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## 24.1 EMS framework

Matilda Minerals will develop an EMS to assist them in managing their environmental responsibilities and to allow for continuous improvement of their environmental management programs.

Over the life of operations the EMS will enable Matilda to systematically assess and review its environmental impacts and obligations, develop targets which will enable them to measure their environmental performance, and implement Environmental Management Programs (EMPs) to manage these impacts and obligations.

Matilda will base its EMS on the AS/NZ ISO14001:2004 Environmental Management System Standards. This standard has been chosen as is the most recognised standard and works on a continuous improvement model.

The Draft EMS presented in this Section has been developed in accordance with the Draft EIS Guidelines for environmental assessment purposes; the final version will be developed in consultation with operational staff.

Under the Mining Management Act there is a requirement for the Mine to develop an MMP and submit it to DPIFM for approval on an annual basis. This plan is the key operational document for all NT mining operations to support the Application for Authorisation of Mining Activities. The MMP aims to satisfy all legislative requirements and provides a tool that outlines actions, programs and responsibilities the mine must take to achieve a 'life-of-mine' commitment to health, safety and environment (DPIFM 2002).

Matilda intends to develop its EMS in line with the requirements of the MMP, to ensure efficient use of resources in managing its safety and environmental responsibilities and to ensure that annual reviews of both instruments are undertaken in parallel.

The structure of the EMS is discussed below under the three distinct sections identified in the Draft EIS Guidelines:

- Policy and Planning;
- Implementation and Operation; and
- Checking and Review.

Fundamental to the implementation of the EMS at an operational level is the development of EMPs. These EMPs contain aspects of the organization's operations that have a significant impact on the environment. They include consideration of legal and other obligations, and objectives and targets to measure environmental performance.

During the environmental assessment process, the need for EMPs and procedures to manage specific issues has been analysed. In response this Draft EIS includes Draft EMPs for flora and fauna

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management, water quality protection, hazardous goods management, sea turtles, quarantine issues, and rehabilitation, as well as other aspects of Matilda's proposed operation.

These Draft EMPs will include design considerations, operational procedures, construction procedures or operational practices to be implemented by Matilda to minimise the Project's environmental impacts. The Draft EMPs are presented in Section 25. These Draft EMPs will be finalised in the start-up phase of operations.

## 24.2 Policy and planning

Matilda has defined corporate principles and a number of policies that define how Matilda's operations should be conducted. These include

- an environmental policy;
- an occupational health and safety policy; and
- a hazard and incident reporting policy.

### 24.2.1 Corporate principles

Matilda's Corporate Principals include:

- Prudent management of shareholder's funds;
- Increase Company net worth;
- Set realistic and achievable goals;
- Promote success in meeting goals;
- Accurate and timely reporting of operational and resource performance;
- Respond to critical business decisions through an effective and timely planning process;
- Strategic focus on business objectives; and
- Evaluation of operation performance targeting continuous improvement.

### 24.2.2 Environmental policy

The prime objective of Matilda Minerals Ltd. is to develop the culture, protocols and procedures to ensure the integrity of the environment for all employees, contractors and external stakeholders associated with our operations.

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The following are Matilda's policy objectives:

- To be committed to continual improvement of environmental management throughout all facets of Matilda's operations
- To act with cognisance to regulatory and ethical standards as would be expected with economically and ecologically sustainable development
- To encourage workforce awareness of environmental management and promote positive personal environmental attitude in the workplace
- To be responsive and responsible with regard to establishing environmental credibility with external stakeholders and regulatory bodies
- To encourage and propose internal and external research to reduce environmental impacts and improve long term rehabilitation and reclamation success within the realms of economically and ecologically sustainable development

A copy of the signed environmental; policy is included below.

These objectives are consistent with the AS/NZS ISO14001 standards. They are designed to be appropriate and relevant to operations, show commitment to improvement and pollution prevention, and are readily available both to employees and the public.

### **24.2.3 Occupational health and safety policy**

The Occupational Health and Safety Policy objective of Matilda and its operations is to provide a safe and healthy workplace for all personnel associated with the company's activities.

Objectives include:

- To comply with all statutory obligations.
- Ensure a safe and healthy workplace for all personnel engaged at the company's operations.
- Identify and manage hazards to an acceptable level of risk.
- To create and maintain a culture in the workplace whereby all supervisors, employees, contractors and visitors have accountability for maintaining a safe work environment.
- Individuals within their area of control have the knowledge and resources to identify and effectively manage hazards associated with their work environment.
- Ensure all incidents are reported, recorded and investigated to ensure appropriate measures are being taken to eliminate identified hazards.

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- Provide adequate training, information, instruction and supervision to create and maintain an injury free workplace.

Elements of the safety policy that will support the EMS include the focus upon accountability, competency requirements of personnel managing hazards, a focus on adequate training requirements, and reinforcement of the need to report, record and investigate incidents to eliminate potential hazards. These environmental components of the safety procedures will be integrated into the EMS and will run parallel as the system becomes operational.

#### **24.2.4 Hazard and incident reporting policy**

A Hazard and Incident Reporting Policy has been developed to provide a focus for developing the culture, protocols and procedures needed to ensure there is an efficient and effective incident and accident reporting process which can be used by all employees, contractors and external stakeholders associated with the operations.

Objectives include:

- All incidents and accidents must be reported to the Supervisor immediately.
- The Department Head shall be informed by no later than the end of that working shift.
- In the event that any person is taken off site for further treatment the Supervisor shall inform the Safety Manager within the first hour of departure.
- The Resident Manager shall be informed of any hazard/incident that has a high or significant risk in ranking as soon as possible.
- The hazard/incident report shall be completed within two working days.

This procedure does not purely focus on actual incidents but also includes potential hazards and impacts. It is designed to encourage positive behaviour, which will reinforce the ongoing continuous improvement and review aspects of the EMS.

#### **24.2.5 Legal and other obligations**

It is Matilda's policy that its employees and contractors will comply with Commonwealth and State legislation, relevant to Matilda's operations.

A list of Commonwealth and Territory legislation that is or could potentially be relevant to Matilda is presented below.

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**Commonwealth legislation**

- *Environment Protection and Biodiversity Act 2000*
- *Native Title Act 1993*
- *Aboriginal and Torres Strait Islander Heritage Protection Act 1984*
- *Aboriginal Land Rights (NT) Act 1976*
- *Ozone Protection and Synthetic Greenhouse Gas Management Act 1989*
- *Motor Vehicle Standards Act 1989*
- *Industrial Chemicals (Notification and Assessment) Act 1989*
- *Assessment of Site Contamination NEPM 1999*
- National Strategy for the Conservation of Australian Species and Communities Threatened with Extinction
- National Strategy for the Conservation of Australia's Biological Diversity 1996

**State legislation**

- *Mining Management Act 2001*
- *Waste Management and Pollution Control Act 1998*
- *Environmental Assessment Act 1982*
- *Local Government Act 1993*
- *Public Health Act 1952*
- *Planning Act 2003*
- *Weeds Management Act 2001*
- *Work Health Act 1986*
- *Northern Territory Aboriginal Sacred Sites Act 1989*
- *Aboriginal Land Rights (NT) Act 1976*
- *Heritage Conservation Act 1999*
- *Territory Parks and Wildlife Conservation Act 2000*

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- *Water Act 2001*
  - *Water Supply and Sewerage Act 1988*
  - *Soil Conservation and Land Utilisation Act 1985*
  - *Radiation (Safety Control) Act 1999*
  - *Radioactive Ores and Concentrates (Packaging and Transport) Act 2002*
  - *Litter Act 1972*
  - *Motor Vehicles Act 1949*
  - *Motor Vehicles (Standards) Regulations - Australian Vehicle Standards Rules*
  - *Fire and Emergency Act 2004*
  - *Bushfires Act 1980*
  - *Dangerous Goods Act 1981 and Regulations*
  - *Traffic Act 1949*

Other obligations include Government guidelines, regional strategies and company commitments. These are, for example, commitments made in Matilda's NOI and the EPBC referral for proposed mining activities at Andranangoo and Lethbridge, the Department of Primary Industry, Fisheries and Mines - Life of Mine Planning Objectives, the Tiwi Islands Natural Resource Management Strategy produced by the TLC, and other commitments Matilda has made during the public consultation processes.

A detailed register identifying Matilda's environmental legislative obligations and other commitments and how these legal and other obligations relate specifically to operational requirements will be developed over time and made available on site for staff and contractors to view. Licences, lease agreements, company policies and procedures will also be included in this register.

Practical steps to implement these obligations will be incorporated into operational procedures.

### **24.2.6 Environmental aspects, impacts and risk management**

Matilda will build procedures for its Tiwi Island Operations that allows for the identification of environmental aspects of their operations that impact on the environment. These impacts will be risk assessed and appropriate management plans and operational procedures will be developed for significant and high risk impacts to manage, mitigate, and prevent these impacts.

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### 24.2.7 Aspects and impacts register

Matilda will systematically evaluate the environmental aspects of activities, processes, inputs and outputs, associated with their operations that have a potential to impact upon the environment. These will be documented in an Environmental Aspects and Impacts Register. Methods for gathering information for inclusion in the register can be predicted from the impact assessment process and will include but not be limited to:

- site visits;
- operational observations;
- interviews with key personnel; and
- literature reviews.

Additionally, the Aspects and Impacts Register will include aspects associated with socio-economic impacts.

For the purposes of this Draft EIS, environmental issues and potential impacts have been drawn from information gathered whilst preparing the NOI and EPBC referral, undertaking baseline field surveys, consultation with key stakeholders including the TLC and local Traditional Owners and NT government personnel, and the requirements listed in the draft EIS guidelines. Identified high risk potential environmental impacts are listed in Table 23.4.

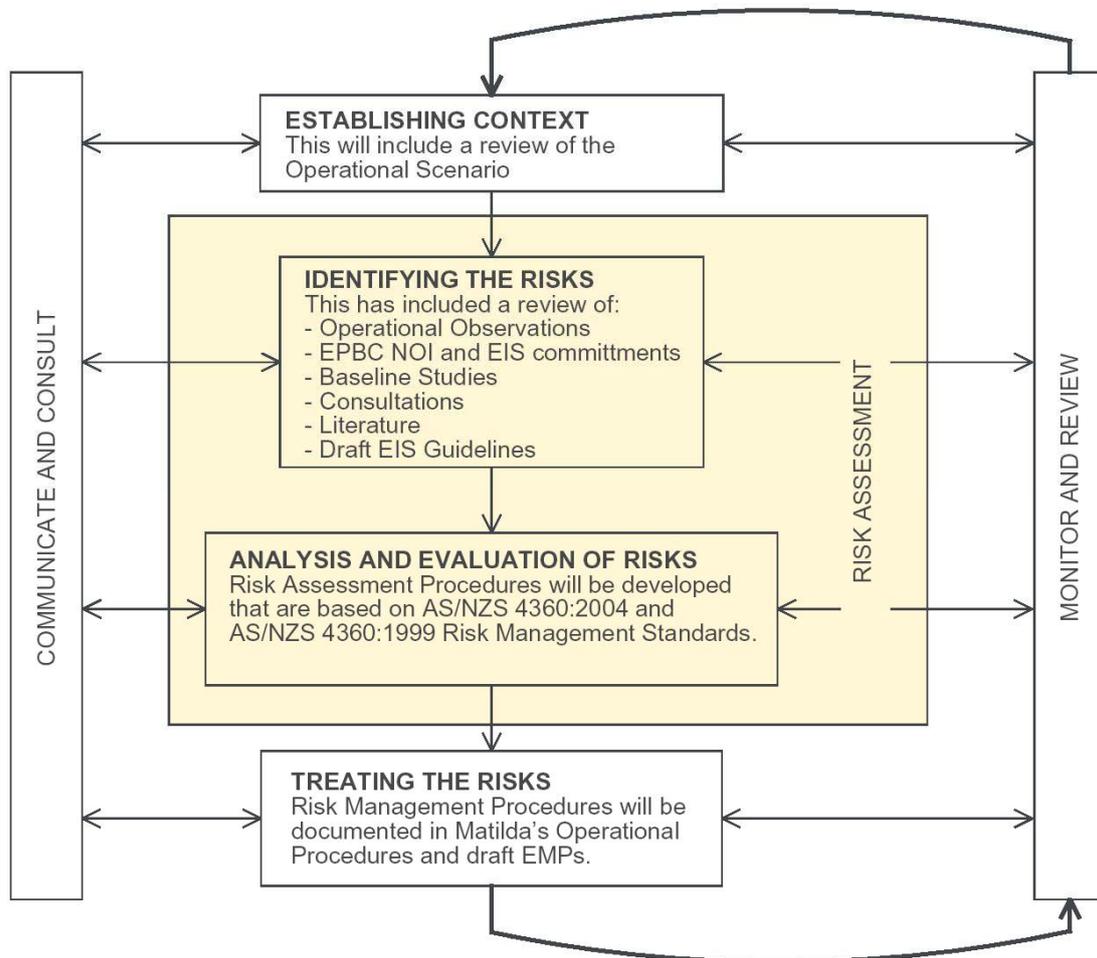
### 24.2.8 Risk assessment

To maximise the return of investment of resources into management of environmental issues it is important that staff and other resources are allocated on priority issues. It is normally accepted that the highest risk issues receive the highest priority.

A draft risk assessment methodology has been developed by Matilda to assist in prioritizing environmental impacts identified in the Aspects and Impacts Register. This environmental risk assessment is consistent with the requirements in AS/NZS 4360:2004 and AS/NZS 4360:1999. The environmental risk methodology is explained in Section 23.

Noting that priorities may change over time due to changes in operational conditions and community and stakeholder expectations, the risk assessment and management process will be an iterative process that is reviewed on an on-going basis. The risk assessment process is illustrated in Figure 24.1.

**Figure 24.1: Risk Management Process - Overview**



Risk assessments will include consideration of biophysical, cultural and socio-economic criteria, as well as external risks including the risks of cyclones and flooding.

The risk assessment methodology that will be used by Matilda is explained in more detail in Section 23. In summary the risk assessment will rate both likelihood and consequence on a scale of 1 to 5. These numbers will be assessed against a matrix to provide an indication of the degree of risk associated with the issues and the relative priority of the issue. The consequence of an environmental issue will be assessed by determining the severity of the effect, the area/population to be affected, the permanence of effects, cultural and socio-economic impacts, including business impacts, and compliance with legislative requirements.

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### 24.2.9 Objectives, targets and program

Matilda will establish strategic objectives and targets for the significant environmental risks identified in its Environmental Aspects and Impacts Register. For the purposes of the Draft EIS, objectives and targets have been developed based on baseline field surveys, consultation with key stakeholders and the requirements listed in the draft EIS guidelines. The risk assessment methodology will be used to reassess these objectives and targets during operational phases.

For the purpose of this EIS, Draft EMPs that contain objectives and targets are contained in the EMP table presented in Section 25. The objectives and targets are designed to be measurable, practical and consistent with Matilda's Environmental Policy. They also take into account legal and other obligations.

The objectives and targets are also designed to facilitate the development of monitoring and reporting on Matilda's performance over time in relation to the commitments made in this Draft EIS. However it is noted that obligations, environmental risks and objectives and targets may change over the life of the operations.

Based on a preliminary assessment of the data gathered to date Matilda has developed the following Draft EMPs for inclusion in the Draft EIS:

- Flora
- Fauna
- Sea Turtles management
- Ground water quality protection
- Surface water quality protection
- Hydrocarbon and hazardous substances management
- Waste management and disposal
- Dust and noise
- Fire management
- Pest, weeds and diseases
- Radiation management plan
- Biting insects

These are presented in Section 25.

### 24.3 Implementation and operation

Matilda will ensure that the required resources are available to establish, implement, maintain and improve the environmental management system over time.

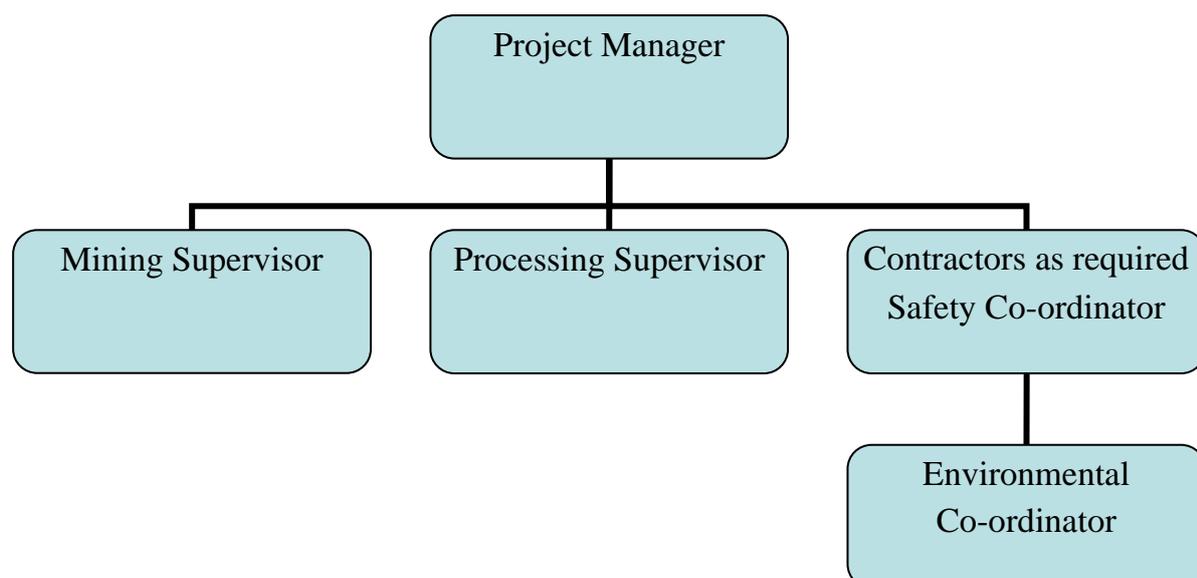
Roles, responsibilities and authorities will be defined, documented and communicated in order to facilitate effective environmental management.

Procedures will also be developed for:

- identifying induction, training and awareness requirements;
- communicating with stakeholders;
- identifying hazards and reporting incidents;
- document control;
- management of hazardous goods, chemicals;
- responding to natural disasters; and
- emergencies.

#### 24.3.1 Resources, roles and responsibilities

Figure 24.2: Environmental Management Organisational Chart



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Matilda has developed a formal job description template which includes job title, location, department, whom that position reports to and specific responsibilities. Matilda has also developed an appointed persons' register that identifies the name, position and areas of responsibilities of persons delegated with specific authorities by Matilda.

### **24.3.2 Competency, training and awareness**

Training and competency are key components of an EMS. Matilda recognises this and has included formal inductions as an integral part of the Matilda Safety Management System which includes presentation of environmental information.

Induction procedures have been developed by Matilda to ensure that they are delivered uniformly to an appropriate level of detail. Currently the inductions have been developed based on exploration requirements. When Matilda becomes operational it will review these procedures to ensure that it adequately covers Matilda's environmental obligations.

Additionally, Matilda's management have the responsibility to establish policy and adapt procedures to maximise the safety and health of all employees.

Supervisors and appointed persons have the responsibility to implement these policies and procedures and to enforce their use throughout their relevant areas of responsibility.

### **24.3.3 Communication**

Matilda has developed policies and procedures to effectively generate external and internal communication.

#### ***External communications***

In accordance with the *Mine Management Act 2001*, and Matilda's associated MMP, there is a requirement for reporting on an annual basis. This will be Matilda's primary means of providing the NT Government with information on its environmental performance. Additionally, Matilda will report safety incidents to DPIFM on a monthly basis for accidents and other incidents.

A preliminary assessment of Matilda's National Pollution Inventory (NPI) reporting requirements was undertaken, which indicated that Matilda may trigger a requirement to report on emissions to the air from combustion of fuels based upon fuel usage.

To date Matilda has consulted extensively with organisations such as the TLC and local Traditional Owners. Matilda will continue to consult with these organisations and document these consultations as part of the EMS development process.

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***Internal communications***

Internally, Matilda holds Tool Box meetings on a regularly basis, these meeting cover occupational health and safety, and environmental issues. Procedures have been developed to document these meetings and actions and outcomes required as a result of these meetings.

Matilda has also developed incident reporting and investigation procedures to communicate information on hazards and potential hazards identified in the workplace. These procedures place an emphasis on using past experience to highlight and mitigate against future risks.

**24.3.4 Documentation**

A document management and retention standard has been developed by Matilda which will be used to manage EMS documents and documents that contain environmental obligations.

As described earlier, Matilda has also developed standards for identifying hazards and documenting and reporting on incidents. Incident report forms will be stored in an incident report database.

Other documents developed by Matilda to support the EMS include daily inspection forms, job safety analysis (JSA) worksheets; risk analysis forms, and forms for listing meeting agendas and documenting minutes of meetings.

**24.3.5 Operational control**

The primary vehicle by which Matilda will achieve operational control over its environmental impact is through specific EMPs and through incorporation of environmental controls into operational procedures. As stated earlier these plans and procedures will be developed to manage identified, significant environmental impacts and within these procedures will be considerations for environmental requirements. Examples of Draft EMPs developed for the purposes of this EMS are presented in section 25.

Matilda has already developed operational procedures as part of Matilda's MMP for management of exploration activities. These include hydrocarbon and chemical management procedures and spill response procedures.

***Managing hazardous goods and chemicals***

Several procedures have been developed by Matilda for the management of hazardous goods and chemicals, including hydrocarbon and chemical management procedures which provide information for the storage and handling of hydrocarbons and bulk chemicals, including diesel fuel, oils, greases, chemicals and explosives. These procedures outline the manner in which bulk and small containers of these substances should be stored and handled on-site.

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These procedures comply with AS 1940-1993, AS 3780-1994, AS/NZS 4452:1997, and are based on the principles of reducing the effects of emissions, developing opportunities for recycling, and promoting more efficient use of resources.

Implementing and maintaining sound hydrocarbon and chemical management practices will minimise environmental impacts from mishandling and improve the control of their use.

### ***Spill Response***

Additionally, a spill response procedure has been developed by Matilda; the purpose of this procedure is to provide details of action to be taken when a hydrocarbon spill is identified, along with post spill actions. It is imperative that the appropriate response is carried out in order to prevent any potential environmental or safety impacts.

This procedure outlines:

- Action required when a spill is identified.
- Techniques to restrict the extent of the contamination.
- Techniques to collect spilled material.
- Techniques to collect and dispose of contaminated material.
- Techniques to treat soils contaminated by hydrocarbon.

### **24.3.6 Emergency preparedness and response**

As part of the EMS development process, Matilda will develop generic procedures for maintaining preparedness and responding to emergencies. This will include an emergency response plan which will include consideration of environmental incidents.

Matilda has developed specific procedures for responding to natural disasters that detail the requirements for precautions and actions to be taken in the event of severe weather, including imminent storms and flooding, and the possibility of a cyclone threat. These procedures will be incorporated into the EMS and shall form part of the site emergency management plan.

The site emergency management plan will be documented in the MMP and requirements of the site emergency plan will be incorporated into operational procedures as required.

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### ***Imminent storms and flooding***

The Imminent Storms and Flooding procedure states that the Resident Manager (or nominee) is to track the path of potential storm and to keep Supervisors aware of potential storms. If a storm is imminent, the Resident Manager is to consider evacuation of persons working in the open.

The Resident Manager is also to consider the likelihood of a potential lightning strike and flooding. The Resident Manager may nominate persons to undertake an on-the-spot weather watch for specific areas.

### ***Cyclones***

The purpose of this procedure is to as far as reasonably practicable reduce the risk of injury or harm to people and minimise damage to company assets from the affects of severe weather and cyclonic storms.

This procedure defines the stages for cyclone alert and the actions required for each stage. All employees, contractor employees and visitors shall know and apply this procedure during the periods of cyclones and cyclone watches.

## **24.4 Checking and review**

Matilda will create monitoring, inspection and audit programs to ensure the effectiveness of their EMS and EMPs.

These programs will include contingency plans and corrective action plans that need to be developed to address issues raised during inspections, monitoring programs and reviews. Currently the primary means of identifying issues and hazards and putting in place action plans to address them is the Incident Reporting procedures. The incident reporting system will continue to play a primary role in identifying environmental issues, but it will be complemented by periodic audits and structured monitoring programs. The EMS will also be reviewed on an annual basis.

Matilda's monitoring programs will be documented in a monitoring manual and incorporated into the EMPs as appropriate. By incorporating monitoring programs into EMPs Matilda will be able to keep a check on specific risks that are identified as being significant, and identify changes or trends so that actual and predicted risks can be compared. The need for corrective action can be considered in the event that impacts reach an unacceptable level. Alternatively the monitoring program may indicate that certain risks are not an issue, and resources may be channelled to other areas.

As stated earlier Matilda will also be required to report on performance against commitments made in the MMP on an annual basis. Matilda intends to undertake a review of its EMS system as part of this annual MMP review to ensure that the EMS is consistent with the requirements of the MMP.

## 24.5 Commitments

*Matilda commits to developing an EMS to assist them in managing their environmental responsibilities and to allow for continuous improvement of their EMS. This EMS will include specific EMP's to address key or significant environmental identified during environmental risk assessments (Section 24.1 and 24.2).*

*Matilda commits to ensuring that the required resources are available to establish, implement, maintain and improve the EMS Section 24.3).*

*Matilda commits to creating a monitoring, inspection and audit program to ensure the effectiveness of the EMS and EMPs (Section 24.4).*