



Certificate Of Registration

IN TERMS OF THE NATIONAL NUCLEAR REGULATOR ACT, 1999 (ACT NO. 47 OF 1999)

CERTIFICATE OF REGISTRATION NO. COR-18

(Variation 2)

Certificate of Registration No. COR-18, is hereby granted by the National Nuclear Regulator (hereinafter referred to as the NNR) in terms of section 22 of the above Act

to

GFI JOINT VENTURE HOLDINGS (PTY) LIMITED

Registration Number: 1998/023354/07

and

GOLDFIELDS OPERATIONS LIMITED

Registration Number: 1959/003209/06

Registered address: 3rd Floor
Block C
Pellmeadow Office Park
Civin Road 60
BEDFORDVIEW
2008

who jointly trade as **SOUTH DEEP JOINT VENTURE** (hereinafter referred to as the holder) and whose liability in terms of section 32 of the above Act for nuclear damage shall be jointly and several,

subject to the terms and conditions set out herein.

B Mkhize
CHIEF EXECUTIVE OFFICER

PART 1 AUTHORISATION CONDITIONS

1.1 SCOPE

- 1.1.1 The holder is authorised to carry out activities associated with radioactive material as set out, and on the site as identified, in section 2.1 of this Authorisation.

1.2 HAZARD ASSESSMENT

- 1.2.1 Assessments, approved by the NNR, shall be conducted by the holder in respect of all the operations and activities involving radioactive material as set out in section 2.1 of this Authorisation and which could give rise to a risk of nuclear damage. The assessments must identify and quantify all potential radiation hazards:

1.2.1.1 to persons employed at or visiting the site

and

1.2.1.2 to members of the public.

- 1.2.2 Details of any proposed modification to existing facilities or amendment of any procedure or construction of any facility, which may have an effect on the risk of nuclear damage and which has not been addressed by the hazard assessments identified in section 2.2 of this Authorisation, together with a quantitative assessment of its impact on the risk of nuclear damage, shall be submitted to the NNR by the holder. Such proposals shall be approved by the NNR before being implemented.

1.3 OPERATIONAL LIMITATIONS

- 1.3.1 The limitations pertaining to normal operations and listed in section 2.3 of this Authorisation shall be adhered to.
- 1.3.2 No activities involving the demolition or disposal of any plant used for the processing of radioactive material shall be undertaken prior to approval by the NNR of the radiation hazard assessment and the radiation protection programme for such activities.
- 1.3.3 No maintenance activities on any plant used for the processing of radioactive material, which may give rise to significant occupational exposure of personnel involved, shall be undertaken prior to the approval by the NNR of the radiation hazard assessment and the radiation protection programme of such activity.

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1.4 OPERATIONAL RADIATION PROTECTION

1.4.1 WORKFORCE

1.4.1.1 Based on the results of the assessments referred to in clause 1.2.1, programmes embodying all aspects as required by NNR documents RD-006: "Requirements for the Control of Radiation Hazards: Mining and Minerals Processing", and RD-011: "Requirements for Medical Surveillance and Control of Persons Occupationally Exposed to Radiation: Mining and Minerals Processing", in the revisions specified in section 2.4.1, must be established and be submitted to the NNR for approval. These programmes must ensure and demonstrate that radiation doses to persons employed at the site and to visitors to the site are in compliance with the radiation dose limitation system set down in the NNR document RD-010: "Requirements for Radiation Dose Limitation: Mining and Minerals Processing", in the revision specified in section 2.4.1 of this Authorisation. The programmes, as approved by the NNR, shall be implemented by the holder.

1.4.1.2 The provisions contained in the revision of documents listed in section 2.4.1 of this Authorisation and submitted in terms of condition 1.4.1.1 of this Authorisation, shall be adhered to.

1.4.2 PUBLIC

1.4.2.1 Based on the results of the assessments referred to in clause 1.2.1, programmes embodying all aspects as required by NNR document RD-007: "Requirements for Control over Radioactive Effluent Discharges and Environmental Surveillance: Mining and Minerals Processing", in the revision specified in section 2.4.2 of this Authorisation, must be established and be submitted to the NNR for approval. These must ensure and demonstrate that radiation doses to members of the public are in compliance with the radiation dose limitation system set down in the NNR document RD-010: "Requirements for Radiation Dose Limitation: Mining and Minerals Processing", in the revision specified in section 2.4.1 of this Authorisation. The programmes, as approved by the NNR, shall be implemented by the holder.

1.4.2.2 The provisions contained in the revision of documents listed in section 2.4.2 of this Authorisation and submitted in terms of condition 1.4.2.1 of this Authorisation, shall be adhered to.

1.5 RADIOACTIVE WASTE

1.5.1 A radioactive waste management programme embodying all the requirements contained in the NNR document RD-004: "Requirements for Radioactive Waste Management: Mining and Minerals Processing", in the revision specified in section 2.5 of this Authorisation, shall be established and submitted to the NNR for approval.

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- 1.5.2 The provisions contained in the revision of documents listed in section 2.5 of this Authorisation and submitted in terms of condition 1.5.1 of this Authorisation, shall be adhered to.

1.6 TRANSPORTATION

- 1.6.1 Transportation of radioactive material or of any equipment or objects contaminated with radioactive material off the site or on roads which are accessible to the public must be carried out in terms of the provisions of the Regulations for the Safe Transport of Radioactive Material of the International Atomic Energy Agency in the revision specified in section 2.6 of this Authorization.

For the purpose of compliance with this condition the National Nuclear Regulator is the National Competent Authority.

- 1.6.2 An annual report shall be submitted to the NNR detailing the number of consignments made during the preceding year, the radioactive content per consignment, the nature of the packaging and the names of the consignees.
- 1.6.3 The provisions contained in the revision of documents listed in section 2.6 of this Authorisation and submitted with regard to condition 1.6.1 of this Authorisation, shall be adhered to.

1.7 PHYSICAL SECURITY

- 1.7.1 A physical security system, approved by the NNR, which will prevent unauthorized access to areas containing radioactive material and will prevent the unauthorized removal of such material, shall be in place.
- 1.7.2 The provisions contained in the revision of documents listed in section 2.7 of this Authorisation and submitted in terms of condition 1.7.1 of this Authorisation, shall be adhered to.

1.8 OCCURRENCES

- 1.8.1 An occurrence reporting mechanism, approved by the NNR shall be established which will ensure that occurrences, including incidents and accidents as defined in the National Nuclear Regulator Act (Act No 47 of 1999), and as identified in the NNR document RD-012: "Notification Requirements for Occurrences: Mining and Minerals Processing", in the revision specified in section 2.8 of this Authorisation, are reported to the NNR by the holder in accordance with the provisions of that document and as specified by NNR document RD-009: "Verbal Emergency Communication with the National Nuclear Regulator: Mining and Minerals Processing", in the revision specified in section 2.8 of this Authorisation.
- 1.8.2 An emergency plan, approved by the NNR, shall be established to make provision for any occurrence involving radioactive material which gives rise to, or has the potential to give rise to, an unplanned exposure to radiation in excess of the respective annual effective dose limits for persons employed on the site,

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visitors to the site, and members of the public. This plan shall comply with the requirements contained in NNR document RD-008: "Requirements for Emergency Preparedness: Mining and Minerals Processing", in the revision specified in section 2.8 of this Authorisation.

- 1.8.3 The provisions contained in the revision of documents listed in section 2.8 of this Authorisation and submitted in terms of condition 1.8.1 and 1.8.2, shall be adhered to.

1.9 QUALITY MANAGEMENT

- 1.9.1 All activities carried out within the scope of this Authorisation shall be subject to the requirements contained in the NNR document RD-005: "Quality Management Requirements for Activities Involving Radioactive Material: Mining and Minerals Processing", in the revision specified in section 2.9 of this Authorisation.

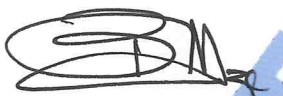
- 1.9.2 The provisions contained in the revision of documents listed in section 2.9 of this Authorisation and submitted in terms of condition 1.9.1 of this Authorisation, shall be adhered to.

1.10 SCHEDULE

- 1.10.1 The programme, scheduling the achievement of compliance with the conditions of this Authorisation, as set out in section 2.10 shall be adhered to.

This Certificate of Registration is effective from the date of issue.

Issued at Centurion on the 24th day of February 2011.



B Mkhize
CHIEF EXECUTIVE OFFICER

**AUTHORISATION CONDITIONS
PART 2: SPECIFIC CONDITIONS****CONTENTS**

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DOCUMENT CONTROL TABLE
8 February 2011

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2.8	11	X												
2.9	12	X												
2.10	13	X												

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SECTION 2.1: SCOPE**2.1.1 The Authorised site is:**

The surface areas enclosed by a yellow boundary on the map headed "Placer Dome Western Areas Joint Venture, South Deep", Scale 1:20000 dated 19 January 2005 (Ref No 39A0273 on 39LCR0031) annexed to Controlled Copy 1 and Controlled Copy NNR of this authorisation.

and

The underground area demarcated with the green Mining Lease boundary line, on the diagram headed " Placer Dome Western Areas Joint Venture, South Deep", Scale 1:20000 dated 22 November 2004 (Ref No 39A0273 on 39LCR0031) annexed to Controlled Copy 1 and Controlled Copy NNR of this authorisation.

The authorized site is located at:
Farm Modderfontein
WESTONARIA
1780

2.1.2 Subject to the provisions of section 2.3, the activities that may be undertaken under the authority of this authorization, are restricted to the following:

- Underground mining and processing of ore body containing uranium isotopes and handling of NORM waste and associated products.

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SECTION 2.2: HAZARD ASSESSMENT

- | | | | |
|-------|---------------|---------|---|
| 2.2.1 | RAD/R/9416 | (Rev 0) | Radialogical Screening Survey at the South Gold Plant of Western Areas Gold Mining Co. Ltd. |
| 2.2.2 | 39A0010 | (Rev 0) | Assessment of the Radiological Hazards Associated with the Underground Operations at Western Areas Gold Mining Company Limited. |
| 2.2.3 | COR18ACR0036 | (Rev 2) | Worker Safety Assessment. |
| 2.2.4 | 39A0297 | (Rev 1) | South Deep Gold Plant Demolition Procedure. |
| 2.2.5 | COR-18ACR0036 | (Rev 2) | Worker Safety Assessment. |

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SECTION 2.3: OPERATIONAL LIMITATIONS

- 2.3.1 Radioactive waste with a specific alpha (U-238, U-234, Th-230, Ra-226, Po-210, Th-232 and Th-228) activity exceeding 1000 Bq/g shall be stored in a facility approved by the NNR.

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SECTION 2.4.1: RADIATION PROTECTION PROGRAMME - WORKFORCE

- | | | | |
|---------|--------------|---------|--|
| 2.4.1.1 | RD-006 | (Rev 1) | Requirements for the Control of Radiation Hazards: Mining and Minerals Processing. |
| 2.4.1.2 | RD-010 | (Rev 0) | Requirements for Radiation Dose Limitation Mining and Minerals Processing. |
| 2.4.1.3 | RD-011 | (Rev 0) | Requirements for Medical Surveillance and Control of Persons Occupationally Exposed to Radiation: Mining and Minerals Processing. |
| 2.4.1.4 | 39A0098 | (Rev 0) | Medical Surveillance and Control Programme for Persons Occupationally Exposed to Radiation at Western Areas Gold Mining Company Limited. |
| 2.4.1.5 | RADPROCFUN | (Rev 3) | Radiation Protection Function. |
| 2.4.1.6 | COR18ACR0037 | (Rev 3) | Radiation Protection Programme – Workforce. |



SECTION 2.4.2: RADIATION PROTECTION PROGRAMME - PUBLIC

2.4.2.1 RD-007

(Rev 0)

Requirements for the Control over
Radioactive Effluent Discharges and
Environmental Surveillance: Mining and
Minerals Processing.

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SECTION 2.5: RADIOACTIVE WASTE

- | | | | |
|-------|-------------|---------|---|
| 2.5.1 | RD-004 | (Rev 0) | Requirements for Radioactive Waste Management: Mining and Minerals Processing. |
| 2.5.2 | 39A0018.DOC | (Rev 0) | Procedure for Controlling Radioactively Contaminated Items. |
| 2.5.3 | 39A0078 | (Rev 0) | Procedure for Controlling Radioactively Contaminated Scrap. |
| 2.5.4 | SRP | (Rev 3) | Procedure for the Release of Scrap Metal from Mining and Minerals Processing Facilities at Placer Dome Western Areas Joint Venture. |
| 2.5.5 | 39LCR0034 | (Rev 0) | Radioactive Waste Management Programme for South Deep Mine. |

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SECTION 2.6: TRANSPORTATION

2.6.1 TS-R-1 (ST-1, Revised)

Regulations for the Safe Transport of
Radioactive Material 1996 Edition (Revised).

2.6.2 JFB/HJF/radtrans- (Rev 0)
39A0010

Standard Procedure on the Transport of
Radioactive Material.



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SECTION 2.7: PHYSICAL SECURITY

2.7.1 PHYSSECUR (Rev 1) Physical Security Procedure at WAGM.

2.7.2 PS (Rev 2) Procedure for physical security system

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SECTION 2.8: OCCURRENCES

- | | | | |
|-------|-----------|---------|---|
| 2.8.1 | RD-012 | (Rev 0) | Notification Requirements for Occurrences: Mining and Minerals Processing. |
| 2.8.2 | RD-009 | (Rev 0) | Verbal Emergency Communication with the National Nuclear Regulator: Mining and Minerals Processing. |
| 2.8.3 | RD-008 | (Rev 0) | Requirements for Emergency Preparedness: Mining and Minerals Processing. |
| 2.8.4 | OCCREPORT | (Rev2) | Procedure for Reporting of Occurrences at WAGM. |
| 2.8.5 | OCCREPORT | (Rev 3) | Procedure for Reporting of Occurrences at Western Areas Gold Mining Company. |



SECTION 2.9: QUALITY MANAGEMENT

- 2.9.1 RD-005 (Rev 0) Quality Management Requirements for Activities Involving Radioactive Material: Mining and Minerals Processing.
- 2.9.2 39A0277 (Rev 4) Quality Management Programme for South Deep Mine.



SECTION 2.10: SCHEDULE

2.10.1 SCHED 2005 (Rev 7)

Schedule for Placer Dome Western Areas
Joint Venture (PDWAJV)

BU.

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Regulation of Natural Sources Department

Record of Decision

LB/35/6/11/18

DATE: 10 February 2011

CHANGE OF NAMES OF A NUCLEAR AUTHORISATION HOLDER

1. INTRODUCTION

The holder of nuclear authorization (COR-18) issued in terms of the National Nuclear Regulator Act, No. 47 of 1999 is authorised to mine underground and process ore body containing uranium isotopes, handle radioactive waste and its associated products.

On 13th June 2008, the holder submitted a notification letter indicating the change of name of PLACER DOME WESTERN AREAS JOINT VENTURE. A list of previous names and joint ventures referring to COR-18 were indicated on the letter. During the review, it was understood that the holder requested the company name to be GFI JOINT VENTURE HOLDINGS (PTY) LIMITED. A Certificate of Registration (COR-18) was issued with that name however, the holder did not accept the certificate and indicated that the Joint Venture which is an unincorporated joint venture is comprised of two (2) companies, namely GFI Joint Venture Holdings (Pty) Limited Registration No: 1998/023354/07 and Gold Fields Operations Limited Registration No: 1959/003209/06 and collectively called SOUTH DEEP JOINT VENTURE.

2. TECHNICAL FINDINGS FROM THE INSPECTION

2.1 GENERAL COMMENTS

- The holder is currently using Certificate of Registration issued under Placer Dome Western Areas Joint Venture.

2.2 SPECIFIC COMMENTS

- The scope and radiation protection programme of the holder has not changed.

3. KEY FACTORS THAT LED TO THE DECISION


The following key factors were considered important to the outcome of the decision:

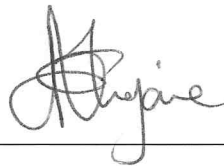
- The scope and radiation protection programme of the facility has not changed.
- The COR copies currently displayed at the facility are incorrect.
- There will be no financial implication regarding the fees payable to the NNR.

4. CONCLUSION AND RECOMMENDATIONS

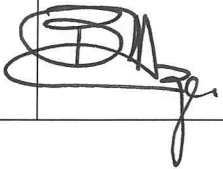
Based on the key factors mentioned in section 3 above, it is recommended that approval be granted and the above-mentioned Certificate of Registration be amended appropriately.

5. QUALITY ASSURANCE TRAIL

THIS ROD WAS PREPARED BY:			
Name	Designation	Signature	Date
Ms. M Maine	Regulatory officer: RENS		10/02/2011

THIS ROD WAS REVIEWED BY			
1. Name	Designation	Signature	Date
Mr. E P Mohajane	Process Co-ordinator: Authorisation		11/02/2011
<u>Remark/Comment:</u>			
2. Name	Designation	Signature	Date

Mr. T Tselane	Manager: RENS		17/02/2011
<u>Remark/Comment:</u> <p style="text-align: center;">Approval Recommended!</p>			
3. Name	Designation	Signature	Date
Mr. M Msebenzi	CTO		23/02/11
<u>Remark/Comment:</u>			
4. Name	Designation	Signature	Date
Mr. G Nhlapo	Legal Advisor		18/02/2011
<u>Remark/Comment:</u>			

THIS DOCUMENT WAS APPROVED BY			
5. Name	Designation	Signature	Date
Adv. B M Mkhize	NNR CEO		24/02/2011