



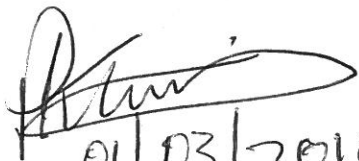
GOLD FIELDS

SOUTH DEEP GOLD MINE
(South Deep Joint Venture)*

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01/03/2010

Monday, 01 March 2010

Acting Regional Head
Department of Water Affairs
Private Bag X995
Pretoria
0001
Attention Mr P Khwinana

Dear Sir,

APPLICATION FOR EXEMPTION IN TERMS OF GNR 704 OF JUNE 1999:

SOUTH DEEP GOLD MINE

South Deep Gold Mine, is an incorporated joint venture between GFI Joint Venture Holdings (Pty) Limited and Gold Fields operations Limited (subsidiaries of GFI Mining South Africa (Pty) Ltd ("Gold Fields") hereby wishes to apply for exemption in terms of Section 3 of GNR 704 of June 1999 (Regulations on use of water for mining and related activities aimed at the protection of water resources) ("GNR 704").

BACKGROUND

1. South Deep Mine is engaged in deep gold mining currently mining at depths of approximately 3 kilometers underground; and is authorized to mine gold and associated minerals in terms of a mining right issued under the Mineral Resources and Petroleum Development Act. Mining activities within and around an area known as Kloof Gold Mine commenced in the 1930s. Water is and has always been an integral part of mining processes. Some mining infrastructure was originally placed on locations which run horizontal, vertical, over or under some water courses. This was done at the time where there was little or no regulation over water management issues. Some of the said activities were previously tacitly and/ or expressly allowed, permitted and/or licensed.
2. Our mining activities precede both GNR 287 of 20 February 1976 (under the Water Act of 1956) and GNR 704 which both came into effect decades after mining activities had already commenced. It is therefore arguable whether the requirements of GNR 704 actually do apply to the mining activities which were already in existence long before it came into effect and/or were already licensed in terms of the water licenses issued under the Water Act of 1956 ("old Water Act"). In fact, in terms of Operational Guideline M61 2nd Edition of 2000 published by the Department of Water Affairs and Forestry ("DWAF"), the

South Deep Joint Venture Board Members: Messrs. SJR Allan, PH Henning, NJ Holland, S Tainton
South Deep Management Committee: Messrs. MK Morcombe, KH Matthysen, D Geyser, GS Bezuidenhout, MJ Cameron, BG Sebola, WC Moses, SA Joseph, E T Matlapeng

* An unincorporated joint venture between GFI Joint Venture Holdings (Pty) Ltd (Reg. No. 1998/023354/07) and Gold Fields Operations Limited (Reg. No. 1959/003209/06), both wholly-owned subsidiaries of GFI Mining South Africa (Proprietary) Limited ("GFIMSA")

department concedes that *"these regulations may not legally be applied retrospectively; however, they lay down certain minimum requirements that should be complied with . . . for existing activities the emphasis should be placed on progressive improvement (rather than total prevention) within a time frame stipulated by DWAF . . ."*

3. Notwithstanding the fact that GNR 704 does not legally apply to our activities already existing at the time of promulgation, Gold Fields took a proactive business decision to assess those existing activities as if GNR 704 was applicable. Gold Fields embarked on both an internal and an external independent assessment, interrogating its compliance with all applicable environmental (including water) legislation.
4. As a result of such assessments, activities were identified and grouped as (a) compliant; (b) non-complaint (but could reasonably and practically be addressed); (c) not compliant (but unreasonable and/or impractical to comply with) given our deep gold mining and associated activities. Gold Fields implemented systems and processes to ensure that activities which would be non-compliant with GNR 704 (if retrospectively applied to those activities) do comply with GNR 704. The Mine has spent a considerable amount of money and resources towards ensuring progressive compliance with the requirements of GNR 704.
5. The purpose of this application is to deal with those activities which could be deemed to be still non-compliant for which we seek an exemption.

APPLICATION

1. Section 3 of GNR 704 provides that *"the Minister of Water Affairs may in writing authorise an exemption from the requirements of regulations 4, 5, 6, 7, 8, 10 or 11 on his or her own initiative or on application, subject to such conditions as the Minister may determine"*.
2. Gold Fields therefore hereby, in terms of the aforesaid section applies for exemption in respect of activities as listed in **Annexure B** attached hereto. (Please refer to the attached **Annexure B** in respect of the Exemptions sought). The basis for which exemption is sought in respect of other activities is for DWA to grant us a reasonable period of time to enable us to comply with GNR 704.
3. We further attach **Annexure A** which indicates the activities which are already in progress to ensure compliance. Kindly note that some plans of actions are detailed in our Environmental Management Programmes (EMPRs).

CONCLUSION

In conclusion, we would like to emphasize the fact that Gold Fields is fully committed to environmental excellence and the maintenance of sound relationships with all its stakeholders. To date our relationship with the DWA has been positive, open and transparent, which we hope to further enhance in future. This application serves as an attempt to do so and to create a firm base upon which future water related applications will be judged. It is also our hope that this approach will assist the DWA in the implementation of its regulatory function going forward.

If there are any further queries in this regard please feel free to contact me directly.

Yours in Health, Safety and Environment

A handwritten signature in black ink, appearing to read 'M. Morcombe'. The signature is fluid and cursive, with a large, sweeping 'M' and a long, horizontal tail stroke.

M MORCOMBE
VICE PRESIDENT AND HEAD OF OPERATIONS – SOUTH DEEP

ANNEXURE A: GNR 704 - ACTION PLAN

SOUTH DEEP GOLD MINE

No	GN704 CONDITION	SITUATION ANALYSIS	MITIGATION IN PROGRESS
4(a)	No person in control of a mine or activity may locate or place any residue deposit, dam, reservoir, together with any associated structure or any other facility within the 1:100 year flood-line or within a horizontal distance of 100 metres from any watercourse or estuary, borehole or well, excluding boreholes or wells drilled specifically to monitor the pollution of groundwater, or on water-logged ground, or on ground likely to become water-logged, undermined, unstable or cracked	- The South Shaft rock dump for waste rock had been placed next to the Leuspruit. The southern corner of the footprint is within the 1:100 year flood-line.	- South Deep is in a process of crushing the rock dump, and therefore reducing the footprint. - The footprint will be rehabilitated once crushing is finalised
6(a)	Every person in control of a mine or activity must confine any unpolluted water to a clean water system, away from any dirty area	- South Deep's infrastructure was constructed in the early 1960's. The design did not take into account proper clean/dirty water separation as it was not a requirement - Incidentally, the design partially catered for separation of clean/dirty water - Subsequent changes to the infrastructure have improved the clean/dirty water separation - The current status is such that 100 % clean/dirty water separation is not possible due to design constraints and	- The situation was assessed and action plans will be developed to address the issues. The action plans entail the construction of a stormwater system around the South Shaft rock dump. - Completion of the project is scheduled for June 2011.

		infrastructural spatial distribution (layout) - However, every effort will be made to improve the situation where practicable. The current mitigation that has been planned to improve the situation has been captured in the right-hand column.	
6(b)	Every person in control of a mine or activity must design, construct, maintain and operate any clean water system at the mine or activity so that it is not likely to spill into any dirty water system more than once in 50 years;	- South Deep infrastructure was constructed in the early 1960's. The design did not take into account proper clean/dirty water separation as it was not a requirement - Incidentally, the design partially catered for separation of clean/dirty water - Subsequent changes to the infrastructure have improved the clean/dirty water separation - Clean/dirty water systems at Twin Shafts were designed based on GN704. - Pumps and cables were continuously stolen at the Twin Shaft Pollution Control dam, which resulted in the required freeboard not been maintained and sporadic overflow. The pollution control dam collects storm water from the Twin Shafts – Shaft area. During the independent assessment, no systems were in place to pump the water back into either the mine- or metallurgical water system. Pumps and a pipeline have since been installed.	- South Deep is in a process of upgrading its clean water separation system at South Shaft,. - The pumps and cables were replaced and pipelines installed to pump water not only back into the mine water process, but also into the metallurgical process to ensure optimal use of water. The process was completed, but due to the overall water management system changes are that the dam might still overflow until the entire system is upgraded. When it overflows samples are taken and the results indicate that the water quality is within limits.
6(c)	Every person in control of a mine	- South Deep's infrastructure was constructed in the early 1960's. The	- A study is currently being conducted to determine if seepage towards the western

	or activity must collect the water arising within any dirty area, including water seeping from mining operations, outcrops or any other activity, into a dirty water system;	design did not take into account proper clean/dirty water separation as it was not a requirement - Incidentally, the design partially catered for separation of clean/dirty water - Subsequent changes to the infrastructure have improved the clean/dirty water separation - A seepage interception system exists directly below the Return Water Dam. The interception system is right below the return water dam at the eastern tailings dam at South Shaft, and collects any seepage from the eastern side of the tailings complex.	side of the tailings complex has an impact on the environment. Based on the outcome of the study appropriate remediation and collection measures will be put in place.
6(e)	Every person in control of a mine or activity must design, construct, maintain and operate any dam or tailings dam that forms part of a dirty water system to have a minimum freeboard of 0.8 metres above full supply level, unless otherwise specified in terms of Chapter 12 of the Act;	- South Deep's infrastructure was constructed in the early 1960's. The design did not take into account proper clean/dirty water separation as it was not a requirement - The old thickeners (5 dams), that used to be part of the now demolished Gold Plant at South Shaft, are used as storage dams to increase capacity to ensure a freeboard of 0.8 metres.	- Current storage dams (referred to as the 'Old Thickeners') were cleaned to ensure sufficient storage capacity. This will ensure that the return water dam will not overflow and the required freeboard maintained at the return water dam.
7(a)	Every person in control of a mine or activity must take reasonable measures to prevent water containing waste or any substance which causes or is likely to cause	- South Deep's infrastructure was constructed in the early 1960's. The design did not take into account proper clean/dirty water separation as it was not a requirement	- A study is currently being conducted to determine if seepage towards the western side of the tailings complex has an impact on the environment. Based on the outcome of the study appropriate remediation and collection measures will be put in place.

	pollution of a water resource from entering any water resource, either by natural flow or by seepage, and must retain or collect such substance or water containing waste for use, re-use, evaporation or for purification and disposal in terms of the Act;	-	A seepage interception system exists directly below the Return Water Dam that collects any seepage originating from the Return Water Dam and 'Eastern' Tailings Dam (Dams 1 & 2), which is returned into the Return Water Dam.	
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ANNEXURE B: GNR 704 – EXEMPTIONS

SOUTH DEEP GOLD MINE

No	EXEMPTION SOUGHT	CURRENT ACTIVITY	REASON FOR EXEMPTION
4(b)	No person in control of a mine or activity may except in relation to a matter contemplated in regulation 10, carry on any underground or opencast mining, prospecting or any other operation or activity under or within the 1:50 year flood-line or within a horizontal distance of 100 metres from any watercourse or estuary, whichever is the greatest;	The natural watercourses, Leeuspruit and Kariegaspruit, exist on the surface topography of the mining lease area.	Mining activities take place at depths below these watercourses. It is not practical, apart from cessation on mining to comply. The underground mining activities do not intrude the surface water courses. Exemption is sought.
4(c)	No person in control of a mine or activity may place or dispose of any residue or substance which causes or is likely to cause pollution of a water resource, in the workings of any underground or opencast mine excavation, prospecting diggings, pit or any other excavation	The Mine deploys backfill in the underground voids.	This adds to improve stability and safety. It also assists in the underground ventilation control. Phase 1 and phase 2 studies on acid mine potential have been conducted on tailings. The underground voids are also taken into cognizance in Mine and regional closure strategies. Exemption is sought for placement of backfill
5	No person in control of a mine or activity may use any residue or substance which causes or is likely to cause pollution of a water resource for the construction of any dam or other impoundment or any embankment, road or railway, or for any other purpose which is likely to cause pollution of a water resource	Waste rock is used within the mine boundary for bunding of pipelines, embankments at railway lines and roads (Haulage roads).	It is believed that it has not adverse effect on any public streams, and therefore exemption is sought.



water & forestry

Department:
Water Affairs and Forestry
REPUBLIC OF SOUTH AFRICA

Tel: 012 392 1484, Fax: (012) 392 1359, www.dwaf.gov.za

FAX COVER SHEET

DATE:

30 September 2010

TO:	Delareze		
FAX:	27 86 626 0528		
FROM:	Tshireletso		
TEL:	012 392 1484	ROOM NO:	
FAX:	012 392 1359		
E-MAIL:			
NO PAGES:	1 excl cover		
SUBJECT:	DWAF's response to exemption for all goldfields mines		
MESSAGE:	Hi. Phillip asked me to fax through the letter for the exemption application for the mines. Please let me know when you get this.		

Signature

Departement van Waterwese en Bosbou • Mhasho wa zwa Madi na Vhusimamadaka • uMnyango wazaManzi namaHlathi • Ntzwana ya ta Mati na Swihlahla
Lefapha la Ditaba tsa Metsi le Meru • Kgoro ya Merero ya Meetse le Dithokgwa • Lefapha la Merero ya Metsi le Dikgwa • LiTiko leTemanti namaHlathi
iSebe lezaManzi naMaHlathi • UmNyango weeNdaba zaManzi namaHlathi

**DEPARTMENT OF WATER AFFAIRS****OFFICE OF THE:**

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T. Komane

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16/2/7/C231/C41

Vice President and Head of Operations
Goldfields (Kloof Gold Mine)
P.O. Box 190
Westonaria
1780

ATTENTION: P. Jacobs

RE: APPLICATION FOR EXEMPTION IN TERMS OF GN704 OF JUNE 1999: GOLDFIELDS GOLD MINES

The meeting held on the 02 September 2010 between the Department of Water Affairs and Mr. Jacobs of Gold Fields with regards to the correspondence received by Gold Fields from this Department bears reference.

The activities that may be granted exemption from the GN704 must have been occurring or initiated at or pre the time the regulation came into effect. The activities undertaken by Kloof, Driefontein and South Deep Gold mines, detailed in your letter have been noted to have been in existence prior the regulation. Therefore the GN704 does not apply to them. The Department therefore recognises the activities detailed in your exemption applications as pre existing activities and therefore legal. The Department also applauds and recognises the mitigation steps currently being taken by the mines and requires the mines to continue practising responsible water management in line with the guidance provided by this Department.

However, this does not exempt the mine from complying with the National Water Act, specifically Section 19 and other guidelines of the Department. It is therefore required that the Kloof, Driefontein and South Deep Gold Mines ensure that the infrastructure currently in place does not pollute the surrounding water resources, and that the Departmental Best Practise Guidelines for (i) integrated mine water management, (ii) pollution prevention and minimisation of impacts, and (iii) water management for underground mining are adhered to. Furthermore, the mine is required to report any planned upgrades or changes to the existing infrastructure to this Department prior to commencement.

It must also be noted that this communiqué supersedes the correspondence dated 24 August 2010; the conditions stipulated in this communiqué must be strictly adhered but does not exclude the condition of the water use license (when issued)

Yours Faithfully

Regional Head:

Date: 27 September 2010