



## THE HUTTI GOLD MINES COMPANY LIMITED

(A Government of Karnataka Enterprise)

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CIN NO. U85110KA1947SGC001321

No. HGML/MET/ENV/UTI/MoEF&CC/2017-18/

Date: 08/04/2017

The Additional Principal Chief Conservator of Forest (Centre)  
Ministry of Environment Forest & Climate Change,  
Regional Office (Southern Zone), Kendriya Sadan,  
IV Floor, E & F wings, 17<sup>th</sup> Main Road,  
II Block, Koramangala,  
Bangalore -560 034

Sir,

**Sub: Compliance for the MoEF conditions for six monthly (October 2016 to March 2017), Uti Gold Mine of M/s. The Hutti Gold Mines Co Ltd. Raichur (Dist), Karnataka- reg**

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With reference to the above cited subject, please find enclosed six monthly compliance report (October 2016 to March 2017) of Uti Gold Mines, as per the stipulated specific conditions of the Environmental Clearance (**Annex-I**).

Submitted for your kind perusal.

Thanking You,

Yours faithfully

General Manager (Co-ordination)  
18/4

Encl: As stated.

**Expansion in production of gold ore from 0.078 MTPA to 0.15 MTPA (OC) to 0.10 MTPA (UG) in Uti Opencast & underground Gold Mine of M/s. Hutti Gold Mines Co. Ltd., near village Uti, Tehsil Deodurg, District Raichur, Karnataka.**

***No.J-11015/12/2003.IA.II(M)***

The total lease area consists of 47.96 Ha, which is a wasteland. There are no National Parks, Sanctuary, and Tiger Reserves within 10 km of the project site. The project does not involve displacement of people. Of the total lease area of 47.96 Ha, 3.62 Ha is active mining area, 6.25 Ha is for OB dump, 5.09 Ha is for mineral storage, 3.0 Ha is for infrastructure and 30.0Ha for green belt. Mining will be carried out by opencast method until the 6<sup>th</sup> year (year 2006) and thereafter by underground method. Targeted annual production capacity of the mine will increase from 0.079 million tonnes per annum (MTPA) to 0.15 MTPA (500 TPD) in opencast operations and decline to 0.10 MTPA (250 TPD) of gold ore after changing to UG operations.

## COMPLIANCE REPORT

Oct 2016 - Mar 2017

Project: Expansion in production of Gold ore from 0.078 MTPA to 0.15 MTPA (OC) to 0.10 MTPA (UG) in Uti Opencast & Underground Gold Project of M/s The Hutti Gold Mines Co Ltd., near village Uti, Tehsil Deodurg, District Raichur, Karnataka.

Ref: MoEF cl. Lr.No. J-11015/ 12 / 2003- IA.II (M) dt.17.11.2004

Sl No	Specific Conditions Stipulated	Compliance Status
1	The method of mining shall change from opencast to underground from 6 <sup>th</sup> year of operation when the rated capacity shall decrease from 0.15 MTPA to 0.10 MTPA	To Change from opencast mining to underground mining, The rated capacity is fixed to 0.10 MTPA
2	The ultimate working depth of opencast operations shall not exceed 56 m bgl.	The ultimate working depth of opencast is reached to 56 m bgl.
3	The area under opencast operations shall be stabilized and reclaimed.	The open cast workings are stable. Complete reclamation will not be possible. However when underground mining would start, a part of the opencast mine would be tried to be reclaimed by dumping waste rock.
4	An estimated 0.523 m <sup>3</sup> of OB to be generated over life of mine shall be stacked at the OB dump of 6.25 ha area at earmarked site only. Maximum height of the OB dumps shall not exceed 30 M. The dump shall be terraced with each bench not exceeding 10 m height and shall be stabilized and reclaimed.	In the earmarked place OB has been stacked. OB dumps height not exceeded 30 M. The dump has been terraced with benches. Since the waste rock is all hard rock boulders and hence there are no fines to form silt.
5	Catch drains and siltation ponds of appropriate size should be constructed to arrest silt and sediment flows from OB dumps. The drains should be regularly desilted and maintained properly.  Garland drains (size, gradient & length) and sump capacity should be designed keeping 50 % safety margin over and above the peak sudden rainfall and maximum discharge in the area adjoining the mine site. Sump capacity should also provide adequate retention period to allow proper settling of silt material.	Catch drain on two sides of the dump exists. On third side there is the hill and water will not flow in that direction. On the 4 <sup>th</sup> side a road exists which is hard rock. Any water flowing from the dump will go to the main catch drain due to sloping of the road.  In no situation the water from the dump will flow in uncontrolled direction, on any side. The main drain flows down and there is a pond where the desilting could be done.

6	Dimension of retaining wall at the toe of OB dumps and benches within the mine to check run-off and siltation should be based on the rainfall data.	As the dump is in higher elevation and consists of hard massive boulders and is totally devoid of mud & silt. The rainfall being scanty and the two drains are dug in hard rock, the water easily flows down. The benches are stable in the dump as well as the pit. The water flows out in the drain far away from the pit.
7	The U/G mining will involve the continuous supply of fresh air and removal of noxious and other harmful gases, measures for dust suppression, prevention of inundation and conservation of energy.	U/G mining activity is yet to start. Ventilation fans will be installed for continuous supply of fresh air. Mine discharge water is being used for dust suppression. Wet drilling will be done once underground mining starts.
8	Pumps of adequate power and capacity shall be used for dewatering mine water. The excess water shall be used in recharge of ground water and suitable measures for recharge of ground water including rain water harvesting should be taken up.	Pumps of adequate power and capacity being used for dewatering opencast mine water. Water is being reused for afforestation because of water scarcity. For U/G mine required electric pumps would be used.
9	Subsidence Prediction model shall be done and subsidence closely monitored and validated using actual data.	After commencement of U/G mining, the monitoring will be taken up. Subsidence survey will be taken up when U/G mining starts.
10	Workshop effluents shall be subject to oil and grease removal before discharge.	Oil and grease is separately collected and the same is being disposed off to recyclers.
11	Mine water discharge and/or any waste water containing heavy metals should be properly treated to meet the prescribed standards before reuse/discharge.	As only mining is done and no processing is involved, there is no chance of any effluent etc. The water is devoid of any heavy metals. The water is being recycled for drilling and dust suppression.
12	Run-off from OB dumps and other surface run-off should be analysis for heavy metals and in case its concentration is found higher than the permissible limit, the water should be treated before discharge/reuse.	Natural spring water is found near the OB dump, the water is being analyzed for heavy metals and the concentration is found below the permissible limit.
13	In-house pilot studies on the eco-toxicological effects of heavy metals found in mine discharge and tailing shall be conducted before their applicability on a large scale. The report of this study shall be submitted in a year of issuance of this letter.	There is no processing plant. The ore is transported to Hutti 20 kms by road for ore processing. There will be no generation of tailings in the mine.

14	In addition to 12.0 h of plantation already carried out, an area of 18.0 ha shall additionally be afforested in consultation with the local DFO/Agriculture Department. The density of trees should be around 2500 plants per hectare. This includes a green belt of sufficient width all around the ML area and on dumps by planting native plant species in consultation with local DFO/Agricultural Department. At least 2000 plant species/ha should be planted.	Afforestation is being carried out in the acquired land by the local DFO/Agriculture Department... The native species has been planted to restore the natural ecosystem. In the core zone, draught resistant plants 14,000 No.s have been planted in an area of 35 Ha .
15	A detailed hydro geological study on the impact of mining on the ground water regime of the area shall be undertaken and a report submitted within six months of issuance of this letter.	The area itself is an arid region, only 100m <sup>3</sup> of water is generated, Regular monitoring of ground water quality is undertaken and reported in six monthly reports submitted.
16	Regular monitoring of ground water level and quality should be carried out by establishing a network of existing wells and constructing new piezometers. The monitoring should be done for quantity four times a year in pre-monsoon (April/May), Monsoon (August), post –monsoon (November) and winter (January) seasons and for quality during May. Data thus collected should be submitted quarterly to the Ministry of Environment & Forest and to the Central Ground Water Authority.	Regular and season wise monitoring of water quality and water level has been carrying out and data base has been maintained.
17	The project authorities should meet water requirement of nearby villages, if any, in case the village wells go dry due to mine-dewatering.	No effect has been found so far
18	Vehicular emission should be kept under control and regularly monitored. Tippers transporting the mineral ore shall be covered with tarpaulins. Dust suppression measures shall be taken in loading and offloading points, haul roads etc.	Regularly emissions are being monitored and certified by authorized analyzers. Ore transport trucks are covered with tarpaulins, Water tanker for spraying water for dust control is done in the open pit area, roads and surroundings.
19	“Consent to operate” should be obtained from SPCB before expanding mining activities.	“Consent to operate” will be obtained from SPCB before starting of mining activities.
20	A detailed mine decommissioning plan submitted to the Ministry of Environment and forests within 5 years of Mine closure.	A mine closure plan is already submitted to IBM for approval. Once it is approved the same will be submitted to the Ministry of Environment and Forests within 5 years of Mine closure.

21	<p>The proponent shall earmark a separate fund of 1 % of the total project cost for eco development measures including community welfare measures in the project area. The amount shall be deposited by the company in a separate account within three months to be maintained by the Karnataka State Pollution Control Board. The action plan in this regard shall be submitted to the KSPCB as well as to MOEF RO, Bangalore within three months of issue of this letter. After approval of the action plan by the KSPCB, the amount deposited shall be released in two installments to the project authorities based on progress of implementation. The KSPCB shall ensure that implementation of the action plan for eco-development measures is completed within two years from its approval by KSPCB. Further, the interest accrued during this period on the amount deposited by the proponent with the KSPCB shall be ploughed back to the same eco-development fund.</p>	<p>Since it is a post facto clearance, a lot of money has already been spent for Environment Management Plant. Expenditure of Rs 12 Lakhs has been made towards environment activities.</p>
<b>B</b>	<b>General Conditions</b>	<b>Compliance Status</b>
1	<p>No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment &amp; forest.</p>	<p>There is no change in mining technology and scope of working.</p>
2	<p>No change in the change in the calendar plan including excavation, quantum of mineral (gold ore) and waste should be made.</p>	<p>There is no change in the change in the calendar plan including excavation, quantum of mineral (gold ore) and waste.</p>
3	<p>Four ambient air quality-monitoring stations should be established in the core zone as well as in the buffer zone for RPM, SPM, So<sub>2</sub>, and NO<sub>x</sub> monitoring. Location of the stations should be decided based on the meteorological data, topographical features, and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board.</p> <p>Data on ambient air quality (RPM, SPM, SO<sub>2</sub>, NO<sub>x</sub> &amp; CO) should be regularly submitted to the Ministry including its Regional office at Bangalore and the State Pollution Control Board/Central Pollution Control Board once in six months.</p>	<p>Ambient air quality monitoring stations in core zone &amp; buffer zone have been established in consultation with SPCB and regular monitoring of SPM RSPM, SO<sub>2</sub>, and NO<sub>x</sub> is being carried out.</p> <p><b>Annexure-II</b></p>

4	Drills should be wet operated or with dust extractors and controlled blasting should be practiced.	Wet drilling and controlled blasting methods are being followed.
5	Fugitive dust emissions from all the sources should be controlled regularly monitored and data recorded properly. Water spraying arrangements on haul roads, wagon loading, dumpers/trucks, loading & unloading points should be provided and properly maintained.	Water spraying arrangements has been on haul roads, wagon loading, dumpers/trucks, loading & unloading points should be provided and properly maintained.
6	Adequate measures should be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in blasting and drilling operations, operations of HEMM, etc should be provided with ear plugs/muffs.	At present noise level is below 85 dBA in the work environment. Ear muffs / earplugs are provided to the drillers, compressor operators as a safety precaution.
7	Industrial waste water (workshop and waste water from mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19 <sup>th</sup> May, 1993 and 31 <sup>st</sup> December, 1993 or as amended from time to time. Oil and grease trap should be installed before discharge of workshop effluents.	As there is no processing plant and only mining is done, the water is clear and does not contain any harmful chemicals. The water that is generated is the seepage water from the rock strata. No workshop, only washing of vehicles is done.
8	Environmental laboratory should be established with adequate number and type of pollution monitoring and analysis equipment in consultation with the State pollution Control Board.	Centralized Environmental laboratory has been established at Hutti with full fledged modern environmental monitoring equipments, with the consultation of RPCB/SPCB. The same equipments are being used for monitoring.
9	Personnel working in dusty area should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects.  Occupational health surveillance program of the workers should be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures,  If needed.	Mine seepage water is being used to suppress the dust during ore transportation, in the haulage area and also in drilling. Water spraying is done at the loading point. Further avenue plantation and peripheral plantation has been done to arrest the dust carried by the wind. All workers who works in dusty areas have been provided protective respiratory devices and periodical health checkup programmes are being conducted. As per Mines Rule, 1955 (Periodical Medical Examination) by our Hospital.
10	A separate environmental management cell with suitable qualified personnel should be set-up under the control of a senior Executive, who will report directly to the Head of the Organization.	Environmental Management Cell has been established under the chairmanship of General Manager, & various departmental heads as members and Environmental Engineer as convener. Environmental Engineer has been appointed to carry

		out the activities of Environmental Management Cell. The cell meets regularly and reviews the policy and programmes for continual improvement to achieve the goal of EMP.
11	The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to Ministry and its Regional Office located at Bangalore.	Funds have been allocated to Environmental Protection measures and separate account is being maintained. Expenditure 2015-16 – Rs .12 Lakhs
12	The Regional Office of this Ministry located at Bangalore shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation's to the officer (s) of the Regional Office by furnishing the requisite data/information/ monitoring reports.	HGML will furnish all relevant information with respect to Environmental Quality monitoring reports to the Regional Office, MOEF Bangalore. Full co-operation will be extended during inspects the site.
13	The project authorities should advertise at least in two local newspapers widely circulated around the project, one of which shall be in the vernacular language of the locality concerned within seven days of the issue of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution Control Board and may also be seen at Web Site of the Ministry of Environment & Forest at <a href="http://envfor.nic.in">http://envfor.nic.in</a> and a copy of the same should be forwarded to the Regional office of this ministry located at Bangalore.	Advertisement has been made in two local daily widely circulated kannada newspapers, Vijay Karnataka and Raichurvani on 16-12-2004 & 30-12-2004 respectively, and a copy of the same has been sent to Regional Office on 31-12-2004.



## UTI GOLD MINE

### Ambient Air Quality Report of UTI Gold Mine, Oct 2016 - Mar 2017

SL. No	Location	Oct – Nov 16				Dec 16 – Jan 17				Feb 17 - Mar 17			
		SPM	NOx	SO2	RPM	SPM	NOx	SO2	RPM	SPM	NOX	SO2	RPM
1	Project Site	145.5	15.9	9.4	42.5	135.4	16.5	8.6	43.5	142.5	16.8	8.6	44.6
2	Uti village	120.6	15.6	9.6	38.3	126.5	16.4	8.5	40.0	126.0	16.1	8.2	40.5
3	Madarkal village	8404	14.7	7.5	30.8	85.7	15.3	7.4	36.6	88.4	14.1	7.5	32.4
4	Ganadal village	83.1	12.0	8.7	24.4	82.2	11.7	8.5	25.1	83.0	12.5	7.5	26.3
5	Yellagatti	84.0	14.7	7.2	24.6	89.7	15.5	8.7	26.2	83.0	17.3	8.2	25.7
6	Palkanmardi	97.2	11.9	6.7	274	94.5	13.5	6.2	28.8	97.6	15.5	8.3	33.8

All units are in  $\mu\text{g} / \text{M}^3$

**Water Quality Report of Uti Gold Mine Oct 2016 - Mar 2017**

<b>SL. No.</b>	<b>Parameters</b>	<b>W1</b>	<b>W2</b>	<b>W3</b>	<b>W4</b>
1	Colour (Hazen units)	<6	<5	<4	<5
2	Odour	Unobjectionable	Unobjectionable	Unobjectionable	Unobjectionable
3	Taste	Agreeable	Agreeable	Agreeable	Agreeable
4	Turbidity(NTU)	4	3	3	4
5	pH	7.4	7.5	7.3	7.6
6	Dissolved solids in ppm	494	495	392	374
7	Total Hardness in ppm	193	236	192	164
8	Copper mg/l	0.05	0.046	0.03	0.06
9	Iron mg/l	0.26	0.20	0.17	0.14
10	Manganese mg/l	0.07	0.06	0.02	0.04
11	Chlorides mg/l	36	42	65	35
12	Sulphates mg/l	72	47	52	557
13	Fluoride mg/l	1.06	0.5	0.93	1.4
14	Phenolics mg/l	BDL	BDL	BDL	BDL
15	Mercury mg/l	BDL	BDL	BDL	BDL
16	Arsenic mg/l	BDL	BDL	BDL	BDL
17	Cyanide mg/l	BDL	BDL	BDL	BDL
18	Lead mg/l	BDL	BDL	BDL	BDL
19	Zinc mg/l	BDL	BDL	BDL	BDL
20	Residual free Chlorine	NIL	NIL	NIL	NIL

**W1 – Nallah in upstream of lease area**

**W2 – Borewell near mines**

**W3 – Open well near Dormitory**

**W4 -Uti Village, BDL – Below Det ectable Level**

**Note:** All values are average of Oct 2016 - Mar 2017

**Noise Level Measurement Report of Uti Gold Mine Oct 2016 - Mar 2017**

Station	Time	Month		
		Oct – Nov 16	Dec 16 – Jan17	Feb – Mar 17
Project Site	11.40 AM	62.4	62.7	58.8
Uti village	10.30 AM	55.5	53.3	55.3
Yellagati	12.20 AM	56.7	55.5	56.3
Nagalapur	11.30 AM	55.8	53.9	56.6
Palakamadi	11.45 AM	56.5	52.7	54.4

**Note:** All values are average of Oct 2016 - Mar 2017 months

**Soil Quality Report of Uti Gold Mine Oct 2016 - Mar 2017**

<b>Parameters</b>	<b>S1</b>	<b>S2</b>	<b>S3</b>	<b>S4</b>	<b>S5</b>	<b>S6</b>
pH	8.1	7.5	7.4	7.7	8.3	8.2
Total Soluble Salts	0.034%	0.0267%	0.0212%	0.0225%	0.0254%	0.05%
Phosphorous ppm	25	22	18	15	25	18
Calcium mg/l	159	424	85	416	126	78
Magnesium mg/l	45	84	55	96	77	43
Chlorides mg/l	76	50	48	52	65	62
Sulphates mg/l	24	17	17	16	16	17
Gold	BDL	BDL	BDL	BDL	BDL	BDL
Silver	BDL	BDL	BDL	BDL	BDL	BDL
Copper in ppm	0.07	0.15	0.08	0.13	0.19	0.15
Lead	BDL	BDL	BDL	BDL	BDL	BDL
Zinc mg/l	0.18	0.24	0.18	0.35	0.44	0.53

S1- Project site

S2- Uti village

S3- Markal village

S4- Ganadal village

S5- Yellagati village

S6- Alkanamardi village

**Note:** All values are average of Oct 2016 - Mar 2017 months

**Dust Fall Measurement Report of Uti Gold Mine Oct 2016 - Mar 2017**

<b>Sl. NO</b>	<b>Station</b>	<b>Annual Arithmetic mean ( T/Sq Km/ Month )</b>
1	Project office	22.00
2	Uti village	15.00
3	Madarkal villa	7.18
4	Ganadal village	8.52
5	Yelagatti	8.7
6	Palkanmardi	6.6