

APPENDIX A
PUBLIC PARTICIPATION PROCESS 1

- A.1 Letters to MME and MET.
- A.2 30 January 2013 meeting minutes.



Reptile Uranium Namibia (Pty) Ltd

Reg. No. 2004 / 511

48 Hidipo Hamutenya Street / PO Box 2538, Swakopmund

Email: peter.christians@reptile.com.na / www.reptileuranium.com

Directors: Dr Leon Pretorius, Anne J van Rensburg, Greg Cochran

Namibia

Tel: 064 41 5200

Fax: 064 40 5384

Mr Erasmus Shivolo
The Mining Commissioner
Directorate: Mines
Ministry of Mines and Energy
Private Bag 13297
Windhoek
Namibia

28 November 2012

Attention: Ms Frieda M Flavianu, Chief Geologist

Dear Ms Flavianu

RE: Request for a formal meeting to discuss the commencement of environmental studies on two planned Mining Licence Applications within EPL3496 and EPL3497 in the Namib-Naukluft Park and confirmation on EIA process to be followed in accordance with the new EIA regulations.

Reptile Uranium Namibia (Pty) Limited (RUN) hereby respectfully requests the presence of the Mining Commissioner and other MME representatives at a formal meeting in the MET Boardroom on the 6th Floor at the Ministry's Windhoek inner city premises on Wednesday 30th January 2013 at 10:00am. We hope that this time is convenient to Mr Shivolo, Mr Lilende, yourself and any other interested and affected officials from your Ministry.

The meeting is of an introductory nature and not expected to last more than an hour.

RUN will again use the South African environmental specialist company Softchem to lead the studies as per the INCA, Tubas Red Sand and Shiyela Iron project studies that commenced in 2009 and received MET approval earlier this year. Present at the meeting will be the principal of Softchem, Mr Francois Friend, me and possibly another RUN representative.

As per the attached maps (and coordinates), the Ongolo Project occurs wholly on EPL3496 and the Tumas Project overlaps both EPL3496 and EPL3497.

The Ongolo Project consists of Primary Uranium mineralisation in granite (alaskite), i.e. similar in style to Rossing and Husab and will at least initially be mined by conventional opencast drill and blast methods and possibly in future years by going underground. The Project will involve more than one pit feeding a metallurgical processing plant that (subject to these studies) will be located in the northern portion of the proposed ML area.

The Tumas Project consists of Secondary Uranium mineralisation in calcretised palaeochannels, similar in style to Langer Heinrich. There is no primary mineralised rock present in this area and as the mineralisation is at or near the surface (to a maximum of about 45 metre deep), mining will be a simple shovel-and-truck operation with minimal, if any, blasting required. It is not envisaged that any metallurgical processing involving chemicals will be undertaken on this site. Rather, rock with suitable grade uranium mineralisation after possible crushing and screening will be transported to Langer Heinrich for metallurgical processing. Unmineralised waste separated on site will be replaced into mined out areas and rehabilitated as mining progresses.

Your favourable response to this request and confirmation of attendance will be appreciated.

Yours sincerely,



Peter J Christians
Country Manager

Cc: Mr. Abraham lilende, Deputy Director: Mineral Rights & Resources Development
Mr F Friend, Softchem

Attached: -

Locality Maps for Ongolo and Tumas Project study areas.



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Directors: Dr Leon Pretorius, Anne J van Rensburg, Greg Cochran

Namibia

Tel: 064 41 5200

Fax: 064 40 5384

Mr Teofilus Nghitila
The Environmental Commissioner
Department of Environment Affairs
Ministry of Environment and Tourism
Private Bag 13306
Windhoek

28 November 2012

Attention: Ms Saima Angula, Chief Development Planner

Dear Ms Angula

RE: Request for a formal meeting to discuss the commencement of environmental studies on two planned Mining Licence Applications within EPL3496 and EPL3497 in the Namib-Naukluft Park and confirmation on EIA process to be followed in accordance with the new EIA regulations.

Reptile Uranium Namibia (Pty) Limited (RUN) hereby respectfully requests a formal meeting in the MET Boardroom on the 6th Floor at the Ministry's Windhoek inner city premises either Tuesday or Wednesday 15th or 16th January 2013 at any time that is convenient to Mr Nghitila, Dr Sikabongo, you and any other interested and affected Government dignitaries and representatives.

The meeting is of an introductory nature and not expected to last more than an hour. Once you have confirmed the day and time, I will also invite representatives from MME, unless protocol requires you to do that?

RUN will again use the South African environmental specialist company Softchem to lead the studies as per the INCA, Tubas Red Sand and Shiyela Iron project studies that commenced in 2009 and received MET approval earlier this year. Present at the meeting will be the principal of Softchem, Mr Francois Friend, me and possibly another RUN representative.

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Your favourable response to this request and confirmation of a suitable meeting time on one of the proposed dates will be appreciated.

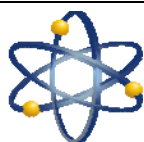
Yours sincerely,



Peter J Christians
Country Manager

Cc: Dr F Sikabongo, Deputy Director: Environmental Impact Assessment
Mr F Friend, Softchem

Attached: -
Locality Maps for Ongolo and Tumas Project study areas.



MINUTES OF MEETING



NAME OF MEETING	Ministry Environment and Tourism (Windhoek) presentation	DATE
FILE NAME	runmin.2013.01.30.doc	30 Jan 2013

ATTENDEES	
Dr Freddy M Sikabongo [FMG] Ministry of Environment and Tourism Ms L Saima Angula [LSA] Ministry of Environment and Tourism Ms Fennie Negumho [FN] Ministry of Environment and Tourism	Mr Klaus Frielingsdorf [KF] Reptile Uranium Namibia Mr Calvin Sisamu [CS] Reptile Uranium Namibia Mr Francois Friend [JFCF] Softchem
APOLOGIES	Mr T Nghitila [TN] (Ministry of Environment and Tourism) and Mr Peter Christians [PC] (Reptile Uranium Namibia)

DISTRIBUTION	Ministry of Environment and Tourism (FMG, LSA, FN), Reptile Uranium Namibia (KF, CS, PC), Softchem (JFCF)
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Item	Minutes/notes									
1.	Introduction FMG welcomed everybody to the meeting and apologised for TN. All present were asked to introduce themselves.									
2.	Reptile Uranium Namibia presentation – Mr Klaus Frielingsdorf KF introduced the project team and gave an overview of the following: <ul style="list-style-type: none">• company profile of Deep Yellow Limited (DYL) and Reptile Uranium Namibia (RUN),• DYL's Namibian portfolio,• Tumas project description, project area and location and process flow,• Tumas project description, project area and location and process flow.									
3.	Softchem presentation – Francois Friend The presentation covered the environmental impact assessment (EIA) framework to be followed for the two projects. Included the activity requirements, public participation, contents of scoping and assessment reports, application/decision process and other elements for consideration.									
4.	Question (Q) and response (R) session <table border="1"><tr><td>Q</td><td>LSA</td><td>How does the project team intend addressing the late night public meetings when some people have to travel long distances?</td></tr><tr><td>R</td><td>JFCF</td><td>The same public information meetings will be employed as used successfully during the Shiyela, Tumas and Tubas Red Sands projects whereby an open day will be held at both Windhoek and Swakopmund that lasts from 10:00 in the morning right through to 18:00 in the evening where the public have access to all the specialists.</td></tr><tr><td>R</td><td>LSA</td><td>Confirmed that MET is satisfied with this approach.</td></tr></table>	Q	LSA	How does the project team intend addressing the late night public meetings when some people have to travel long distances?	R	JFCF	The same public information meetings will be employed as used successfully during the Shiyela, Tumas and Tubas Red Sands projects whereby an open day will be held at both Windhoek and Swakopmund that lasts from 10:00 in the morning right through to 18:00 in the evening where the public have access to all the specialists.	R	LSA	Confirmed that MET is satisfied with this approach.
Q	LSA	How does the project team intend addressing the late night public meetings when some people have to travel long distances?								
R	JFCF	The same public information meetings will be employed as used successfully during the Shiyela, Tumas and Tubas Red Sands projects whereby an open day will be held at both Windhoek and Swakopmund that lasts from 10:00 in the morning right through to 18:00 in the evening where the public have access to all the specialists.								
R	LSA	Confirmed that MET is satisfied with this approach.								
5.	Closure FMG thanked the presenters for the short period required for the presentations and there being no further business the meeting was closed.									

APPENDIX B
PUBLIC PARTICIPATION PROCESS 2

- B.1 Forwarding letters to owners and occupiers of land adjacent to the proposed project.
- B.2 Forwarding letters to government authorities.



Reptile Uranium Namibia (Pty) Ltd

Reg. No. 2004 / 511

48 Hidipo Hamutenya Street / PO Box 2538, Swakopmund

Email: peter.christians@reptile.com.na / www.reptileuranium.com

Directors: Peter Christians, Greg Cochran, Anne J van Rensburg

Namibia

Tel: 064 415 200

Fax: 064 405 384

Mrs I E Kahl
P O Box 213
Otjiwarongo
Namibia

28 March 2013

Attention: Mrs I E Kahl

MINING LICENCE APPLICATION BY REPTILE URANIUM NAMIBIA (PTY) LTD

Notice is hereby given that Reptile Uranium Namibia (RUN) intends to submit an application for a mining licence on EPL3496 and EPL3497 for its Tumas project to the competent Namibian authorities for the extraction of uranium.

In order to register as an interested and/or affected party (IAP), comment on the proposed activity and/or obtain more information on the project, please contact Mr Peter Christians on 064-415200 or email at info@reptile.com.na or francois@softchem.co.za.

More information with regards to the project is available at:
www.deepyellow.com.au and www.softchem.co.za.

Please confirm receipt of this letter.

Yours faithfully

Peter Christians
Country Manager: Reptile Uranium Namibia (Pty) Ltd



Reptile Uranium Namibia (Pty) Ltd

Reg. No. 2004 / 511

48 Hidipo Hamutenya Street / PO Box 2538, Swakopmund

Email: peter.christians@reptile.com.na / www.reptileuranium.com

Directors: Peter Christians, Greg Cochran, Anne J van Rensburg

Namibia

Tel: 064 415 200

Fax: 064 405 384

Mr Deon Garbers
Senior Vice President Operations
Swakop Uranium (Pty) Ltd
11 Kraal Street
Swakopmund
Namibia

28 March 2013

Attention: Mr Deon Garbers

MINING LICENCE APPLICATION BY REPTILE URANIUM NAMIBIA (PTY) LTD

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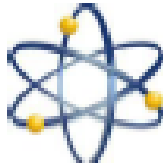
More information with regards to the project is available at:
www.deeptyellow.com.au and www.softchem.co.za.

Please confirm receipt of this letter.

Yours faithfully

Peter Christians

Country Manager: Reptile Uranium Namibia (Pty) Ltd



Reptile Uranium Namibia (Pty) Ltd

Reg. No. 2004 / 511

48 Hidipo Hamutenya Street / PO Box 2854, Swakopmund

Email: peter.christians@reptile.com.na / www.reptileuranium.com

Directors: Peter Christians, Greg Cochran, Anne J van Rensburg

Namibia

Tel: 084 416 200

Fax: 084 406 384

Mr Werner Ewald
General Manager
Bannerman Mining Resources Namibia (Pty) Ltd
P O Box 2854
Swakopmund
Namibia

28 March 2013

Attention: Mr Werner Ewald

MINING LICENCE APPLICATION BY REPTILE URANIUM NAMIBIA (PTY) LTD

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Please confirm receipt of this letter.

Yours faithfully

Peter Christians
Country Manager: Reptile Uranium Namibia (Pty) Ltd



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Directors: Peter Christians, Greg Cochran, Anne J van Rensburg

Namibia

Tel: 064 415 200

Fax: 064 405 384

Dr Kuri Tjipangandjara
General Manager, Engineering & Scientific Services
Namibia Water Corporation Ltd (NamWater)
Private Bag 13389
Windhoek
Namibia

28 March 2013

Attention: Dr Kuri Tjipangandjara

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Directors: Peter Christians, Greg Cochran, Anne J van Rensburg

Namibia

Tel: 064 415 200

Fax: 064 405 384

Mr Reiner Jagau
General Manager, Power Systems Development
Namibian Power Corporation (Pty) Ltd
P O Box 2864
Windhoek
Namibia

28 March 2013

Attention: Mr Reiner Jagau

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Directors: Peter Christians, Greg Cochran, Anne J van Rensburg

Namibia

Tel: 064 415 200

Fax: 064 405 384

Mr Eckart Demasius
Chief Executive Officer
Swakopmund Municipality
Private Bag 53
Swakopmund
Namibia

28 March 2013

Attention: Mr Eckart Demasius

MINING LICENCE APPLICATION BY REPTILE URANIUM NAMIBIA (PTY) LTD

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Please confirm receipt of this letter.

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Peter Christians

Country Manager: Reptile Uranium Namibia (Pty) Ltd



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Namibia

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Mr Erasmus Shivolo
Mining Commissioner, Directorate of Mines
Ministry of Mines and Energy
Private Bag 13297
Windhoek Namibia

28 March 2013

Attention: Mr Erasmus Shivolo

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Namibia

Tel: 064 415 200

Fax: 064 405 384

Mr Colgar Sikopo
Director – Regional Services and Park Management
Ministry of Environment and Tourism
Private Bag 13306
Windhoek
Namibia

28 March 2013

Attention: Mr Colgar Sikopo

MINING LICENCE APPLICATION BY REPTILE URANIUM NAMIBIA (PTY) LTD

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Directors: Peter Christians, Greg Cochran, Anne J van Rensburg

Namibia

Tel: 064 415 200

Fax: 064 405 384

Hon. Cleophas Mutjavikua
Erongo Regional Governor
Private Bag 5019
Swakopmund
Namibia

28 March 2013

Attention: Mr Cleophas Mutjavikua

MINING LICENCE APPLICATION BY REPTILE URANIUM NAMIBIA (PTY) LTD

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Namibia

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Fax: 064 405 384

Mr MURONGA HAINGURA
Chief Executive Officer
Walvis Bay Municipality
P O Box 2925
Walvis Bay
Namibia

28 March 2013

Attention: Mr MURONGA HAINGURA

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Please confirm receipt of this letter.

Yours faithfully

Peter Christians

Country Manager: Reptile Uranium Namibia (Pty) Ltd

APPENDIX C
REGISTER OF INTERESTED AND AFFECTED PARTIES



Interested and affected parties register
Tumas Project
2013



No	Name	Contact No	Designation/Organisation/Address	Email
1	JA Eksteen		Swakopmund Matters	swakopmundmatters@swakop.com
2	Hans-Peter Reiff	+264 61 295 6991	Cymot Namibia	hpreiff@cymot.com
3	Ignatius Kauvee	+264 64 403 905	Namibian Coast Conservation and Management	ikauvee@nacoma.org.na
4	Jessica Kemper (Dr)		Lüderitz	jkemper01@gmail.com
5	Monica Gentle	+264 64 412 004	Account Manager, Erongo Region, Telecom Namibia	coetzem@telecom.na
6	John Paterson	+264 64 204 044	Project Manager, Albatross Task Force	atfnamibia@gmail.com
7	John Pallet	+264 61 220 579	Southern African Institute for Environmental Assessment, Windhoek	john.pallet@saiea.com
8	Werner Ewald	+264 811 224 470	General Manager, Bannerman Resources, Swakopmund	wewald@bannermanresources-na.com
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08 April 2013

APPENDIX D
DRAFT ENVIRONMENTAL MANAGEMENT PLAN



**PUBLIC ACCESS
REPORT**

**Compiled for
REPTILE URANIUM NAMIBIA (PTY) LTD**



**DRAFT ENVIRONMENTAL MANAGEMENT PLAN
FOR THE TUMAS PROJECT**

**Report No TUMDEMPREP/2011/01
17 April 2013**



PO Box 1525, North Riding, 2162
South Africa
Cell: 082 554 8900
Tel: 011 462 2985 Fax: 086 657 1612
E-mail: francois@softchem.co.za
Website: www.softchem.co.za

- water and waste management
- environmental management
- environmental assessments
- air pollution assessments
- dedicated software

DRAFT ENVIRONMENTAL MANAGEMENT PLAN FOR THE TUMAS PROJECT

Compiled by:

.....
JFC Friend
PrEng CEng

Date: 17 April 2013

File No: TUMDEMPREP2013.01.DOC

Report No: TUMDEMPREP/2013/01

Order No: RUN2013/01

CONFIDENTIALITY AND COPYRIGHT SECTION

The content of this report emanated from a privately requested investigation as part of an environmental authorisation and as such is not confidential. Copies of the report will only be primarily issued to the relevant government authority, and made available to the public via the internet.

Copyright in this report is reserved. No publication or dissemination of its contents is allowed without written permission from SOFTCHEMcc.

Softchem cc CK1991/013881/23
Member: JFC Friend PrEng CEng MSc(Eng) Dip MktM FSAiChE FICHEM FWISA FIWM(SA)

EXECUTIVE SUMMARY

This environmental management plan was compiled as a requirement to Section 8(j) of the Namibian environmental impact assessment (EIA) regulations (NGR, 2012b) that requires a draft (environmental) management plan to be included in the scoping report. All components for such a draft environmental management plan in terms of Section 8(j)(aa – cc) of the EIA regulations have been included in this report, together with requirements contemplated to become part of future environmental management plans.

TABLE OF CONTENTS

	PAGE
EXECUTIVE SUMMARY	D - 4
TABLE OF CONTENTS	D - 4
1. INTRODUCTION	D - 5
2. ENVIRONMENTAL MANAGEMENT SYSTEM	D - 6
3. MEDIA TYPES AND ENVIRONMENTAL ASPECTS	D - 7
4. IMPACTS AND MITIGATION	D - 8
5. RESPONSIBILITIES, MONITORING AND TIME FRAMES	D - 4
6. REHABILITATION AND CLOSURE	D - 4
7. LEGAL COMPLIANCE	D - 4
8. ENVIRONMENTAL AWARENESS	D - 4
9. DETAILS OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER	D - 4
10. REFERENCES	D - 4

1. INTRODUCTION

Deep Yellow Limited (DYL), through its 100% owned subsidiary Reptile Uranium Namibia (Pty) Ltd (RUN), proposes to extract uranium for export from the Tumas project situated on exclusive prospecting licence EPL3496 and intends to submit a mining licence application to the competent Namibian authorities. However, an environmental impact assessment (EIA) process must be undertaken by the relevant applicant and authorised by the Ministry of Environment and Tourism (NGR, 2012a) before any mining licence can be granted. In terms of Section 3(a) of the EIA regulations (NGR, 2012b), RUN appointed Softchem as its environmental assessment practitioner (EAP) for this environmental impact assessment process.

As part of a scoping report, Section 8(j) of the EIA regulations requires that a draft (environmental) management plan (DEMP) be included in the scoping report. In terms of Section 8(j)(aa – cc) of the EIA regulations (NGR, 2012b) and Section 28 of the draft EA regulations (MET, 2009 – utilised for guidance as well as it sets out a broader required definition), the components of this draft environmental management plan are set out below, with references to the relevant sections within this report:

- details and expertise of the EAP who prepared this report (Section 9 - MET, 2009);
- information on any proposed management or mitigation measures that will be taken to address the environmental impacts identified in Section 8 of the future EIA report through the anticipated stages of this activity (Section 4 - MET, 2009 and NGR, 2012b);
- a detailed description of the aspects of the activity that are covered by this DEMP (Section 3 - MET, 2009);
- identification of the persons who will be responsible for the implementation of the measures contemplated in Section 4 (Sections 5 - MET, 2009);
- time periods within which the measures contemplated in this DEMP must be implemented (Section 5 - MET, 2009); and
- proposed mechanisms for monitoring compliance with and performance assessment against the environmental management plan and reporting thereon (Section 5 - MET, 2009).

In addition to the requirements of Section 8(j) of the EIA regulations and Section 28 of the draft EA regulations, it is contemplated that the below components will become part of future environmental management plans. The additional components addressed in this DEMP are set out below, with references to the relevant sections within this report:

- measures for rehabilitation conforming to sustainable development, including, where appropriate, concurrent or progressive measures (Section 6);
- description of any modifications, remediation, control or stopping of any action, activity or process which causes pollution or environmental degradation and to remedy the cause of pollution or degradation and migration of pollutants (Section 4);
- compliance with any prescribed environmental management standards or practices (Section 2);
- description of compliance with any applicable provisions of Namibian legislation regarding closure, where applicable (Sections 6 and 7);
- compliance with any applicable provisions of Namibian legislation regarding financial provisions for rehabilitation, where applicable (Section 7);
- process for managing any environmental damage, pollution, pumping and treatment of extraneous water or ecological degradation as a result of this proposed activity (Section 2);

- an environmental awareness plan to inform employees of any environmental risk which may result from their work and how risks must be dealt with in order to avoid pollution or degradation of the environment (Section 8); and
- closure plans and objectives, where appropriate (Section 6).

This draft environmental management plan should be read in conjunction with the future EIA report on this activity, and in particular Sections 8 and 10, and Appendices B to H, and Appendix O of the future EIA report.

2. ENVIRONMENTAL MANAGEMENT SYSTEM

In Section 12 of the scoping report a brief introduction is given to the development of an environmental management system (EMS) in accordance with the ISO 14001:2004 standard (even if not accredited under the standard). ISO 14001 is the world's most recognised EMS framework, enabling organisations to demonstrate sound environmental management by minimising harmful effects on the environment and achieving continual improvement through a formal environmental management system, which is subject to external audit verification (Friend *et al.*, 2005). Implementation of such a system will involve, *inter alia*, the development, approval, authorisation and implementation of the following ISO 14001 aligned procedures (Friend *et al.*, 2005):

- *Environmental policy and management review procedure*;
- *Environmental management system planning procedure* (addressing environmental aspects; legal and other requirements; and objectives, targets and programmes);
- *Environmental management system implementation and operation procedure* (addressing resources, roles, responsibility and authority; competency, training and awareness; communication; documentation; control of documents; operational control; and emergency preparedness and response); and
- *Environmental management system checking procedure* (addressing monitoring and measurement; evaluation of compliance; nonconformity, corrective and preventive action; control of records; and internal audit).

Apart from an overall environmental management manual (acting as a roadmap to the complete EMS), the following documents will form part of the envisaged EMS for the proposed activity (Friend *et al.*, 2005):

- environmental aspects and impacts register,
- environmental legal register,
- environmental objectives, targets and programme,
- environmental training register,
- environmental complaints register, and
- EMS audit schedule.

An environmental management system contemplated above will principally be developed from the following sources:

- this draft environmental management plan,
- record of decision in the event of approval for this proposed activity, and
- mitigation measures and operational guidelines contained in Sections 8 and 10, and Appendices B to H, and Appendix O of the future EIA report.

Such an EMS will make use of processes, practices, techniques, materials, products, services or energy to avoid, reduce or control (separately or combined) the creation, emission or discharge of any type of pollutant or waste, in order to reduce adverse environmental impacts. It will also address the management of any environmental damage, pollution, pumping and treatment of extraneous water or ecological degradation as a result of this proposed activity.

3. MEDIA TYPES AND ENVIRONMENTAL ASPECTS

The physical, chemical and biological processes that shape the global environment are fundamental to an understanding of how significant environmental problems really are. The global environment (Figure 1) comprises four linked systems (Friend, 2002):

- **atmosphere:** gases/air enveloping the earth.
- **biosphere:** that part of the earth that comprises a variety of habitats, containing all living organisms, inclusive of animals, plants and micro-organisms.
- **geosphere:** represented by the internal geological processes of the earth and the external physical features that shape the world.
- **hydrosphere:** comprises all the saltwater (94 %) and freshwater (6 %) resources of the earth.

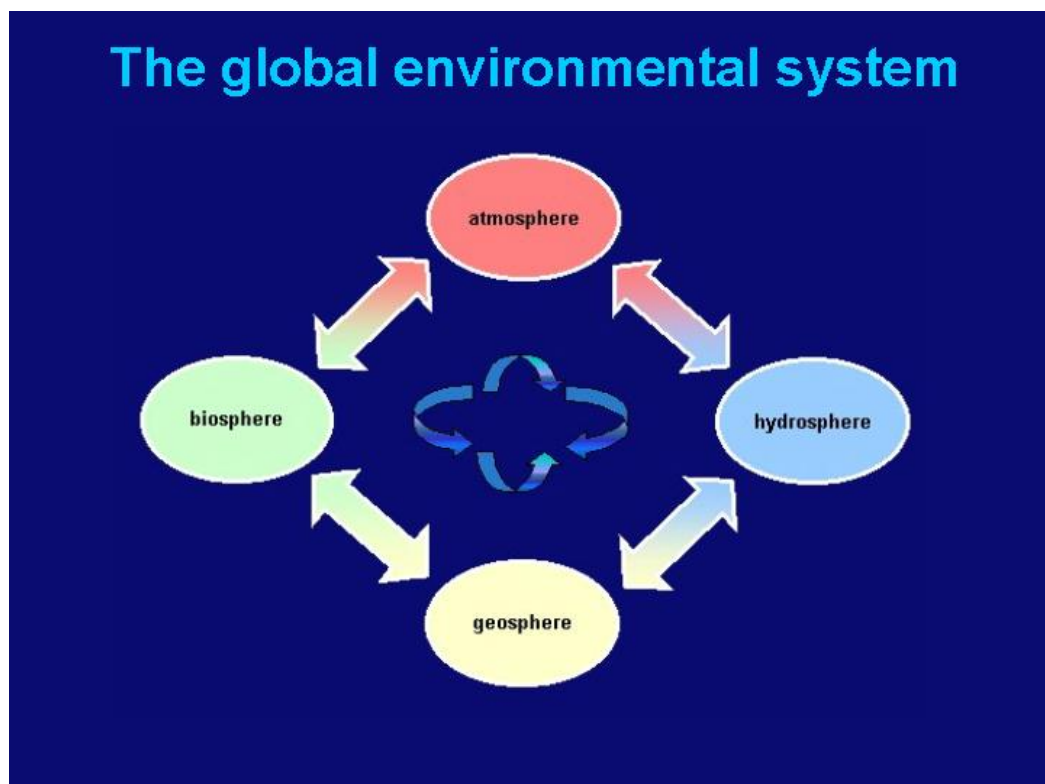


Figure 1 The global environmental system.

Each of these systems interacts with one another and the pollution sources, sinks and fluxes are controlled by specific processes that can be defined. As people have become aware of the more obvious attributes of environmental destruction, there has been a shift in priority towards monitoring and attempting to control the adverse effects of pollution. This resulted in, *inter alia*, the legal obligations enforced on companies to monitor their discharges and, regulatory authorities starting to compile comprehensive databases on the quality of the environment. (Friend, 2001)

Environmental damage to the above systems can be caused by both natural and man-made activities. The environmental effects of such activities are conveyed through the three principal media (IChemE, 1993):

- **Water** - discharges are dispersed down a concentration gradient in both freshwater and saltwater. The relative flowrates of pollutant and water, the degree of contamination and complexity of the ecosystem all have an effect on the rate of dispersal.
- **Air** - atmospheric emissions are dispersed and chemically converted to less damaging compounds. These processes are influenced by meteorological conditions, the pollutant source and the chemical and physical nature of the pollutant.
- **Land** - contaminated land can present particularly intractable problems. Ameliorating the adverse effects of pollution may only be possible by removing the contaminated material. Contaminated land can cause further problems with water courses and groundwater, thus extending the boundaries of pollution. Albeit that the third media is land, the actual field of study to address this media is normally referred to as waste management.

For the proposed mining activity the media aspects will be addressed according to water, air and land/waste issues. Based on the description of the proposed mining activity in Section 3 of the future EIA report and the environment in Section 5 of the future EIA report, the relevant aspects of this activity (classed in accordance to the three media types) are listed in Table 1.

Table 1 Aspects and media types.

Environmental aspect	Media
Geology – mining construction and operation	land
Land use capabilities - mining construction and operation	land
Hydrology - mining operation	water
Air – mining construction and operation and vehicle transport	air
Natural vegetation - mining construction and operation	land
Animal life - mining construction and operation	land
Sensitive landscapes and visual aspects - mining construction and operation	land
Noise - mining construction and operation and vehicle transport	air

4. IMPACTS AND MITIGATION

Environmental impacts are defined by DEAT (2006) as the changes in an environmental parameter that result from undertaking an activity. In order to address (mitigate) any impact on the environment, impacts must be evaluated according to acceptable criteria of assessment. The evaluation of impacts for this activity will be comprehensively dealt with in Section 7 of the future EIA report. These evaluations are summarised in Table 2, indicating relevant mitigation measures required to address impacts foreseen from this proposed activity.

From Section 7 in the future EIA report and as required by Section 28(b) of the draft EA regulations, project impacts are subdivided into the following three phases*, from which impacting activities can be identified (DEAT, 1998); :

- construction phase [CP] – all activities on and off site, including the transport of material,

- operational phase [OP] – all activities, including operation and maintenance of structures, and
- decommissioning/rehabilitation phase [DP] – any activity related to the physical dismantling of the structures and/or restoring of process/mining land to some degree of its former state.

* note that while planning and design is recognised as a project phase, it is for this project and generally for most projects, of no negative impact significance.

However, the nature of this project is such that construction, operation and rehabilitation will take place nearly simultaneously for this activity (refer Sections 3 and 8 of future EIA report). Thus impacts will not be described separately for these different phases (see also Section 7 of the future EIA report).

The mitigation measures recommended in Table 2 will address the requirements contemplated by the draft EIA regulations in describing briefly the modifications, remediation, control or stopping of any action, activity or process which causes pollution or environmental degradation and to remedy the cause of pollution or degradation and migration of pollutants. More detailed explanations and descriptions are provided in Section 8, and Appendices B to H, and Appendix O of the future EIA report.

Table 2 Environmental impacts and mitigation measures.

Environmental impact	Mitigation measures
Geology – mining operation, open pits and waste dumps.	Implementation of properly engineered backfilling, closure and rehabilitation of all mining activity. Use of waste material and tailings for backfilling. Use cover material for rehabilitation.
Land use capabilities – mining operation.	Implementation of properly engineered backfilling, closure and rehabilitation of all mining activity with simultaneous return to a nature conservancy environment.
Hydrology - surface and groundwater pollution.	Implementation of properly engineered water treatment plant/system for capture and effective treatment of any leachate/discharges from the activity. Spillage catchment and bunding areas.
Air - the mining operation and increased traffic lead to increased dust creation.	Implementation of mitigation and management measures as stipulated in Sections 8 and 10, and Appendix B of the future EIA report. Scheduled personnel travel and optimised deliveries. Wetting of roads. Dust suppression and extraction equipment. Regular maintenance of mine vehicles.
Natural vegetation - with required construction and operational activities of the proposed facility certain vegetation will have to be removed and disturbed.	Implementation of mitigation and management measures as stipulated in Sections 8 and 10, and Appendix D of the future EIA report. Demarcation. <i>In-situ</i> conservation. No off-road driving. Dust suppression and extraction equipment.
Animal life - with required construction and operational activities of the proposed facility certain fauna will be disturbed in their natural habitat.	Implementation of mitigation and management measures as stipulated in Sections 8 and 10, and Appendices E and F of the future EIA report. Fencing off mining site. Strict speed limits
Archaeological – various impacts.	Implementation of mitigation and management measures as stipulated in Sections 8 and 10, and Appendix G of the future EIA report. Demarcation.
Sensitive landscapes and visual aspects - impact on sensitive landscapes and visual impacts during construction and operational activities of the proposed activity.	Implementation of mitigation and management measures as stipulated in Sections 8 and 10 of the future EIA report.
Noise - adverse noise levels due to increased traffic and operational activities.	Implementation of mitigation and management measures as stipulated in Sections 8 and 10, and Appendix H of the future EIA report. Noise abatement process and equipment.
Radiation – various impacts.	Implementation of mitigation and management measures as stipulated in Sections 8 and 10, and Appendix O of the future EIA report.

5. RESPONSIBILITIES, MONITORING AND TIME FRAMES

It is a requirement of Section 28(d) of the draft EA regulations that persons who will be responsible for the implementation of the measures contemplated in Section 4 be identified and is presented in Table 3.

In terms of Section 28(f) proposed mechanisms for monitoring compliance with and performance assessment against the environmental management plan (EMP) and reporting thereon must be included in a draft EMP. Various monitoring programmes will be presented in Appendices B to H, and Appendix O of the future EIA report. EVT (2011) states that the objectives of monitoring are:

- to verify that an activity conforms to the required standards and site-specific authorisations,
- for the data that is collected from sampling to be confidently used in interpretations to determine the effects that the activity has on the environment,
- to determine whether the design and its implementation, as well as operational controls, are adequate,
- to facilitate meaningful quality assessment, risk assessment and implementation of suitable management measures if so required, and
- to provide information for future planning and prioritisation.

Section 28(e) of the draft EA regulations requires that time periods within which the measures contemplated in this DEMP must be implemented be included in the draft EMP. These, together with responsible people and monitoring actions are given in Table 3.

6. REHABILITATION AND CLOSURE

Due to the nature of the activity, rehabilitation will take place on a continuous basis during the operational time of the activity. Specific legislated procedures will be followed once the closure stage of the activity is reached.

7. LEGAL COMPLIANCE

As part of an EMS, as described in Section 2 of this draft environmental management plan, legal compliance with regard all relevant legislation will form an integral part of the overall EMS. This will include, *inter alia*, keeping of legal registers, adhering to permit/licence requirements and forwarding relevant required month reports to government departments. Compliance with regard any applicable provisions of Namibian legislation regarding financial provisions for rehabilitation, where applicable; will be addressed as prescribed by relevant government authority. Through liaison with the relevant government department the most appropriate financial medium will utilised to address this.

The legislation, policies and/or guidelines of any sphere of government that have been considered in the preparation of the scoping report, in terms of Section 26(e) of the draft EA regulations, will represent a starting point for the compilation of the legal register, as part of an overall EMS. Naturally more legislation is applicable once addressing operational issues at the proposed activity.

Table 3 Environmental impacts, monitoring actions, time frames and responsibilities.

Environmental impact	Mitigation measures	Monitoring actions and time frames	Responsibilities
Geology – mining operation, open pits and waste dumps.	See Table 2.	Periodic inspections.	Production supervisor. Plant foremen. Plant operators.
Land use capabilities – mining operation.	See Table 2.	Periodic inspections.	Environmental manager. All personnel.
Hydrology - surface and groundwater pollution.	See Table 2.	Periodic inspections and monitoring programmes.	Environmental manager. All personnel.
Air - the mining operation and increased traffic lead to increased dust creation.	See Table 2.	Periodic inspections and monitoring programmes.	Administration manager. Production supervisor. Plant operators. Environmental manager.
Natural vegetation - with required construction and operational activities of the proposed facility certain vegetation will have to be removed and disturbed.	See Table 2.	Periodic inspections.	Environmental manager. All personnel.
Animal life - with required construction and operational activities of the proposed facility certain fauna will be disturbed in their natural habitat.	See Table 2.	Periodic inspections.	Environmental manager. All personnel.
Archaeological – various impacts.	See Table 2.	Periodic inspections.	Environmental manager. All personnel.
Sensitive landscapes and visual aspects - impact on sensitive landscapes and visual impacts during construction and operational activities of the proposed activity.	See Table 2.	Periodic inspections.	Environmental manager. All personnel.
Noise - adverse noise levels due to increased traffic and operational activities.	See Table 2.	Periodic inspections and monitoring programmes.	Production supervisor. Plant foremen. Environmental manager.
Radiation – various impacts.	See Table 2.	Periodic inspections and monitoring programmes.	Radiologist. Environmental manager.

8. ENVIRONMENTAL AWARENESS

One of the preeminent requirements of an EMS is the setting up of an environmental awareness plan. Apart from informing employees of any environmental risk that may result from their work and how risks must be dealt with in order to avoid pollution or degradation of the environment, such a plan will contain, *inter alia*, the following elements:

- conducting an environmental training needs analysis at least once every two years (or earlier, if a management review indicates a need for such an analysis) to ascertain the level of environmental awareness of personnel;
- the identification of training needs and the frequency of testing competence and/or environmental awareness of employees, contractors and/or suppliers will be in accordance with guidelines set by the company;
- the attendance of an induction course on Environmental Awareness by all personnel, included in this prescribed induction process will be new employees, contractors and/or suppliers;

- making personnel aware of the importance of conformance with the company's environmental policy and procedures and with the requirements of the environmental management system; the significant environmental impacts, actual or potential, of their work activities and the environmental benefits of improved personal performance; their roles and responsibilities in achieving conformance with the environmental policy and procedures and with the requirements of the environmental management system, including emergency preparedness and response requirements; the potential consequences of departure from specified operating procedures; and the relevant procedure in the event of complaints received from external parties;
- ensuring that all personnel whose work may create a significant impact on the environment will receive and be competent on the basis of appropriate education, training and/or experience; and
- incorporation of required training of personnel in the environmental training register, and personal records of employees updated accordingly once specified training has been completed.

9. DETAILS OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER

In terms of Section 28(a) of the draft EA regulations it is a requirement to provide details of the environmental assessment practitioner (EAP) who prepared the report and the expertise of the EAP to compile an environmental management plan. Brief information in this regard is given below, with more detailed qualifications, experience and related publications available in Section 10 of the scoping report.

Name: John Francois Curling Friend
Education: BEng (Chem) Pretoria 1986
 MSc (Eng) Cape Town 1991
 Dip MktM IMM 1995

Affiliations: FSAIChE (Fellow, South African Institution of Chemical Engineers)
 FIChemE (Fellow, United Kingdom Institution of Chemical Engineers)
 FWISA (Fellow, Water Institute of South Africa)
 FIWM(SA) (Fellow, Institute of Waste Management of Southern Africa)

Registrations: PrEng (Professional Engineer, Engineering Council of South Africa)
 CEng (Chartered Engineer, United Kingdom Engineering Council)

Specialisation: Water management, treatment and recycling. Air quality and waste management. Environmental management, economics, assessments and auditing. Technical audits and effluent treatment. Specialised computer applications.

10. REFERENCES

- DEAT (DEPARTMENT OF ENVIRONMENTAL AFFAIRS AND TOURISM) (1998)** EIA regulations – implementation of sections 21, 22 and 26 of the Environment Conservation Act. *Department of Environmental Affairs and Tourism guideline document*, April 1998, Pretoria.
- DEAT (DEPARTMENT OF ENVIRONMENTAL AFFAIRS AND TOURISM) (2006)** Guideline 5: Assessment of alternatives and impacts in support of the environmental impact assessment regulations. *Department of Environmental Affairs and Tourism guideline document*, June 2006, Pretoria.
- EVT (ENVITECH SOLUTIONS PTY LTD) (2011)** Proposed Vlakfontein waste treatment and disposal facility. *Envitech Solutions design report*, June 2011, Johannesburg.
- FRIEND JFC (2001)** Environmental engineering. Lecture presented at the University of Pretoria as part of *Industrial Chemistry CIC310*, 22 March 2001, Pretoria.
- FRIEND JFC (2002)** Environmental awareness. Lecture presented at the University of Pretoria as part of *Environmental Management COM780*, 19 February 2002, Pretoria.
- FRIEND JFC, BORSHOFF J, PRETORIUS LE, MARSH D, SIEBERT T, SLABBERT J, VAN ROOYEN N, DU TOIT L, KVASNICKA J, SPEISER A, KINAHAN J, POTGIETER F, BUTCHER D and VAN RENSBURG J (2005)** Langer Heinrich Uranium Mine environmental assessment final report. *Softchem report*, No LHUEA2005.01, April 2005, Johannesburg.
- ICHEME (1993)** *Environmental Awareness*. Training package E02, Institute of Chemical Engineers, Rugby, England.
- MET (NAMIBIAN MINISTRY OF ENVIRONMENT AND TOURISM) (2009)** *Environmental assessment regulations*. *Ministry Environment and Tourism draft regulations*, April 2009, Windhoek.
- NGR (NAMIBIAN GOVERNMENT REGULATION) (2012a)** List of activities that may not be undertaken without environmental clearance certificate. Regulation 29, Government Gazette, 4878, 6 February 2012, Windhoek.
- NGR (NAMIBIAN GOVERNMENT REGULATION) (2012b)** Environmental impact assessment regulations. Regulation 30, Government Gazette, 4878, 6 February 2012, Windhoek.

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Please note that various references are made in the above draft environmental management plan to a future EIA report. This report will only be compiled once approval for the scoping report has been received by the relevant government authority, whereafter specialist studies will be completed for the inclusion into the next requirement in terms of the EIA regulations, namely the environmental impact assessment report. Normally the requirement for a draft environmental management plan is at the completion of the EIA report – for inclusion with the EIA report, and the number of references to such a future EIA report supports this view/practice.