when)
* the testing procedure to ensure that all energy sources are controlled
* the step by step procedure for removing the lockout

**Electrical Lockout**

* Shut down machine using normal operational shutdown procedure and controls. This should be done by, or in consultation with the machine operator.
* After ensuring that the machinery has been completely shut down, and all controls in the “off” position, open the main disconnect switch located in the field. Some AC or DC drive units are located in a switch room, normally operated by electricians. In the case of DC drive units, a motor blower switch and a field switch must also be switched off which are located inside of the cabinet. If training has been conducted to allow other persons to operate this switchgear, a record should be made of the training duration and dates. If racking out is required in a MCC, a qualified electrician must be contacted. If fuses are to be removed, qualified personnel must use fuse pullers due to the proximity of the bus bar that is still energized. **Removal of fuses only does not** **constitute a lockout**
* Using your own personal padlock, or one assigned by your supervisor, lock the disconnect switch in the off position. Do not lock only the box. Remove the key and retain. Complete a locko1ut tag and affix to the disconnect switch. Each person working on the equipment must follow this step. The lock of the person doing the work or in charge must be installed first, remain throughout and be removed last
* Test the main disconnect switch and make sure it cannot be moved to the “on” position
* Try to turn start the machine using the normal operation controls and point of operation switches to make sure that the power has been disconnected
* Other sources of energy that could create a hazard while working on the equipment must also be de-energized and appropriately “locked-out” This can include flywheels, gravity, springs, capacitors, compressed air, hydraulics, steam and other pressurized or hazardous liquids and gases (see figure 1)
* When the work is completed, prior to removing the last lock, make sure the operational controls are in the “off” position so that the main disconnect switching is done under “no load”. Ensure all blocks, tools and other foreign materials are removed from machine. Also ensure that all personnel that may be affected are informed that the lock(s) will be removed
* Remove lock and tag, and close the main disconnect switch if permission has been given
* When the work has not been completed on the first shift, the next operator should install a personal lock and tag before the first operator removes the original lock and tag. If the next operator is delayed, a lock and tag could be installed by the next supervisor.

**A locked out and tagged disconnect switch**

The existence of this procedure will be communicated to all employees through orientation.

**Train Your Workers**

All workers performing lockouts and their supervisors must receive training. The training should address:

* importance of lockouts
* legal requirements for lockouts
* company policy on lockouts
* the energy forms, hazards and procedures (administrative and work-related) that must be followed
* the importance of following procedures
* lockout errors to be avoided (for example, assuming the equipment is inoperable or that the job is too small to warrant a lockout)
* the use and care of personal protective equipment
* proper use of all tools

**We are not electrical contractors therefore no electrical work is to be carried out on site. The above procedure is to identify and make employees aware of a lock out procedure.**

**Stop Work Authority Procedure**

**Introduction**

Stop Work Authority (SWA) establishes the responsibility and authority of any individual to stop work when an unsafe condition or act could result in an undesirable event. In general terms, the SWA process involves a stop, notify, correct, and resume approach for the resolution

**Roles and Responsibilities**

* Senior Leadership: Establish clear expectations and accountability, and create the culture necessary to promote SWA. Model SWA behaviour and ensure that there is support, *not* reprisal, for using Stop Work Authority.
* Line Supervisors: Create a culture where SWA is exercised freely, honor SWA requests, resolve issues before operations resume and recognize proactive participation.
* Company employees/contractors: Initiate Stop Work and support interventions of others.
* HES: Training, documentation, compliance and support of the Stop Work Authority program.

**Situations that Initiate the Use of Stop Work**

* Unsafe conditions
* Incident occurs
* Significant near-loss
* Emergency situation
* Alarm sounds
* Change in conditions
* Change in scope of work
* Change in work plan
* Anytime anyone feels that personnel, the environment, or equipment is at risk

**How to Stop Work**

1. When a person identifies a perceived unsafe condition, act, error, omission, or lack of understanding that could result in an undesirable event, they must immediately initiate a stop work intervention with the person(s) potentially at risk.
2. If the affected person(s) are not in immediate risk and the supervisor is readily available, the stop work action should be coordinated through the supervisor. If the supervisor is not readily available or the affected person(s) are at immediate risk, the stop work intervention should be initiated directly with those at risk.
3. Stop work interventions should be initiated in a positive manner by briefly introducing yourself and starting a conversation with, “I am using my stop work authority because…” Using this phrase will clarify the user’s intent and set proper expectations.
4. Notify affected personnel and supervision of the stop work issue. If necessary, stop associated work activities, remove person(s) from the area, stabilize the situation, and make the area as safe as possible.
5. Affected parties shall discuss and gain agreement on the stop work issue.
6. If determined and agreed that the task or operation is okay to proceed as is (i.e., the stop work initiator was unaware of certain facts or procedures), the affected persons should thank the initiator for their concern and proceed with the work.
7. If determined and agreed that the stop work issue is valid, then every attempt should be made to resolve the issue to affected persons’ satisfaction prior to starting work.
8. If the stop work issue cannot be resolved immediately, work shall be suspended until proper resolution is achieved. When opinions differ regarding the validity of the stop work issue or adequacy of the resolution actions, the person in charge at the location shall make the final determination. Details regarding differences of opinion and resolution actions should be included in the documented report.
9. Positive feedback should be given to affected personnel regarding resolution of the stop work issue. Under no circumstances should retribution be directed at any person(s) who exercise in good faith their stop work authority as detailed in this program.

**Contractors and Stop Work Authority**

Contractors have the same responsibility and authority as company employees to stop work when an imminent hazard to persons, property or the environment is identified. In addition, contractors shall immediately notify a company representative that work has stopped, the reasons for stopping the work, work with the company representative to resolve any issues, and reach consensus to resume work. Appropriate measures shall be taken to abate the imminent hazard and coordinate efforts with the company representative to mitigate the potential for recurrence.

**SWA Conflict Resolution**

When opinions differ regarding the validity of a stop work intervention or the decision to resume work, a clear protocol must be established to properly resolve the conflict. Persons with proper authority (e.g. next level of management, HES manager) who are not party to the conflict should be identified to resolve such issues. This proper authority may not reside at the location where the conflict occurred.

**Reporting**

Stop work interventions should be formally documented and reported in order to:

1. Measure participation
2. Determine quality of interventions and follow up
3. Trend common issues and identify opportunities for improvement
4. Facilitate sharing of learnings
5. Contribute to recognition schemes

Reporting can be achieved either by developing a stand-alone reporting process or using the incident reporting processes. Whatever method is selected, separate detail regarding stop work interventions should be maintained as a demonstration of process maturity and value.

Observers are encouraged to document when Stop Work Authority is exercised during an observation.

When opinions differ regarding the validity of the stop work issue or adequacy of the resolution actions, the person in charge at the location shall make the final determination.

**Follow-up**

Stop work interventions that identified Health, Environment and Safety concerns should be addressed to the satisfaction of all involved persons prior to the resumption of work. Although most issues can be adequately resolved in a timely manner at the job site, occasionally additional investigation and corrective actions may be required to identify and address root causes. Corrective actions should be addressed and followed through to completion.

**Reward and Recognition**

Consistent with our reward and recognition culture, a recognition scheme should be developed to positively reinforce desired behaviors (i.e., the timely execution and response to stop work interventions). Conscious effort should be given to recognize individuals or work groups that exercise their authority to stop work in a manner consistent with company policy.

Many opportunities exist to provide such recognition as:

* Individual recognition by supervisor for each intervention
* Regular peer recognition of “good stops” in safety meetings
* Periodic public recognition of company-wide good stops published on company newsletters, bulletins or other such communications
* Award of nominal prizes for proactive participation

On occasions where there was a missed stop work opportunity, recognizing and providing feedback will ensure that everyone in the workforce understands its importance and the role it plays in preventing recurrence.

Recognizing things done right, saying thanks for a job well done and letting employees know their efforts are appreciated goes a long way toward promoting and encouraging repeated outstanding efforts and fostering a positive work environment.

**Training**

Awareness training with regard to SWA policy, expectations, and processes should be developed and administered at a frequency required to maintain competency.

SWA training is covered at HES Super Session, in-house training, and during Incident Free Operations (IFO) meetings for all employees and contractors.

**SWA Drills**

SWA drills provide the opportunity to reinforce the use of stop work and exercise the behaviors associated with this action. The SWA Drill Protocol example lists suggested steps for this type of drill.

**Communications and Training**

The ability to effectively stop work when necessary is a critical component in our journey to Incident-Free Operations (IFO). In addition, an effective stop work program includes the written and verbal reinforcement of these expectations. This can be accomplished through many means including tailgate meeting, SWA posters in the workplace, SWA pocket cards, as well as SWA drills.

**WORKING AT HEIGHTS/SCAFFOLD**

Working at heights entails any work that is undertaken where the fall height of a worker would be equal to or greater than *2 meters* above the ground level at that point.

No worker will be performed from a ladder for any work undertaken at a height greater than *2 meters* in which case a scaffold will be erected.

*Scaffolds are to have access ladders, platforms, handrails, toe-boards and to be suitably braced back to a fixed structure.*

Approved standard mobile free standing scaffolds are allowable where a risk assessment indicates suitability of use.

All scaffolds are to be erected under the supervision of a formally authorized and competent scaffold supervisor who is required to sign-off the completed structure before use. Signs indicating- scaffold safe/unsafe for work, to be displayed on the structure at ground level.

All workers are required to wear full body harness with the lanyard fixed to a rigid secure point when working on a scaffold.

No working platform higher than 500 mm is allowed to be placed on any scaffold in order to increase a workers reach.

No person is to be upon the scaffold whilst in the process of moving a mobile scaffold.

The work area surrounding the base of the scaffold is to be clearly demarcated with safety cones or hazard tape.

Pumping positions on the forecourt where the movement of vehicles could jeopardize the safety of the workers must be temporarily closed.

When work is done whilst workers are on top of a roof or canopy, a safety harness must be worn and the lanyard secured when there is any risk of falling.

The use of approved mechanical working platforms (i.e. cherry-picker) is acceptable in extreme cases to access the top of high light masts (safety harness to be worn). The risk from working at height is falling resulting in possible death.

**TYPICAL TYPES OF WORK COULD ENTAIL:**

* Bricklaying and plastering of high walls
* Scraping, cleaning and painting of high walls
* Erecting (includes bolting, cutting and welding) of canopy structure
* Installation of canopy sheeting
* Installation of canopy light fittings, electrical connections and lamp replacement
* Scraping, cleaning and painting of canopy
* Installation and maintenance of canopy fascia light-line and electrical connections
* Scraping, cleaning and painting of canopy fascia
* Erection and installation of panels to monolith signage
* Installation of electrical fittings and wiring etc. to monolith signage
* Installation and painting of vent pipes
* Maintenance / cleaning of fittings at the top of vent pipes
* Maintenance of electrics and lights on high light masts
* Any work on Ultra City towers

**Scaffold**

**General**

Protecting workers from injuries associated with erecting and working with scaffolding

**Application**

All scaffolding used shall be erected, maintained and dismantled by a competent worker, in accordance with manufactures specifications and legislation.

**Protective Mechanisms**

|  |
| --- |
| 1. Permit system  2. Manufacturers specifications  3. Fall protection devices  4. Safe work procedure PPE  5. ERP (Emergency Response Plan) |

**Supervisor Responsibility**

Supervisors are responsible to facilitate and/or provide proper instruction to their workers on protection requirements and training Determine the type of scaffold required

**Worker Responsibility**

1. Ensure grounding on a firm and level base.

2. Maintain the established minimum clearances from all power lines.

3. Provide a safe access ladder.

4. Ensure scaffold has a platform perimeter handrail.

5. Anchor or tie a *free standing* scaffold according to legislation.

6. Do not use a ladder sloped against the side of a scaffold at any time.

7. A toe board is required on all platforms.

8. Ensure tube and clamp modular construction is utilized. Wood construction is to be used only when absolutely necessary.

9. Ensure proper safe scaffold tags are installed.

10. Utilize a tag line when hoisting material.

11. Minimize tools, material and debris on the platform.

12. Ensure a hand line with a tool bag for tools is utilized.

13. When working at 2m fall protection system must be used.

14. Follow scaffold safe work procedure step by step.

**Hot Wor****k**

**Definitions**

**Designated Safe Hot Work Area:** Areas that have been designated and constructed for performing open flame or spark producing work.

**Fire Watch:** Trained personnel who are in attendance during the entire hot work operation and are immediately available to extinguish a fire or take other effective action if needed.

**Hot Work:** Any work using an open flame or spark producing equipment. Hot work includes, but is not limited to welding, cutting, burning, grinding, and any related heat producing jobs that could ignite combustible materials or flammable atmospheres.

**Hot Work Operator:** Any employee or contractor who operates an open flame or spark producing equipment or performs any hot work.

**Responsibilities for Hot Work**

Department heads are responsible for ensuring that the requirements of this operating procedure are understood and practiced by their employees. Any department that employs an outside contractor who will be performing any hot work, as defined, must comply with the requirements of this procedure. Specific responsibilities of the department conducting or coordinating any hot work operations include:

1. Contact the facility manager or person responsible for that area in which the hot work is to take place, inform that person of the scope of work to be performed and determine if they have any specific concerns about the procedure.
2. Determine the combustible materials and hazardous areas present or likely to be present in the work location.
3. Protect combustibles in the work location by moving the work to a designated safe hot work area or a location free of combustibles.
4. If the work cannot be moved, have the combustibles moved to a safe distance from the work or have the combustibles properly shielded against ignition.
5. Ensure that workers are provided with and use proper safety equipment, including personal protective equipment and fire extinguishing equipment.
6. When required, designate a responsible person to serve as a fire watch.
7. Ensure that the work area is given a final inspection one half hour after completion of the job to detect and extinguish possible hot spots or smoldering fires. The fire watch shall be released after the final inspection.

**Hot Work Requirements**

**Permissible Areas** – routine hot work operations shall be allowed without the requirements of a permit, only in areas that have been designated as a Safe Hot Work Area.

**Permit Required Areas** – in areas where it is not practical to move the work to a designated safe hot work area, hot work shall only be permitted once the area is made fire safe by removing combustibles or protecting combustibles from ignition sources. Hot work operations are strictly prohibited under the following conditions:

1. In areas not designated safe hot work areas where a proper hot work permit has not been obtained.
2. In sprinklered buildings while such protection is impaired.
3. In the presents of explosive atmospheres, such as mixtures of flammable gases, vapors, liquids, or dust with air.
4. On or in any drum, container or vessel that has not been properly cleaned to remove any possible explosive atmospheres that can develop inside from residual contents.
5. In areas near the storage of large quantities of flammable or combustible materials that can readily ignite.

**Hot Work Permit Procedures**

**Preparation of work area** – Before a hot work permit is approved and issued, the department or individual requesting the permit shall verify that:

1. All hot work equipment to be used is in satisfactory condition and in good repair.
2. Any combustible materials such as paper clippings, wood shavings, or textile fibers on the floor are swept clear for a radius of 35 feet.
3. Floors constructed of combustible materials are properly protected by either wetting the surface or covered by fire resistant shields. Where floors have been wetted down, personnel operating arc welding or cutting equipment shall be protected from possible shock.
4. All combustible materials are relocated at least 35 feet horizontally from the work area. Where relocation is not practical, the combustible materials shall be protected with flame proof covers or otherwise shielded with metal or fire resistant shields or tarps.
5. Openings or cracks in walls, floors or ducts within 35 feet of the work area are tightly covered to prevent the passage of sparks to adjacent areas.
6. Where hot work is done near walls, partitions, ceilings or roofs of combustible construction, fire resistant shields or guards are provided to prevent ignition.
7. If hot work is to be done on a metal wall, partition, ceiling or roof, that precautions are taken to prevent ignition of combustibles materials on the other side, due to conduction or radiation, such as relocation or covering the materials. If the combustible materials cannot be relocated or protected, a fire watch shall be provided on the opposite side of the wall where the work is being performed.
8. No hot work is attempted on metal partition, wall, ceiling, or roof having a covering, nor on walls or partitions of combustible sandwich type panel construction.
9. Hot work is not undertaken on pipes or other metals that are in contact with combustible walls, partitions, ceilings or roofs, if the work is close enough to cause ignition by conduction.
10. Nearby personnel are suitably protected against heat, sparks, slag, etc.
11. Where hot work is to be done in close proximity to a sprinkler head, that the head is covered by a wet cloth to prevent activation. The cloth must be removed immediately at the conclusion of the hot work.
12. Where hot work is to be done in close proximity to a smoke detection system, Fire Systems must be notified to disable the system to prevent alarm activation.

**Designation of Fire Watch** - The department or individual requesting the hot work permit is responsible for designating a fire watch. The fire watch shall:

1. Have fire extinguishing equipment readily available and be trained in its use.
2. Know how to activate the building's fire alarm system, if applicable, or who to notify in the event of a fire.
3. Watch for fires in all exposed areas and try to extinguish them first only when obviously within the capacity of the equipment available, or otherwise sound the alarm immediately.
4. Monitor the work area for at least 30 minutes after completion of the hot work to detect and extinguish any smoldering fires that may be identified.

Verify that the buildings fire sprinkler system is operational, where applicable. Determine if the work area has any fire alarm detectors that need to be disabled to prevent false alarms, and appropriately disable only those devices that could be accidentally activated.

Verify the location, start time and duration of the hot work operation. A hot work shall only be valid for the time duration identified. No hot work permit shall exceed an 8-hour period.

**Special Precautions**

**Confined Spaces** – Any hot work that is to be performed in a confined space shall be conducted in accordance with the University *of* North Texas Confined Space Manual.

**Welding or Cutting on Containers** – No cutting, welding, or other hot work is to be performed on any drums, tanks, containers or any vessel that may have contained chemicals or materials that when heated may produce flammable, explosive or toxic atmospheres if the container has not been thoroughly cleaned and prepared.

**Hot Tapping** – Hot work that must be performed on any utility piping used for the transmission or distribution of flammable gases or liquids shall only be performed by a crew qualified to make hot taps.

**Outside Contractors** – Contractors shall perform all hot work procedures in accordance with this operating procedure or be able to demonstrate that they have a comparable procedure that meets or exceeds the requirements of this operating procedure.

**Personal Protective Equipment**

Personal protective equipment for eyes, face, head, and extremities, respiratory protection and protective shields and barriers, shall be used and maintained in a sanitary and reliable condition.

**ELECTRICAL WORK**

Electrical work entails any work that is undertaken on electrical conductors, circuits, switches and fittings, components of electrical distribution boards as well as all electrical appliances.

No work will commence before the appropriate circuit has had the electrical current isolated and locked-out.

Only appropriately qualified electricians are allowed to undertake work on live electrical circuits and only in extreme cases where current cannot be isolated, i.e. fault-finding.

PPE and insulated tools are to be used at all times.

An “Electrical Isolation Certificate” is required to be completed before the commencement of work on conductors etc.

The risk from electrical work is electrocution resulting in possible death.

Typical types of work could entail:

* Distribution boards
* Plug points
* Light fittings
* Electrical cables
* Busbars
* Switches and isolators
* Relays, electrical motors etc.
* Fluorescent globes / bulbs
* Neon lights
* Microwave ovens, electric kettles and urns, pie warmers, chip fryers etc.
* Etc.

***We are not electrical contractors. You are not allowed to carry out any electrical work at all!!!***

**CONFINED SPACE WORK**

Confined space work is limited to any park of a worker’s body is required to be within any space where there is a possibility of the “contained” atmosphere having accumulated volatile, toxic or dusty material or being unsuitable to support normal breathing.

A confined space does not imply that the space is “sealed”.

No work can be conducted in confined spaces unless it has been assessed through the PTW process as being safe to enter. At a *minimum a gas-free test* must be conducted and certificated accordingly.

It is important to remember that hydrocarbon vapours are heavier than air and will sink and accumulate at the lowest point in any confined space.

Risks to be considered during the PTW process include fire, explosion, asphyxiation etc. resulting in death.

Typical confined space environments include:

* Inside of underground tanks
* Entrance chambers to underground tank fittings, i.e. the void below the forecourt manhole.
* Entrance chambers to underground tank fittings and manholes-even if the forecourt level manhole cover has been removed
* Service / lubrication pits
* Drain pits
* Inside ceiling
* Etc.

**EXCAVATION**

Excavation work entails any work where excavations are done by hand or mechanically and where the excavation reaches a depth of greater than 300mm from the natural ground level at that point.

No excavated material or any other materials (bricks, pipes etc.) may be stored in close proximity to the edge an excavation so as to result in collapse.

Risks to be considered during excavation work are side-wall collapse resulting in physical injury and asphyxiation, falling of people and machinery/vehicles into the excavation resulting in injury etc.

* Excavation pits for underground tanks
* Excavation pits for petrol/oil gravity separators
* Trenches > 300mm deep for fuel lines
* Trenches > 300mm deep for storm water and sewerage lines
* Trenches > 300mm deep for foundations
* Pits > 300mm deep for signage bases
* Etc.

**TRAFFIC CONTROL WORK**

Traffic control work entails any work where moving vehicles have the potential to cause injury to any workers performing work on the site.

This would normally involve the work location being in the entrance or exit to the site, anywhere on the forecourt or in the parking areas.

It also includes any service roads on site. Risks to be considered during traffic control work are vehicles driving into or over workers resulting in injury and death.

* Maintenance of forecourt surface, i.e. brick paving, concrete and asphalt work
* Excavation work on forecourt
* Work on pump islands
* Working on pumps and dispensers
* Working in manholes and pits located on the forecourt
* Pressure testing of fuel lines
* Installation, removal or replacement of fuel lines
* Work on forecourt signage
* Painting on forecourt surface
* Maintenance of canopy lighting and signage
* Painting of canopy
* Maintenance of service roads
* Installation, removal or maintenance to shade ports
* Landscaping work where traffic flow would be disrupted.

Safe Working Procedures For Lifting & Hoisting

**Lifting:**

Preserve your back health by using the following lifting strategies:

* Before lifting a load, think of other means of moving it using a device that can help you to pull, push or roll the load.
* Have firm footing and make sure the standing surface that you are on is not slippery.
* Determine the best way to hold the load using handles, gripping areas or special lifting tools. Get a firm grip on the load.
* Keep your back straight by tucking your chin in.
* Tighten your stomach muscles and lift with your legs.
* Lift the load slowly.
* Hold the load as close to the body as possible; be sure you position the load close to the body before lifting.
* Do not twist during your lift or when moving the load. Turn with your feet rather than your back.
* Set the load down gently, using your legs and keeping your back as straight as possible.
* Be sure your fingers are out of the way when putting the load down and when moving the load through tight spaces.
* Ask for help if you need it and use lifting tools and devices whenever they are available.

**Hoisting**

|  |  |
| --- | --- |
| Safety glasses must be worn at all times in work areas. | Hair Protection circleLong and loose hair must be contained. |
| Foot Protection circleAppropriate footwear with substantial uppers must be worn. | ApronClose fitting/protective clothing must be worn. |
| **Prohibition circleProhibition circle**Rings and jewellery must not be worn. | Walking or standing on conveyorDo not stand on hoist whilst hoist is in operation. |

**A vehicle hoist must not be operated unless it has a current certificate of inspection.**

### **PRE-OPERATIONAL SAFETY CHECKS**

1. Ensure that vehicle hoist has operating and maintenance instructions permanently located and clearly visible.
2. The equipment must be used in accordance with manufacturer’s instructions.
3. Check the capacity of the hoist compared to the weight of the vehicle. If vehicle is too heavy, do not proceed.
4. Ensure the area is clean and clear of grease, oil, and objects that may be a slip/trip hazard.
5. Familiarise yourself with and check all machine operations and controls.
6. Check all safety devices are in good condition.
7. Ensure support arms are capable of being locked in position.
8. Ensure rubber pads are in good condition on all load points.
9. Faulty equipment must not be used. Immediately report suspect equipment.

#### OPERATIONAL SAFETY CHECKS

1. Centre vehicle on hoist, ensuring that the weight is evenly distributed to the front and rear.
2. Identify the correct jacking points and place the lifting pads under the vehicle at the front & rear on the jacking points, ensuring contact.
3. Only one person shall operate the hoist at a time.
4. Ensure hoist area is clear of people and equipment before operating.
5. Never leave the hoist running unattended.
6. Check vehicle stability by looking at the jacking points.
7. Engage manual lock.
8. At the completion of work lower the vehicle hoist and ensure all equipment is left in a safe position.

#### HOUSEKEEPING

1. Switch off equipment.
2. Leave the equipment and work area in a safe, clean and tidy state.

## POTENTIAL HAZARDS

◼ Falling objects ◼ Trapping hazards ◼ Crushing hazards ◼ Entanglement hazard

**Personal Protective Equipment**

## 1 Purpose

Provides guidelines for employees to ensure specific protection and Personal Protective Equipment are used at the University.

## 2 Scope

Applicable to all employees, contractors and visitors while they are at the work site.

## 3 Procedure Overview

Personal Protective Equipment (PPE) and clothing must be provided to and must be worn by all persons only when:

* a hazard cannot be eliminated or reduced by engineering or administrative controls; or
* Specific protection is required by the Advisory Standard for Selection, Provision and Use of Personal Protective Equipment.

## 4 Procedures

### 4.1 Supply and use of PPE

Category 4 Delegates or above must supply PPE to employees and others when hazards cannot be controlled by engineering measures or when it is specifically required under legislation. Safety devices and control equipment (such as exhaust or fume extraction systems and guards) must be in use at all times and PPE is to be an adjunct to these control measures.

Individuals must wear PPE as instructed by the supervisor, by a material safety data sheet (MSDS), risk assessment or a standard work procedure.

Training in the correct use, storage and cleaning of PPE should be provided and records kept.

### 4.2 Acquisition and storage

All PPE must comply with the appropriate Australian Standard.

Users of PPE must store the equipment in the accommodation provided. The equipment must be cleaned regularly and cleaned prior to use if shared.

PPE needs to be checked regularly both during storage and use should be easily accessible when needed.

Supervisors must carry out regular inspections to ensure that PPE is on hand and is maintained in good condition to ensure its continued effectiveness; and must keep records on any acquisition, cleaning and training in relation to the equipment.

Individuals must inform their Supervisor if there are deficiencies in the supply or condition of any PPE required to carry out work safely.

### 4.3 When should you use PPE?

PPE and administrative controls are lowest on the hierarchy of control measures. PPE does not control the hazard at the source and should not be relied on as the main control measure unless it is a temporary or interim measure or when options higher on the list of controls have been exhausted. PPE can be used effectively in conjunction with other control measures to manage exposure to a risk.

The effectiveness of PPE as a control measure is limited as it can:

* be uncomfortable to wear
* make working difficult
* create other risks to a person's health and safety
* be expensive in the long term

### 4.4 Selection of PPE

To ensure that the item of PPE will provide the level of protection that is it designed to, PPE should:

* be appropriate for the type of work and give appropriate protection for the risk
* give adequate protection to the user
* not create additional health or safety risks
* be compatible with other PPE being used (e.g. ear muffs with a hard hat)
* fit properly
* not interfere with any medical conditions of the user
* be easy to use
* be comfortable
* comply with relevant Australian Standards

Consult with workers when selecting PPE and consider a persons individual characteristic and style preference.

### 4.5 Using PPE

Make sure that:

* PPE is used in accordance with the manufacturers' instructions
* the PPE fits correctly
* individuals are instructed and trained in how to use it
* appropriate signs should be displayed to remind employees and students where PPE must be worn

Training should cover arrangements for the provision, correct use, storage and maintenance of PPE and should be done:

* when new employees and students start work
* when you get new PPE
* To refresh employee's and student's memories from time to time.

Personal protective equipment such and their purpose:

* Helmets – Prevent head injury from falling objects
* Goggles – Protect eyes from grinding sparks and debris
* Steel tip shoe – Protect feet from heavy falling objects
* Overall – Protect from dirt, dust and abrasion
* Gloves – Protect hands and fingers from cuts / abrasion
* Dust mask – Protect respiratory system
* Ear muffs – Protect ears from excessive noise
* Full body harness – Fall arrester
* Luminous vest – Make work more visible.

*Relevant PPE is essential before any task is initiated!*

Please refer to PPE records – Reference number SEA014 PPE

**INDUCTION**

Induction is a very important part of the employment process, and one that can easily get overlooked in a small, busy organization where everyone is working at full capacity. It is worth getting your induction procedures organized – preferably in discussion with the rest of your staff – so that when you get a new member of staff you do not have to rush around on their first day thinking about what to do with them.

All new staff and casual employees must be inducted before attempting any task.

* Educate new person about all the risks and precautions
* Ensure that he understands the induction
* Emphasize the nature of work
* Ensure that his attire complies

**THE FIRST DAY**

The single most important aspect of the first day is making time for the new recruit. There is nothing more disappointing and disheartening than sitting for hours waiting for someone to come and show you what to do, or give you information you need. Getting off on the wrong foot can colour that an employee’s impression of the business forever. Indeed, you may lose the person you have spent so much time and money getting – so it’s worth getting it right! What makes a huge difference is having a planned induction programme.

This might cover a period of two days, two weeks, or two months, depending on the nature of the job and the size of the business, but at the end of a good induction process, new employees should be thoroughly conversant with the operating procedures of the company, and have all the basic knowledge required to do their job. They may not yet be competent to work completely unsupervised, but they should feel comfortable with what they are required to do and know where to get help if they need it. They should also understand your business objectives, and what you are trying to achieve. If you have the opportunity, use a “buddy” system where another employee is “assigned” to look after the new person – it can help both employees to develop confidence!

It is important to consider the length of the induction process. Again, if you think back to your first day in a new job, you’ll probably remember feeling overwhelmed by the amount of information to take in and getting home exhausted and confused! It’s better to break information into bite-sized pieces, and mix it with activity.

**EMERGENCY RESPONSE PLAN**

The Emergency Response Plan involves the following process:

1. Retailer to conduct a risk assessment of the service station to establish the likelihood of any identified risks occurring.

* The following are typical risks that could be identified at every service station:
  + Fire
  + Physical injury (gun shot wounds, broken limbs, lacerations, burns, electrical shocks, etc)
  + Medical emergencies (heart attacks, loss of consciousness etc)
  + Riot / Demonstration
  + Fuel spillage
  + Robbery
  + Bomb threats
* Less common risks identified at some sites could involve the following:
  + Existence of buildings (commercial, residential, etc) above the site
  + Existence of basements, shops, storerooms, etc below the site
  + Flood (proximity to rivers and the coast)
  + Landslides
  + Insect/ snake bites
  + Threat of wild animals

1. Field force member and the retailer devise an Emergency Response Plan to deal with each identified risk once it has occurred in order to minimize its impact and to prevent it from escalating.
2. Test the Emergency Response Plan once a year.

It is incumbent on each site’s manager to assess the particular risk that could occur and devise a plan to deal with each one.

It is suggested that the above scenarios are documented in a special file entitled “Emergency Response Plan” and filed in a safe place.

Fire Emergency Response Plan

* Sound the alarm
  + Switch off all pumps-use the emergency switch
  + Attempt to extinguish the blaze as soon as possible if it is not already too large
  + Use the fire extinguishers and sand for petrol fires
  + Use the fire-hose for fires in the building (don’t use water on electrical or petrol fires)
  + Evacuate the entire building
  + Summon the fire brigade as soon as possible if the blaze cannot be immediately extinguished
  + Keep onlookers away from the site
  + Report incident to Shell field force member as soon as possible

**PRODUCT SPILLS AND LEAKS**

If there is a large spill, the following should be done:

* Switch off all the pumps-use the emergency switch
* Ensure there is no smoking, fire or welding in the vicinity
* Do not switch on vehicle engines
* Ask customers to get out of their vehicles
* Keep fire extinguishers approximately 5 meters away, ready for action
* Call the fire brigade and advise Shell
* Soak up the product spill with sand or sawdust and remove to a safe place
* Don’t use water as this will spread the product faster and carry it into drains
* Form a dam to prevent the product from reaching a drain

**PHYSICAL INJURY**

In the event of physical injury the following should be done:

* Apply first aid technique
* Phone the doctor and / or hospital
* Take injured party to the doctor or hospital

**MEDICAL EMERGENCY**

In the event of a medical emergency the following should be done:

* Apply first aid technique
* Phone the doctor and / or hospital
* Take injured party to the doctor or hospital

**RIOT / DEMONSTRATION**

When you see a group of protesters moving in on your site, you should take the following precautions:

* Telephone your local police station.
* Telephone your field force member or Shell Call Centre.
* Ask customers to complete their transactions and quickly leave the service station in a direction away from the approaching/gathering crowd
* Lock all the pumps and dispensers
* Switch off the power to the forecourt pumps
* Switch off all electricity including the lights
* Remove all loose forecourt equipment into the building or the rear section of the property. This would include fire extinguishers and sand buckets
* Lock all gates and doors and assemble all staff back in a room out of site
* Unlock your first aid cabinet
* Keep fire extinguishers handy
* Cancel any imminent fuel deliveries
* Ask your staff to remain calm and quite

Your service station should appear to be closed and so hopefully deflect the crowd. The circumstances of each incident will differ; however retailers should use their discretion when making operational decisions, whether all or some forecourt staff should be sent home or if it is safe for them to leave the site.

In all instances adopt a non-confrontational approach with the protesters or the media. Practice these measures beforehand to ensure that you are properly prepared.

**ROBBERY**

If a robbery does take place, your staff should do the following:

* Give the robber what he demands
* Obey the robber, move slowly and be calm, alert and observant
* Remember his height, skin colour, his voice, his weapon, his vehicle and the registration
* Write down the details of the robber as soon as possible once he has gone
* Figures in the Safety at Service Station Operational Standards Manual shows sketches that will assist in recording the details of the robber
* Telephone the police and don’t touch anything that might carry the robber’s fingerprints
* Ask witnesses to remain on the premises until the police arrive, or take their names and addresses.
* Report the incident to Shell field force member immediately

7. **Emergency Procedures, accidents, first aid and details of proactive equipment routinely provided**

Emergency Action Plan

Any injury at work- not matter how small- must be reported immediately to your supervisor and receive first aid attention. Serious conditions often arise from small injuries if they are not cared for at once.

***DO NOT ENDANGER YOUR LIFE. SURVEY THE SITUATION BEFORE TAKING ANY ACTION.***

|  |  |
| --- | --- |
| **CONTRACTOR NAME:SEAVEST AFRICA** | **CONTRACTOR HONE: 083 781 1234** |
| * Site Location Name: |  |
| * Site Location Address: |  |
|  |  |

Emergency Phone Numbers

|  |  |
| --- | --- |
| **CONTACT** | **TELEPHONE NUMBER** |
| Ambulance |  |
| Fire |  |
| Police |  |
| Hospital Name |  |
| Hospital Phone |  |
| Responsible RMC |  |
| Chevron Health and Safety Specialist |  |
| Client Contact |  |
|  |  |

Utility Emergency Telephone Numbers

|  |  |
| --- | --- |
| **UTILITY** | **TELEPHONE NUMBER** |
| Water |  |
| Gas |  |
| Electric |  |
| Telephone/Cable |  |
| Sewer |  |
|  |  |

Directions to Hospital

|  |
| --- |
|  |

* Critical hazards

Work at height on roof, Rusty roof sheets and roof structure

* Minimum personal protective equipment

Safety Shoes, High visibility vest, Leather Gloves, Safety Harness with lanyard, and hard hat with chin strap.

* Onsite location of first aid kit and safety supplies

First aid kit and safety supplies are located at the site office/foremen’s vehicle.

* Emergency first aid

Ensure first aid kit is stocked with minimum requirements as per Annexure to General Safety Regulations in OHSAct.

**First aid for petroleum hydrocarbon emergencies**

Ingestion: DO NOT INDUCE VOMITING. Call Poison Control; follow instructions. Administer cardiopulmonary resuscitation (CPR), if necessary. Seek medical attention.

Inhalation: Remove person from contaminated environment. DO NOT ENTER A CONFINED SPACE TO RESCUE SOMEONE WHO HAS BEEN OVERCOME UNLESS PROPERLY EQUIPPED, TRAINED, AND A STANDBY PERSON PRESENT. Administer CPR if necessary. Seek medical attention.

Skin contact: Brush off dry material, remove wet or contaminated clothing. Flush skin thoroughly with water. Seek medical attention if irritation persists.

Exposure symptoms: Headache, dizziness, nausea, drowsiness, irritation of the eyes, nose and throat, skin and breathing difficulties.

Contingency plan: Report incidents to HSE Department after emergency procedures have been implemented.

Response to emergency steps:

1. Survey the situation. Do not endanger your own life. DO NOT ENTER A

CONFINED SPACE TO RESCUE SOMEONE WHO HAS BEEN OVERCOME UNLES PROPERLY EQUIPPED, TRAINED, AND A STANDBY PERSON IS PRESENT.

1. Call Netcare 082 911 (if available) for paramedics or the fire department

IMMEDIATELY. Explain the physical injury, chemical exposure, fire, or release situation.

1. Decontaminate victim without delaying life saving procedures.
2. If victim’s condition appears to be non-critical, but seems to be more severe than minor cuts, he /she should be transported to the nearest hospital by trained Emergency Medical Services (EMS) personnel: let the doctor assume the responsibility for determining the severity of the injury. If the condition is obviously serious, EMS must transport the victim.
3. Notify the HSE Department. Complete the applicable Incident Reporting Forms within 24 hours.

|  |  |
| --- | --- |
| EMERGENCY FIRST AID PROCEDURES | |
| **To Stop Bleeding**   1. Give medical treatment. 2. Assure airway, breathing, and circulation. 3. Use DIRECT PRESSURE over the wound with clean dressing or you hand (use no permeable gloves). Direct pressure will control most bleeding. 4. Bleeding from an artery or several injury sites may require DIRECT PRESURE on a PRESSURE POINT. Use pressure points for 30- 60 seconds to help control severe bleeding. 5. Continue primary care and seek medical aid as needed. | **CPR**   1. Call for help. 2. Arousal: check for consciousness. 3. Open airway with chin-lift. 4. Look, listen and feel for breathing. 5. If breathing is absent, give 2 slow, full rescue breaths. 6. Check the pulse for 5 to 10 seconds. 7. If pulse is present, continue rescue breathing: 1 breath every 5 seconds. 8. If pulse is absent, start CPR: 15 comprehensions, 2 breaths (1man) |

8. The site Manager, and supervisory staff will monitor safety in the location in the locations visited throughout the course of the day, and should any area be identified attention, ensure that the necessary actions are taken.

**Accident statistics**

**AFR (Accident Frequency** Total reportable events x 100000

**Rate) = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Total number of employees

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Last year** | | **Year before** | | **Year before that** | |
| **RIDDOR DESCRIPTION** | Total no. | AFR | Total no. | AFR | Total no. | AFR |
| Deaths |  |  |  |  |  |  |
| Major injuries |  |  |  |  |  |  |
| Over 3 day injuries |  |  |  |  |  |  |
| Reportable diseases |  |  |  |  |  |  |
| Dangerous Occurrences |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

**Evacuation Drill Records**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Emergency Co-ordinator:** | |  | | | |
| **Company:** | |  | | | |
| **Location:** | |  | | | |
| **Date of Drill:** | |  | | | |
| **Time Alarm activated:** | |  | | | |
| **Time all Persons accounted for:**  **(when all persons names are on register)** | |  | | | |
| **evacuation time:** | |  | | | |
| **Persons in attendance:** | | 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| **Overall Standard of Drill:** | | **Unsatisfactory** | **Satisfactory** | **Good** | **Very Good** |
| **(X) where applicable** | |  | **X** |  |  |
| **Comments:** | **Action Required/by Who:** | | | **Date Action taken & By Whom:** | |
| Employees evacuated within 5 minutes | n/a | | |  | |
|  |  | | |  | |
|  |  | | |  | |
|  |  | | |  | |
|  |  | | |  | |
|  |  | | |  | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Emergency Co-ordinator:** | | | |
| **Name:** |  | **Sign:** |  |
| **Position:** |  | **Date:** |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **Signed off by Safety Committee Chairman/CEO:** | | | |
| **Name:** |  | **Sign:** |  |
| **Position:** |  | **Date:** |  |

**EMERGENCY CHECKLIST**

Auditor \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Designation \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Site \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |
| --- | --- | --- |
| **Items checked** | **Yes/ No/ NA** | **Comments** |
| **EMERGENCY preparedness** | | |
| 1. Display of essential telephone numbers. |  |  |
| 2. An alarm system in place (air-horn, whistle, hooter). |  |  |
| 3. Emergency team identified and appointed (See 4 below)  Emergency Coordinator  Fire fighter  First-aider |  |  |
| 4. In case of small teams – have emergency procedures been discussed with principle contractor/ service station manager. |  |  |
| 5. First aid facilities. |  |  |
| 6. Evacuation - plan and emergency exit routes identified |  |  |
| 7. All personnel advised. |  |  |
|  | | |
| **EMERGENCY DRILL** | | |
| 1. Notification to police and other emergency services. |  |  |
| 2. Dispersal of vehicles to a safe place. Employee’s vehicles and work related vehicles. |  |  |
| 3. Contact with vehicles outside work area, not to return until further notice. |  |  |
| 4. Control access. |  |  |
| 5. Co-operation and liaison with neighbouring companies. |  |  |
| 6. Evaluate drill:  Emergency services response time.  Emergency personnel handling tasks/ workers.  Workers’ co-operation with emergency personnel and procedures:  Closing of doors, windows, etc.  Speed to assembly point  Roll call for completeness of evacuation |  |  |
| 7. Notification to managing director - once the emergency is over. |  |  |
| 8. Plans to be reviewed and modified at regular intervals. (reviewed once a year) |  |  |

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Signature

|  |
| --- |
|  |

**FALL PROTECTION PLAN**

**1. INTRODUCTION**

Fall protection is a concept that describes behaviors, systems, processes, procedures, equipment and rules intended to protect workers from hazards. Fall protection does not mean bulky or cumbersome equipment. It doesn’t interfere with work tasks, and it doesn’t get in the way of co-workers if you understand the concept and apply it appropriately.

**2. BASIC FALL PROTECTION REQUIREMENTS**

The basic fall protection requirements are summarized below:

* Workers must be protected from fall hazards when they are on unguarded surfaces more than 2meters above a lower level or at any height above dangerous equipment

• Workers perfuming duties on a skeleton steel building or structure must be protected by a

• Fall arrest system connected to a securely anchored lanyard or lifeline when the fall distance is greater than 2 meters. (Each anchor to be able to support at least 1 500 kg per attached worker.) It is advisable for workers to be connected at all times.

• Workers must tie to the steel beams of the cradle when they performing a task and to never exceed the indicated maximum weight including materials and equipment.

**3. FACTORS WHICH CAN CAUSE A FALL**

A worker may fall from, through or into a place or thing when;

There is a sudden acceleration or deceleration;

* moving from one surface to another;
* the surface is not capable of supporting a load:
* openings or holes are not identified or protected,
* open edges are not protected;
* levels change;
* hand grip is lost;
* surfaces are slippery (e.g. Surfaces ate wet or covered with dust);
* footwear is unsuitable;
* equipment, tools, rubbish are causing obstructions in work area;
* ladders are used incorrectly,
* clothing is caught;
* surfaces move;
* lighting is unsatisfactory;
* weather conditions are bad (e.g. heavy rain or wind is present);
* struck by a moving or falling object; and devices are not provided or are used incorrectly
* Other factors may have a detrimental effect on a person’s behavior or performance (e.g. exposure to chemicals or electricity) which may increase the risk of a fall.

**4. LEGISLATIVE REQUIREMENTS**

**LEGISLATION:**

Occupational Health and Safety Act, 1993

Construction Regulations, 2003

**Definitions:**

**“Competent person”**

means any person having the knowledge training, experience and qualifications specific to the work or task being performed: Provided that where appropriate qualifications and training are registered in terms of the provisions of the South African Qualifications Authority Act, 1995 (Act No.58 of 1995). These qualifications and training shall be deemed to be the required qualifications and training;

**“Fall prevention equipment”**

means equipment used to prevent persons from falling from an elevated position, including personal equipment, body harness, body belts, lanyards, lifelines or physical equipment, guardrails, screens, barricades, anchorages or similar equipment;

**“Fall arrest equipment”**

means equipment used to arrest the person in a fall from an elevated position, including personal equipment, body harness, lanyards, declamation devices, lifelines or similar equipment, but excludes body belts;

**“Fall protection plan”**

means a documented plan, of all risks relating to working from an elevated position, considering the nature of work undertaken, and setting out the procedures and methods to be applied in order to eliminate the risk;

**Regulation 8 fall protection:**

1) A contractor shall cause:

a) The designation of a competent person, responsible for the preparation of a fall protection plan;

b) The fall protection plan contemplated in (a) to be implemented amended where and when necessary and maintained as required

c) Steps to be taken in order to ensure the continued adherence to the fall protection plan.

2) The fall protection plan contemplated in sub regulation (1), shall include-

* a risk assessment of all work carried out from an elevated position which shall include the procedures and methods used to address all the risks identified per location:
* the processes for evaluation of the employees’ physical and psychological fitness necessary to work at elevated positions and the records thereof, and
* the procedure addressing the inspection, testing and maintenance of all fall protection equipment and
* The procedure addressing the inspection, testing and maintenance of all fall protection equipment.

3) A contractor shall ensure that the construction supervisor appointed in terms of regulation 6(1) is in possession of the most recently updated version of the fall protection plan.

4) Notwithstanding the provisions of sub regulations (1) and (2), the contractor shall ensure that-

* all unprotected openings in floors, edges, slabs, hatchways and stairways are adequately guarded, fenced or barricaded or that similar means are used to safeguard any person from falling through such openings;
* no person works in an elevated position, unless such work is performed safely as if working from a scaffold or ladder;
* notices are conspicuously placed at all openings where the possibility exists that a person might fall through such openings;
* fall prevention mid fall arrest equipment is;­
* suitable and of sufficient strength for the purpose or purposes for which it is being used having regard to the work being carried out and the load, including any person, it is intended to bear; and
* securely attached to a structure or plant and the structure or plant and the means of attachment thereto is suitable and of sufficient strength and stability for the purpose of safely supporting the equipment and any person who is liable to fall;
* fall arrest equipment shall only be used where it is not reasonably practicable use fall prevention equipment; and
* Suitable and sufficient steps shall be taken to ensure, as far as reasonably practicable, that in the event of a fall by any person, the fall arrest equipment or the surrounding environment does not cause injury to the person.

5) Where roof work is being performed on a construction site, the contractor shall ensure that in addition to the requirements set out in sub regulations (2) and (4), it is furthermore indicated in the fall protection plan-

* that the roof work has been properly planned;
* that the roof erectors are competent to carry out the world
* that no employees are permitted to work on roofs during inclement weather conditions or if weather conditions are a hazard to the health and safety of the employees;
* hat prominent warning notices are to be placed where all covers to openings are not of sufficient strength to withstand any imposed loads and where fragile material exists;
* that the areas mentioned in paragraph (d) are to be barricaded off to prevent persons from entering;
* that suitable and sufficient platforms, coverings or other similar means of support have been provided to be used in such a way that the weight of any person passing across or working on or from fragile material is supported; and
* that there is suitable and sufficient guard-rails or barriers and toe-boards or other similar means of protection to prevent, so far as is reasonably practicable, he fall of any person, material or equipment

##### SOUTH AFRICAN BUREAU OF STANDARDS SPECIFICATION

The following EN standards have been adopted by the SABS as South African National Standards and were launched at a function at the SABS on August 24, 2000.

### PERSONAL PROTECTIVE EQUIPMENT AGAINST FALLS FROM A HEIGHT

|  |  |
| --- | --- |
| EN - NU MBER  SANS - NUMBER | SPECIFICATION |
| SABS EN 341: 1992 | Descended devices.(Approved according to SABS procedures on 10 December 1999) |
| EN 351-1:2002 SANS 50353-1:2003 | Guided type fall arresters including a rigid anchor line. (Edition 2) |
| EN 353-2:2002 SANS 50353-2:2003 | Guided type fall arresters including a flexible anchor line. (Edition 2) |
| E4N 354:2002 SANS 50354:2003 | Lanyards. (Edition2) |
| EN 355:2002 SANS 50355 | Energy absorbers. (edition 2) |

**5. HEIGHT FALL PROTECTION**

* **Before onsite work begins**

a) Ensure that only competent persons who are fit and capable of doing the work to which they are assigned, are employed on the Project

b) Provision of well maintained equipment and certified tools suitable for the work to be done.

c) Nominate and appoint person for managing the on site safety programmed.

d) Ensure that active follow up, in co-ordination with GVK supervision is carried out for any injury, site incident, or failure of the safety management system.

h) Forward any relevant information for inclusion in the health and safety file.

I) put in place a Health, Safety & Environment onsite Training Programmed, addressing the specific needs of his workforce.

* **As onsite work progresses**

The designated responsible person shall:

a) Daily plan for type and nature of work

b) Scope of work

c) Allowable working hours

d) Confirm that work can be safety executed within the proposed programmed of works

e) HSE Induction Requirements

f) Personnel Protective Clothing

g) Equipment, standards and requirements

h) Noise restriction including local requirements

i) Interfaces with other Contractors

j) Contractors HSE plan

k) Auditing — participation and involvement

I) Daily Risk Assessments

m) Work Stoppages

n) Training

o) Hazardous materials (bringing into the Premises)

p) Reporting of incidents and accidents

q) Permit System — administration and requirements

r) Consider Language barriers

t) Any other specific anticipated hazards related to the work scope

u) Environmental Considerations

Daily team talks shall be given at start of each shift. These will be conducted by the Contractors line supervision and should address the application of HSE rules and procedures to the hazards of current work. Duration of the team talk should typically be 5 minutes, but particularly hazardous operations may require extended team talks, for example, confined space entry.

A register shall be maintained and daily checks be carried out.

Items to be verified are:

|  |
| --- |
| SUSPENDED SCAFFOLD |
| Sound Equipment |
| Not Overloaded |
| Secure outriggers |
| Lifting Gear |
| Wire ropes |
| Shackles |
| Safety belts available |
| Checked by a suspended scaffold specialist |
|  |

* **Housekeeping arrangements**

The effectiveness of a HSE programmed is determined by the general standards of housekeeping maintained on site. Key points to be applied are:

a) Cable management: strap hooks or rubber ties for hanging cables and hoses shall be provided to keep access ways clean and tidy

b) All loose material shall be stored in a clean and tidy manner

c) Scrap bins shall be sited near work areas, and cleaned regularly

1. Skips should be sited in strategic locations
2. Scaffolding platforms shall be kept clear of debris, with all material stored in suitable containers
3. Housekeeping problems shall be identified and auctioned on a daily basis as part of the inspection responsibility of individual supervisors

* **Responding to emergencies**

Site Evacuation & Emergency Response Plan

The GVK Site agent shall be responsible for preparing, issuing and ensuring that all personnel understand site conditions in conjunction with clients overall emergency preparedness procedures and systems. All site personnel shall be advised of the actions to be followed in the event of fire, gas/toxic release, environmental contamination or damage or any other emergency situation. Such advice shall be given at site inductions and subsequent ongoing HSE talk’s sessions.

The Plan shall be clear and concise. The procedures shall be included on notice boards, strategically placed around the site.

Emergency telephone numbers shall be listed. A basic map should be provided which shows evacuation routes and assembly points.

## LETTERS OF

## APPOINTMENT

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

## APPOINTMENT

SEAVEST AFRICA

OCCUPATIONAL HEALTH AND SAFETY ACT

SECTION 16(2) – ASSISTANT TO THE CHIEF EXECUTIVE OFFICER APPOINTMENT

I, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ appointee of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ hereby appoints you \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ as the Section 16(2) (Assistant to the CEO) appointee responsible for the area known as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

In terms of this appointment, you are responsible for occupational health and safety matters at the aforementioned area. In order to ensure that you meet this responsibility you must familiarize yourself with the Occupational Health and Safety Act and its Regulations. You are also required to ensure that all statutory requirements are met at all times.

**In order to be of assistance, you may make further appointments in terms of Section 16(2). These appointees must assist with occupational health and safety matters within specific designated areas. These further appointees may not make further appointments in terms of the Occupational Health and Safety Act.**

Your appointment is valid from \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

You shall report directly to me on all occupational health and safety matters arising.

……………………………………

(Hemi Gayadeen)

Kindly confirm your acceptance of this appointment by completing the following:

### ACCEPTANCE

I, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ understand the implications of the appointment as detailed above and confirm my acceptance.

……………………………….

(Nicky Jamun)

**OCCUPATIONAL INJURIES AND DISEASES ACT APPOINTMENT**

Responsible Person in terms of Section 39(3) (A) of the Compensation for Occupational Injuries and Diseases Act, 130 of 1993

I, **\_\_\_\_\_\_\_\_\_\_\_\_\_\_**, having been appointed in terms of Section 16(2) of the Occupational Health and Safety Act (85 of 1993) as the **Manager** for Seavest Trading, hereby appoint you, **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**, as the responsible person.

### The following will be your duties and responsibilities:

1. To ensure that all injuries and occupational diseases that may come to your attention, are reported to the Commissioner as required by subsection 38, 39(1) in the prescribed manner.

2. To ensure and assist the Commissioner on request to furnish him with particulars regarding the accident and injuries concerned to comply with the provisions at Section 40.

3. Shall within 14 days after having received a claim send such claim and any relevant information and documents to the Commissioner. (Section 41)

4. To ensure that the employer is registered, and furnish the Commissioner with the prescribed particulars of the business, and shall within a period determined by the Commissioner furnish such additional particulars as the Commissioner may require. (Section 80)

Position valid from **1st January 2010** until **31st December 2015**.

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**DIRECTOR**

Please confirm your acceptance of this appointment by completing the following:

## ACCEPTANCE

I, **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**, understand the implications of this appointment as detailed above and confirm my acceptance.

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

SIGNATURE DATE

**EMERGENCY RESPONSE TEAM COORDINATOR**

[General Safety Regulation 2; Environment Regulation 9(1)]

I, **\_\_\_\_\_\_\_\_\_\_\_\_\_\_**, having been appointed in terms of Section 16(2) of the Occupational Health and Safety Act (85 of 1993) as the **General** for Seavest Trading, hereby appoint you, **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**, as the **Emergency Response Team Coordinator.**

### The following will be your duties and responsibilities:

1. Ensure that you are fully familiar with all emergency procedure regulations.
2. Draw up an emergency plan for the premises which caters for any natural or man-made emergency / disaster / business interruption.
3. Ensure that all relevant parts of the plan are available to all employees.
4. Ensure that emergency escape routes are displayed prominently on the plan.
5. Ensure that emergency exits are clearly identified and obstruction free, with all keys available at the doors.
6. Co-ordinate training with all staff, appointing suitable persons to control various functions during an emergency- i.e. fire / first-aid / evacuation etc.
7. Co-ordinate training all staff members in use of emergency equipment.
8. Co-ordinate regular inspections and maintenance of all emergency equipment.
9. Co-ordinate all emergency drills.
10. Restore and / or isolate water, electricity and other energy sources if necessary.
11. Liaise with Local Municipality Board, Civil Departments (Metro / S.A.P.S / etc), Fire Brigade and any neighboring industries to ensure that the emergency plan benefits all parties.
12. Revise the emergency procedures annually to ensure that they are up-to-date and practical.
13. All areas in front of fire equipment to be demarcated as "KEEP CLEAR" and ensure compliance with this instruction.
14. All equipment to be indicated according to company standards.
15. Liaise with local authorities and ensure that the service company is registered with the town board as being competent to inspect and maintain the equipment.
16. Co-ordinate all activity in the case of a fire.

Position valid from **1st January 2010** until **31st December 2015**.

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**DIRECTOR**

Please confirm your acceptance of this appointment by completing the following:

## ACCEPTANCE

I, **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**, understand the implications of this appointment as detailed above and confirm my acceptance.

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

SIGNATURE DATE

**FIRST AID COORDINATOR**

In terms of General Safety Regulation 3 of the Occupational Health and Safety Act, Act 85 of 1993.

I, **\_\_\_\_\_\_\_\_\_\_\_\_\_\_**, having been appointed in terms of Section 16(2) of the Occupational Health and Safety Act (85 of 1993) as the **Manager** for Seavest Trading, hereby appoint you, as the First Aider of your team.

### The following will be your duties and responsibilities:

1. Ensure that all accidents are reported, including the minor cuts, bruises etc.

2. Ensure that all of the injuries in clause 1 are investigated.

3. Ensure that all the injuries are treated.

4. Ensure that all the treatments are recorded in the first-aid book:

4.1 Name of employee.

4.2 Short description of the accident, cause and treatment.

4.3 Date off and date of resumption.

4.4 Your signature.

5. Ensure that your certificate is valid at all times.

6. Ensure that the first-aid box is equipped with the minimum requirement of the General Safety Regulation Annexure.

7. Ensure that the first-aid box is sign posted.

8. Ensure that the first-aid box is available and unobstructed.

9. Ensure that all employees in your team are aware that you are the first-aider

10. Ensure that your name is displayed on the box and how to get hold of you in the event of an emergency.

Position valid from **1st January 2010** until **31st December 2013**.

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**DIRECTOR**

Please confirm your acceptance of this appointment by completing the following:

## ACCEPTANCE

I, **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**, understand the implications of this appointment as detailed above and confirm my acceptance.

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

SIGNATURE DATE

**PERSON RESPONSIBLE FOR MACHINERY**

(General Machinery Regulation 2 Appointment

of the Occupational Health and Safety Act No. 85 of 1993)

I, **Nicky Jamun**, having been appointed in terms of Section 16(2) of the Occupational Health and Safety Act (85 of 1993) as the **Manager** of **Seavest Trading**, hereby appoint you, **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**, as the **Supervisor of Machinery.**

### The following will be your duties and responsibilities: -

1. To ensure that the machinery is safe to use in terms of Regulation 2 of the General Machinery Regulations.
2. Ensure that you are familiar with the Act and its regulations, and that these are complied with.
3. Ensure that an organized maintenance programmed has been developed.
4. Ensure that proper records are kept regarding the machinery under your surveillance.

Position valid from **1st January 2010** until **31st December 2015**.

Person to report to: **Director**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Director**

Please confirm your acceptance of this appointment by completing the following:

## ACCEPTANCE

I, **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**, understand the implications of this appointment as detailed above and confirm my acceptance.

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

SIGNATURE DATE

**INCIDENT INVESTIGATOR**

In terms of Section 24 and General Administration Regulation 8(1) of the Occupational Health and Safety Act, Act 85 of 1993.

I, **\_\_\_\_\_\_\_\_\_\_\_\_\_\_**, having been appointed in terms of Section 16(2) of the Occupational Health and Safety Act (85 of 1993) as the **Manager** for Seavest Trading, hereby appoint you, **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**, as the Investigator of all incidents occurring at the Plant.

### The following will be your duties and responsibilities: -

1. Investigate all incidents and accidents in accordance with General Administrative Regulation 6, 8 and Section 24.

2. Report the findings of the investigation on the Annexure 2 form.

3. Report the Section 24 incidents to the Provincial Director within seven days on the form of WCL 1 or WCL 2 as published in the Compensation for Occupational Injuries and Diseases Act, 1993 (Act No. 130 of 1993).

4. Ensure that the Annexure 2 forms are endorsed by the employer and the chairman of the Health and Safety Committee.

Position valid from **1st January 2010** until **31st December 2015**.

Area of responsibility: **Workshop and All customer sites where work is being conducted**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**DIRECTOR**

Please confirm your acceptance of this appointment by completing the following:

## ACCEPTANCE

I, **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**, understand the implications of this appointment as detailed above and confirm my acceptance.

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

SIGNATURE DATE

**CHAIRMAN OF THE HEALTH AND SAFETY COMMITTEE**

(Section 19(3) of the Occupational Health and Safety Act No. 85 of 1993)

I, **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**, having been appointed in terms of Section 16(2) of the Occupational Health and Safety Act (85 of 1993) as the **Manager** for Seavest Trading, hereby appoint you as the **Chairman of the Health and Safety Committee.**

### The following will be your duties and responsibilities: -

1. Perform all the required duties as the Chairman of the Health and Safety Committee.
2. Endorse the minutes of the Health and Safety Committee Meetings.
3. Ensure Meetings are held regularly and copies of the Minutes are available.

Position valid from **1ST January 2010** until **31st December 2015**.

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**DIRECTOR**

Please confirm your acceptance of this appointment by completing the following:

## ACCEPTANCE

I, **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**, understand the implications of this appointment as detailed above and confirm my acceptance.

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

SIGNATURE DATE

**MEMBER OF THE HEALTH AND SAFETY COMMITTEE**

(Section 19 of the Occupational Health and Safety Act No. 85 of 1993)

I, **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**, having been appointed in terms of Section 16(2) of the Occupational Health and Safety Act (85 of 1993) as the **Manager** for Seavest, hereby appoint you as a **Member of the Health and Safety Committee** of Seavest Trading**.**

### The following will be your duties and responsibilities:

1. Ensure that you are familiar with the provisions of the Act and its regulations, especially Sections 19 and 20.
2. All required duties are to be performed as detailed in Sections 19 and 20 of the Act and in General Administrative Regulations 8 and 10.
3. Be prepared to regularly attend meetings at a prescribed time and place.

Position valid from **1sy January 2010 until 31st December 2013**.

Area of responsibility: **Seavest Workshop and all sites where work is being performed by Seavest staff.**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**DIRECTOR**

Please confirm your acceptance of this appointment by completing the following:

## ACCEPTANCE

I, **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**, understand the implications of this appointment as detailed above and confirm my acceptance.

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

SIGNATURE DATE

**ENVIRONMENT, HEALTH AND SAFETY REPRESENTATIVE**

[Section 17 of the Occupational Health and Safety Act (Act 85 of 1993)]

I, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**,** having been appointed in terms of Section 16(2) of the Occupational Health and Safety Act (85 of 1993) as the Managerfor Seavest Trading, hereby appoint you, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, as the **Environment, Health and Safety Representative** for the **Team 1.**

### In terms of Section 18 of the Act, the following will be your duties and responsibilities: -

1. To review the effectiveness of health and safety measures;
2. To identify potential hazards and potential major incidents at the workplace;
3. To examine the causes of incidents at the workplace, in collaboration with the employer;
4. To investigate complaints by any employee relating to that employee's health and safety at work;
5. To make representations to the employer on general matters affecting the health or safety of the employees at the workplace;
6. To inspect the Work area, including any article, substance, plant, machinery or health and safety equipment at that workplace with a view to the health and safety of employees, on a quarterly basis;
7. To participate in consultations with inspectors at the workplace and accompany inspectors on inspections of the workplace, when required;
8. To attend the safety meetings of which you are a member.
9. He/She shall, in respect of the workplace or section of the team for which he has been designated to be entitled to:-

* visit the site of an incident at all reasonable times and attend any inspection in loco;
* attend any investigation or formal inquiry held in terms of this Act;
* in so far as it is reasonably necessary for performing his functions, inspect any document which the employer is required to keep in terms of this Act;
* accompany an inspector on any inspection;
* with the approval of the employer, accompany a technical adviser, on any inspection; and
* Participate in any internal health or safety audits.

1. A health and safety representative shall not incur any civil liability by reason of the fact only that he failed to do anything, which he may do or is required to do in terms of this Act.

Position valid from **1st January 2010** until **31st December 2013**.

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**DIRECTOR**

Please confirm your acceptance of this appointment by completing the following:

## ACCEPTANCE

I, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, understand the implications of this appointment as detailed above and confirm my acceptance.

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

SIGNATURE DATE

**WORK PERMIT ISSUING OFFICER**

(General Safety Regulation 4)

I, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**,** having been appointed in terms of Section 16(2) of the Occupational Health and Safety Act (85 of 1993) as the Managerfor Seavest Trading, hereby appoint you, \_\_\_\_\_\_\_\_\_\_\_\_\_\_, as the **Work Permit Issuing Officer.**

### The following will be your duties and responsibilities: -

1. Conduct a work permit survey to establish if the following types of work apply to the premises:
2. Any work on a roof
3. Any electrical installation work
4. Any work necessitating the use of scaffolding
5. Any work in a confined space
6. Any work on pressurized pipelines
7. Any welding work which has not been exempted in writing
8. Any hot work
9. Any cold work
10. Record your findings on the survey form, noting whether the work can be safely undertaken.
11. Ensure that the correct permits are issued and appropriately approved / signed.
12. Ensure that the permits and forms are filed appropriately.

Position valid from **1st January 2010** until **31st December 2013**.

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**DIRECTOR**

Please confirm your acceptance of this appointment by completing the following:

## ACCEPTANCE

I, \_\_\_\_\_\_\_\_\_\_\_\_\_\_, understand the implications of this appointment as detailed above and confirm my acceptance.

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

SIGNATURE DATE

**CONSTRUCTION VEHICLE AND MOBILE PLANT INSPECTOR**

**GENERAL SAFETY REGULATION**

Construction regulation 21

REG. 21.(1) A contractor shall ensure that all construction vehicles and mobile plants

-

REG

. 21. (1)(j) are on a daily basis inspected prior to use, b

y a competent person who has

been appointed in writing and the findings of such inspection is recorded in a register

I, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(Employer) for, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (Company)

do hereby designate / nominate, \_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_( Employee)as the,

Supervisor Of Construction Work at the following premises / site.

Period: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Duties and Responsibilities**

1 Ensure compliance with the Construction Regulation 21

2 Ensure all Construction vehicles an

d mobile plant

are inspected daily prior use.

3 Ensure all Construction vehicles and mobile plant which is found to be unsafe are withdrawn from use

until the required repairs are effected

4 Ensure record is kept of all inspections and the register is made

available for controlling monthly.

**AUTHORISED/ DESGINATED BY :**

Signature

Designation

Date

**ACCEPTANCE**

I, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ hereby accept and understand the requirements of this

appointment

Signature

Designation

Date



# Appointment as Person Responsible for Stacking/Storage in Terms of General Safety Regulations 8.1 (a) Construction Regulations 26 (a) of the Occupational Health and Safety Act, (85 OF 1993)

NAME OF COMPANY: .....................................................................................................................

IN TERMS OF THE ABOVE-MENTIONED ACT:

I (THE EMPLOYER) having been appointed to ensure full compliance with the OHSA and Regulations, hereby appoint you...................................

Full name

Manager-Section 16(2)

as Stacking/Storage Inspector to ensure that the stacking and storage are conducted in accordance with General Safety Regulations 8 and Construction Regulations 26.

YOUR RESPONSIBILITIES ARE TO:

1. Ensure that the stacking/storage in the area designated to you comply with the requirements of GSR 8, and the Construction Regulations 26 (a-d).

2. Ensure that all stacking operations are executed under your personal supervision.

3. Inspect all the stacking/storage operations to ensure that it adhere to GSR 8/Construction Regulations 26.

4. Immediately take action to break down unsafe stacks, and to rebuild them in a safe and stable manner.

5. Ensure, when stacks are built, that the sprinkler systems are not interfered with and that aisles and exists are clear at all times.

6. Ensure that flammable liquids, gas cylinders, and chemicals are stored safely, and to report any unsafe stacking to the Health and Safety Committee.

A copy of the General Safety and Construction Regulations of the OHSA are attached for your convenience and you are to familiarize yourself with the requirements of the act regulations.

This appointment will become effective on the date of acceptance thereof, from…….…..…to……..…...

Please confirm your acceptance of this appointment by signing and returning to me the duplicate copy of this letter.

Signature:

Manager (the employer)

Designation:

Date:

**ACCEPTANCE**

I understand the implications of the appointment and confirm my acceptance of this appointment. I have studied the relevant sections of the Act and Regulations and understand what is required of me.

Signed: Date:

|  |  |  |
| --- | --- | --- |
| ***LIST OF INSPECTION*** | | |
|  | | |
| **ITEM** | **FREQUENCY** | **BY WHOM** |
|  |  |  |
| **1. Tools & Equipment** |  |  |
| 1.1 Electric Tools | Weekly | Technician / Admin Clerk |
| 1.2 Hand Tools | Weekly | Technician / Admin Clerk |
|  |  |  |
| **2. Vehicles** |  |  |
| 2.1 Vehicle Inspections | Weekly | Technician / Admin Clerk |
|  |  |  |
| **3. Emergency** |  |  |
| 3.1 Fire Extinguisher | Weekly | Technician / Admin Clerk |
| 3.2 First Aid Kit | Weekly | Technician / Admin Clerk |
|  |  |  |
| **4. Safety Equipment** | Weekly | Technician / Admin Clerk |
| 4.1 Safety Harness | Weekly | Technician / Admin Clerk |
|  |  |  |
| **5. PPE** | Weekly | Technician / Admin Clerk |
|  |  |  |
| **6. Housekeeping** | Weekly | Technician / Admin Clerk |
|  |  |  |
| **7. Scaffold & Ladders** | Monthly | Technician / Admin Clerk |
|  |  |  |
|  |  |  |
|  |  |  |
| Records are kept in the Tool Check File! | | |

**Seavest**

**Incident Investigation**

(To be used in conjunction with and in addition to the Annexure 1 - Recording and Investigation of incidents)

## Incident description

*A description of what happened in no more that 100 words. The description should factually state the work activity at the time and the sequence of events that led to the incident*.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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## Outcome

*In no longer than 25 words provide a description of injuries and/or damage.*

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Main findings from investigation**

*Provide a list of the main findings based on factual and proven evidence from the final investigation report. Limit the number of main findings to 4-5*

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

## Main causes

*Provide a list of the main causes based on factual and proven evidence. These should typically come from identified failed defenses. Limit the number of main findings to 4-5*

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**Immediate actions**

*Provide a list of the immediate actions taken to prevent re-occurrence of the incident. These should typically come from identified actions to ensure the above identified defenses are in place in future. Limit the number of main findings to 4-5*

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

## Underlying causes

*Provide a list of the underlying causes in the company that led to the incident occurring. These should typically come from the final investigation report. Limit the number of underlying causes to 4-5.*

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

## Management actions to address underlying causes

*Provide a list of the actions for Management in the company to take to prevent re-occurrence of this incident or any other incident of similar nature occurring. These should typically come from the actions to address the identified latent failures in the company. Limit the number of Management actions to 4-5*

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# Designated Safe Hot Work Area Inspection

Location\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Description of work being performed\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Fire protection devices in area YES NO Comments\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Non combustible work areas YES NO Comments\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Combustible materials within 35 feet

of work area YES NO Comments\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Guards and shields in place YES NO Comments\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Hot work equipment maintained

properly YES NO Comments\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Possible explosive atmosphere

in area YES NO Comments\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Is fire watch needed in this area YES NO Comments\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

## Area approved for hot work YES NO

Comments\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Inspector\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Weekly Audits**

**Tools**

Audits on tools and equipment are conducted on a weekly basis. These records are kept in our tool check file. This allows us to identify any missing or damaged tools, and can be replaced immediately.

*Refer below for example of how a tool check is conducted.*

**Scaffolds and Ladders**

Scaffolds and ladder inspections are conducted every second week. This indicates to us if the requested item is in good working condition.

*Refer to inspection record book. Ref: SEA019IRB*

**SAFETY TALK**

**Tool Box Talks**

Tool box talks are conducted on a regular basis in the mornings before technicians can leave base to commence with the day’s work.

This allows us to monitor the risks and dangers out on site therefore we can eliminate and take the necessary precautions.

*Please refer to tool box talk book Reference No. SEA017TB*

Refer below for an example of a tool box talk

**Pre Job Briefing**

Pre Job Briefing is conducted on site before actual work for the day commences.

This allows us to identify and isolate/eliminate the risks and dangers on site.

Refer below for an example of a tailgate talk.

**Pre Job Briefing**

**OFFICE SAFETY – GENERAL HOUSEKEEPING**

There is a direct relationship between a clean, organized workplace and a safe workplace.

***Good housekeeping:***

• Eliminates accident and fire hazards

• Maintains safe, healthy work conditions

• Saves time, money, materials, space, and effort

• Improves productivity and quality

• Boosts morale

• Reflects an image of a well-run, successful organization.

***Be sure to do your part by keeping the following points in mind:***

* + Always keep walkway and evacuation routes clear.
  + Don’t store boxes or other items in aisles, hallways, or stairwells that lead to emergency exits.
  + Make sure that exit doors are kept clear so that they can be easily opened in an emergency. Good housekeeping will ensure that nothing blocks these doors on either side.
  + Access to Fire extinguishers must be kept clear at all times. Extinguishers must also be visible, so they should not be used as hangers for coats nor be blocked by stacks of boxes or other items.
  + Personal workspaces should be frequently inspected and corrected for electrical and tripping hazards, unsecured items that may fall or tip over, and bacteria accumulation on phones, keyboards and desktops.
  + Garbage, scraps and debris should be properly disposed of in designated trash receptacles and be removed on a frequent basis.
  + Eliminate or report any hazards you identify anywhere in your work environment.
  + Work must be carried out as per scope.

Meeting Conducted By: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Members Present**

Name & Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name & Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name & Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name & Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name & Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Behavioural Based Safety Programme**

1. **What is Behavioural Based Safety?**

Behavioural Based Safety is a process that reduces unsafe behaviours that can lead to incidents occurring in the workplace. The process works by reinforcing safe behaviour and identifying the causes of unsafe behaviour.

**The Three Generic Types of Approach**   
A behavioural safety process can be introduced in numerous ways but can be categorised into one of three generic types, these are:

* **Top Down**: a management driven process that typically has supervisors measuring behaviour and providing one to one feedback and relaying recommendations for improvement to the management team.
* **Bottom Up**: an employee driven process which encourages front line participation in safety. This works on the basis of using peer-to-peer observations which are fed back to a workforce run behavioural safety team who then conduct analysis to develop recommendations for managers to implement.
* **Collective**: a collective approach is where both managers and front line personnel conduct observations. Analysis is then conducted by a behavioural safety team (represented by both managers and front line personnel) to identify the root causes of unsafe practices. Recommendations are then identified and implemented to improve safety performance.

*\*It should be noted that whilst contractors may initially be considering either a Top Down or Bottom Up approach, all contractor should eventually aim towards adopting a collective approach.*

**2. The Six Pillars of Behavioural Safety**

Any behavioural safety process should seek to include the six pillars of behavioural safety, namely:

1. **Awareness**: to increase understanding and reduce resistance
2. **Management**: to lead by example and support the process
3. **Ownership**: to increase participation and develop commitment to continuous improvement
4. **Measurement**: to provide a pro-active means of measuring daily safety performance
5. **Feedback**: to recognise and praise good safety performance and seek understanding of unsafe acts may occur
6. **Analysis**: to objectively identify systemic drivers of unsafe behaviour and to allow for targeted recommendations for improvement
7. **Implementation of the BBS Program**   
   Each contractor will assess their organisation to identify the most effective method of implementing a behavioural safety process. Based on the assessment the contractor will then develop a plan of implementation to suit their needs and budget. Typically this involves developing the behavioural based measure and designing a method for conducting observations, training managers, a behavioural safety team and behavioural safety co-coordinator. The contractor will then train the initial group of observers, before training a team of 'in house' people to train and sustain the process.
8. **Safety Leadership**

One of the key predictors of an organisations safety culture is perceived management value of safety, often expressed by the behaviour of managers within the organisation. It is the leadership behaviour therefore of managers that often can be key to influencing risk taking occurring within organisations.

1. **What is Safety Leadership?**

Leadership is more than just management, and refers to not to just what, but how a person influences and motivates others. For example if a manager walks by an employee not wearing the correct PPE for the job, because they do not notice it is not being worn, the employee can be left with impression that managers do not mind if safety rules are not followed. It is these subtle things or soft signals that can play a major role in safety across the board.

1. **Why do people find it hard to lead on safety?**

Quite often people are promoted to management roles were leadership skills are required based solely on technical ability alone. As a result managers can often be task orientated and can often fail to communicate the importance of safety due to daily work pressures. The challenge here is to provide people in leadership roles with the skills to understand how they can misrepresent and under estimate risks and hazards, how and what influences people in their charge to take risk and how to effectively manage people and influence their behaviour.

1. **Procedure on how to conduct the Observation**

The Contractor will define who within their organisation will be performing the observation. Persons performing the observation (observer) must be knowledgeable / competent in the task they are required to observe being conducted. The observation must be properly planned and scheduled a few days in advance. The work crew being observed should be notified well before the observation date and what task will be observed. Unplanned observations should not be allowed. All observations should be conducted using the required Observation Form. The observer must provide feedback (both positive and “at-risk”) to the work crew or person being observed (observee) as soon as possible, preferably within the same shift in the presence of the observee’s supervisor. During the feedback session, the observe must be given the opportunity to explain any “at-risk” behaviours. Solutions for all “at-risk” behaviours must be agreed upon by the observer, observe and the observee’s supervisor. The observation will be performed using the BBSO Form.

1. **What is a quality observation**

An observation should consist of the following:

* All demographic information is completed, i.e., the 1st page of the form.
* The observer is required to enter a comment for every at-risk behavior observed, providing details describing what the behavior was and why it was done at-risk.
* The number of times an observation was made should be entered in the “Correct” or “At Risk” columns. Eg, if 5 workers were seen not wearing safety shoes, then 5 should appear in item # 15 of the Observation Form in the “At Risk” column.

1. **Record Keeping**

All Observations conducted shall be retained by the contractor for at least one year.

1. **Analysis of the Observation**

Every 6 months, the contractor shall analyse the results of the observations to determine where the gaps lie within the organisation. A plan should be put in place to close out the gaps identified.

|  |  |  |
| --- | --- | --- |
|  | | Behavioral Based Safety Observation |
| BBSO Type: Safe Work Practice Observation   |  |  | | --- | --- | | Name of Observer |  | | Observation Date / Time |  | |  |  | | Person / work crew observed |  | | Location of job |  | | Job / Task observed |  | |  | | | |
|  | | |
|  | | |
|  | | |
|  | | |
| |  | | --- | | Background Information / additional comments | |  | |  | |  | |  | |  | |  |  |  | | --- | | Observer’s Positive Comments | |  | |  | |  | |  | |  | |  | |  |  |  |  | | --- | --- | | Feedback Conducted by |  | | Feedback Date / Time |  | | | |
|  | | |
|  | | |
|  | | |
|  | | |
|  | | |

RESULTS of OBSERVATION

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Item # | Activity Description | Correct | At Risk | Comments ( What was Observed )  *Observer explains what was observed at risk* |
|  | COMMON Safe Work Practice Activities | *Numeric input here* | |  |
| 1 | Risk Ranking for job conducted (documented on permit/form as high, medium, low) |  |  |  |
| 2 | Correct Work Permit and Forms issued for the task |  |  |  |
| 3 | All relevant verifications and checks conducted by Permit Issuer / Approver and Requestor. |  |  |  |
| 4 | Job specific JLA available for all High risk work |  |  |  |
| 5 | JLA written / reviewed and communicated to all workers. |  |  |  |
| 6 | Location specific emergency plan reviewed with workers. |  |  |  |
| 7 | Work site visually inspected by Permit Approver to verify that the permit conditions are met and that other work being performed in the vicinity will not introduce additional hazards. |  |  |  |
| 8 | Proper barricades and safety signs are in place. |  |  |  |
| 9 | Are all cord connected electric power tools and other cord connected devices connected to a circuit with Earth Leakage Relay. |  |  |  |
| 10 | Pre-job safety briefing conducted & documented |  |  |  |
| 11 | Permit Issuer (and/or Permit Approver, if applicable) verifies controls are in place and signs the permit. |  |  |  |
| 12 | Permit Requester understands the permit conditions and signs permit(s). |  |  |  |
| 13 | Proper PPE worn for work type performed – check JLA for PPE requirements. |  |  |  |
| 14 | Workers have the knowledge and training to perform the job |  |  |  |
| 15 | Permit revalidation, extension, renewal, or cancellation is completed per the relevant SWP standard. |  |  |  |
| 16 | Permit Issuer, supervisor or other person in charge performs work-in-progress field. |  |  |  |
|  | GAS DETECTION SWP ACTIVITIES |  |  |  |
| 17 | Gas meter is bump tested daily or prior to use and the results are recorded. |  |  |  |
| 18 | Gas meter has been field calibrated within last month (check Monthly calibration sheet). |  |  |  |
| 19 | Calibration gas is within expiration date. |  |  |  |
| 20 | Detector tubes (if used) are within expiration date. |  |  |  |
| 21 | Detector tubes (if used) are from the same manufacturer as the sampling pump. |  |  |  |
| 22 | Gas testing is conducted in a safe manner. |  |  |  |
| 23 | Qualified Gas Tester performs the gas testing. |  |  |  |
| 24 | Gas test results recorded on appropriate permit |  |  |  |
|  | ISOLATION OF HAZARDOUS ENERGY (LOTO) SWP ACTIVITIES |  |  |  |
| 25 | Isolation points for all relevant energy sources are identified prior to work starting. |  |  |  |
| 26 | Locks and Tags are installed by each craft in the following order: (1) Operations; (2) Electricians; and (3) Maintenance. Locks and tags are removed in the reverse order. |  |  |  |
| 27 | Equipment Isolation Checklist is used correctly. |  |  |  |
|  | CONFINED SPACE ENTRY SWP ACTIVITIES |  |  |  |
| 28 | The confined space is positively isolated prior to entry. |  |  |  |
| 29 | Proper purging, flushing, venting and draining occur prior to entry. |  |  |  |
| 30 | Continuous air ventilation is in place once entry occurs. |  |  |  |
| 31 | Written rescue plan and rescue equipment are available. |  |  |  |
| 32 | Job is carried out as per permit requirements. |  |  |  |
| 33 | Confined Space Entry Log exists and is current. |  |  |  |
| 34 | Gas testing is conducted (initial / continuous / follow-up) and logged appropriately. |  |  |  |
| 35 | Entry Watch, Entry Supervisor, Rescue personnel are trained and available. |  |  |  |
|  | HOT WORK SWP ACTIVITIES |  |  |  |
| 36 | Positive isolation of hazardous energy has occurred prior to beginning hot work. |  |  |  |
| 37 | Proper purging, flushing, venting and draining occur prior to hot work. |  |  |  |
| 38 | Flammable / combustible materials are removed or covered within 15 meters (50 feet) prior to hot work. |  |  |  |
| 39 | All drains/trenches are covered within 15 meters (50 feet) |  |  |  |
| 40 | Appropriate spark containment is used. |  |  |  |
| 41 | Gas testing is conducted (initial / continuous / follow-up) and logged appropriately. |  |  |  |
| 42 | Trained Fire Watch is in attendance. |  |  |  |
| 43 | 2 x 9kg DCP Fire extinguishers are located adjacent to hot work. |  |  |  |
| 44 | Oxy-Acetylene / LPG cylinders are fitted with flashback arrestor. |  |  |  |
| 45 | Gas supply is shut off during breaks and lunch period. |  |  |  |
| 46 | Gas cylinder(s) are kept outside of the confined space. |  |  |  |
|  | WORK AT HEIGHTS SWP ACTIVITIES |  |  |  |
| 47 | Area is barricaded appropriately. |  |  |  |
| 48 | Safety harness and lanyards are inspected before use |  |  |  |
| 49 | Overhead Electrical lines close to the work activity are identified and made safe |  |  |  |
| 50 | Safety harness worn correctly (chest strap at mid-chest, d-ring in back, leg straps tightened) |  |  |  |
| 51 | Anchor location is selected and inspected prior to use. |  |  |  |
| 52 | 100% tie-off available & used |  |  |  |
| 53 | Tools are raised and lowered by means of a tool belt / box using rope or other safe method (tools are not hand carried while climbing). |  |  |  |
| 54 | 3 points of contact is used while climbing. |  |  |  |
| 55 | Written rescue plan is available (when fall protection is used). |  |  |  |
| 56 | A Safety Standby is present when workers are wearing a harness. |  |  |  |
| 57 | Portable ladder is appropriate for the task, positioned correctly, stable and in good condition. |  |  |  |
| 58 | Mobile Elevated Working Platform (MEWP) is appropriate for the task, positioned correctly and operated by a competent operator, stable, and in good condition. |  |  |  |
| 59 | A fall-arrest system (such as a fall-arrest harness and lanyard) is used in conjunction with the MEWP. |  |  |  |
| 60 | Scaffolding is stable, has appropriate bracing, no missing scaffold planks, guardrails, mid-rails or toe boards and constructed by competent persons. |  |  |  |
|  | EXCAVATION SWP ACTIVITIES |  |  |  |
| 61 | Appropriate technique is used for the task (e.g. hand, vacuum, mechanical digger / back-hoe). |  |  |  |
| 62 | Shoring is stable and safe means of egress is in place. |  |  |  |
|  | AFTER SWP ACTIVITIES |  |  |  |
| 63 | Work permit(s) is returned to Permit Issuer. |  |  |  |
| 64 | Permit Issuer or delegated responsible party verifies that work is completed in a satisfactory manner. |  |  |  |
| 65 | Permit Issuer or delegated responsible party verifies that site is left in clean, orderly condition. |  |  |  |
| 66 | Permit Issuer or delegated responsible party signs off on the permit and files correctly. |  |  |  |
| Total # of Correct and At-Risk Behaviors observed | |  |  | = xxxxxxx % |

Describe in Detail Why the At-Risk Item Occurred

|  |  |
| --- | --- |
|  | |
| Item # | Root Cause Description Detail (If more than one Root Cause per At-Risk Item, number the RCs in sequential order) |
|  |  |
|  |  |
|  |  |
|  |  |

Root Cause Factors

|  |  |
| --- | --- |
| A.) Lack of skill or knowledge. | E.) Lack of or inadequate procedures. |
| B.) In past, did not follow procedures or acceptable practices and no incident occurred (injury, product quality incident, equipment damage, regulatory assessment or production delay | F.) Inadequate communication of expectations regarding procedures or standards. |
| C.) Doing the job according to procedures or acceptable practices takes more time/effort. | G.) Inadequate tools or equipment (available, operable & safely maintained; proper task & workplace design). |
| D.) Short-cutting procedures or acceptable practices are positively reinforced or tolerated. | H.) External Factors |

Solution(s): How to Prevent Undesirable Behavior/Job Factor from Recurring:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Item # | Factor (A-H)\* | Person Responsible (Name) | Solution(s) | Date Assigned | Due Date | Action Taken | Date Completed |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |

Responsibilities

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| |  |  | | --- | --- | | Reviewer(s) (Name): |  | |  |  | |  |

Supervisor Verify & Validate Solutions/Action Items

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Solution ID | Action Taken (If different from what was previously stated) | Date Completed | Supervisor  V & V Date | Supervisor Responsible  V & V Comments | Supervisor Responsible (Name ) |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

**Management of Change Policy and Procedure**

1. **Introduction**

To ensure the changes in the company are filtered through to all involved, we need to pay attention to the fact that we live in a changing environment with systems, methods, materials etc. changing all the time.

1. **Objectives**

The objectives of this procedure are to ensure that:

* the effects of proposed changes to Plant/ Procedures/ Equipment/ Office Accommodation are correctly assessed, specified, costed and scheduled to achieve minimum disruption, and lowest potential risk to personnel and/ or assets.
* all proposed changes to a specific scope of work are adequately justified, reviewed, approved and implemented.
* any impacts of proposed changes on Health, Safety and the Environment are reviewed and acted upon.

1. **Scope of Application**

This procedure shall apply to all projects where a proposal to implement change has been lodged. All proposals must be evaluated for technical, and HSSE impact, and approved at the appropriate authority level.

**The process will not apply to changes that have LOW or no HSSE impact, or projects that are managed by project HSSE plans, but would typically include;**

Focused Initiatives: Launching major business changes, trials of equipment/ experimental processes

Organisation: Staff structure, policies, staffing disciplines, staffing levels, contractors

Facilities: Modifications to New or Existing buildings, working environment, significant experimental fixtures, office moves.

Work Processes: Changes to HSE critical processes, changes to HSE critical equipment, e.g. alarm systems, isolation procedures, changes to standard use of equipment, storage vessels, critical monitoring systems, HSE reporting

Products: New business areas, substantial product modification

**The process will not apply to projects where changes are required to revision controlled documents / procedures.**

All change requests to which this procedure applies shall identify responsibilities of the key personnel involved in its inception, co-ordination, completion and review.

1. **Policy and Procedure**

**4.1 Development of Change Requests**

The activities below show the responsibilities of each group / person shown in the flowchart attached.

1. The originator / Person Proposing the Change.

Any member of staff may identify the need for focused change. They can propose a change by explaining their proposal and outlining the reasons for the change.

The proposal should then be communicated to a change owner / project sponsor who will be required to investigate / challenge the need for the change before endorsing the proposal

2. The Change Owner:

It is the responsibility of the change owner must review the change request and make any challenges for the need of the proposal. This should include the scope of the proposal in terms of people, facilities, processes, costs and products. The change owner must also consider the impact on business groups affected by the change, and the anticipated risk exposure.

Briefly;

* Challenge and screen out unwarranted proposals;
* Complete the alternatives & HSE checklists to determine if other courses of action have been considered, also, identify the advantages and disadvantages of any alternatives.

**The change owners are also responsible for ensuring any challenges are fair and objective, and that the project is properly managed, consulting with representatives of any affected business groups.**

The change owner shall where appropriate, establish a Change Team with a mix of technical and managerial competence to act as advisors for the project.

3. The Change Team (Change owner plus technical support)

Where the risk to personnel or assets may be considered high, the team will actively work with the change owner to reduce these risks to an acceptable level.

The team shall feedback relevant information to the change owner. The team, after receiving approval from the change owner, shall establish a formal plan for the project to take place.

Further to the above the review team shall consider;

* Technical feasibility;
* Effects on other change proposals;
* Interface effects with other business group activities;
* Potential conflicts with HSE philosophy;
* Reliability, operability and maintainability;
* The possibility of alternative proposals.

4. Implementation Team (Persons carrying out the work)

The change owner shall communicate the plan to affected persons. The implementation team shall implement the changes in accordance with the plan. **The project owner still retains management responsibility for completion of the project.**

If the change is temporary, verify that the temporary changes are removed, or made permanent.

On completion of the project, the implementation team shall ensure that drawings and other documentation are updated.

**4.2 Change Request Justification**

Proposed changes must be justified on one or more of the following criteria:

* The current design will not work, is not safe and/or does not comply with mandatory standards.
* The change suggests a substantial cost saving.
* The change shows a demonstrable overall benefit

However, even if a justification can be made under the above criteria, the change may not be implemented unless:

* Project funding is available;
* The impact of the project creates unacceptable risks to personnel or company assets.

The project change team may sanction the change as follows:

* Approve;
* Reject;
* Endorse but refer because of funding, expenditure or schedule constraint;
* Refer without endorsement.

**4.3 Emergency Change Request.**

In some circumstances changes are required by, or in response to an emergency situation. In these circumstances the time required to establish the necessary teams to evaluate the reasons for change may be detrimental to the business and may present risks to personnel.

Emergency change requests should still be reviewed by the project owner, HSE representation, and where necessary Engineering support, to ensure that whatever changes are to take place have been thought through and evaluated for risks to persons and business impact.

**4.4 Authorisation.**

Change requests must be authorised by the Chief Executive Officer after taking the advice of an appropriate HSE, and Engineer advisor where required. All of the risks associated with the project must have been considered, eliminated or reduced to a tolerable level before the project is permitted to commence.

1. **Responsibilities**

5.1 All managers are responsible to study the contents of this policy and procedures to ensure that they are knowledgeable with the contents.

5.2 The CEO is responsible to ensure that the requirements in terms of changes are enforced.

1. **Title and allocation / Responsible person / Review**
   1. This procedure
      1. Shall be called the Management of Change Policy and Procedure; and
      2. Form part of the Health, Safety, Security and Environmental policies and procedures.
   2. The CEO is the responsible person to ensure that revisions take place and that all correspondence in relation to this policy be kept and taken into consideration at the review.
   3. This procedure must be reviewed when need be, but not later than 24 months from the effective date of this policy and procedure.

Annexure 1

|  |  |  |
| --- | --- | --- |
| **Managing Initiatives and Changes in UCS TECHNOLOGY SERVICES**  This document describes how business groups should identify, authorise, plan, and manage initiatives and changes. These changes will normally involve changes in one of the following five areas:  Focused Initiatives: Launching major business changes, Trials of equipment/experimental processes  Organisation: Staff structure, policies, staffing disciplines, staffing levels, contractors  Facilities: Modifications to New or Existing buildings, working environment, significant experimental fixtures, office moves.  Work Processes: Changes to HSE critical processes, Changes to HSE critical equipment, e.g. alarm systems, isolation procedures, changes to standard use of equipment, storage vessels, critical monitoring systems, HSE reporting  Products: New business areas, substantial product modification | | |
|  |  |  |
| **How this works:**  1 **Any member of staff** may identify the need for a focused initiative or change—just document the proposed change and inform the Change Owner (your line, or someone else who you think should direct the change management)  2 Your change request should include a summary of the proposed change. The request may range from a simple e‑mail to a comprehensive technical report. See box at right.  3 The diagram on the next page shows the steps that happen when you submit a change request. This will allow you to:  **Plan the Change** – make sure risks are evaluated and implementation systematically prepared. See box below  **Execute the Change** – follow the plan  **Evaluate the change** – verify that all went according to plan  **Feedback** – look for ways to improve the process  4 **Low Risk** changes can be effectively managed without preparing a formal Plan for Change. Use your own management skills and support with appropriate line approvals. For implementation, call on resources as required.  5 If temporary or emergency changes are needed, employees are informed of actions taken and advised when the temporary changes are no longer in effect or are made permanent. |  | **A Change Request should include:**   * The basis, or reason for the change * The scope of the change (in terms of people, facilities, processes, and products) * Other organisation(s) affected by the change * Anticipated effect on risk exposure * Potential impact on technology of products |
|  |
|  | **Changes NOT required to implement this Procedure**   * **Changes that have no HSSE impact.** * **Project or technology changes that are managed by project HSSE plans,** * **Changes to revision controlled procedures.** * **Minor changes that are low risk.**   **In the above cases, see item 4, (How this works) Low Risk** |
|  |  |  |
| **Considerations for a Formal Plan for Change**   * Staffing – Review number of people, qualifications, degrees of depth, configuration, and allocation of responsibilities. * Cost – Is a capital expenditure request required, set a budget and obtain proper approvals. * Business Issues – Review controls needed to minimise business interruption and ensure that deliverables satisfy the customer’s requirements while maintaining positive reputation. * Procedures – Review, modify and update where needed. * Hazard Register & Activity Sheet – Reconcile against the scope or type of change proposed * Informing & Training Personnel - Identify all affected personnel and tasks, update related training materials and train personnel prior to work with a changed environment. * Product Documentation – Update product documentation (such as advertising, technical specifications, legal reporting to a jurisdiction) as appropriate for the change. * Asset or Equipment Data – Revise Equipment data sheets or other asset design documentation * Transitional Risk – plan for risks that may be present during and after the change * Feedback – identify the methods that will be used to monitor change effectiveness | | |

**INJURY AND ILLNESS PREVENTION PROGRAM**

**INTRODUCTION AND PURPOSE**

It is the policy of Seavest Africa to maintain a safe and healthy work environment for each employee (including contract employees), and to comply with all applicable occupational health and safety regulations. This Injury and Illness Prevention Program (IIPP) is intended to establish a framework for identifying and correcting workplace hazards within the department, while addressing legal requirements for a formal, written IIPP.

**RESPONSIBILITIES**

The Department Head has primary authority and responsibility to ensure departmental implementation of the IIPP and to ensure the health and safety of the department's staff. This is accomplished by communicating Seavest Africa’s emphasis on health and safety, analyzing work procedures for hazard identification and correction, ensuring regular workplace inspections, providing health and safety training, and encouraging prompt employee reporting of health and safety concerns without fear of reprisal.

Seavest as an ongoing responsibility to evaluate reports of unsafe conditions, and to coordinate any necessary corrective actions.

Timely correction of workplace hazards will be tracked which will receive and review reports of unsafe conditions, workplace inspection reports, and injury reports.

**Supervisors**

Supervisors play a key role in the implementation of the IIPP. They are responsible for:

• Communicating to their staff on health and safety.

• Ensuring periodic, documented inspection of workspaces under their authority.

• Promptly correcting identified hazards.

• Modeling and enforcing safe and healthful work practices.

• Providing appropriate safety training and personal protective equipment.

• Implementing measures to eliminate or control workplace hazards.

• Stopping any employee’s work that poses an imminent hazard to either the employee or any other individual.

**All Employees**

It is the responsibility of all staff to comply with all applicable health and safety regulations, policies, and established work practices. This includes, but is not limited to:

• Observing health and safety-related signs, posters, warning signals and directions.

• Reviewing the building emergency plan and assembly area.

• Learning about the potential hazards of assigned tasks and work areas.

• Taking part in appropriate health and safety training.

• Following all safe operating procedures and precautions.

• Using proper personal protective equipment.

• Warning coworkers about defective equipment and other hazards.

• Reporting unsafe conditions immediately to a supervisor, and stopping work if an imminent hazard is presented.

• Participating in workplace safety inspections.

**IDENTIFYING WORKPLACE HAZARDS**

Generally, supervisors are responsible for identification and correction of hazards that their staff face and should ensure that work areas they exercise control over are inspected. Supervisors should check for safe work practices with each visit to the workplace and should provide immediate verbal feedback where hazards are observed.

**Injury Reporting**

Employees who are injured at work must report the injury immediately to their supervisor. If immediate medical treatment beyond first aid is needed, call for emergency help. The injured party will be taken to the appropriate hospital or medical center.

If the injured employee saw a physician, the supervisor should obtain a medical release form before allowing the employee to return to work. The health care provider may stipulate work tasks that must be avoided or work conditions that must be altered before the employee resumes his or her full duties.

**Injury Investigation**

The employee’s supervisor is responsible for performing an investigation to determine and correct the cause(s) of the incident. Specific procedures that can be used to investigate workplace accidents and hazardous substance exposures include:

• Interviewing injured personnel and witnesses.

• Examining the injured employee’s workstation for causative factors.

• Reviewing established procedures to ensure they are adequate and were followed.

• Reviewing training records of affected employees.

• Determining all contributing causes to the accident.

• Taking corrective actions to prevent the accident/exposure from reoccurring.

• Recording all findings and actions taken.

**Training on Specific Hazards**

Supervisors are required to be trained on the hazards to which the employees under their immediate control may be exposed. This training aids a supervisor in understanding and enforcing proper protective measures.

All supervisors must ensure that the personnel they supervise receive appropriate training on the specific hazards of work they perform, and the proper precautions for protection against those hazards. Training is particularly important for new employees and whenever a new hazard is introduced into the workplace. Such hazards may include new equipment, hazardous materials, or procedures. Health and Safety training is also required when employees are given new job assignments on which they have not previously been trained and whenever a supervisor is made aware of a new or previously unrecognized hazard.



**MATERIAL SAFETY DATA SHEET**

### SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** **Professional High Sheen Pure Acrylic White (PEM 1100)**

**Company Name:** Barloworld Plascon South Africa

**Address:** Private Bag X4010

Kenmare

1745

**Telephone:**  (011) 951 4500

**Facsimile:** (011) 955 4081

**Contact Person:**  Dr. B. Cooray

### SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

**Chemical Class:** Emulsion Paint

**Classification:** Not classified as hazardous

**R Phrases:** None

**S Phrases:**  None

**Hazardous Components:** None

### SECTION 3. HAZARDS IDENTIFICATION

**SAPMA Health Rating:** 4-MINIMAL – No great risk to health

**Inhalation:**  Avoid exposure to vapours, fumes and mists.

**Skin:** No hazard expected if used in moderation. Direct contact to be avoided.

**Eyes:** May cause irritation. Possible contact to be avoided.

**Ingestion:** Irritating and nauseating.

No records of chronic effects found.

Non-toxic but can have undesirable environmental side effects.



### SECTION 4. FIRST AID MEASURES

**Inhalation:**  Move to fresh air. In case of discomfort seek medical attention.

**Skin:**  Wash with soap and water or a recognised skin cleaner. Avoid use of solvents.

**Eyes:**  Rinse immediately with plenty of water. Seek medical advice if symptoms persist.

**Ingestion:**  Wash mouth with plenty of water. Do NOT induce vomiting. Seek medical attention.

### SECTION 5. FIRE FIGHTING MEASURES

Product is non-flammable

No direct explosion hazard expected.

Use foam, CO2, dry powder.

### SECTION 6. ACCIDENTAL RELEASE MEASURES - SEE ALSO SECTIONS 5, 8, 13

Contain & collect spillage with non-combustible absorbent material and dispose of according to local regulations.

Do not allow product to enter drains and sewers.

### SECTION 7. HANDLING AND STORAGE

Inert substance with no special requirements for hazard containment

Store in containers in a well-ventilated environment.

Store away from direct sun, heat and severe cold.

### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**SAPMA Rating:** 4-H-C PPE - Eye protection

**Inhalation:** In case of insufficient ventilation, use suitable respiratory protection.

**Skin:** Avoid contact as far as possible. Wash immediately after contact.

**Eyes:** Avoid direct contact. Never touch eyes with dirty hands or gloves.

**Ingestion:** Observe the rules of hygiene. Wash before eating, drinking or smoking.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:** White, opaque liquid

**Flash Point:** N/A

**Density:**  1.40 (typical)

**PH:** 8.5 – 9.5

**Viscosity:** 100 - 110 KU

**Solubility:** Water miscible

### SECTION 10. STABILITY AND REACTIVITY

Stable under normal conditions

Inert - no reaction with fire-fighting water

Avoid contact with acids, alkalis and hydrocarbon solvents

### SECTION 11. TOXICOLOGICAL INFORMATION

No records of chronic effects found

### SECTION 12. ECOLOGICAL INFORMATION

May have short-term environmental effects. Contain, monitor & remove.

### SECTION 13. DISPOSAL INFORMATION

Use reputable waste disposal contractors. Exercise caution in disposal of used containers.

Can be eliminated from sewage/effluent by chemical flocculation.

### SECTION 14. TRANSPORT INFORMATION

**SIN/UN Number:** Not classified as dangerous for transport

**Shipping Name:** Not classified

**Packaging Group:** Not classified

**Class:** Not classified

### SECTION 15. REGULATORY INFORMATION

**Classification:** Not classified as hazardous

### SECTION 16. OTHER INFORMATION

In case of any discomfort always seek medical advice. All information is given in good faith but without guarantee in respect of accuracy. No responsibility is accepted for errors or omissions or the consequences thereof.

Q2O SUPER MULTI-PURPOSE LUBRICANT

**Material Safety Data Sheet Q20 Aerosol**

|  |
| --- |
| 1 IDENTIFICATION |
| Manufacturer: Triton-Leo Group (PTY)LTD, P.O. Box 459, Isando 1600  Tel: 011 452 7048 Fax: 011 452 8457  Chemical name: Organic mixture  Trade name Q20 Super Multi-Purpose Lubricant  1 Chemical characterisation Organic mixture of highly refined mineral oil distillates of specific  composition, which repels moisture, prevents corrosion, cleans and lubricates.  1.2 Colour: Straw colour  1.3 Odour: Mild oily solvent odour |
| 2 COMPOSITION |
| The product contains the following materials apart from gases.  **%Weight Cas No Chip (risk)**  PERCHLOROETHYLENE (PEC) 54.72 127-18-4 R10  KOGASIN (KEROSENE/WAX) 24.94 9005-25-8  RUSTILO DW 924 0.11 8052-41-3 N/A(for lubrication)  CARBON DIOXIDE CO2 GAS 1.21 124-38-9 N/A  SOLKANE R22 NON FLAMMABLE 12.14 75-45-6  (Gases are not part of total composition but make up 13% of content)  SHELL JHVI OIL 18.13 64742-52-5  PETROLEUM WHITE JELLY 1.88 98112-77-7 |
| 3 HAZARDS IDENTIFICATION |
| * 1. Fire and Explosion   Flash point: Tag open cup 85ºc (minimum)  Flammable limits: (Lel)1.0% (Uel)6.0%  (Solvent portion)  Extinguishing media: CO², dry chemical, foam  Special fire fighting procedures: See section 5herein  Unusual fire and explosion Flammable   * 1. Health/Routes of Entry   Threshold limit value: Hydrocarbon solvent lowest TLV(100ppm)  Carcinogenic: The product has been assessed by independent laboratories as  being human carcinogen category 3   * 1. Symptoms of Exposure   Inhalation May cause anaesthesia, headache, dizziness, nausea and upper  Respiratory irritation  Skin contact: May cause drying of skin and/or irritation  Eye contact: May cause irritation, tears and redness  Ingestion: May cause irritation, nausea, vomiting and diarrhoea |
| 4 FIRST AID MEASURES |
| SKIN- Wash copiously with soap and water – remove contaminated clothing, including  Shoes and launder before re-use. If skin irritation develops seek immediate  Medical attention.  EYES- As soon as possible irrigate thoroughly with water for at least 15 minutes, holding  the eyelid apart. If in any doubt, or the irritation persists, obtain medical attention  INHALATION- Ensure that airways are clear and unobstructed. Keep warm and at rest. If there  is any difficulty in breathing, or vomiting has occurred obtain medical attention  urgently. If breathing stops or shows signs of failing, apply mouth to mouth  ventilation.  INGESTION- In the event of deliberate ingestion help must be obtained urgently. |
| Keep at rest. Do not induce vomiting but seek prompt medical attention. Observe patient in case abdominal pain develops, or patient starts to vomit. Try to keep patient conscious and try to make certain that patient does not aspirate vomit into lungs.Material Safety Data Sheet Q20  |  | | --- | | 5 FIRE-FIGHTING MEASURES | | Keep product in storage (and in use) away from sources of ignition. In the event of fire, remove all unaffected product (if possible) away from the immediate vicinity. If necessary cool stocks with water mists. Extinguish burning material with foam, dry powder CO² or halons. DO NOT USE WATER FIRST AID FACILITIES AND TREATMENT AS NORMAL FOR BURNS | | 6 ACCIDENTAL RELEASE MEASURES | | 6.1 Small Scale Spillages In the unlikely event of spillages from aerosol cans, place cans in bags or  open pail until pressure has dissipated. Aerosol cans must not be punctured  or incinerated but disposed of in land fill or in accordance with local  regulations. Do not wash Q20 contamination into drains and waterways.  Instead wipe affected areas with white spirit or turpentine substitute and  allow to dry. When dry wash affected areas with soapy water to remove  any remnants of Q20. If white spirit cannot be applied, layer with sawdust  or absorbent material. Allow to dry and then sweep/shovel into refuse bins  and dispose of via public or private waste disposal.  6.2 Large Scale Spillages In the event of large roadside transport spillages resulting from collision  or overturned vehicles, vehicles must be kept away from contaminated  roads or other surfaces. Affected areas should be covered in layers of  sawdust or similarly absorbent material. Do not wash into drains,  waterways or soil courses. Later remove absorbent material to waste disposal  site. Marine spillages should be dealt with in accordance with pollutant  procedures which are relevant to the product classification and IMDG codes. | | 7 HANDLING AND STORAGE | | 7.1 Special Handling Information  Ventilation: Must be sufficient to keep solvent vapour less than TLV  Respiratory protection: Advised when concentration of solvent vapour exceeds TLV.  Protective gloves: Advised when skin comes into contact with Q20 regularly or to  prevent possible skin irritation.  Eye protection: Factory or industrial users are advised to wear protection to guard  Against potential eye contact i.e. goggles  Other protection equipment: Overalls   * 1. Special storage information   There is no special storage information relevant to the keeping of Q20. It is obvious that aerosols should be kept away from sources of ignition or ambient temperatures above 50ºcelsius. Local laws and fire inspectorates may also influence storage policies of commercial organisations. Do not store large quantities of Q20 aerosol in unventilated bunkers or enclosures. Store in dry and cool areas. Keep out of reach of children. Do not spray on naked flame or any incandescent material. No smoking near expelled product. | | 8 EXPOSURE CONTROLS/PERSONAL PROTECTION | | See Section 7.1 above.   * 1. General   Keep product away from sources of ignition, avoid excessive inhalation of spray particles, do not puncture or store container above 50ºcelsius, keep away from children.  Use only in accordance with the instructions printed on the container.  Use only in a well ventilated area.  Do not use near a naked flame or any incandescent material.  Do not smoke whilst using.   * 1. Exposure Limits   Exposure Limit (EH40/97)  8 hour TWA period 10 minute period  PPM mgm-3 PPM mgm –3  White spirit 100 575 125 720  Mineral oil - 5 - - | | |  | | --- | | 9 PHYSICAL AND CHEMICAL PROPERTIES Material Safety Data Sheet Q20 Aerosol | | Boiling point: 67ºC  Vapour density (air=1): Greater than 1  Solubility in water: Insoluble  Specific gravity (H2O=1) 1.126 @21ºC  Volatile volume (by weight): 73.9%  Evaporation rate: Not determined  Vapour pressure: 100 +/-5 psi celcius  Appearance: Straw colour  Odour: Mild oily solvent odour  Dielectric: 38 kva | | **10 STABILITY AND REACTIVITY** | | Stability: Considered stable  Conditions to avoid: N/A  Incompatibility: Incompatible with strong oxidising agents  Hazardous decomposition: Thermal decomposition may yield carbon monoxide and/or carbon  Dioxide.  Hazardous polymerisation: Will not occur | | 11 TOXICOLOGICAL INFORMATION | | Oral toxicity (of liquid): LD50>5.0g/kg bodyweight (rat)  Biodegradability (including solvent): Ready biodegradable (84% after 28 days) | | **12 ECOLOGICAL INFORMATION** | | Volatile organic compounds (weight): 72.92 of product contains VOCs  CFCs: CFC free since 1981  Tins: Contains 7% recycled steel and in turn are recyclable  Caps: High density polypropylene which is recyclable  Corrugated: Recyclable | | **13 DISPOSAL CONSIDERATIONS** | | Empty aerosol cans should not be punctured or incinerated. Bury in landfill. Oil based products should be disposed of to a licensed waste contractor. Soak up with sawdust. Any disposal route should comply with local bylaws and the requirements of environmental protection legislation. Collect into drums and burn soaked sawdust. Authorities to be informed e.g. atomic energy board and fire department | | **14 TRANSPORT INFORMATION** | | By sea: “Aerosols” Class 2 UNI 1950, Marine Pollutant  Tariff no 3403-19(5) packing code 111 class 2  By road “Aerosols” UNI 1950 Class 2 item 5ºF ADR | | **15 REGULATORY INFORMATION** | | Chemical (Hazard Information and Packaging Regulation) 1994 No3247 and amendment 1996 No1092  Council Directive 88/379/EEC of 7 June 1988 relating to the Classification of Packaging and Council Directive 75/324EEC. Relating to Aerosol Dispensers and Amendment 94/1EC: Classified as FLAMMABLE. Keep out of reach of children. Avoid contact with skin and eyes. Do not breathe gas/fumes/vapour/spray. Pressurised container: protect from sunlight and do not expose to temperatures exceeding 50ºC Do not pierce or burn containers after use. Do not spray on naked flame or any incandescent material. Keep away from sources of ignition. –No smoking near product. | | **16 OTHER INFORMATION** | | We believe the statements, technical information and recommendations contain herein are reliable. However, the data is provided without warranty, expressed or implied. It is the users responsibility both to determine safe conditions for use of this product and assume loss damage or expense, direct or consequential, arising from its use. Before using the product, read information printed on the label. This product is manufactured according to Amended Aerosol Directive (75/324/EEC and 94/1/ec). | | |

**MATERIAL SAFETY DATA SHEET FOR PETROL**

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING

|  |  |  |
| --- | --- | --- |
| Material Name | : | Shell Unleaded Petrol |
| Recommended Uses | : Fuel for spark ignition engines designed to run on unleaded | |
|  |  | fuel. |
| Other names | : | GASOLINE |
| Product Code | : | 002D1809 |
| Manufacturer/Supplier | : | The Shell Company of Australia Limited |
|  |  | (ABN 46 004 610 459) |
|  |  | 8 Redfern Road |
|  |  | Hawthorn East |
|  |  | Victoria 3123 |
|  |  | Australia |
| Telephone | : | +61 (0)3 9666 5444 |
| Fax | : | +61 (0)3 8823 4800 |
| Emergency Telephone | : 1800 651 818 (within Australia only) +61 3 9663 2130 | |
| Number |  | (International) |
|  |  |  |
| 2. HAZARDS IDENTIFICATION |  |  |

HAZARDOUS SUBSTANCE. DANGEROUS GOODS.

Classified as hazardous according to the criteria of NOHSC, and as Dangerous Goods according to the Australian Dangerous Goods Code.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Symbol(s) | | | : | | | | F+ Extremely flammable. | | | | | | |
|  | | |  | | | | T Toxic. | | | | | | |
|  | | |  | | | | N Dangerous for the environment. | | | | | | |
| R-phrase(s) | | | : | | | | R12 Extremely flammable. | | | | | | |
|  | | |  | | | | R38 | | Irritating to skin. | | | | |
|  | | |  | | | | R45 | | May cause cancer. | | | | |
|  | | |  | | | | R46 | | May cause heritable genetic damage. | | | | |
|  | | |  | | | | R63 | | Possible risk of harm to the unborn child. | | | | |
|  | | |  | | | | R65 | | Harmful: may cause lung damage if swallowed. | | | | |
|  | | |  | | | | R67 | | Vapours may cause drowsiness and dizziness. | | | | |
|  | | |  | | | | R51/53 Toxic to aquatic organisms, may cause long-term | | | | | | |
|  | | |  | | | | adverse effects in the aquatic environment. | | | | | | |
| S-phrase(s) | | | : S2 Keep out of the reach of children. | | | | | | | | | | |
|  | | |  | | | | S29 Do not empty into drains. | | | | | | |
|  | | |  | | | | S45 In case of accident or if you feel unwell, seek medical | | | | | | |
|  | | |  | | | | advice immediately (show the label where possible). | | | | | | |
|  | | |  | | | | S53 Avoid exposure. Obtain special instructions before use. | | | | | | |
|  | | |  | | | | S61 Avoid release to the environment. Refer to special | | | | | | |
|  | | |  | | | | instructions/Safety data sheets. | | | | | | |
|  | | |  | | | | S62 If swallowed, do not induce vomiting: seek medical advice | | | | | | |
|  | | |  | | | | immediately and show this container or label. | | | | | | |
| Health Hazards | | | : Vapours may cause drowsiness and dizziness. Slightly | | | | | | | | | | |
|  | | |  | | | | irritating to respiratory system. Irritating to skin. Moderately | | | | | | |
|  | | |  | | | | irritating to eyes. Harmful: may cause lung damage if | | | | | | |
|  | | |  | | | | swallowed. Possibility of organ or organ system damage from | | | | | | |
| Material Safety Data Sheet | | | | | | | |  | |  |  |  |
|  |  |  | | |  | | | prolonged exposure; see Chapter 11 for details. Target | | | | | |
|  |  |  | | |  | | | organ(s): Blood-forming organs. Peripheral nervous system. | | | | | |
|  |  |  | | |  | | | May cause heritable genetic damage. Possible risk of harm to | | | | | |
|  |  |  | | |  | | | the unborn child. A component or components of this material | | | | | |
|  |  |  | | |  | | | may cause cancer. This product contains benzene which may | | | | | |
|  |  |  | | |  | | | cause leukaemia (AML acute myelogenous leukaemia). | | | | | |
|  | Signs and Symptoms | | | | : | | | Skin irritation signs and symptoms may include a burning | | | | | |
|  |  |  | | |  | | | sensation, redness, swelling, and/or blisters. Eye irritation | | | | | |
|  |  |  | | |  | | | signs and symptoms may include a burning sensation and a | | | | | |
|  |  |  | | |  | | | temporary redness of the eye. If material enters lungs, signs | | | | | |
|  |  |  | | |  | | | and symptoms may include coughing, choking, wheezing, | | | | | |
|  |  |  | | |  | | | difficulty in breathing, chest congestion, shortness of breath, | | | | | |
|  |  |  | | |  | | | and/or fever. The onset of respiratory symptoms may be | | | | | |
|  |  |  | | |  | | | delayed for several hours after exposure. Breathing of high | | | | | |
|  |  |  | | |  | | | vapour concentrations may cause central nervous system | | | | | |
|  |  |  | | |  | | | (CNS) depression resulting in dizziness, light-headedness, | | | | | |
|  |  |  | | |  | | | headache, nausea and loss of coordination. Continued | | | | | |
|  |  |  | | |  | | | inhalation may result in unconsciousness and death. Damage | | | | | |
|  |  |  | | |  | | | to blood-forming organs may be evidenced by: a) fatigue and | | | | | |
|  |  |  | | |  | | | anaemia (RBC), b) decreased resistance to infection, and/or | | | | | |
|  |  |  | | |  | | | excessive bruising and bleeding (platelet effect). Peripheral | | | | | |
|  |  |  | | |  | | | nerve damage may be evidenced by impairment of motor | | | | | |
|  |  |  | | |  | | | function (incoordination, unsteady walk, or muscle weakness in | | | | | |
|  |  |  | | |  | | | the extremities, and/or loss of sensation in the arms and legs). | | | | | |
|  |  |  | | |  | | | Auditory system effects may include temporary hearing loss | | | | | |
|  |  |  | | |  | | | and/or ringing in the ears. | | |  |  |
|  | Safety Hazards |  | | | : | | | Extremely flammable. Electrostatic charges may be generated | | | | | |
|  |  |  | | |  | | | during handling. Electrostatic discharge may cause fire. Liquid | | | | | |
|  |  |  | | |  | | | evaporates quickly and can ignite leading to a flash fire, or an | | | | | |
|  |  |  | | |  | | | explosion in a confined space. | | | |  |
|  | Environmental Hazards | | | | : | | | Toxic to aquatic organisms, may cause long-term adverse | | | | | |
|  |  |  | | |  | | | effects in the aquatic environment. | | | |  |
|  | Additional Information | | | | : | | | This product is intended for use in closed systems only. | | | | | |
|  | SUSDP Schedule |  | | | : | | | S5. When packed in containers having capacity of less than | | | | | |
|  |  |  | | |  | | | 20 litres. | |  |  |  |
|  | SUSDP Schedule |  | | |  | | | Not scheduled. When packed in containers having capacity of | | | | | |
|  |  |  | | |  | | | greater than 20 litres. | | |  |  |
|  |  | | | | | | | | | |  |  |
| 3. COMPOSITION/INFORMATION ON INGREDIENTS | | | | | | | | | | |  |  |
|  | Preparation description | | | | : | | | Complex mixture of hydrocarbons consisting of paraffins, | | | | | |
|  |  |  | | |  | | | cycloparaffins, aromatic and olefinic hydrocarbons (including | | | | | |
|  |  |  | | |  | | | benzene at 1.0%v/v maximum), with carbon numbers | | | | | |
|  |  |  | | |  | | | predominantly in the C4 to C12 range. May also contain | | | | | |
|  |  |  | | |  | | | several additives at <0.1% v/v each. | | | |  |
|  | Hazardous Components | | | |  | | |  | |  |  |  |
|  | Chemical Identity | CAS | | |  | | | EINECS | | Symbol(s) | R-phrase(s) | Conc. | |
|  | Gasoline, low | 86290-81-5 | | | | | | 289-220-8 | | F+, Xi, T, | R12; R38; | 90.00 - 100.00 % |
|  | boiling point |  | | |  | | |  | | Xn, N | R45; R46; |  |
|  | naphtha |  | | |  | | |  | |  | R63; R65; |  |
|  |  |  | | |  | | |  | |  | R67; R51/53 |  |
| Additional Information | | | | : | | Contains Benzene, CAS # 71-43-2. Contains Toluene, CAS # | | | | | | | |
|  | | | |  | | 108-88-3. Contains Ethylbenzene, CAS # 100-41-4. Contains | | | | | | | |
|  | | | |  | | n-Hexane, CAS # 110-54-3. Contains Xylene (Mixed Isomers), | | | | | | | |
|  | | | |  | | CAS # 1330-20-7. Contains Naphthalene, CAS # 91-20-3. | | | | | | | |
|  | | | |  | | Contains Cyclo-hexane, CAS# 110-82-7. | | | | | | | |
|  | | | |  | | Contains Tri-methyl-benzene (all isomers), CAS# 25551-13-7. | | | | | | | |
|  | | | |  | | Dyes and markers can be used to indicate tax status and | | | | | | | |
|  | | | |  | | prevent fraud. | | | | | | | |
|  | | | |  | | Refer to chapter 16 for full text of EC R-phrases. | | | | | | | |
|  | | | |  | |  | | | | | | | |
| 4. FIRST AID MEASURES | | | |  | |  | | | | | | | |
| Inhalation | | | | : | | Remove to fresh air. If rapid recovery does not occur, transport | | | | | | | |
|  | | | |  | | to nearest medical facility for additional treatment. | | | | | | | |
| Skin Contact | | | | : | | Remove contaminated clothing. Immediately flush skin with | | | | | | | |
|  | | | |  | | large amounts of water for at least 15 minutes, and follow by | | | | | | | |
|  | | | |  | | washing with soap and water if available. If redness, swelling, | | | | | | | |
|  | | | |  | | pain and/or blisters occur, transport to the nearest medical | | | | | | | |
|  | | | |  | | facility for additional treatment. | | | | | | | |
| Eye Contact | | | | : | | Flush eyes with water while holding eyelids open. Rest eyes for | | | | | | | |
|  | | | |  | | 30 minutes. If redness, burning, blurred vision, or swelling | | | | | | | |
|  | | | |  | | persist, transport to the nearest medical facility for additional | | | | | | | |
|  | | | |  | | treatment. | | | | | | | |
| Ingestion | | | | : | | If swallowed, do not induce vomiting: transport to nearest | | | | | | | |
|  | | | |  | | medical facility for additional treatment. If vomiting occurs | | | | | | | |
|  | | | |  | | spontaneously, keep head below hips to prevent aspiration. If | | | | | | | |
|  | | | |  | | any of the following delayed signs and symptoms appear within | | | | | | | |
|  | | | |  | | the next 6 hours, transport to the nearest medical facility: fever | | | | | | | |
|  | | | |  | | greater than 101° F (37° C), shortness of breath, chest | | | | | | | |
|  | | | |  | | congestion or continued coughing or wheezing. | | | | | | | |
| Advice to Physician | | | | : | | Treat symptomatically. | | | | | | | |

5. FIRE FIGHTING MEASURES

Clear fire area of all non-emergency personnel.

|  |  |  |
| --- | --- | --- |
| Specific Hazards | : Hazardous combustion products may include: A complex | |
|  |  | mixture of airborne solid and liquid particulates and gases |
|  |  | (smoke). Carbon monoxide. Unidentified organic and inorganic |
|  |  | compounds. The vapour is heavier than air, spreads along the |
|  |  | ground and distant ignition is possible. Will float and can be |
|  |  | reignited on surface water. |
| Suitable Extinguishing | : Foam, water spray or fog. Dry chemical powder, carbon | |
| Media |  | dioxide, sand or earth may be used for small fires only. |
| Unsuitable Extinguishing | : | Do not use water in a jet. |
| Media |  |  |
| Protective Equipment for | : Proper protective equipment including breathing apparatus | |
| Firefighters |  | must be worn when approaching a fire in a confined space. |
| Additional Advice | : If the fire cannot be extinguished the only course of action is to | |
|  |  | evacuate immediately. Keep adjacent containers cool by |
|  |  | spraying with water. If possible remove containers from the |
|  |  | danger zone. Contain residual material at affected sites to |
|  |  |  |

prevent material from entering drains (sewers), ditches, and waterways.

6. ACCIDENTAL RELEASE MEASURES

Observe all relevant local and international regulations. Avoid contact with skin, eyes and clothing. Evacuate the area of all non-essential personnel. Ventilate contaminated area thoroughly. Avoid contact with spilled or released material. Immediately remove all contaminated clothing. For guidance on selection of personal protective equipment see Chapter 8 of this Material Safety Data Sheet. For guidance on disposal of spilled material see Chapter 13 of this Material Safety Data Sheet. If contamination of sites occurs remediation may require specialist advice. Ensure electrical continuity by bonding and grounding (earthing) all equipment. Take precautionary measures against static discharges.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Protective measures | | | : Vapour can travel for considerable distances both above and | | |
|  | | | below the ground surface. Underground services (drains, | | |
|  | | | pipelines, cable ducts) can provide preferential flow paths. Do | | |
|  | | | not breathe fumes, vapour. Take measures to minimise the | | |
|  | | | effects on groundwater. Contain residual material at affected | | |
|  | | | sites to prevent material from entering drains (sewers), ditches, | | |
|  | | | and waterways. Shut off leaks, if possible without personal | | |
|  | | | risks. Remove all possible sources of ignition in the | | |
|  | | | surrounding area. Use appropriate containment (of product | | |
|  | | | and fire fighting | | |
|  | | | water) to avoid environmental contamination. Prevent from | | |
|  | | | spreading or entering drains, ditches or rivers by using sand, | | |
|  | | | earth, or other appropriate barriers. Attempt to disperse the | | |
|  | | | vapour or to direct its flow to a safe location for example by | | |
|  | | | using fog sprays. Take precautionary measures against static | | |
|  | | | discharge. Ensure electrical continuity by bonding and | | |
|  | | | grounding (earthing) all equipment. | | |
| Clean Up Methods | | | : For large liquid spills (> 1 drum), transfer by mechanical means | | |
|  | | | such as vacuum truck to a salvage tank for recovery or safe | | |
|  | | | disposal. Do not flush away residues with water. Retain as | | |
|  | | | contaminated waste. Allow residues to evaporate or soak up | | |
|  | | | with an appropriate absorbent material and dispose of safely. | | |
|  | | | Remove contaminated soil and dispose of safely. | | |
|  | | | For small liquid spills (< 1 drum), transfer by mechanical means | | |
|  | | | to a labelled, sealable container for product recovery or safe | | |
|  | | | disposal. Allow residues to evaporate or soak up with an | | |
|  | | | appropriate absorbent material and dispose of safely. Remove | | |
|  | | | contaminated soil and dispose of safely. | | |
| Additional Advice | | | : Notify authorities if any exposure to the general public or the | | |
|  | | | environment occurs or is likely to occur. Local authorities | | |
|  | | | should be advised if significant spillages cannot be contained. | | |
|  | | | Maritime spillages should be dealt with using a Shipboard Oil | | |
|  | | | Pollution Emergency Plan (SOPEP), as required by MARPOL | | |
|  | | | Annex 1 Regulation 26. | | |
|  | | |  | | |
| 7. HANDLING AND STORAGE | | |  | | |
| General Precautions | | | : Avoid breathing vapours or contact with material. Only use in | | |
|  | | | well ventilated areas. Wash thoroughly after handling. For | | |
|  |  | | seals and gaskets use: graphite, PTFE, Viton A, Viton B. |
| Unsuitable Materials | : | | Some synthetic materials may be unsuitable for containers or |
|  |  | | container linings depending on the material specification and |
|  |  | | intended use. Examples of materials to avoid are: natural |
|  |  | | rubber (NR), nitrile rubber (NBR), ethylene propylene rubber |
|  |  | | (EPDM), polymethyl methacrylate (PMMA), polystyrene, |
|  |  | | polyvinyl chloride (PVC), polyisobutylene.; However, some may |
|  |  | | be suitable for glove materials. |
| Container Advice | : | | Do not cut, drill, grind, weld or perform similar operations on or |
|  |  | | near containers. Gasoline containers must not be used for |
|  |  | | storage of other products. Containers, even those that have |
|  |  | | been emptied, can contain explosive vapours. |
| Additional Information | : | | Ensure that all local regulations regarding handling and storage |
|  |  | | facilities are followed. |

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Naphthalen | AU OEL | TWA | 10 ppm | 52 mg/m3 |  |
| e |  |  |  |  |  |
|  | AU OEL | STEL | 15 ppm | 79 mg/m3 |  |
|  | AU OEL | TWA | 100 ppm | 350 mg/m3 |  |
| Cyclohexan |  |  |  |  |  |
| e |  |  |  |  |  |
|  | AU OEL | STEL | 300 ppm | 1,050 mg/m3 |  |
| Xylene | AU OEL | TWA | 80 ppm | 350 mg/m3 |  |
|  | AU OEL | STEL | 150 ppm | 655 mg/m3 |  |
| Toluene | AU OEL | TWA | 50 ppm | 191 mg/m3 |  |
|  | AU OEL | STEL | 150 ppm | 574 mg/m3 |  |
|  | AU OEL | SKIN\_DES |  |  | Can be absorbed through |
|  |  |  |  |  | the skin. |
| Benzene | AU OEL | TWA | 1 ppm | 3.2 mg/m3 |  |
|  | SHELL IS | TWA | 0.5 ppm | 1.6 mg/m3 |  |
|  | SHELL IS | STEL | 2.5 ppm | 8 mg/m3 |  |
| n-Hexane | AU OEL | TWA | 20 ppm | 72 mg/m3 |  |
| Ethylbenze | AU OEL | TWA | 100 ppm | 434 mg/m3 |  |
| ne |  |  |  |  |  |
|  | AU OEL | STEL | 125 ppm | 543 mg/m3 |  |
|  | AU OEL | TWA | 25 ppm | 123 mg/m3 |  |
| Trimethylbe |  |  |  |  |  |
| nzene, all |  |  |  |  |  |
| isomers |  |  |  |  |  |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Additional Information | | : SHELL IS is the Shell Internal Standard. Skin notation means | | | | | | | |
|  | | that significant exposure can also occur by absorption of liquid | | | | | | | |
|  | | through the skin and of vapour through the eyes or mucous | | | | | | | |
|  | | membranes. | | | | |  | | |
| Material | | Source | | | | | Hazard Designation | | |
| Benzene | | AU OEL | | | | | Confirmed human carcinogen. | | |
| Exposure Controls | | : The level of protection and types of controls necessary will vary | | | | | | | |
|  | | depending upon potential exposure conditions. Select controls | | | | | | | |
|  | | | |  | | based on a risk assessment of local circumstances. | | | |
|  | | | |  | | Appropriate measures include: Use sealed systems as far as | | | |
|  | | | |  | | possible. Adequate explosion-proof ventilation to control | | | |
|  | | | |  | | airborne concentrations below the exposure guidelines/limits. | | | |
|  | | | |  | | Local exhaust ventilation is recommended. Eye washes and | | | |
|  | | | |  | | showers for emergency use. | | | |
| Personal Protective | | | | : | | Personal protective equipment (PPE) should meet | | | |
| Equipment | | | |  | | recommended national standards. Check with PPE suppliers. | | | |
|  | | | |  | | AS/NZS 1337: Eye protectors for industrial applications. | | | |
|  | | | |  | | AS/NZS 2161: Occupational protective gloves - Selection, use | | | |
|  | | | |  | | and maintenance. AS/NZS 1715: Selection, use and | | | |
|  | | | |  | | maintenance of respiratory protective devices. AS/NZS 1716: | | | |
|  | | | |  | | Respiratory protective devices. | | | |
| Respiratory Protection | | | | : | | If engineering controls do not maintain airborne concentrations | | | |
|  | | | |  | | to a level which is adequate to protect worker health, select | | | |
|  | | | |  | | respiratory protection equipment suitable for the specific | | | |
|  | | | |  | | conditions of use and meeting relevant legislation. Check with | | | |
|  | | | |  | | respiratory protective equipment suppliers. Where air-filtering | | | |
|  | | | |  | | respirators are suitable, select an appropriate combination of | | | |
|  | | | |  | | mask and filter. Where air-filtering respirators are unsuitable | | | |
|  | | | |  | | (e.g. airborne concentrations are high, risk of oxygen | | | |
|  | | | |  | | deficiency, confined space) use appropriate positive pressure | | | |
|  | | | |  | | breathing apparatus. All respiratory protection equipment and | | | |
|  | | | |  | | use must be in accordance with local regulations. | | | |
| Hand Protection | | | | : | | Personal hygiene is a key element of effective hand care. | | | |
|  | | | |  | | Gloves must only be worn on clean hands. After using gloves, | | | |
|  | | | |  | | hands should be washed and dried thoroughly. Application of a | | | |
|  | | | |  | | non-perfumed moisturizer is recommended. Suitability and | | | |
|  | | | |  | | durability of a glove is dependent on usage, e.g. frequency and | | | |
|  | | | |  | | duration of contact, chemical resistance of glove material, | | | |
|  | | | |  | | glove thickness, dexterity. Always seek advice from glove | | | |
|  | | | |  | | suppliers. Contaminated gloves should be replaced. | | | |
|  | | | |  | | Select gloves tested to a relevant standard (e.g. Europe | | | |
|  | | | |  | | EN374, US F739). When prolonged or frequent repeated | | | |
|  | | | |  | | contact occurs, Nitrile gloves may be suitable. (Breakthrough | | | |
|  | | | |  | | time of > 240 minutes.) For incidental contact/splash protection | | | |
|  | | | |  | | Neoprene, PVC gloves may be suitable. | | | |
| Eye Protection | | | | : | | Chemical splash goggles (chemical monogoggles). | | | |
|  | | | |  | | Approved to EU Standard EN166. | | | |
| Protective Clothing | | | | : | | Chemical resistant gloves/gauntlets, boots, and apron (where | | | |
|  | | | |  | | risk of splashing). | | | |
| Monitoring Methods | | | | : | | Monitoring of the concentration of substances in the breathing | | | |
|  | | | |  | | zone of workers or in the general workplace may be required to | | | |
|  | | | |  | | confirm compliance with an OEL and adequacy of exposure | | | |
|  | | | |  | | controls. For some substances biological monitoring may also | | | |
|  | | | |  | | be appropriate. | | | |
| Environmental Exposure | | | | : | | Local guidelines on emission limits for volatile substances must | | | |
| Controls | | | |  | | be observed for the discharge of exhaust air containing vapour. | | | |
|  | | | | | | | | | |
| 9. PHYSICAL AND CHEMICAL PROPERTIES | | | | | | | | | |
| Appearance | | | | : | | Purple. Liquid. | | | |
| Odour | | | | : | | Hydrocarbon | | | |
| pH | | | | : | | Data not available | | | |
|  | | | |  | | based on a risk assessment of local circumstances. | | | |
|  | | | |  | | Appropriate measures include: Use sealed systems as far as | | | |
|  | | | |  | | possible. Adequate explosion-proof ventilation to control | | | |
|  | | | |  | | airborne concentrations below the exposure guidelines/limits. | | | |
|  | | | |  | | Local exhaust ventilation is recommended. Eye washes and | | | |
|  | | | |  | | showers for emergency use. | | | |
| Personal Protective | | | | : | | Personal protective equipment (PPE) should meet | | | |
| Equipment | | | |  | | recommended national standards. Check with PPE suppliers. | | | |
|  | | | |  | | AS/NZS 1337: Eye protectors for industrial applications. | | | |
|  | | | |  | | AS/NZS 2161: Occupational protective gloves - Selection, use | | | |
|  | | | |  | | and maintenance. AS/NZS 1715: Selection, use and | | | |
|  | | | |  | | maintenance of respiratory protective devices. AS/NZS 1716: | | | |
|  | | | |  | | Respiratory protective devices. | | | |
| Respiratory Protection | | | | : | | If engineering controls do not maintain airborne concentrations | | | |
|  | | | |  | | to a level which is adequate to protect worker health, select | | | |
|  | | | |  | | respiratory protection equipment suitable for the specific | | | |
|  | | | |  | | conditions of use and meeting relevant legislation. Check with | | | |
|  | | | |  | | respiratory protective equipment suppliers. Where air-filtering | | | |
|  | | | |  | | respirators are suitable, select an appropriate combination of | | | |
|  | | | |  | | mask and filter. Where air-filtering respirators are unsuitable | | | |
|  | | | |  | | (e.g. airborne concentrations are high, risk of oxygen | | | |
|  | | | |  | | deficiency, confined space) use appropriate positive pressure | | | |
|  | | | |  | | breathing apparatus. All respiratory protection equipment and | | | |
|  | | | |  | | use must be in accordance with local regulations. | | | |
| Hand Protection | | | | : | | Personal hygiene is a key element of effective hand care. | | | |
|  | | | |  | | Gloves must only be worn on clean hands. After using gloves, | | | |
|  | | | |  | | hands should be washed and dried thoroughly. Application of a | | | |
|  | | | |  | | non-perfumed moisturizer is recommended. Suitability and | | | |
|  | | | |  | | durability of a glove is dependent on usage, e.g. frequency and | | | |
|  | | | |  | | duration of contact, chemical resistance of glove material, | | | |
|  | | | |  | | glove thickness, dexterity. Always seek advice from glove | | | |
|  | | | |  | | suppliers. Contaminated gloves should be replaced. | | | |
|  | | | |  | | Select gloves tested to a relevant standard (e.g. Europe | | | |
|  | | | |  | | EN374, US F739). When prolonged or frequent repeated | | | |
|  | | | |  | | contact occurs, Nitrile gloves may be suitable. (Breakthrough | | | |
|  | | | |  | | time of > 240 minutes.) For incidental contact/splash protection | | | |
|  | | | |  | | Neoprene, PVC gloves may be suitable. | | | |
| Eye Protection | | | | : | | Chemical splash goggles (chemical monogoggles). | | | |
|  | | | |  | | Approved to EU Standard EN166. | | | |
| Protective Clothing | | | | : | | Chemical resistant gloves/gauntlets, boots, and apron (where | | | |
|  | | | |  | | risk of splashing). | | | |
| Monitoring Methods | | | | : | | Monitoring of the concentration of substances in the breathing | | | |
|  | | | |  | | zone of workers or in the general workplace may be required to | | | |
|  | | | |  | | confirm compliance with an OEL and adequacy of exposure | | | |
|  | | | |  | | controls. For some substances biological monitoring may also | | | |
|  | | | |  | | be appropriate. | | | |
| Environmental Exposure | | | | : | | Local guidelines on emission limits for volatile substances must | | | |
| Controls | | | |  | | be observed for the discharge of exhaust air containing vapour. | | | |
|  | | | | | | | | | |
| 9. PHYSICAL AND CHEMICAL PROPERTIES | | | | | | | | | |
| Appearance | | | | : | | Purple. Liquid. | | | |
| Odour | | | | : | | Hydrocarbon | | | |
| pH | | | | : | | Data not available | | | |
|  | |  | | peripheral neuropathy in animals. (n-Hexane) | | |  |
| Mutagenicity | | : | | May cause heritable genetic damage. (Benzene) | | |  |
|  | |  | | Mutagenicity studies on gasoline and gasoline blending | | | |
|  | |  | | streams have shown predominantly negative results. | | |  |
| Carcinogenicity | | : | | Known human carcinogen. (Benzene) | | |  |
|  | |  | | May cause leukaemia (AML - acute myelogenous leukemia). | | | |
|  | |  | | (Benzene) | | |  |
|  | |  | | Inhalation exposure to mice causes liver tumours, which are | | | |
|  | |  | | not considered relevant to humans. | | |  |
| Reproductive and | | : | | Causes foetotoxicity at doses which are maternally toxic. | | | |
| Developmental Toxicity | |  | | (Toluene) | | |  |
|  | |  | | Causes adverse effects on the foetus based on animal studies. | | | |
|  | |  | | (Toluene) | | |  |
|  | |  | | Many case studies involving abuse during pregnancy indicate | | | |
|  | |  | | that toluene can cause birth defects, growth retardation and | | | |
|  | |  | | learning difficulties. (Toluene) | | |  |
| Additional Information | | : | | Exposure to very high concentrations of similar materials has | | | |
|  | |  | | been associated with irregular heart rhythms and cardiac | | | |
|  | |  | | arrest. | | |  |
|  | |  | | Prolonged and repeated exposures to high concentrations | | | |
|  | |  | | have resulted in hearing loss in rats. Solvent abuse and noise | | | |
|  | |  | | interaction in the work environment may cause hearing loss. | | | |
|  | |  | | (Toluene) | | |  |
|  | |  | | Abuse of vapours has been associated with organ damage and | | | |
|  | |  | | death. (Toluene) | | |  |
|  | |  | | Myelodysplastic syndrome (MDS) was observed in individuals | | | |
|  | |  | | exposed to very high levels (50 ppm to 300 ppm range) of | | | |
|  | |  | | benzene over a long period of time in the workplace. | | | The |
|  | |  | | relevance of these results to lower levels of exposure is not | | | |
|  | |  | | known. (Benzene) | | |  |

12. ECOLOGICAL INFORMATION

Fuels are typically made from blending several refinery streams. Ecotoxicological studies have been carried out on a variety of hydrocarbon blends and streams but not those containing additives. Information given is based on a knowledge of the components and the ecotoxicology of similar products.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Acute Toxicity | : Toxic:LL/EL/IL50 1-10 mg/l(to aquatic organisms)(LL/EL50 | | | |
|  |  | | expressed as the nominal amount of product required to | |
|  |  | | prepare aqueous test extract). | |
| Mobility | : Floats on water. Evaporates within a day from water or soil | | | |
|  |  | | surfaces. Large volumes may penetrate soil and could | |
|  |  | | contaminate groundwater. Contains volatile constituents. | |
| Persistence/degradability | : Major constituents are expected to be inherently | | | |
|  |  | | biodegradable. The volatile constituents will oxidize rapidly by | |
|  |  | | photochemical reactions in air. | |
| Bioaccumulation | : | | Contains constituents with the potential to bioaccumulate. | |
| Other Adverse Effects | : Films formed on water may affect oxygen transfer and damage | | | |
|  |  | | organisms. | |
| 13. DISPOSAL CONSIDERATIONS | | | | |  | |
| Material Disposal | | | : | | Recover or recycle if possible. It is the responsibility of the | |
|  | | |  | | waste generator to determine the toxicity and physical | |
|  | | |  | | properties of the material generated to determine the proper | |
|  | | |  | | waste classification and disposal methods in compliance with | |
|  | | |  | | applicable regulations. Waste arising from a spillage or tank | |
|  | | |  | | cleaning should be disposed of in accordance with prevailing | |
|  | | |  | | regulations, preferably to a recognised collector or contractor. | |
|  | | |  | | The competence of the collector or contractor should be | |
|  | | |  | | established beforehand. Do not dispose into the environment, | |
|  | | |  | | in drains or in water courses. Do not dispose of tank water | |
|  | | |  | | bottoms by allowing them to drain into the ground. This will | |
|  | | |  | | result in soil and groundwater contamination. | |
| Container Disposal | | | : | | Drain container thoroughly. After draining, vent in a safe place | |
|  | | |  | | away from sparks and fire. Residues may cause an explosion | |
|  | | |  | | hazard. Do not, puncture, cut, or weld uncleaned drums. Send | |
|  | | |  | | to drum recoverer or metal reclaimer. Do not pollute the soil, | |
|  | | |  | | water or environment with the waste container. | |
| Local Legislation | | | : | | Disposal should be in accordance with applicable regional, | |
|  | | |  | | national, and local laws and regulations. Local regulations may | |
|  | | |  | | be more stringent than regional or national requirements and | |
|  | | |  | | must be complied with. | |
|  | | |  | |  | |
| 14. TRANSPORT INFORMATION | | |  | |  | |
| ADG | | |  | |  | |
| UN number | | |  | | 1203 | |
| Proper shipping name | | |  | | GASOLINE | |
| Class | | |  | | 3 | |
| Packing group | | |  | | II | |
| Hazchem Code | | |  | | 3YE | |
| IMDG | | |  | |  | |
| Identification number | | |  | | UN 1203 | |
| Proper shipping name | | |  | | PETROL | |
| Class / Division | | |  | | 3 | |
| Packing group | | |  | | II | |
| Marine pollutant: | | |  | | Yes | |
| IATA (Country variations may apply) | | | | | | |
| UN No. | | | : | | 1203 | |
| Proper shipping name | | | : | | Gasoline | |
| Class / Division | | | : | | 3 | |
| Packing group | | | : | | II | |

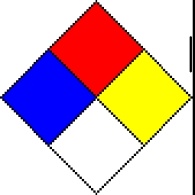
15. REGULATORY INFORMATION

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

|  |  |  |  |
| --- | --- | --- | --- |
| SUSDP Schedule | | : | S5. When packed in containers having capacity of less than |
|  |  |  | 20 litres. |
|  |  |  | Not scheduled. When packed in containers having capacity of |
|  |  |  | greater than 20 litres. |
| AICS |  | : | All components |
|  |  |  | are listed or |
|  |  |  | exempt |
| Classification triggering | | : | Contains gasoline, low boiling point naphtha, unspecified. |
| components |  |  |  |
| Other Information | | : National Code of Practice for the Preparation of Material Safety | |
|  |  |  | Data Sheets [NOHSC:2011] List of Designated Hazardous |
|  |  |  | Substances [NOHSC:10005]. Approved Criteria for Classifying |
|  |  |  | Hazardous Substances [NOHSC:1008]. Adopted National |
|  |  |  | Exposure Standards for Atmospheric Contaminants in the |
|  |  |  | Occupational Environment [NOHSC:1003]. Australian |
|  |  |  | Dangerous Goods Code. Standard Uniform Scheduling of |
|  |  |  | Drugs and Poisons. |
|  | |  |  |
| 16. OTHER INFORMATION | |  |  |
| Additional Information | | : This document contains important information to ensure the | |
|  |  |  | safe storage, handling and use of this product. The information |
|  |  |  | in this document should be brought to the attention of the |
|  |  |  | person in your organisation responsible for advising on safety |
|  |  |  | matters. |
| R-phrase(s) |  |  |  |
| R12 | Extremely flammable. | | |
| R38 | Irritating to skin. | |  |
| R45 | May cause cancer. | | |
| R46 | May cause heritable genetic damage. | | |
| R51/53 | Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic | | |
|  | environment. |  |  |
| R63 | Possible risk of harm to the unborn child. | | |
| R65 | Harmful: May cause lung damage if swallowed. | | |
| R67 | Vapours may cause drowsiness and dizziness. | | |
| MSDS Version Number | | : | 1.0 |
| MSDS Effective Date | | : | 08.04.2010 |
| MSDS Revisions | | : A vertical bar (|) in the left margin indicates an amendment | |
|  |  |  | from the previous version. |
| MSDS Regulation | | : |  |

|  |  |  |
| --- | --- | --- |
| Uses and Restrictions | : | This product must not be used in applications other than those |
|  |  | recommended in Section 1, without first seeking the advice of |
|  |  | the supplier. |
|  |  | This product is not to be used as a solvent or cleaning agent; |
|  |  | for lighting or brightening fires; as a skin cleanser. |
|  |  | This product is designed only to suit automotive applications |
|  |  | and no provision is made for the requirements of aviation |
|  |  | applications. |
| MSDS Distribution | : | The information in this document should be made available to |
|  |  | all who may handle the product. |
| Disclaimer | : | This information is based on our current knowledge and is |
|  |  | intended to describe the product for the purposes of health, |
|  |  | safety and environmental requirements only. It should not |
|  |  | therefore be construed as guaranteeing any specific property |
|  |  | of the product. |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **MATERIAL SAFETY DATA SHEET FOR THINNERS**  **Hazards Identification** |  |  |  |  |



**Emergency Overview**

Caution! Combustible. Keep away from heat, sparks, flame and all other sources of ignition. Vapors may cause fire. Vapors may travel long distances to other areas and rooms away from work site. Do not smoke. Extinguish all flames and pilot lights, and turn off stoves, heaters, electric motors and all other sources of ignition anywhere in the structure, dwelling or building during use and until all vapors are gone from work site and all areas away from work site. Keep away from electrical outlets and switches. Beware of static electricity that may be generated by synthetic clothing and other sources.

**OSHA Regulatory Status:**

This material is classified as hazardous under OSHA regulations.

**Potential Health Effects (Acute and Chronic)**

Inhalation Acute Exposure Effects:

May cause dizziness; headache; watering of eyes; eye irritation; weakness; nausea; muscle twitches, and depression of central nervous system. Severe overexposure may cause convulsions; unconsciousness; and death. Intentional misuse of this product by deliberately concentrating and inhaling can be harmful or fatal.

Skin Contact Acute Exposure Effects:

May cause irritation; numbness in the fingers and arms; drying of skin; and dermatitis. May cause increased severity of symptoms listed under inhalation.

Eye Contact Acute Exposure Effects:

This material is an eye irritant. May cause irritation; burns; conjunctivitis of eyes; and corneal ulcerations of the eye. Vapors may irritate eyes.

Ingestion Acute Exposure Effects: Harmful or fatal if swallowed. May cause nausea; weakness; muscle twitches; gastrointestinal irritation; and diarrhea. Severe overexposure may cause convulsions; unconsciousness; and death.

Chronic Exposure Effects:

Reports have associated repeated and prolonged overexposure to solvents with neurological and other physiological damage. Prolonged or repeated contact may cause dermatitis. May cause jaundice; bone marrow damage; liver damage; anemia; and skin irritation.

**Signs and Symptoms Of Exposure**

Inhalation, ingestion, and dermal are possible routes of exposure.

**Medical Conditions Generally Aggravated By Exposure**

Diseases of the skin, eyes, liver, kidneys, central nervous system and respiratory system.

**First Aid Measures**

**Emergency and First Aid Procedures**

Inhalation:

If user experiences breathing difficulty, move to air free of vapors, Administer oxygen or artificial medical assistance can be rendered.

Skin Contact:

Wash with soap and large quantities of water and seek medical attention if irritation from contact persists.

Eye Contact:

Flush with large quantities of water for at least 15 minutes and seek immediate medical attention.

Ingestion:

Do not induce vomiting. Call your local poison control center, hospital emergency room or physician immediately for instructions to induce vomiting.

If spontaneous vomiting is about to occur,place victim's head below knees. If victim is drowsy or unconscious, place on the left side with head down. Never give anything by mouth to a person who is not fully conscious. Do not leave victim unattended. Seek medical attention immediately.

**Note to Physician**

Call your local poison control center for further information.

Inhalation: Inhalation overexposure can produce toxic effects. Monitor for respiratory distress. If cough or difficulty in breathing develops, evaluate for upper respiratory tract inflammation, bronchitis, and pneumonitis. Administer supplemental oxygen with assisted ventilation as required.

Ingestion: If ingested, this material presents a significant aspiration and chemical pneumonitis hazard. Induction of emesis is not recommended. Consider activated charcoal and/or gastric lavage. If patient is obtunded, protect the airway by cuffed endotracheal intubation or by placement of the body in a Trendelenburg and left lateral decubitus position.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Fire Fighting Measures**  **Flammability Classification:** | Class II | |  |  |  |
| **Flash Pt:** | >= 101.00 F | | Method Used: | | Setaflash Closed Cup (Rapid Setaflash) |
| **Explosive Limits:** | LEL: | ~ 0.5 % | | UEL: | ~ 6 % |
| **Autoignition Pt:** | 446.00 F | |  |  |  |

**Fire Fighting Instructions**

Self-contained respiratory protection should be provided for fire fighters fighting fires in buildings or confined areas. Storage containers exposed to fire should be kept cool with water spray to prevent pressure build-up. Stay away from heads of containers that have been exposed to intense heat or flame.

**Flammable Properties and Hazards**

Combustible Liquid.

**Hazardous Combustion Products**

Carbon dioxide, carbon monoxide, smoke, fumes, and/or unburned hydrocarbons.

**Extinguishing Media**

Use carbon dioxide, dry powder, or foam.

Accidental Release Measures

**Steps To Be Taken In Case Material Is Released Or Spilled**

Clean up:

Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind, out of low areas, and ventilate closed spaces before entering. Shut off ignition sources; keep flares, smoking or flames out of hazard area.

Small spills:

Take up with sand, earth or other noncombustible absorbent material and place in a plastic container where applicable.

Large spills:

Dike far ahead of spill for later disposal.

Waste Disposal:

Dispose in accordance with applicable local, state and federal regulations.

Handling and Storage

**Precautions To Be Taken in Handling**

Read carefully all cautions and directions on product label before use. Since empty container retains residue, follow all label warnings even after container is empty. Dispose of empty container according to all regulations. Do not reuse this container.

A static electrical charge can accumulate when this material is flowing through pipes, nozzles or filters, and when it is agitated. A static spark discharge can ignite accumulated vapors particularly during dry weather conditions. Always use proper bonding and grounding procedures.

**Precautions To Be Taken in Storing**

Keep container tightly closed when not in use. Store in a cool, dry place. Do not store near flames or at elevated temperatures.

Exposure Controls/Personal Protection

**Respiratory Equipment (Specify Type)**

For OSHA controlled work place and other regular users. Use only with adequate ventilation under engineered air control systems designed to prevent exceeding appropriate TLV. For occasional use, where engineered air control is not feasible, use properly maintained and properly fitted NIOSH approved respirator for organic solvent vapors. A dust mask does not provide protection against vapors.

**Eye Protection**

Safety glasses, goggles or face shields are recommended to safeguard against potential eye contact, irritation, or injury. Contact lenses should not be worn while working with chemicals.

**Protective Gloves**

Wear impermeable gloves. Gloves contaminated with product should be discarded. Promptly remove clothing that becomes soiled with product.

**Other Protective Clothing**

Various application methods can dictate use of additional protective safety equipment, such as impermeable aprons, etc., to minimize exposure. Before reuse, thoroughly clean any clothing or protective equipment that has been contaminated by prior use. Discard any clothing or other protective equipment that cannot be decontaminated, such as gloves or shoes.

**Engineering Controls (Ventilation etc.)**

Use only with adequate ventilation to prevent build-up of vapors. Open all windows and doors. Use only with a cross ventilation of moving fresh air across the work area. If strong odor is noticed or you experience slight dizziness, headache, nausea, or eye-watering - Stop - ventilation is inadequate. Leave area immediately.

**Work/Hygienic/Maintenance Practices**

A source of clean water should be available in the work area for flushing eyes and skin. Do not eat, drink, or smoke in the work area.

Wash hands thoroughly after use.

Physical and Chemical Properties

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Physical States:** | [ ] Gas | | [ X ] Liquid | | [ | ] Solid |
| **Melting Point:** | No data. | |  |  |  |  |
| **Boiling Point:** | 298.00 F - 400.00 F | | | |  |  |
| **Autoignition Pt:** | 446.00 F | |  |  |  |  |
| **Flash Pt:** | >= 101.00 F | |  | Method Used: | | Setaflash Closed Cup (Rapid Setaflash) |
| **Explosive Limits:** | LEL: | ~ 0.5 % | | | UEL: | ~ 6 % |
| **Specific Gravity (Water = 1):** | 0.78 |  |  |  |  |  |
| **Vapor Pressure (vs. Air or mm Hg):** | 0.22 MM HG | | | at 68.0 F | |  |
| **Vapor Density (vs. Air = 1):** | 4.7 |  |  |  |  |  |
| **Evaporation Rate (vs Butyl** | No data. | |  |  |  |  |
| **Acetate=1):** |  |  |  |  |  |  |
| **Solubility in Water:** | No data. | |  |  |  |  |
| **Solubility Notes** |  |  |  |  |  |  |
| Very slightly soluble in cold water. | |  |  |  |  |  |
| **Percent Volatile:** | 100.0 % by weight. | | | |  |  |
| **VOC / Volume:** | 784.0000 G/L | | |  |  |  |
| **Corrosion Rate:** | No data. | |  |  |  |  |
| **pH:** | No data. | |  |  |  |  |
| **Appearance and Odor** |  |  |  |  |  |  |
| Water White / Free and Clear |  |  |  |  |  |  |

Stability and Reactivity

**Stability:** Unstable [ ] Stable [ X ]

**Conditions To Avoid - Instability**

No data available.

**Incompatibility - Materials To Avoid**

Incompatible with strong acids, alkalies, and oxidizers such as liquid chlorine and oxygen.

**Hazardous Decomposition Or Byproducts**

Decomposition may produce carbon monoxide and carbon dioxide.

**Hazardous Polymerization:** Will occur [ ] Will not occur [ X ]

**Conditions To Avoid - Hazardous Polymerization**

No data available.

Disposal Considerations

**Waste Disposal Method**

Dispose in accordance with federal, state, and local regulations.



**EMPLOYEE DOCUMENT RECEIPT ACKNOWLEDGMENT:**

**Form letter to be signed by employee to indicate he has received the policy and procedure documents and understands its effect. To be returned to Head Office.**

I, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, have received my copies of the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. It is my responsibility to read and understand the matters set forth in this manual. It is a guide to firm policies and procedures.

I understand that no statement contained in these forms creates any guarantee of continued employment or creates any obligation, contractual or otherwise, on the part of the firm. I will rely on any promises, statements or representations to the contrary only if they are in writing and signed by an authorised member of the firm’s management.

I understand and acknowledge that the firm has the right, without prior notice, to modify, amend or terminate policies, practices, benefit plans, and other institutional programs within the limits and requirements.

Full Name & Surname: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Sign: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_