

**INDIAN BUREAU OF MINES  
MINERALS DEVELOPEMMENT AND REGULATION DIVISION**

**Mining Plan Modification REPORT**

**Kolkata regional office**

**Mine file No :** KOL/JHK/SB(E)/Cu-3

**Mine code :** 14BHR27005

- (i) Name of the Inspecting : **E025** ) **NAMAN EKKA**  
Officer and ID No.
- (ii) Designation : Junior Mining Geologist
- (iii) Accompanying mine :  
Official with  
Designation
- (iv) Date of Inspection : 05/03/2020
- (v) Prev.inspection date :

**PART-I : GENERAL INFORMATION**

1. (a) **Mine Name** : **SURDA**
- (b) **Registration NO.** :
- (c) Category : A Mechanised
- (d) Type of Working : Underground
- (e) Postal address  
State : JHARKHAND  
District : SINGHBHUM (EAST)  
Village : SURDA & MOSABANI  
Taluka : GHATSILA  
Post office : SURDA-MOSABANI  
Pin Code : 832104  
FAX No. : 06585-225806  
E-mail : bhattacharya\_sk@hindustancon  
Phone : 06585-225878/225862
- (f) Police Station : GHATSHILA
- (g) First opening date : 01/01/1956
- (h) Weekly day of rest : SUN
2. Address for : PO: MOUBHANDAR  
correspondance : DIST: EAST SINGHBHUM .  
JHARKHAND PIN 832103
3. (a) Lease Number : JHK0025  
(b) Lease area : 388.68  
(c) Period of lease : 26  
(d) Date of Expiry : 15/03/2030
4. Mineral worked : COPPER ORE Main

## 5. Name and Address of the

Lessee : HINDUSTHAN COPPER LTD.  
 1,ASHUTOSH CHOUDHURY AVENUE  
 TAMRA BHAWAN KOLKATA-700019  
 KOLKATA WEST BENGAL  
 Phone:033-2283-2832/2529  
 FAX :033-2283-2623

Owner : Shri S K Bandyopadhyay  
 M/s Hindustan Copper  
 Limited Indian Copper  
 Complex, PO. Moubhand East  
 Singhbhum, Jharkhand-832103  
 SINGHBHUM (EAST) JHARKHAND  
 Phone: 22832226  
 FAX : 03322832478 ,03

Agent : SANJAY KUMAR SINGH  
 HINDUSTAN COPPER LTD. P.O.  
 MOUBHANDAR DIST. EAST  
 SINGHBHUM (JHARKHAND)  
 SINGHBHUM (EAST) JHARKHAND  
 Phone: 06585-225878  
 FAX : 06585-225806

## Mining Engineer

Name : PARVEZ ALAM,Full Time  
 Qualification : BE (MINING)  
 Appointment/ : 01/05/2015  
 Termination date

## Geologist

Name : AMIT DEGVEKAR,Full Time  
 Qualification : MSc.(Geo)  
 Appointment/ : 09/03/2014  
 Termination date

6. Date of approval of Mining	:	Renewal under rule 24 MCR1960	04/10/2007
Plan/Scheme of Mining		Mining Scheme rule 12 MCDR1988	21/01/2013
		MP review under 17(1) MCR 2016	16/04/2019

## PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

## Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	Proposal was to drill 02 Nos. of angular BH	02 nos. of Angular BH has been drilled in 2018-19	
1b	Exploration over lease area for geological axis 1 or 2	No such Proposal	Till Date the entire lease area exploration covered under G1 - 141.79 Ha. G2 - 206.87 Ha. G3 - 40.02 Ha.	
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Proposal was to drill the BH by MECL	MECL has done the exploration.	
1d	Balance area to be explored to bring Geological axis in 1 or 2	No such Proposal	MECL has been given Work order to prove the depth continuity of Surda Deposit.	
1e	Balance reserve as on 01/04/20		111 - 1304815 T 122 - 1546510 T 211 - 6977218 T 222 - 1441572 T 331 - 3766427 T 332 - 6759221 T 333 - 6770587 T	BALANCE RESERVE AS ON 01/04/2019 AS PER ANNUAL RETURNS.
1f	General remarks of inspecting officers on geology, exploration etc		The area lies in the singhbhum shear zone and exploration has been done by IBM, GSI, MECL and HCL himself. The area explored in G1 - 141.79 Ha. G2 - 206.87 Ha. G3 - 40.02 Ha.	The area lies in the singhbhum shear zone and exploration has been done by IBM, GSI, MECL and HCL himself. The area explored in G1 - 141.79 Ha. G2 - 206.87 Ha. G3 - 40.02 Ha.

## Development :

Sl.No.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Vertical development - 1350 m Lateral development - 3785 m	Vertical development - 88.1 m Lateral development - 115.4 m	

2b	Separate benches in topsoil, overburden and minerals (Rule 15)	The was no such proposal as the mines being UG mine	Mining was confined to development of Drives and raises which were in waste. Production from existing stopes was also carried out.	
2c	Stripping ratio or ore to OB ratio	No such proposal	No work done.	
2d	Quantity of topsoil generation in m3	No such proposal	No top soil generated as the mine being UG Mine.	
2e	Quantity of overburden generation in m3	No such proposal	No OB generated as the mine working is UG	
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc		Development of drives and raises were similar as proposed in approved mining plan. Six stopes were in operation.	Development of drives and raises were similar as proposed in approved mining plan. Six stopes were in operation.

### Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	Stopes proposed for production - 06	06 Stopes were in operation.	
3b	Quantity of ROM mineral production proposed	From Stopes - 807500 Tons From development (Raises+Drives) = 92500 tons	From Stopes -216683 Tons From development (Raises+Drives) = 841 tons	
3c	Recovery of sailable/usable mineral from ROM production	No such proposal	No work done	
3d	Quantity of mineral reject generation	No such proposal	No mineral rejects generated.	
3e	Grade of mineral rejects generation and threshold value declared.	No such proposal	No mineral rejects generated.	

3f	Quantity of sub grade mineral generation.	No sub grade mineral production proposed	No sub grade mineral produced. Average grade was maintained from stopes .
3g	Grade of sub grade mineral generation	No sub grade mineral production proposed	No sub grade mineral generated.
3h	Manual / Mechanised method adopted for segregating from ROM	No such proposal	No segregation done in stopes.
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No such proposal	No analysis or beneficiation study carried out for sub grade mineral rejects.
3j	Provision of drilling and blasting in mineral benches	Yes proposal of drilling & blasting in the working stopes	Drilling and blasting done in working Stopes
3k	Provision of mining machineries in mineral benches	Yes proposal of mining Machineries in Working stopes	Mining machineries are deployed in the working stopes
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Yes height of stopes as proposed in MP/SoM	Height of stopes as proposed are being maintained in the mines.
3m	Total area covered under excavation/pits	No such proposal	Approx 96.00 Ha. of area is being used for UG mining activities.
3n	Ore to OB ratio for the pit/mine during the year.	No Proposal for OB Generation	No OB Generated.

3o	Total area put in use under different heads at the end of year	Area for excavation 2.52ha., Storage of Top Soil Area 2.94ha., Waste Dump Area 5.49ha., Mineral Storage & Concentrator Plant 4.85ha. Infrastructure (Administrative Building, Shaft Portals, Manager office, Workshop area) 8.41ha., Roads 1.88ha., Green Belt 18.79ha., Township 10.69ha., New Production Shaft 10.76ha.	Area for excavation 2.52ha., Storage of Top Soil Area 2.94ha., Waste Dump Area 5.49ha., Mineral Storage & Concentrator Plant 4.85ha. Infrastructure (Administrative Building, Shaft Portals, Manager office, Workshop area) 8.41ha., Roads 1.88ha., Green Belt 18.79ha., Township 10.69ha., New Production Shaft 10.76ha.	
3p	Production of ROM mineral during the last five year period as applicable	2014-15: 275200Te 2015-16: 460000Te 2016-17: 560000Te 2017-18: 675000Te 2018-19 : 124247 Te	2014-15 -179036 Te 2015-16 - 267251 Te 2016-17 - 313856 T 2017-18 - 175391 T 2018-19 - 217526 T	
3q	General remarks of inspecting officers on method of mining etc.		Method of mining as proposed in approved MP is being practiced	Method of mining as proposed in approved MP is being practiced

## Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	No such proposal	No work done	
4b	Location of topsoil, OB and mineral reject dumps	No such proposal	No work done	

4c	Number of dumps within lease area and outside of lease area	No such proposal	No work done	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	No such proposal	No work done	
4e	Number of active and alive dumps.	No such proposal	No work done	
4f	Number of dead dumps.	No such proposal	No work done	
4g	Number of dumps established.	No such proposal	No work done	
4h	Whether Retaining wall or garland drain all along dumps are there.	No such proposal	No work done	
4i	Length of Retaining wall or garland drain all along dumps	No such proposal	No work done	
4j	Number of settling ponds	No such proposal	No work done	
4k	Specific comments of inspecting officer on waste dump management		The mine being UG Mine so no OB/Top Soil Generated in 2018-19, no waste were generated during mining Low grade Ore were blended with high grade ore to get an average grade of 0.81 % to 0.85% Cu.	The mine being UG Mine so no OB/Top Soil Generated in 2018-19, no waste were generated during mining Low grade Ore were blended with high grade ore to get an average grade of 0.81 % to 0.85% Cu.

---

Solid Waste Management - Backfilling:

Sl.No.	Item	Propasals	Actual work	Remarks
5a	Status of part or full extraction of mineral from mined out area before starting backfilling.	No such proposal.	Part extraction and part filling as Cut & fill method of stoping is being practiced	

5b	Area under backfilling of mined out area	No Such Proposal	No back filling as such in this mine, since the method of working and the proposal for open stoping does not require back filling as supports.	
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No such Proposal	No work done.	
5d	Total area fully reclaimed and rehabilitated	No such Proposal	No work done.	
5e	General remarks of inspecting officers on backfilling and reclamation etc.		No back filling as such in this mine, since the method of working and the proposal for open stoping does not require back filling as supports.	No back filling as such in this mine, since the method of working and the proposal for open stoping does not require back filling as supports.

---

Progressive Mine Clousre Plan:

Sl.No.	Item	Propasals	Actual work	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly. Rule 23 E(2).		No Annual Report on PMCP submitted.	Violation pointed out during previous inspection.
6b	Area available for rehabilitation (ha) .	No such proposal	No work done.	
6c	afforestation done (ha).	18 Ha.	18 Ha.	
6d	No. of saplings planted during the year	500 nos.	500 nos.	

---



6e	Cumulative no .of plants	The area lies in the PF, replacement of dead saplings from the alive ones in the green belt area.Replacement saplings in green belt of 18.79 ha	The area lies in the PF, replacement of dead saplings from the alive area.Replacement saplings in green belt of 18.79 ha	The area lies in the PF, replacement of dead saplings from the alive ones in the green belt area.
6f	Any other method of rehabilitation	No Proposal	No work done.	
6g	Cost incurred on watch and care during the year	No Proposal	Nearly 2 lakhs Rs.	
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling ( Lx B x D	Not proposed	No such reclamation and rehabilitation by backfilling.	
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	Not proposed	No work done.	
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on backfilled area	Not proposed	No work done.	
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Not proposed	NO work done.	
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	Not proposed	Not applicable.	

6m	Compliance of rehabilitation of waste land within lease (i)afforestation	Not proposed	Whatever the land available near by the office, residential areas are used and developed for making aesthetic beauty.	
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	Not proposed	Not applicable.	
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	Not proposed	No work done	
6p	Compliance of environmental monitoring (core zone and buffer zone)	Proposals are made in the approved document.	The Environmental Monitoring work is being carried out in core zone and buffer zone of the mine.	
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.		This is an u/g mine and the PMCP work is possible in the later period.	This is an u/g mine and the PMCP work is possible in the later period.

---

#### Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	All the ROM produced from the mine is need to be transported to the Common Beneficiation Plant	Yes, as per the proposals, the ROM are sent to the common Beneficiation plant for extraction of Copper metal from the ROM.	

7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	No sorting in the mine underground, whatever the ROM from the different stopes are sent to the Beneficiation plant for crushing and for other process	Directly the ROM is sent for crushing and followed with other process to extract the Copper metal. No any manual or mechanical sorting is under taken as such.	
7c	Different grade of mineral sorted out at mines.	Not proposed	Whatever the ROM produced are sent to the Beneficiation plant, segregating the ROM & waste at the bottom.	
7d	Any beneficiation process at mines .	No beneficiation process available at mines site.	Common Beneficiation plant available at Mosabani ML area, belongs to the common lessee company.	
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues		Mineral conservation and beneficiation issues are well taken care of. Precaution is taken care by the company to avoid any loss of ores in the planning part itself.	Mineral conservation and beneficiation issues are well taken care of. Precaution is taken care by the company to avoid any loss of ores in the planning part itself.

---

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No proposals	The mine is operating in u/g method, no any such excavation, except at the initial stage of the mine opening.	
8b	Concurrent use or storage of topsoil	No proposals	Not applicable	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	No proposals.	Whatever the materials that are operating inside the mine, are hoisted to the surface and kept & used accordingly.	

8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Not proposed.	If at all any such situation arises, it is kept in the respective places.	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Not proposed.	It is a u/g mine, no such activities are present in the mine, if at all anything comes it will be taken care of.	
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Not proposed.	The ML area presently workings reveals very thin vegetations, and the company has planted 500trees in 2.6ha. area.	
8g	Survival rate	Not proposed	80%	
8h	Water sprinkling on roads to control airborne dust	Proposed.	Water sprinkling is being done regularly.	
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area		The aesthetic beauty in and around mines area is good.	The aesthetic beauty in and around mines area is good.

---

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns		Monthly and Annual returns are submitted in time.	Monthly and Annual returns are submitted in time.

9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Engineer: Sri Parvez Alam, B.E (min) w.e. f. 01/05/2015., Geologist: Sri Amit Degvekar, M.Sc. (Geo), Manager: Sri Parvez Alam, B.E (min)	Mining Engg. and geologist appointed were present during inspection.
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Area for waste disposal 5.48ha. (under forest), Area occupied by plant, buildings, residential, welfare buildings & roads 58.55ha. (23.27ha. under Forest + 35.28ha. Outside forest) Other purpose (Top soil storage) 2.28ha.	Found Correct.
9d	Scrutiny of Annual return on afforestation	500 trees with Survival rate 80%.	Found Correct
9f	Scrutiny of Annual return on ROM stock and/or graded ore	For Underground (Total) Opening Stock 9306Te, Grade Copper 0.85, Production (2018-19) 217526 Te, Grade Copper 0.79, Closing Stock 9311Te, Grade Copper 0.87	Found correct as reported.
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Cost of production - 3022.60	It seems correct.

9h	Scrutiny of Annual return on fixed assets	Value of fixed assets at the end of year - 1181778202 Rs. Found Correct.
9k	Scrutiny of Annual return on mining machineries	Winding Engine Found correct. (Electric) 7604.00KG 1no.Winding Engine (Electric) 13307.00KG 1no,Ventilation Fan 6000 Cum/H 1no.,Ventilation Fan 4300 Cum/H 1no,LHD 1.5cum capacity, 5nos.,LHD 1.45cum capacity, 1nos,LHD 0.76cum capacity, 1nos,Electric Locomotives(8T e capacity) 1nos., Pumps (Electric) 100L/MN, 3nos.,220L/MN, 2nos., 40L/MN, 3nos., 15L/MN, 2nos.,20L/MN, 1no.,60L/MN,1no. o. Air Compressor 3000cum/MN 1no,3500cum/MN 1no,1000cum/MN 7no, Winding Engine(Elect) 30416KG 1no. Front End Loader 0.76cum 5nos.,

---

**Details of violations observed during current inspection and compliance position of violation pointed out**

Violation observed		Show couse position	
Rule NO.	Issued on Compliance on	Rule NO.	Issued on Compliance on

**Date :**

**(NAMAN EKKA)**

Indian Bureau of Mines