

**REPORT ON CHECK INSPECTION OF NOAMUNDI IRON ORE MINE OF M/s. TATA
STEEL LIMITED IN WEST SINGHBHUM DISTRICT, JHARKHAND**

Name and designation of inspecting officer : Shri. Anupam Nandi (RCOM
Ranchi)

Date of Inspection : 05/12/2019

1. General information of the mine:

- i) Name of mine : Noamundi Iron Ore Mines
- ii) Owner : M/s. Tata Steel Ltd
- iii) Nominated Owner : T. V. Narendran
- iv) Mining Engineer : Dipak Behera
- v) Agent : R P Mali
- vi) Mine Manager : Dipak Behera
- vii) Lease Area : 1160.06Ha.
- viii) Location : Noamundi
- ix) Lease Period : Upto 31.03.2030
- x) Date of Expiry : 31st March 2030.
- xi) Date of approval of Mining Plan : 07.02.2017
- xii) Period of Mining Plan : 01.04.2017 to 31.03.2022.
- xiii) Date of approval of Modification
of Mining Plan/ Scheme of Mining : 13.08.2019
- xiv) Period of Modification of
Mining Plan/ Scheme of Mining : 2019-20 to 2021-22
- xv) Production (Year 2018-19) ROM : 7.97 Million tonnes.

2. Brief description of the Mine:

- a. A brief description of the mine covering location, geology, problems associated with mining of the deposit etc. may be given.

The lease covering an area of 1160.06 ha. is located in Noamundi at a distance of 130 km south west of Jamshedpur and is well connected by an all-weather metaled road. It is also well connected by an all-weather metaled road to Chaibasa around 65 km which is also the district headquarter of West Singhbhum-district. The area can also be approached from Noamundi Railway Station on Tatanagar -Gua /Barbil rail route of South Eastern Railways. The distance from Noamundi Iron mine to Noamundi railway station is about 5 km.

Noamundi iron ore deposit was discovered in the year 1917. Subsequently, a lease was obtained in the year 1923 and manual opencast mining operations started in the year 1925. The first dispatches were done in the year 1926. The mining operations were mechanized in 1953 to meet the increased demand of iron ore to Steel Works at Jamshedpur.

Noamundi Iron mine was granted lease from 01.01.1922 for a period of 30 years over an area of 1160.06 ha. 1st Renewal for 30 years w.e.f. 01.01.1952 over an area of 1160.06 ha. 2nd Renewal over an area of 1160.06 ha granted by Govt. of Bihar vide their memo no. 4795 dated 01.09.1984 and lease deed executed on 20.10.1985. Third Renewal of lease was applied on 17.12.2009. Express order vide letter no -286 dated 12.2.2015 issued by Govt. of Jharkhand for continuation of operation valid upto 31.12.2031.

The total lease area of 1160.06 Ha consists of forest land of 762.43 Ha and non-forest land of 397.63 Ha. The mining lease lies in Mahudi, Balijor, Korta, Noamundi, Sarbil, Barabalijori village. The lease falls in Topo sheet no - 73 F/8 & 73 F/12. The company has obtained forest diversion of 370.92 Ha, the balance area has been sought for diversion.

General Geology:

Noamundi iron deposit lies in the western portion of Singhbhum-Orissa craton. The Iron Ore Group (IOG) surrounds the batholithic complex and consists of low-grade meta-sediments, acid-intermediate and mafic volcanics and sills. The IOG rocks are exposed in three major basins around the Singhbhum granite batholith (Saha et. al., 1988). The eastern basin extends from south of Jamshedpur through Gorumahisani-Badampahar and extends southward up to near Nausahi. The southern basin lies between Daitari - Tomka, while the northern-western basin is represented by the western Singhbhum-Bonai-Keonjhar Iron Ore basin which extends for about 100km in length and 20 to 30km width in NNE-SSW direction from Chakradharpur to south

of Koira. The iron ore deposits of Noamundi, Joda, Khondbond are located in this basin along with many other good quality iron ore deposits of varying dimensions.

Noamundi iron ore deposit belongs to Pre-Cambrian era of Dharwarian age. This deposit is a part of eastern limb of the major Bonai synclinorium and trends NNE-SSW with an overturned western limb. It consists of weakly metamorphosed sedimentary formations and lithology observed in this area comprises of shales, banded hematite jasper, iron ores with interbedded shales within BIF, laterite and limonite, canga and soil.

The iron ore bodies generally occupy the top portions of the hills and are elongated in the north-south direction. In Jamda Block-I, as mentioned above, they form two almost continuous strips one to the east and another to the west of the Balijor nala. Northern portions of these two ranges show preponderant occurrence of Soft Ore while towards the south Hard Ore is developed and forms prominent out crops. In Jamda Block-II of the lease area, forms the western most ore body within the lease area and is composed mostly of laminated and lateritic soft ore and friable ore with a few patches of the Hard Ore at the top. The ore is interbanded with reddish ochereous material it is generally aluminous. Blocks-IV, V & VI show at the top of the hills discontinuous bouldery patches of iron ore with scattered scree at the slopes. The ore consists agglomerations of iron ore pieces containing high silica and alumina. Quartzites, phyllites and sandstone associated with the iron ores.

The general agreement for the origin of iron ore is that it has formed due to continuous leaching and replacement of BHJ and Shale by the action of meteoric water which has percolated through joints & fissures. Thus the minor structural elements viz hinge of folds, joints, and fissure form the loci of mineralization.

The different types of ore often grade into one another laterally and even at depth. Generally, after the lateritic cap, Hard Ore is found confined to the higher levels underlain by Soft, Friable and Blue dust. Capping of Canga (iron ore pieces embedded in alumino-silico matrix) and float ore is occasionally found over ore bodies.

b. Description on deployment of mining machinery may be given in the following format.

b) Deployment of mining machinery

Departmental:

Sl No	Machineries Deployed	Capacity	Number of Units	In use	Idle	Utilization (%)	Brief description	Remarks
1	Dumper	100 ton	11	11	Nil	74	Make - Komatsu	
2	Shovel (Hydraulic)	5.9 cum	5	5	Nil	66	Make - Tata Hitachi	
3	Front end loader	9.0cum	2	2	Nil	78	Make - Komatsu	
4	Dozer	410HP	1	1	Nil	41	Make - Komatsu	
5	Dozer	452HP	1	1	Nil		Make - Caterpillar	
6	Water tanker	50KL	1	1	Nil	33	Make - Komatsu	
7	Blast host drill	150 mm	2	2	Nil	45	Make - Atlas Copco	
8	Crane	75 Tone	1	1	Nil	NA	Make-TIL Ltd.	
9	Crane	15 Tone	1	1	Nil	NA	Make-ACE Ltd.	
10	Motor Grader	16 feet	1	1	Nil	25	Make - Komatsu	

3. Implementation of Mining Plan or scheme of Mining:

Sr. No.	Proposal in the Mining Plan or Scheme of mining (Period from 01-04-2017 to 31.03.2022)	Observations regarding implementation of proposals given in approved Mining Plan or Scheme of mining.				Remarks	
1.	CONSERVATION OF MINERALS						
a)	Exploration:	YEAR	PROPOSED		ACTUAL		50 boreholes were proposed in forest
			No of Hole	Meterage	No of Hole	Meterage	
		2018-19	60	3000	15	484	

b)	Utilization of subgrade mineral:		area. Forest Clearance over the area is awaited
c)	Any other proposal for monitoring:	33% of utilization of total generated subgrade mineral.	
2.	SCIENTIFIC MINING		
a)	Mine Development and method of mining	Mechanized method of open cast mining has been adopted for mining iron ore in a series of 12 m high benches with the help of shovel-dumper combination.	
b)	Handling of Waste/subgrade material:	Waste Handled – 1400860.4 in cubic meters, Subgrade – 650469 tonnes	
c)	Area reclamation & restoration:	Through plantation – Total 5762 saplings were planted.	
d)	Any other proposal for monitoring:	NA	
3.	PROTECTION OF ENVIRONMENT		
a)	Afforestation:	Plantation of 5762 was done in the year 2018-19.	
b)	Quality of Air:	Within permissible limit	
c)	Quality of Water:	Within permissible limit	
d)	Noise Level:	Within permissible limit	
e)	Vibration:	Within permissible limit	

f)	Any other proposal for monitoring:	NA	
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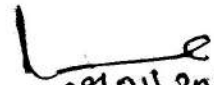
4. History of Violations after approval of Mining Plan or Scheme of Mining:

Sl. No.	Date of Inspection	Name of Inspecting Officer	Violations of MCDR,88 observed and Pointed out	Rectification of Violations	Remarks
1.	11.06.2019	Shri B P Kerketta	Rule 11(1), Rule 35(2) & Rule 55(1)(3)(iii)	Rule 35(2) & Rule 55(1)(3)(iii) complied on 12.09.2019	
2.	19.12.2018	Shri B P Kerketta	Rule 11(1) & Rule 35(2)	Rule 35(2) complied	

5. Socio-Economic Development Plan: Total 2437.03 lakh spent for C S R activities during 2018-19.

Sl. No.	Proposed Action Plan towards Socio-Economic Development	Expenditure Proposed (In Rs. Lakh)	Expenditure Incurred (In Rs. Lakh)	Remarks
1.	General Development in the area			
	i) Housing	-	-	
	ii) Water Supply	23.0	28.62	
	iii) Sanitation	3.0	4.0	
	iv) Health, Safety and Medical Facilities	14.99	52.75	

2.	Education and Training	482.67	498.84	
3.	Employment to local inhabitants	50	65.45	
4.	Public Transportation and communication	16.64	20.87	
5.	Recreation and other sports activities	15	15.56	
6.	Expenditure for environment management	1057	1579.6	
7.	Other	158.86	171.34	
	Total:	1821.16	2437.03	


08/01/2020

(Anupam Nandi)

Regional Controller of Mines & Inspecting Officer