

# PROPOSED EXPLORATION ACTIVITIES OF GIB MINING NAMIBIA (PTY) LTD IN EPL 9924

#### **ENVIRONMENTAL MANAGEMENT PLAN**

# PREPARED FOR: GIB MINING NAMIBIA (PTY) LTD

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#### DOCUMENT CONTROL

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## ENVIRONMENTAL MANAGEMENT PLAN FOR THE PROPOSED EXPLORATION ACTIVITIES OF GIB MINING IN EPL 9924

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#### **ACRONYMS AND ABBREVIATIONS**

Below a list of acronyms and abbreviations used in this report.

Acronyms / Abbreviations	Definition	
ALARA	As Low As Reasonably Achievable	
DEA	Department of Environmental Affairs	
DoF	Directorate of Forestry	
DWNP	Directorate of Wildlife and National Parks	
EAP	Environmental Assessment Practitioner	
EAPAN	Environmental Assessment Professionals Association of Namibia	
ECC	Environmental Clearance Certificate	
EIA	Environmental Impact Assessment	
EMP	Environmental Management Plan	
EMS	Environmental Management System	
EPL	Exclusive Prospecting License	
I&AP	Interested and Affected Party	
MAWLR	Ministry of Agriculture, Water and Land Reform (MAWLR)	
MEFT	Ministry of Environment, Forestry and Tourism	
MHSS	Ministry of Health and Social Services	
MME	Ministry of Mines and Energy	
MMP	Management and Mitigation Plan	
NBRI	National Botanical Research Institute	
NHC	National Heritage Council	
NNNP	Namib Naukluft National Park	
NRPA	National Radiation Protection Authority	
RC	Reverse Circulation	
RMP	Radiation Management Plan	



### ENVIRONMENTAL MANAGEMENT PLAN FOR THE PROPOSED EXPLORATION ACTIVITIES OF GIB MINING IN EPL 9924

#### 1 INTRODUCTION

#### 1.1 BACKGROUND AND PROJECT OVERVIEW

GIB Mining Namibia (Pty) Itd (GIB Mining) is the Namibian registered company of Gibb River Diamonds Limited of Australia. The company is busy developing the Ellendale diamond project and Edjudina gold project in Australia.

In Namibia GIB Mining has acquired six Exclusive Prospecting Licenses (EPLs) covering 1,828 km², two of which are in the Erongo Region. On these two – EPL 9924 (which is the topic of this document) and EPL 10131 – GIB Mining intends to conduct exploration activities for nuclear fuel minerals. Both EPLs are located within the Namib Naukluft National Park (NNNP), east of Swakopmund and between the C28 and C14 main roads (see Figure 1).

EPL 9924 is about 110 km from Swakopmund, just south of Hotsas. EPL 10131 is further east, southeast of Gemsbokwater and close to the eastern boundary of the park. Both the waterholes at Hotsas and Gemsbokwater are less than 1 km from the EPLs. Ganab (Campsite) is 8 km southwest from EPL10131 and Tumas View is 13 km southwest of EPL 9924. Access from the C28 road via existing park roads is possible to both EPLs.

Both EPLs are relatively small - EPL 9924 is 1,535 ha and EPL 10131 is 3,227 ha in size, i.e. a total of 47.6 km<sup>2</sup>. Exploration activities are proposed in targeted areas only and will commence as soon possible, on both EPLs, depending on the decision by the Ministry of Environment, Forestry and Tourism (MEFT) and the issuing of Environmental Clearance Certificates (ECCs).

Phase 1 of the proposed exploration activities entail ground radiometric surveys to detect any mineralization in the area. This includes the review of geological maps of the area and onsite ground traverses and observations, followed by airborne radiometric, electromagnetic surveys and some grab sampling (small samples of rock and soil) for geochemical analysis. Depending on the Phase 1 results, target areas will be delineated. If deemed worthy of follow up, ground-based surveys in the form of Reverse Circulation (RC) drilling will follow where mineralization is suspected. Diamond drilling is unlikely as the targets are mainly situated in calcrete.

The detailed description of the proposed exploration activities is provided in the Scoping (including impact assessment) Report for EPL 9924.



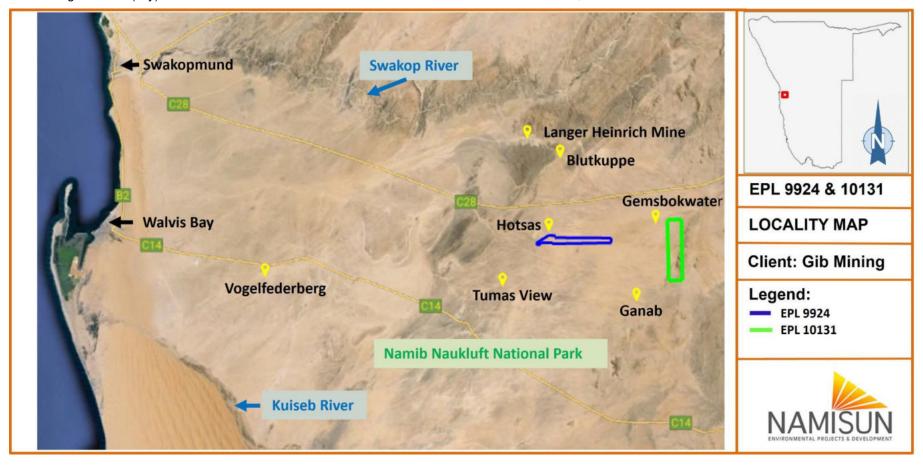


FIGURE 1: LOCATION OF EPL 9924 AND EPL 10131



#### 1.2 AIM OF THIS DOCUMENT

Prior to the commencement of the proposed exploration activities in EPL 9924, environmental clearance is required from the regulatory authority, the Department of Environmental Affairs (DEA) within the MEFT in terms of the Environmental Management Act, 7 of 2007. This Act was gazetted on 27 December 2007 (Government Gazette No. 3966) and its associated regulations were promulgated in January 2012 (Government Gazette No. 4878).

Namisun Environmental Projects and Development (Namisun) was appointed by GIB Mining as an independent environmental consulting company to undertake the required Environmental Impact Assessment (EIA) process, to compile a Scoping (including an impact assessment) Report and accompanying Environmental Management Plan (EMP) for each of the two EPLs as part of their application process for an ECC.

If approved, an ECC will be issued for the proposed exploration activities per EPL.

This document, the EMP for EPL 9924, details the actions required to meet legal requirements and to avoid, minimize or manage effectively the likely impacts associated with the implementation of the proposed exploration activities in EPL 9924.

The environmental commitments contained in this EMP form the overarching contractual agreement between GIB Mining and the Government of the Republic of Namibia, represented by the MEFT, to be implemented by GIB Mining. Subsequently, GIB Mining will be held responsible for the sound environmental management in EPL 9924.

#### 1.3 STRUCTURE OF THIS DOCUMENT

The structure of this document, the EMP for EPL 9924, is outlined in Table 1, following largely the requirements as set out in Section 8 of the EIA Regulations (2012), promulgated under the Environmental Management Act, No. 7 of 2007.

**TABLE 1: CONTENT OF THE EMP** 

EIA REGULATION REQUIREMENT	REFERENCE IN THE EMP
Project overview	Section 1.1
Details of the persons who prepared the EMP and the expertise of those persons to prepare the EMP.	Section 1.5
An identification of relevant laws and guidelines	Chapter 2
A detailed description of the aspects that are covered by this EMP.	Chapter 3
Overall environmental objectives	Chapter 4



EIA REGULATION REQUIREMENT	REFERENCE IN THE EMP
An identification of responsibilities and timeframes within which the measures contemplated in the EMP must be implemented	Chapter 5
Information about the proposed management and mitigation measures to be undertaken to address the identified impacts	Chapters 6
Proposed mechanisms for monitoring compliance with the EMP and reporting on it.	Chapter 7

#### 1.4 KEEPING THE EMP UP TO DATE

It is the intention that this EMP should be seen as a "living document" which will be amended during the operation (where relevant) as new information (e.g.: environmental data), policies, authority guidelines and technologies become available, and as the activities might change, or new ones be introduced.

GIB Mining will conduct periodic reviews of the EMP, should circumstances change.

This EMP is linked to the proposed exploration activities defined in the Scoping (Including impact assessment) Report only (see Section 1.1), therefore, should further listed activity(s) as defined in the EIA-regulations associated with the Environmental Management Act, No. 7 of 2007 be triggered because of future modifications / changes, this EMP will be required to be updated through another EIA process as stipulated in the Act and its regulations.

#### 1.5 DETAILS OF THE PERSONS WHO PREPARED THIS EMP

As stated in Section 1.2, Namisun was appointed by GIB Mining to undertake and administer the EIA process and environmental clearance applications for the proposed exploration activities in EPL 9924. This process includes the compilation of an accompanying EMP for EPL 9924.

Namisun is a Namibia-based, independent environmental consultancy firm, which operates from Swakopmund.

Dr Pierré Smit, the project manager, holds a PhD in Landscape Ecology and has more than twenty-nine years of experience in environmental management, managing environmental assessment, the implementation of EMPs and Environmental Management Systems (EMSs) in Namibia.

Werner Petrick, the project reviewer, has more than twenty-five years of relevant experience in conducting / managing EIAs, compiling EMPs and implementing EMPs and EMSs. Werner has a B. Eng (Civil) degree and a master's degree in environmental management and is certified as lead environmental assessment practitioner (EAP) and reviewer under the Environmental Assessment Professionals Association of Namibia (EAPAN).



The environmental project team and proponent details for the EIA amendment process relating to the project is outlined in Table 2.

**TABLE 2: EIA TEAM AND PROPONENT DETAILS** 

TEAM	NAME	DESIGNATION	TASKS AND ROLES	COMPANY
Project	Nico Scholtz	Exploration	Technical input	GIB Mining
proponent		Geologist	Implementation of the EMP	
EIA Project Manager	Pierré Smit	EAP	Management of the EIA process, public participation and reporting	Namisun
EIA Project Reviewer	Werner Petrick	EAP	Review of the EIA process and reports	
Specialist	John Kinahan	Archaeologist	Archaeological (specialist) study	J Kinahan

Furthermore, Mr Peter Bridgeford of Vultures Namibia provided key information and input relating to the lappet-faced vultures, and specific to their presence in the northern NNNP.



#### **2 LEGAL REQUIREMENTS**

A summary of the applicable legislation, described in Chapter 3 of the EIA Scoping (including an impact assessment) Report for the proposed exploration activities of GIB Mining in EPL 9924 is provided in Table 3.

TABLE 3: LIST OF LEGISLATION RELEVANT TO THE OSHIVELA PILOT PROJECT

YEAR	NAME
1956	Water Act, No. 54 of 1956, as amended.
1969	Soil Conservation Act, No. 76 of 1969 and the Soil Conservation Amendment Act, No. 38 of 1971
1974	Hazardous Substance Ordinance, No. 14 of 1974
1975	Nature Conservation Ordinance, No.14 of 1975 (as amended).
1976	Atmospheric Pollution Prevention Ordinance, No. 11 of 1976
1990	The Constitution of the Republic of Namibia.
1990	Petroleum Products and Energy Act, No. 13 of 1990
1992	Minerals (Prospecting and Mining) Act, No. 33 of 1992
1996	Nature Conservation Amendment Act, No 5 of 1996
2001	The Forestry Act, No. 12 of 2001 as amended by the Forest Amendment Act, No. 13 of 2005 and its regulations of 2015.
2003	Pollution Control and Waste Management Bill (3rd Draft September 2003).
2004	National Heritage Act, No. 27 of 2004.
2005	Atomic Energy and Radiation Protection Act, Act No. 5 of 2005 and Radiation Protection and Waste Disposal Regulations (Regulations, 2011) under this Act.
2007	Labour Act, No. 11 of 2007
2007	Environmental Management Act, No. 7 of 2007 and its regulations promulgated in terms of the Act in 2012.
2008	Minerals (Prospecting and Mining) Amendment Act, 8.
2009	Draft Protected Areas and Wildlife Management Bill.
2013	Water Resources Management Act, No. 11 of 2013 and Regulations promulgated in terms of the Act in 2023.
2015	Public and Environmental Health Act, No. 1 of 2015
2017	Nature Conservation Amendment Act, No.3 of 2017

#### 2.1 ENVIRONMENTAL CLEARANCE CERTIFICATE

The EIA Policy (1995) is enforced through the Environmental Management Act, 7 of 2007 and the EIA Regulations of 6 January 2012 (EIA Regulations). In terms of this legal framework certain identified activities may not commence without an environmental clearance issued by MEFT.

The following activities identified in the regulations apply to the proposed exploration activities:



#### "MINING AND QUARRYING ACTIVITIES"

- The construction of facilities for any process or activities which requires a license, right or other form of authorization, and the renewal of a license, right or other form of authorization, in terms of the Minerals (Prospecting and Mining Act), 1992.
- Other forms of mining or extraction of any natural resources whether regulated by law or not.
- Resource extraction, manipulation, conservation and related activities

#### "WASTE MANAGEMENT, TREATMENT, HANDLING AND DISPOSAL ACTIVITIES"

- The construction of facilities for waste sites, treatment of waste and disposal of waste.
- Any activity entailing a scheduled process referred to in the Atmospheric Pollution Prevention Ordinance, 1976.

#### "HAZARDOUS SUBSTANCE TREATMENT, HANDLING AND STORAGE"

- The manufacturing, storage, handling or processing of a hazardous substance defined in the Hazardous Substances Ordinance, 1974.
- Any process or activity which requires a permit, licence or other form of authorisation, or the modification of or changes to existing facilities for any process or activity which requires an amendment of an existing permit, licence or authorisation or which requires a new permit, licence or authorisation in terms of a law governing the generation or release of emissions, pollution, effluent or waste.

As stipulated in the EIA-regulations associated with the Environmental Management Act, No.7 of 2007, (see also Section 1.2) an ECC needs to be obtained from the DEA within the MEFT prior to the commencement of the proposed exploration activities in EPL 9924. An EIA Scoping (including an impact assessment) Report and an EMP specific for EPL 9924 are required as part of the application for clearance, and to support the decision-making process.

If approved, an ECC will be issued for EPL 9924 and the proponent, GIB Mining, will be held responsible for the implementation and management of the conditions in the ECC as well as the requirements of this EMP.

An ECC is valid for three years and may be renewed. Application for renewal must be lodged prior to the expiry date of the ECC.

#### 2.2 OTHER PERMITS

In addition to the ECC, GIB Mining might be required to obtain other permits / authorisations to commence with the proposed exploration activities, as summarised in Table 4 and Table 5.



TABLE 4: NOTIFICATION, REGISTRATION AND APPROVALS THAT MAY BE REQUIRED

ISSUE	LEGISLATION	REQUIREMENT / AUTHORITY
Exploration for minerals	Minerals (Prospecting and Mining) act, No. 33 of 1992	Granted EPL from the Mining Commissioner at the Ministry of Mining and Energy (MME)
Handling and disposing of radioactive materials	Atomic Energy and Radiation Protection Act, Act No. 5 of 2005	Permits from the National Radiation Protection Authority (NRPA) under the Ministry of Health and Social Services (MHSS)
Picking, removal, transport and relocation of protected plants <sup>1</sup>	Nature Conservation Ordinance, No. 4 of 1975	Plant removal permit, approval by the Directorate of Forestry (DoF), the Directorate of Wildlife and National Parks (DWNP) in consultation with the Namibia Botanical Research Institute (NBRI)
Entrance into the NNNP	Nature Conservation Ordinance, No. 4 of 1975	Park Permit
Registration, selling, operating, installing of infrastructure related to Group I and III hazardous substances	Hazardous Substance Ordinance, No. 14 of 1974	Licences from the MEFT and MHSS required for the sale, use and storage of "hazardous substances", which are specified in certain groups.
Disturbing or destroying of national heritage, archaeological or paleontological sites. <sup>2</sup>	National Heritage Act, No. 27 of 2004,	Consent from the National Heritage Council (NHC)
Each exploration hole to be drilled	Water Resource Management Act, No. 11 of 2013	Licenses from the Ministry of Agriculture, Water and Land Reform (MAWLR)

TABLE 5: LIST OF PERMITS OR CERTIFICATES THAT MAY BE REQUIRED

LICENSE / CERTIFICATE / PERMIT	AUTHORITY
ECC	MEFT (DEA)
Park Permit	MEFT (DWNP)
EPL	MME
Radiation-related permits	MHSS (NRPA)
Picking, removal, transport and relocation of protected plants	MEFT
Archaeological	NHC
License to drill boreholes	MAWLR

<sup>&</sup>lt;sup>1</sup> In the Biodiversity Mitigation and Management Plan, it is stated that no protected plant species must be removed or destroyed, as far as possible – see Section 6.1.2.



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<sup>&</sup>lt;sup>2</sup> In the Archaeological Mitigation and Management Plan it is stated that these sites must not be disturbed or destroyed, as far as possible – see Section 6.2.2.

No other specific environmental permits are foreseen for the proposed exploration activities in EPL 9924, but additional permissions might be required as circumstances change.



#### 3 ENVIRONMENTAL ASPECT AND IMPACT IDENTIFICATION

Understanding the biophysical and human environment in which the proposed exploration activities are located, is the first step to understanding the relevant impacts. The next and possibly more important step is to identify the environmental aspects that give rise to the impacts. For example, a single activity has more than one environmental aspect associated with it: namely, noise, dust generation and waste generation. All these aspects have the potential to cause impacts on the environment (or third parties) in a different way. Successful management will be gauged by how well GIB Mining avoids, minimises, or mitigates all the impacts associated with each environmental aspect.

#### 3.1 ENVIRONMENTAL ASPECTS AND IMPACTS

As part of the EIA processes for the proposed exploration activities in EPL 9924, the associated environmental aspects and potential environmental impacts were identified and qualitatively assessed – see Table 10 in Chapter 7 of the EIA Scoping (including an impact assessment) Report for the proposed exploration activities of GIB Mining in EPL 9924 (Namisun, 2024).

Table 6 in this document, the EMP for EPL 9924, summarizes the environmental aspects and potential impacts associated with the proposed exploration activities. It also provides reference to the relevant and applicable Management and Mitigation Plans (MMPs) in each case.

TABLE 6: DESCRIPTION OF ENVIRONMENTAL ASPECTS AND POTENTIAL IMPACTS

Aspect	Potential Impact	Relevant MMP		
Geological studies, field mapping, rock and soil sampling				
Biodiversity (general disturbance related to the on-foot exploration activities)	<ul> <li>Potential impact on fauna and flora</li> <li>Possible broader ecological / systems impacts</li> <li>Potential impact on avifauna (i.e. lappet-faced vultures)</li> </ul>	Biodiversity MMP (see Section 6.1)		
Heritage (general disturbance because of on-foot exploration activities)	Possible damage to or destruction of heritage resources	Archaeological MMP (see Section 6.2)		
	Airborne surveys			
Biodiversity (general disturbance because of aircraft)	<ul> <li>Potential impact on fauna and flora</li> <li>Possible broader ecological / systems impacts</li> <li>Potential impact on avifauna (i.e. lappet-faced vultures)</li> </ul>	Biodiversity MMP (see Section 6.1)		



Aspect	Potential Impact	Relevant MMP	
Drilling and associated activities			
Noise (generated by the establishment of access tracks and drill site, operational activities including noise from workers, vehicles and machinery and movements)	<ul> <li>Potential impacts on visitors, road users and tourists</li> <li>Potential impact on fauna</li> <li>Potential impact on avifauna (i.e. lappet-faced vultures)</li> </ul>	Noise MMP (see Section 6.3)	
Biodiversity (general disturbance because of establishment of access tracks and drill site, operational activities including noise from workers, vehicles and machinery and movements)	<ul> <li>Potential impact on fauna and flora</li> <li>Possible illegal collection of plant material or firewood,</li> <li>Possible poaching (either direct or indirect by informing syndicates)</li> <li>Possible road kills, off-road driving, etc.</li> <li>Possible establishment of weeds and invasive plants.</li> <li>Potential impact on avifauna (i.e. lappet-faced vultures)</li> </ul>	Biodiversity MMP (see Section 6.1); Noise MMP (see Section 6.3); Socio- economic MMP (see Section 6.4)	
Heritage (general disturbance because of operational activities)	Possible damage to or destruction of heritage resources.	Archaeological MMP (see Section 6.2)	
Spillages (of hydrocarbons,	Possible soil pollution	Soil MMP (see Section	
lubricants or possible spills from portable toilets and ablution facilities)	<ul> <li>Possible surface water contamination</li> <li>Possible groundwater pollution due to pollutants entering aquifers via surface water infiltration.</li> </ul>	6.5); Hazardous Substance MMP (see Section 6.6); Surface and Groundwater MMP (see Section 6.7); Waste MMP (see Section 6.8)	
Air quality (because of dust from access roads and tracks and drilling activities; pollution from exhaust fumes)	<ul> <li>Possible air quality deterioration.</li> <li>Potential increase in dust levels (nuisance and health impacts – to visitors, road users and tourists)</li> </ul>	Air quality MMP (see Section 6.9)	
Radiation (because of exposure to radioactive mineral waste)	Potential impacts on surface water, groundwater, soil, fauna, avifauna and third parties (visitors, road users and tourists)	Waste MMP (see Section 6.8); Radiation MMP (see Section 6.10)	
	Relevant to all activities		
Third-party safety (i.e. visitors, road users and tourists)	Inconvenience and safety impacts to visitors, road users and tourists	Socio-economic MMP (see Section 6.4)	
Waste (because of dumping of general waste within the work areas)	<ul> <li>Possible hazardous to wildlife</li> <li>General degradation and nuisance (visual) impacts</li> </ul>	Hazardous Substance MMP (see Section 6.6); Waste MMP (see Section 6.8)	
Spillages (from portable toilets and ablution facilities)	<ul> <li>Potential health and safety issues</li> <li>Potential pollution of soil</li> <li>Potential pollution of surface and groundwater</li> </ul>	Biodiversity MMP (see Section 6.1); Socio- economic MMP (see Section 6.4); Soil MMP (see Section 6.5); Hazardous Substance MMP (see Section 6.6);	



Aspect	Potential Impact	Relevant MMP
	<ul> <li>Potential impacts on fauna and avifauna</li> <li>Inconvenience and safety impacts to visitors, road users and tourists</li> </ul>	Surface and Groundwater MMP (see Section 6.7); Waste MMP (see Section 6.8)
Closure and of drill site rehabilitation		
Biodiversity	No impacts if the disturbed areas are returned to the natural state	Biodiversity MMP (see Section 6.1); Socio- economic MMP (see Section 6.4)

#### 3.2 COMPLIANCE AND ALIGNMENT REQUIREMENTS

This EMP will form the basis of the 'general' environmental management of GIB Mining's proposed exploration activities and all the implied work instructions, method statements, procedures, etc. will be developed taking cognizance of the relevant commitments in this EMP.

As part of environmental management, GIB Mining will roll out the MMPs in this EMP and develop work instructions / method statements / procedures to ensure the objectives provided in this EMP are achieved and commitments are implemented. Furter responsibilities and target dates for implementing relevant commitments will therefore be included in the work instructions / method statements / procedures and other relevant documents.



#### 4 OVERALL ENVIRONMENTAL OBJECTIVES

The following overall environmental objectives are applicable to the proposed exploration activities of GIB Mining in EPL 9924:

- Ensure compliance with relevant national legislation and standards, international best practices, corporate policies and this EMP by incorporating the relevant requirements stipulated in this EMP into contracts as well as work instructions / method statements / procedures and other relevant documents.
- Ensure compliance with the NNNP Rules and Regulations (i.e. Park Rules) and take cognizance of the NNNP Park Management Plan.
- In accordance with the Park Rules, no activity will be allowed during the night time, and employees will not be allowed to stay onsite after hours. No vehicle, except for the drill rig for which permission from DWNP is required, will be left onsite overnight.
- Without infringing on the rights of individuals, manage the movements of employees and service providers and set rules for their behaviour, with special emphasis placed on preventing transgression and punishment of transgressors.
- Prevent non-compliances by enforcing induction to all individuals prior to visits to the work areas and by warning signs and restricted access controls.
- Use a limited number of vehicles and people for the proposed exploration activities so
  that proper supervision can be ensured, and adverse environmental impacts through
  physical destruction and disturbance can be avoided, mitigated and managed.
- Monitor the impacts and determine additional suitable management and / or mitigation measures as and where required, and to ensure good environmental performance and reporting.
- Apply the precautionary principle throughout by enforcing responsibility by promoting environmental awareness, and supporting, training and responsibility of all employees and service providers to ensure that all employees and service providers adhere to the relevant management commitments.
- Minimize cumulative negative socio-economic impacts and enhance positive socioeconomic impacts.

In addition to these Overall Environmental Objectives, GIB Mining must develop and implement a separate Occupational Health and Safety Plan, and (possibly) a Radiation Management Plan (RMP) for EPL 9924, which does not form part of this EMP.

GIB Mining must also develop and implement an Emergency Response Plan for potential incidents in EPL 9924. This plan must be updated regularly, based on a regular review and assessment of risks for EPL 9924.



#### 5 RESPONSIBILITIES AND REQUIREMENTS

The following sections list the general management requirements that are relevant to the proposed exploration activities of GIB Mining in EPL 9924.

#### 5.1 Parties Responsible for the Implementation of the EMP

This section describes the roles and responsibilities for implementing the various management plans.

#### 5.1.1 EXPLORATION MANAGER

The Exploration Manager of GIB Mining has overall responsibility for the environmental management in all work areas, for ensuring this EMP is implemented, and shall ensure the compliance to this EMP. The EMP will be part of the contract with all individuals involved and ensure adherence to the conditions of the EMP.

Contract documents should consider the inclusion of penalties for non-conformance to the EMP, or to link the sign-off of the contract to a retainer clause. The client retains part of the contract fees until the Exploration Manager has signed off the clearance certificate, indicating satisfaction with the rehabilitation of the contractor's work and exploration activities (where relevant).

It is also the duty of the Exploration Manager to ensure that appropriate environmental risk assessments are conducted and that an environmental risk management plan is developed and implemented. Risks must be managed pro-actively. An adequate Emergency Response Plan with its necessary protocols must be developed and implemented, and sufficient financial and human resources must be made available to implement the emergency protocols.

Specifically, the Exploration Manager will be responsible for:

- Supervision over the exploration team.
- Regular inspections and auditing compliance to this EMP and any other relevant legal requirements e.g., permits and authorisations.
- Conducting of environmental awareness training during induction training and on an ad hoc basis thereafter.
- Conducting of scheduled monitoring as outlined in various sections in the EMP.
- Ensuring compliance to this EMP and permits and authorisations issued to GIB Mining by relevant authorities.
- Submit required information to relevant authorities such as reporting on compliance with the EMP, permit and relevant authorisations.



#### 5.1.2 CONTRACTORS

All contractors and their employees will be contractually required to comply with the relevant commitments in this EMP. To achieve this, the Exploration Manager must ensure that the following is done:

- All staff are familiar with the EMP and aware of their environmental responsibilities.
- Relevant work instructions / method statements / procedures and other relevant documents are in place.
- Incidents of non-compliance are recorded, and the necessary corrective actions are implemented.

#### 5.2 INDUCTION, AWARENESS AND TRAINING

All employees, contractors and their employees will be required to undergo induction before the commencement of any work onsite. Different induction modules will be developed and implemented for employees, contractors, and visitors.

All employees, contractors and their employees are expected to understand the EMP requirements and implement them.

As a minimum induction, awareness and training shall include:

- Explanation of the various environmental sensitivities in and around EPL 9924 (i.e. within the NNNP) and the specific work areas, as described in the EIA Scoping (including impact assessment) Report.
- Discussion of the potential environmental impacts of the proposed exploration activities.
- Explanation of individual roles and responsibilities.
- Explanation of the mitigation and management measures that must be implemented when carrying out activities.
- Explanation of the importance of complying with the EMP and the implied work instructions / method statements / procedures.
- Induction, awareness and training sessions must be recorded, including the names of attendees, dates of their attendance and the information presented to them.

#### 5.3 AUDITING COMPLIANCE WITH THE EMP

The EMP for EPL 9924 is a legally binding document and non-compliance with it could result in disciplinary action, such as fines and penalties; legal action; monetary penalties; withdrawal of permits; and the suspension of work. Compliance with the EMP requires thus a rigorous inspection, auditing and recording system.



#### 5.3.1 INTERNAL AUDITS AND INSPECTIONS

A copy of the EMP shall be available onsite and upon request, throughout the duration of the exploration activities proposed in EPL 9924.

An internal review process and procedure shall be established by the Exploration Manager, to monitor the progress and implementation of the EMP.

Work instructions / method statements / procedures and other relevant documents shall be developed and implemented by the Exploration Manager, and modified and changed where and when necessary, to improve the efficiency of the EMP.

The Exploration Manager is responsible for monitoring and enforcement of the EMP on a day-to-day basis and conduct regular internal inspections against the commitments in the EMP. Daily, weekly and monthly inspections will thus be undertaken. Findings will be documented for both record keeping purposes and for informing continual improvement.

Any violation / non-compliance of the EMP must be recorded and the necessary corrective actions must be implemented.

#### 5.3.2 EXTERNAL ENVIRONMENTAL PERFORMANCE ASSESSMENT

An independent professional must conduct an EMP performance assessment annually. Compliance with the commitments of the EMP and the continued adequacy of the EMP, relative to the onsite activities, will be assessed and the findings must be recorded in a report.

Monitoring reports will be provided to the relevant authorities as per permits and authorisations issued by the relevant authorities (MME, NHC, MHSS and MEFT).



#### 6 MANAGEMENT AND MITIGATION PLANS

The MMPs described in this chapter are applicable to the proposed exploration activities of GIB Mining in EPL 9924.

The following MMPs are listed here:

- Biodiversity MMP.
- Archaeological MMP.
- Noise MMP.
- Socio-economic MMP.
- Soil MMP.
- Hazardous Substances MMP.
- Surface and groundwater MMP.
- Waste MMP.
- Air quality MMP.
- Radiation MMP.

#### Important notes:

- Only one to two persons, supervised by the Exploration Manager / Geologist, will
  conduct the exploration activities during Phase 1 (geological studies, field mapping and
  rock and soil sampling). During Phase 2 a drilling team of up to 10 operators may be
  required (if drilling is justified by the results obtained during Phase 1). The drilling team
  will be supervised by the Exploration Manager / Geologist.
- The Park Management Plan for the NNNP identifies the Hotsas Waterhole as a place of special value, surrounded by a concentric circle (buffer) in which minimal disturbance is recommended. Seeing that the target areas for exploration by GIB Mining is planned in the western part of EPL 9924, the commitments in the EMP must be implemented to avoid / minimize impacts in this sensitive area and GIB Mining must inform DWNP prior to their planned drilling and associated activities near the Hotsas Waterhole.
- In consideration of the Park Management Plan of NNNP careful consideration is required in respect of any planned (future) mining activities near the Hotsas Waterhole.
   It is advised that an early and detailed Environmental Screening Study be initiated, if mining and related activities are proposed near the waterhole.
- A Park Permit is not required for someone who passes through on one of the main roads in the NNNP. However, a valid Park Permit is required otherwise (i.e. visiting, working or overnighting). Accordingly, each employee must be in possession of a valid Park Permit while conducting work for of GIB Mining. The Park Permit stipulates the Park Rules to which the permit holder must adhere to.



#### 6.1 BIODIVERSITY MMP

#### 6.1.1 OBJECTIVE

The objective is to prevent, as far as is possible, the unacceptable disturbance and loss of species and habitats, and related ecosystem functionality as well as to minimize impacts on sensitive areas because of potential effects associated with the proposed exploration activities in EPL 9924.

#### 6.1.2 ACTIONS REQUIRED

#### a) <u>Disturbance and loss of species, habitats and sensitive areas:</u>

- Plan the work areas beforehand to keep the footprint as small as practically possible.
- Take cognisance of the sensitive areas described in the EIA Scoping (including Impact Assessment) Report – the Hotsas Waterhole, the drainage lines, camelthorns (and their root systems), vulture nests – prior to any activity and demarcate them on a map as far as possible.
- Invite Vultures Namibia to make the exploration team aware of vultures and their related ecology and to identify the trees with nests and the presence of vultures hands-on with the exploration team.
- Inspect the mapped sensitive areas with the necessary rigour (as a joint reconnaissance with Vultures Namibia).
- Based on the onsite evidence, determine tree-specific stay-away distances and periods and associated precautions – in collaboration with Vultures Namibia.
- Adhere to stay-away zones and periods (agreed with Vultures Namibia) to avoid disturbance of breeding vultures and active vulture nests.
  - Accordingly, activities between May / June and November / December near active nests must be avoided as far as possible. The exact timing and distance must be determined per siting though, as no one-size-fits-all approach can be followed.
- As far as possible, schedule the (specific) timing of airborne surveys to avoid potential disturbances to vultures. Preferably this must be done between November / December and May / June, to be confirmed with Vultures Namibia.
- Schedule the (general) timing of on-the-ground activities to avoid disturbances to flora, fauna and avifauna.
- Clearly demarcate movement areas and prevent offroad driving.
- Where necessary, introduce operational controls such as barricading around sensitive areas.
- Avoid disturbance of breeding vultures and active vulture nests through restrictions on flight hights, flight paths and timing of the flights.



- Avoid the clearing of vegetation as far as possible, and specifically avoid the disturbance or removal of protected plant species (e.g. camelthorns).
- Avoid the disturbance of the root systems of camelthorns and potential impacts on their water supply.
- Ensure that drainage lines are not blocked.
- Install abatement controls to reduce noise disturbance.
- Enforce speed limits and off-road driving.
- Keep record of all biodiversity incidents (e.g. road kills, observations, etc.) and use these records to plan the operational activities.
- Regularly check for water leaks, monitor sites for invasive alien plants and eradicate them immediately.

#### b) Managing the workforce

- Ensure staff members are in possession of Park Permits with Park Rules made known to them.
- A limited number of vehicles and people will be used for the activities so that proper supervision can be ensured, and potential damage be avoided.
- Strict enforcement of anti-poaching measures, collection of wildlife or plants, off-road driving, littering, etc. with zero tolerance, and this should be emphasised during induction / general awareness to all staff.
- Prevent unnecessary new tracks and offroad driving.
- Ensure strict and effective waste management (including of food and kitchen waste), to discourage an unnatural increase in scavengers.
- No food preparation will be allowed onsite.
- No open fires will be allowed onsite.
- Fire extinguishers will always be available onsite.
- Sensitize staff members about environmental awareness, the value of biodiversity and the negative impacts of disturbance, especially to breeding birds, and of poaching and road kills through regular inductions and refreshers.

#### c) Rehabilitation

- Develop and implement a rehabilitation plan.
- Remove all infrastructure, discarded items, drill cores and drill chips, debris, scrap metal and other waste from disturbed areas after all exploration activities are completed.
- All boreholes must be cut and capped.



- Ensure that no heaps of soil, rocks and material remain sweep and rake manually before moving to the next drill pad so that the site looks as close to 'pre-operation 'as possible.
- All sumps have been dried and filled in, if not portable water reservoirs are used.
- All non-mineralised mud generated during drilling is either disposed of in the borehole, in designated holes, or taken offsite and disposed of at an official waste site.
- Remove vehicle tracks in disturbed areas after all exploration activities are completed.
- Rehabilitation of the soils should be done to meet both visual and ecological objectives.
- Take photos before work begin in an area and again after the work area has been rehabilitated.
- Prevent re-access into rehabilitated areas.
- Ensure relinquishment of the rehabilitated areas.



#### 6.2 ARCHAEOLOGICAL MMP

#### 6.2.1 OBJECTIVE

The objective is to prevent the unacceptable disturbance and loss of archaeological sites because of potential effects associated with the proposed exploration activities in EPL 9924.

#### 6.2.2 ACTIONS REQUIRED

#### a) Damage or loss to archaeological sites:

- Apply for consent from the National Heritage Council of Namibia, based on the recommendations by the archaeologist.
- Demarcate identified sites and implement arrangements to avoid disturbance of them.
- No entry into the significant site (near but outside EPL 9924) must be ensured.
- Do not disturb or destroy any recorded site as far as possible.
- Apply the precautionary principle throughout staff members should be given training to know what heritage resources they may encounter and what to do in case a discovery is made.
- Adopt a Chance Finds Procedure in case an archaeological site is discovered (albeit unlikely).

If there are any chance finds of archaeological sites that have not been identified and described yet, a Chance Finds Procedure shall be followed. The key component of which is to ensure that the work that can further damage the discovery can be stopped, that the site is identified, remains undisturbed until a specialist has assessed the site and the potential damage, advise on the necessary management steps is obtained, and guidance on the requirements for authority consultation and permitting is in place.

To cater for this possibility GIB Mining is encouraged to peruse the "Archaeological Guidelines for Mining in the Namib" by J. Kinahan.



#### 6.3 Noise MMP

#### 6.3.1 OBJECTIVE

The objective is to prevent the unacceptable noise impacts associated with the proposed exploration activities in EPL 9924 that may affect third-parties, fauna and avifauna.

#### 6.3.2 ACTIONS REQUIRED

#### a) Noise pollution:

- Follow the Labour Act Regulations, specifically the Noise Regulations (Regulation 197), and or WHO guidelines on maximum noise levels (Guidelines for Community Noise, 1999), to prevent hearing impairment for workers onsite and a nuisance to third parties.
- Restrict noise producing activities to daytime.
- Avoid unnecessary revving of engines and switch off equipment when not required.
- Start-up equipment sequentially rather than simultaneously.
- Enforce speed limits and keep all new tracks in a good state to avoid unwanted rattle and body-slap from vehicles.
- The use of low frequency white noise or flashing lights should be considered instead of audible reversing warning sounds.
- Avoid excessive use of hooters and alarms.
- Place noise producing equipment in such a way that noise is directed away from receptors and / or are attenuated.
- Maintain machinery, vehicles and equipment in good condition to prevent unnecessary noise outputs.
- Schedule the (specific) timing of airborne surveys to avoid, mitigate and manage disturbances to fauna and avifauna (see Biodiversity MMP – Section 6.1.2).
- Avoid, mitigate and manage airborne noise through restrictions on flight hights, flight paths and timing of the flights (see Biodiversity MMP – Section 6.1.2).
- Establish and maintain a complaint register where Interested and Affected Parties (I&APs)<sup>3</sup> can lodge noise related complaints. It must include the name, contact and affiliation details of the complainant, the date of the complaint as well as the date and time of the disturbing event, the location where the event was observed, a detailed description of the event including details such as noise character, impulsiveness and tonality. In response to a complaint, GIB Mining should investigate the incident and if required make use of a specialist to conduct the necessary assessment. GIB Mining must implement remedial and corrective actions to prevent such events in future.



<sup>&</sup>lt;sup>3</sup> It is expected that only the visitors to the Hotsas Hide near the Hotsas Waterhole fall in this category.

#### 6.4 SOCIO-ECONOMIC MMP

#### 6.4.1 OBJECTIVE

The objective is to limit negative socio-economic impacts and to enhance positive socio-economic impacts; to keep third parties and I&APs informed about the proposed exploration activities in EPL 9924 through an efficient forum of communication and information sharing; to prevent physical harm to third parties, fauna and avifauna; and not to compromise on the integrity of nature conservation principles of the NNNP.

#### NOTE:

A separate Occupational Health and Safety Plan and (possibly) a RMP for EPL 9924 shall be developed by GIB Mining, which does not form part of this EMP.

An Emergency Response Plan for potential incidents in EPL 9924 must be developed and implemented by GIB Mining, which must be updated regularly, based on a regular review and assessment of risks for EPL 9924.

#### 6.4.2 ACTIONS REQUIRED

#### a) Communication and information sharing:

- Maintain an updated I&AP database.
- Devise and implement a stakeholder communication and engagement strategy to keep key stakeholders such as the DWNP, the management team of NNNP and Vultures Namibia informed about the proposed exploration activities.
- Establish a platform for information sharing and collaboration with key stakeholders.
- Establish and maintain a complaint register for I&APs.
- Develop and implement a concerns / complaints (grievance) process for I&APs, document grievances, respond swiftly and install investigation and reporting procedures to solve grievances.

#### b) Management and supervision over staff:

- Develop and implement the necessary policies, contracts, agreements, work instructions, method statements and procedures to ensure that employees and contractors are compliant with the relevant national legislation and standards, international best practices, company rules and corporate policies, and this EMP.
- Set and enforce rules to prevent transgressions of the NNNP Park Rules and the
  consequences for transgressors, i.e. fines, prosecution, etc. (e.g. no collecting of plant
  material or firewood, no fires and food preparation, daily waste removal, no poaching,
  no sharing of information about animal movements, reporting of road kills and humanwildlife incidents, etc).



- Put 'no entry' signs at tracks turning off the official park roads.
- Enforce induction to all individuals prior to visits to the work areas.
- Implement pro-active mechanisms to prevent non-compliances (e.g. warning signs, access control, barricades around no-go and sensitive areas, limited number of people, vehicles and movements, etc.).
- Enforce responsibility and accountability through training, induction and awareness.
- Develop and implement an Emergency Response Plan for potential incidents in EPL 9924, incorporating firefighting, medical treatments, spill management, etc.
- Enforce Overall Environmental Objectives (see Chapter 4)

#### c) Managing socio-economic impacts:

- To limit negative socio-economic impacts and to enhance positive socio-economic impacts:
  - Establish human resources policies for the recruitment of qualified, competent Namibians.
  - Set a skill development program and strategy for staff to maximize the use of the local labour force.
  - o Promote continuous learning programs.
  - Ensure skills upgrading and the upkeep of staff records for future employment of the staff.
  - Establish procurement policies to support local, regional and Namibian supply of services and goods.
  - Support the local economy with staff residing in Swakopmund / Walvis Bay and getting daily supplies from local businesses.
  - Support community initiatives of which staff are members of.



#### 6.5 SOIL MMP

#### 6.5.1 OBJECTIVE

The objective is to limit the loss, disturbance and pollution of soil because of the proposed exploration activities in EPL 9924.

**NOTE:** Actions regarding the clean-up and remediation of leaks and spills to prevent soil pollution must be incorporated in GIB Mining's Emergency Response Plan for EPL 9924.

#### 6.5.2 ACTIONS REQUIRED

#### a) Physical disturbance of soil:

- Apply the precaution principle and demarcate the work areas and the routes of movement to minimize areas of disturbance.
- Limit off-road driving and restrict all activities to demarcated areas through enforcement, awareness and training.
- Restrict the laydown of materials and equipment to a pre-approved area. The area used should be constrained as far as possible.

#### b) Potential pollution of soil:

- No hydrocarbons (fuel or lubricants) and, if possible, no hazardous substance will be stored onsite.
- Refuelling and maintenance of vehicles will take place offsite.
- In the unlikely scenario of dispensing of petroleum products, refuelling or maintenance (of stationery equipment such as the drill rig, generator, etc.) must take place over an impermeable surface or drip tray.
- If the use of hazardous substances onsite is inevitable, the handling, storage and use
  of a hazardous substance must take place on an impermeable surface and within a
  containment with a capacity of 110% of the volume of the hazardous substance in use.
- Develop and implement an appropriate work instruction, method statement or procedure to detail the handling of soil pollutants.
- Work areas shall be monitored for spills and leaks (daily) and must be contained and cleaned immediately.
- If a spill or leak is detected, the source of pollution must be isolated and contained, if possible.
- Spill kits and or absorbent material must be readily available onsite.
- Hydrocarbon-contaminated soil must be removed and disposed of at the Hazardous Waste facility in Walvis Bay.



- Educate workers on potential soil pollution, good housekeeping and the use of containment, clean-up and remediating measures.
- All vehicles and machines must be maintained properly to ensure that hydrocarbon leaks and spills are kept at a minimum.
- Waste (including effluent, hydrocarbon and hazardous items) must be contained onsite before it is removed for disposal at a permitted facility offsite.
- See also the commitments in the Hazardous Substance MMP, Section 6.6.2.



#### 6.6 HAZARDOUS SUBSTANCE MMP

#### 6.6.1 OBJECTIVE

The objective is to limit the unacceptable contamination of soil, surface and groundwater because of hazardous substances used during the proposed exploration activities in EPL 9924.

**NOTE:** Actions regarding the clean-up and remediation of leaks and spills of hazardous substances to prevent soil, surface and groundwater pollution must be incorporated in GIB Mining's Emergency Response Plan for in EPL 9924.

#### 6.6.2 ACTIONS REQUIRED

#### a) Handling, storage and use of hazardous substances:

- If possible, prevent the presence of hazardous substances and chemicals onsite.
- If the use of hazardous substances and chemicals onsite is inevitable, ensure legal compliance in the handling, storage and use of these substances and ensure that they are handled, stored and used on an impermeable surface and within a containment with a capacity of 110% of the volume of the hazardous substance in use. Accordingly:
  - A register shall be kept on all hazardous and chemical substances and always be available for inspection.
  - Develop and implement appropriate work instruction, method statement or procedures to detail the handling of hazardous and chemical substances.
  - Work areas shall be monitored for spills and leaks (daily) and must be contained and cleaned immediately.
  - In case a hazardous or chemical spill or leak is detected, the source of pollution must be isolated, and the substance must be contained.
  - Spill kits and or absorbent material must be readily available onsite.
  - Soil that is contaminated by hazardous substances, must be removed and disposed of at the Hazardous Waste facility in Walvis Bay.
  - Educate workers on the handling, storage and use of hazardous and chemical substances, including potential pollution, good housekeeping and the use of containment, clean-up and remediating measures.
  - Hazardous and chemical waste must be contained onsite before it is removed.
  - Used and waste hazardous and chemical substances should be stored in drums or other suitable containers, which must be labelled, sealed and removed for disposal at a permitted facility offsite.
  - Hazardous waste disposal certificates must be kept on file.



#### 6.7 SURFACE AND GROUNDWATER MMP

#### 6.7.1 OBJECTIVE

The objective is to prevent the pollution of surface water, and by doing so, restrict indirectly the potential to pollute groundwater, because of the proposed exploration activities in EPL 9924.

**NOTE:** Actions regarding the prevention of surface and groundwater pollution must be incorporated in GIB Mining's Emergency Response Plan for EPL 9924.

#### 6.7.2 ACTIONS REQUIRED

#### a) Physical infrastructure:

- Apply the precaution principle and prevent the location of work areas within the drainage lines.
- Ensure that drainage lines are not blocked.
- Restrict the laydown of materials and equipment to a pre-approved area. The area used should be constrained as far as possible

#### b) Potential pollution:

- Adhere to the principle that no hydrocarbons (fuel or lubricants) and, if possible, no hazardous substance will be stored onsite.
- If the use of hazardous substances onsite is inevitable, the actions stipulated in Section 6.6.2 are applicable.
- As potential soil pollution may indirectly cause the pollution of surface and groundwater too, the actions stipulated in Section 6.5.2 are applicable. Subsequently:
  - Dispensing of petroleum products, refuelling or maintenance (of stationery equipment such as the drill rig, generator, etc.) must take place over an impermeable surface or drip tray.
  - Work areas shall be monitored for spills and leaks (daily) and must be contained and cleaned immediately.
  - If a spill or leak is detected, the source of pollution must be isolated and contained, if possible.
  - o Spill kits and or absorbent material must be readily available onsite.
  - All vehicles and machines must be maintained properly to ensure that hydrocarbon leaks and spills are kept at a minimum.
  - Waste (including effluent, hydrocarbon and hazardous items) must be contained onsite before it is removed for disposal at a permitted facility offsite.



- Educate workers on potential soil and water pollution, good housekeeping and the use
  of containment, clean-up and remediating measures.
- Provide appropriate toilet and ablution facilities to prevent any illegal discharge of effluent or sewage.
  - Contain sewerage and remove regularly for disposal at a licensed facility (e.g. in Swakopmund).



#### 6.8 WASTE MMP

#### 6.8.1 OBJECTIVE

The objective is to prevent pollution, environmental degradation and the impacts associated with waste in general in EPL 9924.

Waste may affect biodiversity, soil, water and the sense of place. As a result, this MMP must be read in correspondence with the Biodiversity MMP (Section 6.1.2), the Socio-economic MMP (Section 6.4.2), the Soil MMP (Section 6.5.2), the Hazardous Substance MMP (Section 6.6.2) and the Surface and Groundwater MMP (Section 6.7.2).

#### 6.8.2 ACTIONS REQUIRED

- Ensure staff members are in possession of Park Permits with Park Rules made known to them – in which littering is prohibited, amongst others.
- Sensitize staff members about waste management and good housekeeping through regular inductions and refreshers.
- Develop a Waste Management Strategy to minimize waste generation onsite.
- Ensure designated, suitable receptables (with lids to prevent borne litter and scavenging) clearly marked for different waste types for disposal will be used at appropriate locations onsite.
- All waste items will be separated at source, collected in the correct receptable, and contained for removal.
- From all work areas, remove discarded items and waste items daily.
- The use of Styrofoam food packaging, etc., plastic bags and danger tape must not be brought onsite.
- General waste must be removed daily for disposal at a permitted facility offsite.
  - Hazardous waste disposal certificates must be kept on file.
- A complaints register should be kept for any waste-related issues and mitigation steps taken to address complaints where necessary.
  - Document and investigate all registered complaints and address the concerns about waste promptly. Document the actions taken
- Implement a zero-tolerance policy with regards to waste-related transgressions.
  - No person will be allowed to discard waste except in a designated receptable for this purpose.
  - Wastewater, effluent or sewage will not be discharged but contained for disposal at a permitted municipal facility.
- Provide appropriate toilet and ablution facilities to prevent any illegal discharge of effluent or sewage.



#### 6.9 AIR QUALITY MMP

#### 6.9.1 OBJECTIVE

The objective is to limit GIB Mining's contribution to air pollution impacts because of its proposed exploration activities in EPL 9924.

#### 6.9.2 ACTIONS REQUIRED

#### a) Air pollution:

- Apply the precaution principle and demarcate the work areas and the routes of movement to minimize the possible sources of air pollution.
- Visually inspect the dust generation sources and keep photographic records of the observations.
- Apply pragmatic management measures such as the visual monitoring of dust and disallowing employees to work in extreme wind conditions.
- Air quality impacts would be minimized through basic control measures such as:
  - o Enforcing speed limits.
  - Limiting unnecessary travelling of vehicles.
- The movement of drilling equipment and support vehicles on unpaved access tracks will be on a small scale.
- Establish and maintain a complaint register where I&APs<sup>4</sup> can lodge dust related complaints. It must include the name, contact and affiliation details of the complainant, the date of the pollution incident and a detailed description of the incident. In response to a complaint, GIB Mining should investigate possible causes and, if required make use of a specialist to determine the likely source through a site inspection. GIB Mining must implement remedial and corrective actions to prevent such events in future.



<sup>&</sup>lt;sup>4</sup> It is expected that only the visitors to the Hotsas Hide near the Hotsas Waterhole fall in this category.

#### 6.10 RADIATION MMP

#### 6.10.1 OBJECTIVE

The objective is to protect workers, third parties and the environment from the harmful effects of ionizing radiation from the handling and disposing of radioactive materials because of GIB Mining's proposed exploration activities in EPL 9924. Two key objectives must be addressed:

- Radiation safety: To ensure that all activities involving radioactive materials or radiation sources are conducted in a way that minimizes exposure and maintains radiation levels as low as reasonably achievable (ALARA).
- Compliance: The Atomic Energy and Radiation Protection Act, No. 5 of 2005 provides the mandate of the Directorate of Atomic Energy and Radiation Protection within the MHSS. Instruments are implemented by the NRPA and Nuclear Applications divisions in the directorate, to govern the handling of radioactive material.

#### 6.10.2 ACTIONS REQUIRED

- Depending on the results from the proposed exploration activities in Phase 1, a basic RMP must be developed, in consultation with the NRPA, for implementation during Phase 2 (i.e. drilling) – if the proposed exploration activities progress to Phase 2.
- A basic RMP must contain information and provide guidance for the following:
  - The handling and disposing of radioactive contaminated material (i.e. drill chips and drill cores).
  - The appointment of a radiation safety officer.
  - Required permits for the transport and storage of samples and the disposal of mineral waste.
  - Training and awareness.
  - Incident responses and emergency preparedness.
  - Record keeping and reporting.
  - Monitoring requirements.



#### 7 MONITORING

An inspection program shall be established to check that the commitments and management actions described in this EMP are implemented and complied with.

Incidents and non-conformances shall be recorded and addressed with appropriate corrective action.

#### 7.1 MONITORING REQUIREMENTS

Monitoring includes, but are not limited to:

#### a) General monitoring:

- Conduct audits and inspections as per Section 5.3. All non-compliances should be recorded and discussed at weekly site meetings and timeous remedial actions taken.
- Check for non-compliances (lack of good housekeeping, spills and leaks, etc.) during a general site-wide inspection weekly.
- Monitor the work areas daily. Record all non-compliances and initiate corrective measures.

#### b) Waste Management:

- Monitor whether the provisions set out in this EMP concerning waste management is being applied as per instructions.
- Keep safe disposal certificates.

#### c) <u>Dust and baseline noise monitoring:</u>

 When complaints are received from affected third parties regarding noise and dust nuisance, abatement measures should be implemented. Communication with those that complained should be continued to determine whether the problem has been resolved.

#### d) Training and awareness:

 The Site Manager to request attendance registers be completed by all personnel attending induction training sessions.

#### e) **Biodiversity monitoring:**

 Information about the vulture population will enable GIB Mining to apply an adaptive management regime, in collaboration with Vultures Namibia, in EPL 9924. For this reason, the vultures will be monitored incidentally, and the information will be made available and exchanged with Vultures Namibia, the DWNP and the staff of the NNNP.

- Keep record of all biodiversity incidents (e.g. road kills, observations etc.) and use these records to plan the operational activities.
- Monitor selected key trees (using fixed point photography) to check for changes over time.
- As far as possible, photograph the work area before and after to guide rehabilitation interventions.

#### f) Radiation monitoring:

 Depending on the circumstances, the proposed exploration activities in EPL 9924 may progress to Phase 2. If this happens, a basic RMP must be developed and implemented – in consultation with the NRPA. Specific monitoring needs will be specified in the RMP.

#### 7.2 REPORTING AND SUBMISSION OF INFORMATION

A reporting system shall be maintained to ensure that all applicable statutory requirements are met.

Reporting of incidents and non-conformances shall include details such as the reason for incidents and non-conformance, responsible persons, consequences, the corrective action taken and the necessary follow-up activities. Incidents and non-conformances shall be reported to the Exploration Manager. The cause of incidents and non-conformances shall be investigated, and recommendations formulated to prevent recurrence.

As a minimum, the following documents will be submitted to the relevant authorities on an ongoing basis:

- Environmental reports will be submitted to the DEA at the MEFT (as specified in the conditions per clearance certificate).
- Reports to the MME as per agreement.
- If required (because the proposed exploration activities progress to Phase 2), reporting to the NRPA in accordance to the RMP.

#### 7.3 DEALING WITH ENVIRONMENTAL EMERGENCIES AND INCIDENTS

An Emergency Response Plan for potential incidents in EPL 9924 must be develop and implemented by GIB Mining. This plan must be updated regularly, based on a regular review and assessment of risks for EPL 9924.

The Emergency Response Plan must include an emergency response plan for firefighting and for accidental spills and leaks. In addition, GIB Mining must conduct appropriate environmental risk assessments; develop and implement an environmental risk management plan; and ensure that an adequate protection and indemnity insurance cover for incidents exists. Procedures and

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protocols for emergencies, inclusive of firefighting and accidental spill and leak contingency plans, must be developed and implemented.

Emergencies related to radiation must also be incorporated into the overall Emergency Response Plan.

Should an environmental emergency occur, the following procedure will be followed:

- The Exploration Manager must immediately be notified of the incident.
- Steps must immediately be taken to minimize the incident through remedial actions according to the Emergency Response Plan.
- The Exploration Manager must report the incident to the respective authorities (depending on the nature of the incident).