

## SINO STEEL MIDWEST CORPORATION LIMITED

### ENVIRONMENTAL MANAGEMENT PLAN (EXPLORATION)

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				Name	Distributed To	Date
1	T. Harries	G. Connell	10/10/06	M. Cannon	D. Broomfield	12/10/06
2	J. Prout	M. Cannon	2/11/06	M. Cannon	D. Broomfield	3/11/06
3	J. Prout	D. Broomfield	17/11/06	M. Cannon	D. Broomfield	17/11/06
4	J. Prout	M. Cannon D. Broomfield	2/1/07	M. Cannon	D. Broomfield K. Brandis	
5	J. Prout	C. McLennan K. Brandis D. Broomfield	11/01/08	J. Prout	K. Brandis D. Broomfield D. Dravnieks (DOIR) B. McKernan (DEC)	14/01/08
6	S. Neill	D. Broomfield P. Stockman W. Ennor	31/08/09	J. Mizera	D. Broomfield B. Chapple & R. DeBari (DMP) P. Stockman S. Neil W. Ennor	25/09/09
7	K. Brandis	S. Neill P. Stockman W. Ennor	12/02/10	J. Mizera	DMP SMC Staff	20/02/10
8	W. Ennor	P. Stockman J. Stott S. Neill	09/07/10	J. Mizera	DMP SMC Staff DEC - Geraldton	23/07/10
9	W. Ennor	P. Hogan S. Neill D. Shankar S. Paul	29/10/15	S. Griffiths	DMP SMC Staff	29/10/15
10	W. Ennor	P. Hogan	19/05/17	P. Hogan	SMC Staff	1/06/17

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## **1 INTRODUCTION**

This Environmental Management Plan (EMP) addresses potential environmental impacts and management actions relevant to the activities associated with all aspects of Sinosteel Midwest Corporation Limited (SMC) proposed Exploration programs. This document addresses the management procedures required prior to, during, and after exploration activities but, does not relate to mining activities.

SMC, its employees and contractors will comply with all Commonwealth and State legislation that apply to its exploration activities. Compliance with commitments outlined in this document may be internally audited by SMC and subject to external audits by the relevant regulatory agencies, including the Department of Mines and Petroleum (DMP).

## **2 PROJECT DESCRIPTION**

SMC's exploration activities involve a number of drilling programs with the primary objective to drill the strike and depth extensions of potential iron ore bodies within the Mid-West region of WA. Priority will be to test those areas with the potential to contain significant resources of economic high-grade iron.

Each lease is expected to be subject to an initial reconnaissance exploration programme of limited duration and a small number of targeted drill holes. Ensuing components of the full exploration program are dependent on the success of earlier stages and may be delayed or omitted.

Key characteristics of an exploration program are:

- Pre-clearance environmental and heritage surveys as required;
- Site preparation, including access, pad and track development;
- Execution of drilling programs; and
- Post exploration rehabilitation.

## **3 ROLES AND RESPONSIBILITIES**

In accordance with this EMP, all activities will be conducted under the supervision of the Exploration Manager or their delegate.

In addition to drilling program tasks, the role of the Exploration Manager will be to:

- Implement and monitor the effectiveness of the Exploration EMP biannually;
- Ensure those involved in activities undertake the SMC exploration induction;
- Manage environmental aspects of exploration;
- Manage contractors and monitor their compliance with the EMP;
- Facilitate communication with government agencies and stakeholders;
- Investigate incidents and ensure appropriate corrective actions are completed; and
- Report breaches to the appropriate government agencies if required.

Further details of the role and responsibility of the Exploration Manager are detailed throughout the Environmental Management Plan.

#### **4 ENVIRONMENTAL MANAGEMENT PROCEDURES**

The environmental management procedures detailed in this EMP form the basis of the operational control procedures for all SMC's exploration activities.

The procedures detail the objectives, management actions, performance indicators, monitoring and reporting requirements for each relevant environmental aspect associated with exploration on SMC's mineral leases.

A review of the EMP will be undertaken via the audit process biannually to ensure currency and effectiveness of management procedures.

<b>EMP-01 Inspections &amp; Audits</b>
<p><b>Objective</b></p> <ul style="list-style-type: none"> <li>• To reinforce environmentally responsible behaviour;</li> <li>• To detect and correct at risk situations and practices; and</li> <li>• To regularly assess compliance of performance indicators and monitoring of commitments.</li> </ul>
<p><b>Management</b></p> <ul style="list-style-type: none"> <li>• Each procedure will be reviewed and revised as required as part of continual improvement;</li> <li>• Conduct an audit of the EMP and legal compliance biannually;</li> <li>• Ensure any non-conformances are addressed with appropriate corrective actions; and</li> <li>• Maintain an “Environmental Inspection Register”.</li> </ul>
<p><b>Performance Indicators</b></p> <ul style="list-style-type: none"> <li>• Audits completed at regular intervals.</li> </ul>
<p><b>Monitoring</b></p> <ul style="list-style-type: none"> <li>• The Exploration Manager or delegate will keep a record of all audits.</li> </ul>
<p><b>Reporting</b></p> <ul style="list-style-type: none"> <li>• Environmental audits will be reported as required.</li> </ul>

## EMP-02 Incident Reporting

### Objective

- To document environmental incidents for cause and effect;
- Have a written history of incidents and actions taken and agreed to, for evidentiary purposes and to track and record remedial measures;
- Build awareness in the workforce of situations where incidents could occur; and
- Provide for continuous improvement in environmental management.

### Management

- Staff and contractors are required to report environmental incidents, near-misses and potential hazards to their supervisor and complete the SMC Incident Report Form;
- Incidents will be reported immediately;
- Incidents and emergency events that may have a significant effect on the environment must be reported in accordance with relevant government requirements;
- The severity of spills to ground depends on what is spilt (e.g. hydrocarbon, drill fluid), volume and the receiving environment. Seek advice from your supervisor or environmental staff when required;
- Incidents that require reporting include:
  - Unauthorised clearing,
  - Death of native fauna,
  - Contamination of ground or surface water,
  - Water/fluid overflow/breach from containment sumps,
  - Major erosion of access tracks,
  - Disturbance to existing, or identification of new Aboriginal, or Non-Indigenous Heritage Sites,
  - Fires,
  - Hydrocarbon (>20L) or chemical spills,
  - Incorrect disposal of waste; and
  - Breaches of government regulations or environmental law.

### Immediate Response

In the event that an environmental incident occurs, the person to first observe the incident is required to:

- Implement immediate corrective action, if safe to do so, to minimise and/or eliminate the immediate risk to personnel, property, the natural environment and clean-up liability; and
- Verbally report the incident to their supervisor and/or the Exploration Manager or delegate.

Supervisors are required to:

- Ensure that resources are available to bring the incident under effective control; and
- Investigate and report the incident to senior SMC management.

### **Performance Indicators**

- All environmental 'near misses', incidents and hazards reported and remedial/preventative actions completed.

### **Monitoring**

- The Exploration Manager or delegate will be responsible for ensuring that incident reporting procedures are followed;
- All incidents will be investigated and analysed to determine and address root causes.

### **Reporting**

- All employees and contractors are responsible for the immediate reporting of all hazards to their supervisor verbally in the first instance;
- SMC has developed a classification system for environmental incidents as detailed in Appendix 3. Categories are summarised below with examples provided in Appendix 3:
  - Low – Limited damage, minor effect;
  - Moderate – Medium short-term effect;
  - Significant – Significant medium-term effect; and
  - Serious – Serious long-term effect.
- All environmental 'near misses', incidents or hazards will be reported to the Exploration Manager or delegate using an SMC Incident Report Form;
- SMC Incident Report Forms will be maintained in the Perth Office;
- All notifiable incidents will be reported as per regulatory requirements to the Managing Director and the relevant government department; and
- All incidents, both notifiable and non-notifiable are to be reported to the Exploration Manager and in the monthly report by the Exploration Manager or delegate.

<b>EMP-03 Aboriginal Heritage</b>
<p><b>Objectives</b></p> <ul style="list-style-type: none"> <li>• Avoid disturbance to Aboriginal Heritage sites unless approval has been given under Section 18 of the <i>Aboriginal Heritage Act 1972</i>; and</li> <li>• Ensure protection of known heritage sites.</li> </ul>
<p><b>Management</b></p> <ul style="list-style-type: none"> <li>• Identify known sites (including buffers);</li> <li>• Demarcate and avoid known sites;</li> <li>• Heritage protection procedures will be adopted through agreement made between SMC and relevant aboriginal stakeholders;</li> <li>• No disturbance to sites to occur during exploration activities without the appropriate approval;</li> <li>• Qualified Archaeologists will be used as required;</li> <li>• To identify any Aboriginal Heritage sites not currently included on the Aboriginal Sites Register, appropriate surveys will be undertaken prior to any surface disturbing activities or drilling;</li> <li>• Any Aboriginal site or suspected sites, which have not previously been identified, will be reported to the Exploration Manager or delegate immediately upon discovery.</li> </ul>
<p><b>Performance Indicators</b></p> <ul style="list-style-type: none"> <li>• Aboriginal Heritage sites avoided unless disturbance is approved; and</li> <li>• Compliance with the <i>Aboriginal Heritage Act 1972</i>.</li> </ul>
<p><b>Monitoring</b></p> <ul style="list-style-type: none"> <li>• Routine monitoring of known Aboriginal Heritage sites will be undertaken by the Exploration Manager or delegate in accordance with EMP-02 Inspections.</li> </ul>
<p><b>Reporting</b></p> <ul style="list-style-type: none"> <li>• Any new suspected heritage sites will be reported immediately to the site Exploration Manager or delegate; and</li> <li>• Unauthorised interference with identified Aboriginal sites of significance will be reported to the Exploration Manager.</li> </ul>



## EMP-04 Native Fauna

### Objective

- Undertake exploration activities in a manner which minimises the adverse impact to fauna; and
- Ensure that any adverse impacts to threatened species are avoided unless appropriately authorised.

### Management

- Vehicles will only use approved access tracks;
- Native fauna will not be captured or intentionally harmed;
- Introduction of feral/domesticated animals will be prohibited;
- Areas found to contain Rare or Endangered species will be avoided, immediately brought to the attention of the Exploration Manager or delegate;
- Disturbed areas will be rehabilitated as soon as practicable to facilitate fauna habitat restoration;
- Non-conformances will be reported to the Exploration Manager or delegate.

### **Shield-back Spider**

*The Shield-back spider (Idiosoma nigrum) is protected under the Wildlife Conservation Act as Schedule 1 species. The Shield-back spider has been found in significant numbers at Weld Range and Blue Hills. Therefore, a fauna survey must be carried out at these project areas before ground disturbing activities can commence. If circumstances occur where impact to the Shield-back spider is unavoidable, a Permit to Take can be obtained from the Department of Parks and Wildlife. **Note:** there are significant penalties for unauthorised disturbance of the Shield-back spider.*

### Management

- Pads and tracks should be located downslope of spider burrows; and
- If for safety or practical reasons pads and tracks must be located up-slope of spider burrows, engineering controls such as earth bunding should be used to direct any sediment runoff away from the spider burrows.

### Performance Indicators

- Number of fauna impacts.

### Monitoring

- The number of fauna deaths and reason will be recorded.

### Reporting

- Native animal injury/death and reason will be recorded and reported:
  - To DPaW, if a threatened species; and
  - In relevant annual reports to demonstrate significance improvements (if any) for all fauna impacts.

### EMP-05 Weed Management

#### Management

- No plants or animals will be brought onto the exploration areas by SMC/contractors;
- Disturbance to natural vegetation will occur only as authorised and limited, as far as practicable to limit invasion by introduced species; and
- Earthmoving/mobile plant and construction equipment will be washed down and cleaned of all vegetative, soil and rock material, prior to mobilisation to the exploration areas as part of the contractor management procedure i.e. pre-mobilisation checklist.

#### Performance Indicators

- Weed hygiene procedures followed;
- No persistent new introductions or spread of weeds.

#### Monitoring

- Work sites will be inspected in accordance with EMP-01 Inspections and Audits.

#### Reporting

- New infestations of weeds or pests will be reported as an environmental incident to the Exploration Manager.

## EMP-06 Ground Disturbance Permit

### Objective

Communicate, document and authorise any new clearing of vegetation or disturbance to the ground in order to limit the impact of exploration activities in previously undisturbed areas.

### What is a Ground Disturbance Permit?

- A Ground Disturbance Permit (GDP) is a review of proposed works and how the works may affect surrounding Environment and Aboriginal Heritage values. No ground disturbing works are permitted to proceed in previously undisturbed areas without an approved Ground Disturbance Permit or permission of the Exploration Manager.

### When is Ground Disturbance Required?

- A Ground Disturbance Permit is required for:
  - a) Work that involves disturbance of vegetation and / or topsoil; and
  - b) Work that requires the use of mechanised equipment.
- A Ground Disturbance Permit is not required for work in previously disturbed areas that are under “active” approval; and
- A Ground Disturbance Permit must be completed and signed off before the scheduled commencement of the works.

### Process for the Ground Disturbance Permit

- Identify drill target locations;
- Develop location details (maps) including information on sensitive areas, heritage sites, DRF plants etc;
- The SMC delegate will ground truth the area to determine the **safe** orientation and size of pad based on terrain, rig configuration and determine dimensions for the tracks, pad and sumps;
- The completed Ground Disturbance Permit will be submitted to the Exploration Manager or delegate for approval; and
- Maps and GPS co-ordinates will be updated.

## EMP-07 Native Vegetation Clearance

### Objectives

- Minimise new disturbance to vegetation;
- Minimise impact or physical disturbance to Threatened Ecological Communities (TEC) and Declared Rare Flora (DRF); and
- Control the spread of weeds into new areas.

### Management

- Where DRF is likely to occur or, if operating in a TEC, a flora survey will be carried out on vegetation to be cleared e.g. vegetation on proposed drill pads and access tracks;
- The results of the TEC or DRF surveys are to be submitted in summary form as a report to adequately support a Programme of Work, Native Vegetation Clearing Permit and Permit to Take applications;
- Information obtained from surveys on the presence and location of a TEC or DRF will be used in planning and managing exploration programmes to avoid and/or minimise impacts on flora;
- Before clearing activities commence in previously undisturbed areas, an approved Programme of Work and/or Clearing Permit will be obtained as necessary;
- Before clearing activities commence in previously undisturbed areas, approval for clearing will be sought from the Exploration Manager or delegate, a Ground Disturbance Permit (EMP-06 Ground Disturbance Permit) will be completed and work will be carried out in accordance with EMP-08 Vegetation Clearing Demarcation Standards;
- Vehicles and machinery will only use designated tracks/roads. Off-road traversing will be prohibited unless authorised;
- All employees/contractors will be inducted on the importance of minimising vegetation clearing and disturbance and weed and management (EMP-05 Weed Management);
- Mature trees will be avoided where practicable;
- **DRF plant species must be avoided by a radius of 50m unless a VCP (issued by DMP) and Permit to Take (issued by DPaW). Areas associated with these species will be demarcated by the Exploration Manager or delegate prior to the commencement of any work;**
- Any target weed populations identified during the surveys as being a result of exploration activities will be managed as per EMP-05 Weed Management;
- Erosion and sedimentation will be minimised by the construction of erosion control bunds;
- Dust control practices will be implemented as necessary e.g. where large areas of vegetation are disturbed resulting in exposed soil;
- Vegetation debris, logs and leaf litter will be retained for reuse during rehabilitation. Topsoil will be stripped and stockpiled or respread immediately in accordance with EMP-09 Topsoil;
- When possible, all clearing activities will be scheduled to minimise the time between initial clearing and rehabilitation; and
- No burning of stockpiled vegetation will occur.

**Performance Indicators**

- All clearing is covered by a PoW / Native Vegetation Clearing Permit, Permit to Take and /or an SMC Ground Disturbance Permit;
- Vegetation and topsoil to be directly returned or stockpiled for later use;
- No unauthorised clearing of DRF or in a TEC; and
- Environmental induction implemented, including Vegetation Clearance Procedures.

**Monitoring**

The Exploration Manager or delegate will regularly inspect operational areas to ensure:

- Only authorised clearing is being undertaken; and
- Vegetation and topsoil is directly returned or stockpiled in suitable locations.

**Reporting**

- The Exploration Manager or delegate will maintain a register of Ground Disturbance Permits.

<p align="center"><b>EMP-08 Vegetation Clearing Demarcation Standards</b></p>
<p><b>Objective</b></p> <ul style="list-style-type: none"> <li>Clearly and unambiguously identify clearing boundaries for site preparatory works.</li> </ul>
<p><b>Management</b></p> <ul style="list-style-type: none"> <li>An SMC delegate will mark out areas that require clearing;</li> <li>The centreline of access tracks will be pegged or flagged;</li> <li>Pegs or flagging will be positioned at intervals not exceeding 25 meters; and</li> <li>Clearing will be done in accordance with the PoW or other approvals e.g. VCP.</li> </ul>
<p><b>Performance Indicators</b></p> <ul style="list-style-type: none"> <li>SMC Ground Disturbance Permit approved; and</li> <li>Clearing boundaries consistent with approved permit.</li> </ul>
<p><b>Monitoring</b></p> <ul style="list-style-type: none"> <li>Periodic checks of areas approved for clearing will be undertaken by the Exploration Manager or delegate in accordance with EMP-01 Inspections and Audits.</li> </ul>
<p><b>Reporting</b></p> <ul style="list-style-type: none"> <li>Clearing beyond approved limits will be reported using the SMC Incident Reporting Form.</li> </ul>

<b>EMP-09 Topsoil</b>
<p><b>Objectives</b></p> <ul style="list-style-type: none"> <li>• Manage topsoil as a resource for rehabilitation by maximising the quantity retained and maintaining its viability through appropriate placement and management.</li> </ul>
<p><b>Management</b></p> <ul style="list-style-type: none"> <li>• Following vegetation clearing, topsoil will be either directly returned to areas available for rehabilitation or formed into dedicated stockpiles;</li> <li>• Once vegetation is cleared, the upper soil profile (topsoil) will be stripped and stockpiled;</li> <li>• Topsoil stripping should be delayed if the risk of soil structure loss is high i.e. due to heavy rain.</li> </ul>
<p><b>Performance Indicators</b></p> <ul style="list-style-type: none"> <li>• Site clearing complies with EMP-07 Native Vegetation Clearance and EMP-10 Access Tracks and Drill Pads;</li> <li>• Topsoil and vegetation direct returned or stockpiled for later use; and</li> <li>• Open areas are minimised through progressive rehabilitation. (EMP-15 Rehabilitation).</li> </ul>
<p><b>Monitoring</b></p> <ul style="list-style-type: none"> <li>• The Exploration Manager or delegate will regularly inspect operational areas to ensure topsoil is being removed and stockpiled in suitable locations or direct returned to rehabilitation areas.</li> </ul>
<p><b>Reporting</b></p> <ul style="list-style-type: none"> <li>• The area disturbed will be recorded in a Ground Disturbance Register (in the PoW Register) by the Exploration Manager or delegate.</li> </ul>

## EMP-10 Access Tracks and Drill Pads

### Objective

- To minimise direct and indirect impacts on the flora, fauna and surface water drainage systems from the development and maintenance of access tracks and drill pads.

### Management

#### *Planning:*

- Where practicable, existing roads and tracks will be used in preference to developing new tracks;
- Routes will be located on the contour if practicable;
- Mature trees will be avoided;
- Clearance of vegetation adjacent to and along natural drainage lines will be minimised;
- In areas that have not been cleared previously, the route will be clearly marked by flagging tape to ensure that all relevant employees and contractors know the width and location of proposed track or pad (refer EMP-08 Vegetation Clearing Demarcation Standards);
- **DRF plant species must be avoided by a radius of 50m unless a VCP (issued by DMP) and Permit to Take (issued by DPaW). Areas associated with these species will be demarcated by the Exploration Manager or delegate prior to the commencement of any work;**
- Heritage sites will not be disturbed, unless approved;
- When working in close proximity, Heritage sites will be demarcated by the Exploration Manager or delegate prior to the commencement of any work. (Refer EMP-03 Aboriginal Heritage); and
- Pads and tracks should be located downslope of known DRF or protected fauna (e.g. the shield back spider). If this is not possible, engineering controls such as earth bunding should be used to direct stormwater runoff away.

#### *Mobilisation:*

- Clearing will be kept to a minimum;
- Access tracks will be constructed to the minimum width possible without compromising safety; Deep cutting into the soil profile will be avoided in flat areas; and
- No unauthorised off track incursions, clearing or damage to tracks (track braiding) will occur.

#### *Drill Site Preparation:*

- Machines are to be free of soil and vegetation on entry to site (EMP-05 Weed Management),
- All machine operators will be supervised, especially at start up, and they will understand, be familiar with and comply with all clearing conditions;
- Drill pads are to be kept to the minimum possible size required for **safe and practical drilling operations;**
- Drill pads will be located in an area that requires minimal or no clearing if possible;
- Drill pads will be situated away from drainage lines and watercourses with a suitable buffer zone established (minimum 20 m), and located to avoid direct and indirect impacts (i.e. runoff, dust etc) on sensitive areas if possible; and
- Vegetation and topsoil disturbed during the site preparation will be managed in accordance with EMP-07 Native Vegetation Clearance and EMP-09 Topsoil.



**Performance Indicators**

- Area pegged or flagged as per EMP-09 Vegetation Clearing Demarcation Standards;
- Topsoil and vegetation directly returned or stockpiled for later use;
- Site clearing complies with EMP-08 Vegetation Clearance and EMP-10 Topsoil; and
- Progressive rehabilitation of available areas (EMP-17 Rehabilitation).

**Monitoring**

- The Exploration Manager or delegate will undertake periodic inspections to ensure that tracks are established, used and maintained according to the above procedures.

**Reporting**

- Ground Disturbance Permits completed prior to clearing will be submitted to the Geologist and/or Exploration Manager/delegate; and
- Non-conformance will be reported using SMC Incident Reporting Form.

## EMP-11 Drilling Operations

### Objective

- To ensure that drilling operations are planned and conducted in a responsible manner that minimises impact on the environment.

### Management

#### *Drilling*

- Frequent preventative maintenance checks will be undertaken on equipment to minimise the chance of hydrocarbon leaks (e.g. from hydraulic lines), leaks will be recorded as part of maintenance procedures. Drilling will be suspended until serious leaks (e.g. >20ltrs in undisturbed ground) have been repaired;
- Drilling contractors must have available hydrocarbon containment and clean up materials (e.g. drip trays, absorbent matting) and be familiar with their proper use;
- No litter or waste will be disposed down drill holes; and
- Drilling will be conducted in a manner that minimises dust.

#### *Water Management During Drilling*

- The release of contaminated water down-slope, into vegetation, or its entry into drainage channels will be managed appropriately;
- The Electrical Conductivity (EC) of the water will be measured using a Conductivity Meter to determine salinity levels. If identified as being potentially harmful to vegetation (approx. 7ms/cm or 5,000ppm TDS) it must be prevented from contacting vegetation; and
- Drilling will be suspended if the groundwater is saline or in significant amounts, until appropriate management can be put in place.

#### *Water Containment*

- Water used or encountered during drilling activities will be contained;
- Before drilling commences, suitably sited and sized sumps will be constructed for Diamond drill holes, and all Reverse Circulation (RC) drilling in areas where water is likely to be encountered;
- Sumps will not be used as a refuse/litter dump.

#### *Sample Management*

- If sample bags are used for drilling:
  - Wherever possible, non-synthetic sample bags will be used (e.g. not green plastic bags);
  - Sample bags will be secured at all times to prevent their loss to wind gusts. Any bags that become wind borne will be retrieved immediately as well as any other windblown litter.

*Capping of Drill Holes*

- RC and Diamond drill holes will be temporarily 'capped' immediately after drilling until PVC collars are cut and holes permanently plugged during rehabilitation (EMP-15 Rehabilitation).

**Performance Indicators**

- Drilling Contractor is performing to the standards specified in the contract;
- Drill sites are left clean and tidy; and
- There are no adverse environmental impacts as a consequence of the drilling activities.

**Monitoring**

- Drill sites will be periodically checked.

**Reporting**

- A daily log of drilling activities and events will be maintained by the onsite Geologist.
- Dates for when rehabilitation is due (6 months from completion of drilling) will be recorded.

<b>EMP-12 Post Drilling Site Clean-up</b>	
<b>Objective</b>	<ul style="list-style-type: none"> <li>To ensure that drill sites are left in a clean and safe state and progressively rehabilitated.</li> </ul>
<b>Management</b>	<ul style="list-style-type: none"> <li>RC and Diamond drill holes will be temporarily ‘capped’ immediately after drilling, using a conical plug placed into the collar effectively sealing the hole, until the PVC collars can be properly cut and holes permanently plugged during rehabilitation (EMP-15 Rehabilitation);</li> <li>The ground will be re-levelled to the pre-drilling contour without leaving a hole or depression;</li> <li>The plug will be covered with mounded topsoil. Settling will be allowed for over time, with the plug tapped firmly to shed any future surface run-off;</li> <li>Prior to commencing rehabilitation earthworks drill pad sites will be tidied. All evidence of exploration activities will be removed from the site and appropriately disposed of;</li> <li>The clean-up will cover all waste, from general rubbish to contaminated soil;</li> <li>All hydrocarbon spills will be cleaned up and all contaminated soil collected and removed from the site as per EMP-17 Hydrocarbon and Chemical Spills;</li> <li>Oil absorbent products will be removed from the site and appropriately stored prior to disposal;</li> <li>Cyclone spoil, slurry and earthen bunds will be re-levelled and broken up where the surface has been capped, to allow vegetation to re-establish; and</li> <li>Sumps used during drilling will be allowed to drain until dry and then will be backfilled.</li> </ul>
<b>Inspections</b>	<ul style="list-style-type: none"> <li>Inspections will be conducted, in accordance with EMP-01 Inspections &amp; Audits, to ensure drill holes have been plugged, topsoil replaced, drill holes have been mounded and sites have been tidied; and</li> <li>Observations, including drainage off drill pads will be carried out to provide specific instructions/requirements to equipment operators during earthworks rehabilitation.</li> </ul>
<b>Performance Indicators</b>	<ul style="list-style-type: none"> <li>Drill Sites are left clean and tidy;</li> <li>Any environmental issues that may require rehabilitation in the future have been noted; and</li> <li>Rehabilitation has been completed.</li> </ul>
<b>Recording</b>	<ul style="list-style-type: none"> <li>The supervising geologist will make a record of the rehabilitation status on the log sheets upon completion of each drill hole; and</li> <li>Information is recorded in the drilling database and the Site Disturbance/Rehabilitation Register.</li> </ul>

<b>EMP-13 Groundwater</b>
<p><b>Objective</b></p> <ul style="list-style-type: none"> <li>Minimise the potential for adverse impact which exploration activity and groundwater extraction may have on groundwater quality.</li> </ul>
<p><b>Management</b></p> <p><i>Quantity</i></p> <ul style="list-style-type: none"> <li>Monitoring requirements stipulated in DOW Groundwater Licences will be complied with;</li> <li>Groundwater extracted will be reused for drilling and exploration activities wherever possible and disposed of in an approved manner; and</li> <li>Saline groundwater will be contained as detailed in EMP-11 Drilling Operations and EMP-14 Sumps and Contaminated Water for the protection of surface water.</li> </ul>
<p><b>Performance Indicators</b></p> <ul style="list-style-type: none"> <li>Compliance with all relevant DoW licences and monitoring guidelines.</li> </ul>
<p><b>Monitoring</b></p> <ul style="list-style-type: none"> <li>Groundwater levels at extraction bores will be recorded and reported by the Exploration Manager or delegate (if required). The recording frequency will be conducted as required by the Water Licence; and</li> <li>Extraction quantities will be recorded throughout the life of the project by the Exploration Manager or delegate. Results will be recorded (as required). The recording frequency will be conducted as required by the Water Licence.</li> </ul>
<p><b>Reporting</b></p> <ul style="list-style-type: none"> <li>The Exploration Manager or delegate will ensure compliance with DEC licence monitoring and that reporting requirements are met; and</li> <li>The Exploration Manager or delegate will maintain records as required.</li> </ul>

## EMP-14 Sumps and Contaminated Water

### Objective

- Undertake drilling activities in a manner which minimises adverse impacts to the environment from drilling muds/fluids;
- Contain and control contaminated water.

### Management

#### *Drilling Muds/Fluids*

- Evaporation sumps will be constructed to collect drilling muds and fluids;
- The size of evaporation sumps will be no larger than required for the containment of drilling muds and fluids. Typical size is 4m x 3m x 2m but will need to be larger in areas likely to encounter water whilst drilling (e.g. near creek lines);
- Drill rigs will be fitted with containment devices to direct drilling muds/fluids to the evaporation sump; and
- Drill rigs will be fitted with spill response kits for use in the event of spillage of hydrocarbons during discharge of muds/fluids.

#### *All Sumps*

- Hydrocarbon spill kits will be located in the vicinity of all operative sumps;
- Oily films/spillage will be removed immediately from sumps in accordance with EMP-17 Hydrocarbon and Chemical Spills and EMP-16 Hydrocarbon and Chemical Management;
- Sumps will be located down slope of the activity site to ensure capture of all run-off;
- Water will be allowed to evaporate before sumps are backfilled;
- Stockpiled substrates will be returned in the reverse order to that of removal (subsoil first followed by topsoil); and
- Sump sites will be scarified and rehabilitated in accordance with EMP-15 Rehabilitation.

### Performance Indicators

- Spill kits are located in the vicinity of all operative sumps and oily films/spills managed in accordance with EMP-17 Hydrocarbon and Chemical Spills and EMP-16 Hydrocarbon and Chemical Management;
- No evidence of drilling mud/fluid runoff to undisturbed areas; and
- Progressive rehabilitation of sumps (EMP-15 Rehabilitation).

### Monitoring

- The construction of each sump will be inspected to ensure that the structure matches acceptable design parameters; and
- Inspections of sumps, drainage structures and erosion control measures will be carried out as soon as possible after periods of heavy rainfall to assess structural integrity.

### Reporting

- Major erosion events of sumps will be reported to the Exploration Manager or delegate and remedial works undertaken; and
- Drilling muds/fluids entering adjacent vegetation will be reported to the Exploration Manager or delegate.

## EMP-15 Rehabilitation

### Objectives

- To meet the tenement conditions with respect to the rehabilitation of exploration sites; and
- To encourage the re-establishment of self-sustaining ecosystems compatible with surrounding undisturbed areas.

### Management

#### *Rehabilitation*

- Disturbed areas will be rehabilitated as soon as practical or in accordance with PoW and tenement conditions;
- Where practicable, cleared areas will be progressively rehabilitated to ensure that the rate of rehabilitation is similar to the rate of clearing;
- Long-term visual impact will be minimised by creating landforms which are compatible with the adjacent landscape;
- Reshaped land will be formed so that it is inherently stable;
- Compacted surfaces will be ripped or scarified to a depth of approximately 300mm should ground condition and hydrology allow;
- Where practicable, natural drainage patterns will be reinstated;
- Disturbed areas to be re-covered with topsoil or rock to match adjacent undisturbed areas;
- Management of noxious or environmental weeds in rehabilitated areas will be in accordance with EMP-05 Weed Management;
- Sinosteel Midwest will monitor and manage rehabilitated areas until such time as the criteria for relinquishment are met, in accordance with relevant government agencies;
- Sinosteel Midwest will avoid long continuous rip lines along tracks, especially down slopes.
- Where appropriate, a formal request to extend the rehabilitation requirement of the PoW is to be sent to the DMP.

#### *Drill Hole Rehabilitation (EMP-11 Drilling Operations)*

- PVC collars will be removed or broken off below ground level, with the PVC wastes being removed from site;
- Drill holes will be plugged 40cm below the surface of the soil, with an appropriate plug and will be backfilled with soil;
- Sample bags will be removed to a storage area or disposed;
- Drill hole cuttings and drill sites will be raked over and scarified;
- Drill sumps will be backfilled after drying out and rehabilitated. Topsoil will be separated from subsoil at construction to be replaced after backfilling; and
- Drill pads will be re-shaped to pre-existing contours. Topsoil will be removed and stored separately in low piles at construction for replacement as soon as possible after re-shaping.

#### *Completion Criteria*

- There should be no access tracks apparent which are left to be used by others (unless agreed) and develop into permanent features;
- There should be no actual or potential erosion sites;
- There should be no permanent markers, spoil or litter;



**Performance Indicators**

- Progressive rehabilitation of disturbed areas;
- All drill holes plugged;
- Demobilisation and removal of all equipment, supplies, vehicles, waste and infrastructure associated with the exploration program; and
- Monitoring of rehabilitated areas.

**Monitoring**

- The Exploration Manager or delegate will routinely inspect rehabilitation areas and maintain records.

**Reporting**

- A record of rehabilitation undertaken will be maintained in a PoW Register.
- The PoW register will record extension to rehabilitation requirements as delivered by the DMP.

- There should be no open holes, sumps or unstable or visible drill hole collars remaining;
- All disturbed areas should be re-contoured to pre disturbance conditions and prepared for natural plant regeneration; and
- Weeds and exotic plant and animal species should neither be introduced nor spread.

## EMP-16 Hydrocarbon and Chemical Management

### Objective

- To minimise the impact of hydrocarbons/chemicals (solvents, cleaning fluids etc) on the environment through the appropriate use, storage and transport.

### Management

- Material Safety Data Sheets (MSDS) will be available for all chemicals used on site. Handling, use and storage of chemicals will be compliant with the relevant MSDS;
- Hydrocarbons and chemicals will be stored, used, transported and disposed in accordance with Dangerous Goods Regulations and DMP guidelines;
- Hydrocarbons will be stored in accordance to Australian Standards for the Storage and Handling of Flammable and Combustible Liquids and will be segregated, where required, to ensure that incompatible classes of chemical are not stored together; and
- Storage facilities will be equipped with adequate fire control equipment bunding and spill response material/equipment.

### Disposal

- Used hydrocarbon containers will be adequately labelled and stored appropriately for future use or disposal;
- Empty drum and containers will be periodically removed from site and disposed or recycled; Hydrocarbons and oily wastes (e.g. fuels, greases, de-greaser, emulsified oils and oily waste water) generated on site, will be captured and stored for removal from site by a licenced contractor for safe disposal or recycling;
- Contaminated soil will be collected and removed from site for disposal and treatment at a licenced Land farm facility; and
- Regular reviews of waste management practices and storage of hydrocarbons and chemicals will be undertaken.

### Performance Indicators

- Containers are clearly and appropriately labelled;
- Housekeeping inspections undertaken; and
- The transport, storage, handling and disposal of hydrocarbons/chemicals on site comply with relevant legislation and DMP guidelines.

### Monitoring

- Housekeeping inspections will be undertaken by the Exploration Manager or delegate. This will include inspection of storage areas for leaking bunds, drums or containers and inventories of spill response equipment and materials.

### Reporting

- Details of quantities and type of hydrocarbons/chemicals entering exploration areas will be recorded by the Exploration Manager or delegate for reporting purposes; and
- Accidental spills will be reported immediately as an environmental incident by completing an SMC Incident Report Form. Investigations will be undertaken if required.

<b>EMP-17 Hydrocarbon and Chemical Spills</b>
<p><b>Scope</b></p> <ul style="list-style-type: none"> <li>• The severity of spills is dependent on:               <ul style="list-style-type: none"> <li>✓ The type of fluid (e.g. hydrocarbon, solvent);</li> <li>✓ The volume of spill; and</li> <li>✓ The receiving environment (e.g. disturbed land, waterway)</li> </ul> </li> <li>• Generally, minor hydrocarbon and chemical spills involve less than 205L on pre-disturbed ground. Major spills are greater than 205L but often involve less than this amount on undisturbed areas.</li> </ul>
<p><b>Objective</b></p> <ul style="list-style-type: none"> <li>• To ensure that minor hydrocarbon and chemical spills are properly contained, treated, transported and disposed; and</li> <li>• Undertake exploration activities to ensure that the risk of hydrocarbon and chemical spills is minimised.</li> </ul>
<p><b>Management</b></p> <ul style="list-style-type: none"> <li>• Hydrocarbon and Chemical spills will be managed according to the recommendations in the manufacturer’s Material Safety Data Sheets (MSDS);</li> <li>• Emergency Services, Department of Environmental Regulation (DER) and DMP will be contacted in the event of a large spill (e.g. fuel truck roll over) or if hazardous chemicals are involved;</li> <li>• Hydrocarbon spill response kits will be provided at all work sites;</li> <li>• The spill will be contained and the leak stopped as soon as possible. This will include blocking the source of the spill, blocking access to waterways and building a bund around the spill;</li> <li>• If safe to do so, spills will be cleaned up using absorbent materials;</li> <li>• Soaked absorbent material will be disposed of at a licenced landfill sites;</li> <li>• Soils contaminated with hydrocarbons will be excavated, sealed and taken to a licenced land fill site as soon as practical; and</li> <li>• The likelihood of the spill recurring will be investigated and steps taken to prevent its recurrence. These measures will be documented and made available to staff and contractors;</li> <li>• Spills greater than 205 litres will be considered as significant and reported immediately to the Exploration Manager or delegate.</li> </ul>
<p><b>Performance Indicators</b></p> <ul style="list-style-type: none"> <li>• Compliance with specified DER and DMP guidelines; and</li> <li>• Reporting, investigation and clean-up of spills in a prompt and timely manner.</li> </ul>
<p><b>Monitoring</b></p> <ul style="list-style-type: none"> <li>• Regular inspections of waste management practices and storage of hydrocarbons and chemicals will be undertaken by the Exploration Manager or delegate.</li> <li>• Inspections will be in accordance with EMP-01 Inspections &amp; Audits.</li> </ul>
<p><b>Reporting</b></p> <ul style="list-style-type: none"> <li>• Reporting will be undertaken per EMP-02 Incident Reporting.</li> </ul>

## 5 Appendices

### Appendix 1

#### Environmental Policy

Sinosteel Midwest Corporation (SMC) is committed to the responsible development of our resources.

SMC accepts responsibility for the impacts our operations have on the environment, and we are committed to eliminate, mitigate, reduce, manage or offset these impacts.

In line with SMC's Four Core Principles, SMC makes the following environmental commitments:

##### ENABLE PEOPLE

- Establish appropriate environmental standards, procedures and work instructions for all high-risk activities
- Provide relevant training for all employees and contractors to ensure SMC's environmental responsibilities and commitments are understood and fulfilled
- Promote environmental programs and initiatives to raise awareness and participation by SMC employees, contractors and suppliers

##### SEEK EXCELLENCE

- Understand our potential environmental impacts, develop management protocols and incorporate results into our decision making processes
- Monitor and measure our impact on the environment and set targets for continuous improvement


##### ACT WITH INTEGRITY

- SMC will meet all statutory requirements as a minimum standard
- Be proactive in consulting with key stakeholders on matters of environmental significance
- Provide information on our environmental performance to relevant stakeholders

##### BE SOCIALLY RESPONSIBLE

- Contribute to local and regional environmental initiatives
- Encourage the adoption of SMC environmental principles by our contractors and suppliers
- Undertake research programs that enhance local and regional success in environmental management, particularly land rehabilitation and ecosystem restoration

## Appendix 2

	
<b>Ground Disturbance Permit</b>	
<b>Date</b>	
<b>Originator</b>	
<b>Project Area:</b>	
Location:	
Tenement:	
Area of Disturbance (ha):	
<b>Reason for Disturbance</b>	
<input type="checkbox"/> Access Track	<input type="checkbox"/> Water Pipe
<input type="checkbox"/> Laydown	<input type="checkbox"/> Other:
<input type="checkbox"/> Topsoil stockpile	<input type="checkbox"/> Drill Pad
<b>Description of proposed activity (attach plan, maps &amp;/or photos if appropriate)</b>	
<b>Checklist</b>	
<input type="checkbox"/> Area is within approved SMC exploration area	
<input type="checkbox"/> Government approvals obtained e.g. PoW, VCP (if required – refer to Exploration EMP) <input type="checkbox"/> N/A	
<input type="checkbox"/> Flora survey of area completed (if required) <input type="checkbox"/> N/A	
<input type="checkbox"/> Fauna survey of area completed (if required) <input type="checkbox"/> N/A	
<input type="checkbox"/> Aboriginal heritage survey of area completed	
<input type="checkbox"/> Heritage sites are marked up (if required) <input type="checkbox"/> N/A	
<input type="checkbox"/> Clearing boundaries are demarcated to standard (refer to Exploration EMP)	
<input type="checkbox"/> Aboriginal heritage monitors booked in (Weld Range / Koolanooka / Robinson Range)	
<b>Conditions</b>	
<b>Approved</b>	
_____ Name	_____ Signature
_____ Position	_____ Date

## Appendix 3

Classification	Definition	Examples
<b>Low</b>	<p>Limited damage, minor effect:</p> <ul style="list-style-type: none"> <li>▪ Temporary on site release immediately contained, causing negligible to low level contamination or damage</li> <li>▪ damage or contamination that is immediately reversible</li> <li>▪ non-compliance with internal procedures</li> <li>▪ an environmental hazard which has not led to an incident</li> </ul>	<ul style="list-style-type: none"> <li>• A small hydrocarbon spill, on cleared area or hard stand, which is easily cleaned up.</li> <li>• Leak or spill into a contained bunded area.</li> <li>• Fauna death of a non-endangered species</li> <li>• Elevated dust which has not left site.</li> <li>• Temporary release of clean water into vegetation.</li> <li>• Non-compliance with internal environmental procedure resulting in low risk of impact.</li> </ul> <p>Non-compliance with environmental procedure could include;</p> <ul style="list-style-type: none"> <li>• Failure to obtain ground disturbance permit prior to vegetation clearing.</li> <li>• Unauthorised driving off roads/tracks.</li> <li>• Litter/rubbish left at site.</li> <li>• Hydrocarbon containers stored outside of bunded area.</li> <li>• Breach of weed hygiene with low risk of spread.</li> </ul>
<b>Moderate</b>	<p>Moderate short term effect:</p> <ul style="list-style-type: none"> <li>▪ medium contamination or damage that is reversible in the short term</li> <li>▪ all contamination recovered or eliminated in a short period of time</li> <li>▪ breach of regulatory condition</li> </ul>	<ul style="list-style-type: none"> <li>• Turbid or poor quality water released into vegetation or creek line (e.g. drilling fluid, overflow from sump).</li> <li>• A hydrocarbon spill on uncleared area cleaned up promptly.</li> <li>• Unauthorised driving off roads/tracks resulting in damage to previously undisturbed area (e.g. surface wheel ruts, erosion, loss of topsoil)</li> <li>• Regulatory non-compliance (e.g. dust emissions extending beyond lease boundary).</li> <li>• Repeated deaths of non-endangered fauna</li> <li>• Unnecessary removal of Priority Flora species</li> <li>• Litter/rubbish over large areas of operation</li> <li>• Erosion of topsoil from stockpiles, areas of vegetation or rehabilitation areas.</li> </ul>
<b>Significant</b>	<p>Significant medium term effect:</p> <ul style="list-style-type: none"> <li>▪ Significant contamination or damage that is recoverable in the medium term</li> <li>▪ Damage or contamination reversible in the medium term</li> <li>▪ Breach of legislation with potential to impact negatively on reputation</li> </ul>	<ul style="list-style-type: none"> <li>• A hydrocarbon spill on undisturbed ground that is not readily cleaned up (e.g. may require more than a week to be remediated).</li> <li>• Saline / hypo saline water release into native vegetation or creek line (e.g. from drilling or sump overflow/breach).</li> <li>• Unauthorised clearing of native vegetation (i.e. no regulatory approval where required). Includes Declared Rare Flora (DRF).</li> <li>• Hazardous chemical spill outside of primary containment area requiring prompt recovery.</li> <li>• Fauna death of an endangered species</li> <li>• Severe erosion from areas of vegetation or rehabilitation, which exposes vegetation surface roots.</li> <li>• Any bush fire started by the operation that is adequately controlled.</li> <li>• Groundwater contamination plume which is recoverable over time.</li> <li>• Overtopping of hazardous material from tails dam, with all contamination contained on-site and recovered.</li> </ul>
<b>Serious</b>	<p>Serious long term effect:</p> <ul style="list-style-type: none"> <li>▪ severe damage or contamination that is recoverable only in the long term</li> <li>▪ damage or contamination will take a long time period to remediate</li> <li>▪ serious reputational damage as a result</li> </ul>	<ul style="list-style-type: none"> <li>• Spill into water way causing death of aquatic life and/or ecosystem</li> <li>• Large hydrocarbon spill into ground which affects large area of soil and reaches groundwater</li> <li>• Large groundwater plume which is not readily containable and recoverable and is severely impacting a range of environmental receptors.</li> <li>• Destruction of rare or endangered flora or fauna species considered to have impact on conservation status of the species.</li> <li>• Destruction of recognised threatened ecological community.</li> <li>• Out of control bushfire started by operations.</li> <li>• Severe erosion from large areas of vegetation or rehabilitation which mobilises significant soil material and exposes subsoil and root material.</li> </ul>