



सत्यमेव जयते

F.No. J-11015/104/2011-IA.II (M)

Government of India

Ministry of Environment, Forest and Climate Change  
Impact Assessment Division

\*\*\*\*\*

Indira Paryavaran Bhavan  
Prithvi Wing, 2<sup>nd</sup> Floor  
Jor Bagh Road, Aliganj  
New Delhi-110 003  
Date: 06<sup>th</sup> September 2021

To

M/s Tata Steel Limited  
Ore Mines & Queries Division  
Administrative Building, Noamundi Iron Mine  
P O Noamundi, West Singhbhum- 833 217  
Jharkhand

**Subject: Proposal for Environmental Clearance of Noamundi Iron Ore Mine for the production from 10 MTPA to 19 MTPA (ROM) with total excavation of 27 MTPA over mining lease area 1160.06 ha along with increase of Iron ore beneficiation plant capacity (Feed to Plant) from 18 MTPA to 27 MTPA in the total project area of 1230.42 ha located at Mahul, Balijore, Korta, Noamundi, Sarbil and Barabalijori villages, West Singhbhum District, Jharkhand by M/s Tata Steel Limited - Environmental Clearance- reg.**

Sir,

This has reference to your proposal no.IA/JH/MIN/190924/2019 for Environmental Clearance of Noamundi Iron Ore Mine for the production from 10 MTPA to 19 MTPA (ROM) with total excavation of 27 MTPA over mining lease area 1160.06 ha along with increase of Iron ore beneficiation plant capacity (Feed to Plant) from 18 MTPA to 27 MTPA in the total project area of 1230.42 ha located at Mahul, Balijore, Korta, Noamundi, Sarbil and Barabalijori villages, West Singhbhum District, Jharkhand by M/s Tata Steel Limited was placed before 31<sup>st</sup> EAC held during 9<sup>th</sup> to 11<sup>th</sup> June and 14<sup>th</sup> to 15<sup>th</sup> June 2021.

**1. EAC Meeting Details:**

EAC meeting	31 <sup>st</sup> EAC
Date of Meeting	9 <sup>th</sup> to 11 <sup>th</sup> June and 14 <sup>th</sup> to 15 <sup>th</sup> June 2021

**2. Project details:**

Name of the Project	Proposal for Environmental Clearance of Noamundi Iron Ore Mine for the production from 10 MTPA to 19 MTPA (ROM) with total excavation of 27 MTPA over mining lease area 1160.06 ha along with increase of Iron ore beneficiation plant capacity (Feed to Plant)
---------------------	---

M/s Tata Steel Limited, Jharkhand

1 | Page

	from 18 MTPA to 27 MTPA in the total project area of 1230.42 ha	
Location	Village	Mahul, Balijore, Korta, Noamundi, Sarbil and Barabalijsori
	District	West Singhbhum
	State / UT	Jharkhand
	Latitudes	22 <sup>o</sup> 05' N to 22 <sup>o</sup> 10' N
	Longitudes	85 <sup>o</sup> 25' E to 85 <sup>o</sup> 35' E
	Sol Topo sheet No.	73 F/8 & 73 F/12
Company Name	M/s Tata Steel Limited	
Accredited Consultant Organisation and its certificate no.	Vimta Labs Ltd and NABET/EIA/1720/SA 088	
KML file	Submitted	
Seismic zone	II	

### 3. Category details:

Category of the project	A under Schedule 1(a) – Mining of Minerals activity & 2(b) – Mineral Beneficiation
Provisions	EIA Notification dated 14 <sup>th</sup> September, 2006
Mining lease Area (MLA)	1230.42 Ha

### 4. ToR/EC Details

ToR Proposal No.	IA/JH/MIN/123625/2019
Online application date for Form-I	29 <sup>th</sup> November 2019
Documents Submitted	Form-I & PFR
EAC meeting for grant of ToR	19-20 <sup>th</sup> Dec., 2019
ToR Letter No.	J-11015/104/2011-IA.II(M)
ToR grant Date	27 <sup>th</sup> April 2020
Production capacity	10 MTPA to 19 MTPA (ROM)
Total Excavation	27 MTPA
Additional information	Increase of Iron ore beneficiation plant capacity (Feed to Plant) from 18 MTPA to 27 MTPA in the total project area of 1230.42 ha

5. The proposal was again considered and amended by Expert Appraisal Committee for Environmental Appraisal of Mining Projects (Non-Coal) in its 32<sup>nd</sup> meeting held during 28<sup>th</sup> June to 1<sup>st</sup> July 2021 which is as follows:

6. The PP submitted that Noamundi Iron ore mine lease was originally granted 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. As per the amended MMDR Act under section 8A(5) the captive lease period of Noamundi extended upto 31.03.2030 for 768.55 out of 1160.06 ha.

7. The PP submitted the revised mining plan (4th Revision) and mine closure plan of Noamundi iron ore mine has been approved by IBM vide Letter No: RAN/WSB/Fe/MP-06/2019-20 dated 13<sup>th</sup> Aug., 2019.
8. The PP submitted that the mining operations are carried out by fully mechanized open cast method. Blasting is carried out to create fragmented material. Height of the bench is 12 m and the width of the benches varies from 12-25 m. Drilling is done using 150/165 mm diameter drill. Blasting is done by using SME (Site Mixed Emulsion Explosives) & Nonel (non-electric initiation) and electronic detonators. The blasted material is excavated by shovels and loaded onto 100 ton dumpers for transportation of ore, sub grade or waste.
9. PP submitted that the topography of the area is undulated and hilly area at an elevation above mean sea level ranging from 506m-736m RL and the ground water level is at 506m AMSL. There are three working pits namely (i) Hill No 5&6(Eastern Pit), (ii) Hill No. 3&4(Eastern Pit), and (iii) Western Pit. The ultimate working depth for Hill No.5&6 will be 588m AMSL, for hill no 3 & 4 will be 540m AMSL and for Western Pit, it will be 522m AMSL. The water table during the post monsoon is reported at 496m AMSL. The mine working will not intersect ground water table.
10. PP submitted that the mine lease area of Noamundi Iron Mine of Tata Steel Limited is over an extent of 1160.06 ha. In addition, an area of 70.36 ha adjacent to the mine lease area also forms part of the project area. This additional area of 70.36 ha is part of the rail loading & dispatch infrastructure which caters to the dispatch of ore produced from the lease area. Thus, the total project area is 1230.42 ha. The Environmental Clearance granted to Noamundi Iron Mine in the year 2013 is over the project area of 1230.42 ha. The mine lease area of 1160.06 ha consists of total forest area of 762.43 ha and non-forest area of 397.63 ha. Forest Clearance for 370.92 ha was granted to the project vide letter no. F. No. 8-279/1985-FC(Pt) dated 04.09.2014. For the remaining forest land of 391.51 ha (including safety zone area of 8.14 ha), an application has been made for forest diversion which is under consideration. The NPV for the entire forest area has been paid.
11. The PP submitted that there are six schedule-1 species viz. Grey wolf, Elephant, sloth bear, Leopard, Peacock, Python, Common Indian monitor. Chief Wildlife Warden Letter has been obtained vide letter No. 1251 dated 28.08.2020.
12. The public hearing was conducted by Jharkhand State Pollution Control Board (JSPCB) on 06th November 2020, under the Chairmanship of Additional Deputy Commissioner, West Singhbhum, Chiabasa at playground of D.A.V. Public School, Noamundi, District-West Singhbhum, Jharkhand as per the Environmental Impact Assessment Notification dated 14th September, 2006.
13. The Project Proponent submitted that there is a court case pending in the High Court of Jharkhand having WP(C) 3768 of 2015. directed the State Government to decide on the representation of Tata Steel which is already pending before the State of Jharkhand in accordance with law and in light of Section 8A(5) of the MMDR Act 1957.
14. The PP submitted that total project cost is 5558 Crores. PP reported that the total manpower required for this mining project is 3717 persons.

## 15. ADS Details

The proposal was considered in 28th EAC meeting held during 24th - 26th Feb, 2021 wherein the Committee deferred the proposal due to want of following information:

Sr. No	ADS Sought	Response
1	Action against project proponent under section 19 of Environment (Protection) Act, 1986.	Credible action under Section 19 of EP Act 1986 has been initiated against the project proponent in the court of Chief Judicial Magistrate, Chaibasa. Reference document has submitted by PP.
2	PP needs to incorporate another chapter-13 in the EIA for remediation plan, Natural reserve augmentation plan to manage the ecology loss of environment for total excess production as per the Environmental Clearance granted previously.	Chapter-13 has been prepared by accredited consultant and is enclosed as an Annexure.
3	Detailed environmental management plan (EMP) to mitigate the environmental impacts which, should inter-alia include the occupational health impacts and also to focus on the dampening effect, noise or voice dampening effect with the revision of the capital cost and recurring cost.	PP has submitted detailed EMP with the ADS reply.
4	PP should also allocate some amount to the sanitation and safe drinking water.	The budgetary provision for the aforesaid activities is estimated to be Rs.1.5 crores. PP has submitted the reply in detail with the ADS reply.
5	PP should also submit the process control, EMP capital investment by assuming the excess waste handling and transportation for excess production.	PP has submitted the reply in detail with the ADS reply.
6	The Project Proponent should revise the Conservation plan as per site specific and to protect the scheduled species. The PP should give the information on allocation of budget, time frame and agencies to be responsible for the implementation for each of the target species. The conservation plan should be duly authenticated by Wildlife specialist.	The SSWLCP for Noamundi mine has been approved by the PCCF (Wildlife) and Chief Wildlife Warden, GoJ on 28.08.2020 with a total capital outlay of Rs.25.26 crores. PP has submitted the reply in detail with the ADS reply.

16. The Committee observed that Environmental monitoring plan was not focusing mainly on air quality, noise and vibration, water quality as well as soil degradation. There were lacuna in the Wildlife conservation plan w.r.t. wildlife conservation rather the focus was on creating infrastructure. Accordingly, the Committee asked the PP to submit the following details:

- 1) Revise the cost of remediation plan, natural resource augmentation plan (NRAP) and community resource augmentation plan (CRAP) to 15 Crores and add 63 lacs to CRAP and repulsion during the violation period i.e. 70 lacs in CRAP.
- 2) EMP measures at the site with cost 85 crores. Details in a tabular form to be submitted. The recurring cost for EMP for the life of mine also to be tabulated.
- 3) Environmental monitoring plan with cost with emphasis on air quality, noise and vibration, water quality as well as soil degradation to be submitted.
- 4) Wildlife conservation plan be augmented with additional points revised in the light of guidance given by EAC during the meeting with more emphasis on wildlife conservation rather than creating infrastructure which cannot be controlled by project proponent.
- 5) The cost of EMP to address public hearing concerns costing 30 crores to be given with capital investments to be done within 3 years which will be monitored by the Ministry.
- 6) The EMP cost should include plantation within the mine lease area whereas plantation outside the mine lease area will be given to NRAP cost.

PP vide email dated 16<sup>th</sup> June 2021 submitted the following information:

**Budget Provisions for Remediation Plan, Natural Resource Augmentation Plan (NRAP) and Community Resource Augmentation Plan (CRAP)**

Remediation Plan										
S. No	Component	Proposed Activity	Description	Location	Unit rate	Total Quantity	Total Cost in Rs lakh	Yr 1	Yr 2	Yr 3
1	Remediation Plan - Air & Noise Environment	Fugitive dust control & Noise attenuation	Installation of Wind-shield cum Noise barrier	Within lease (Bottom Bin Railway siding)	20 lakhs per 100 m boundary	1500 m boundary	300	100	100	100
2	Remediation Plan - Air Environment	Fugitive dust control	Develop green zone along prominent wind direction	Within project area	3 lakhs per hectare	16 ha	80	25	25	30
3	Remediation Plan - Biological	Increase green cover	Rapid forest development (Miyawaki)	Within lease	100 lakhs per hectare	1 ha	100	0	50	50

	Environment		plots)							
4	Remediation Plan - Water Environment	Surface water run-off management	Construction of check dams, gully plugs & garland drains	Within lease	3 lakhs per check-dam 4000 per cum for Gully plug 100 per mtr for Garland drain	2 check dams; 10 gully plugs; 1000 m garland drain	10	3	3	4
<b>Sub-total (a)</b>							<b>490</b>	<b>128</b>	<b>178</b>	<b>184</b>

<b>Natural Resource Augmentation Plan (NRAP)</b>									
S. No	Proposed Activity	Description	Location	Unit rate	Total Quantity	Total Cost in Rs lakhs	Yr 1	Yr 2	Yr 3
1	Tree Plantation	Development of fruit-bearing trees plot at village area	Hesapi, Dwarsahi	21 lakhs per acre	40 acres	840	280	280	280
2	Avenue plantation	Development of Greenbelt by road-side plantation	Mahudi to Bhangaon, Noamundi to Kutingta, Noamundi to Jamda.	1000 per sapling	15000 mtr	30	10	10	10
3	Rain-water harvesting	Construction and Maintenance of Rain-water harvesting pond structures in villages	Noamundi Basti, Mahudi Meralgara, Deogaon	3.375 lakhs per pond	8 nos. ponds	27	7	7	13
<b>Sub-total (b)</b>						<b>897</b>	<b>297</b>	<b>297</b>	<b>303</b>

<b>Community Resource Augmentation Plan (CRAP)</b>									
S.No	Proposed Activity	Description	Location	Unit rate	Total Quantity	Total Cost in Rs lakhs	Yr 1	Yr 2	Yr 3
1	Provision of solar lights	Installation of solar lights in village areas	Mahudi, Sialjoda, Meralghra, Balijodi	Rs 35000 per light	23 nos.	8	0	4	4
2	Provision of solar-powered bore-well	Installation of solar-powered bore-well in schools	Mahudi, Sialjoda, Meralghra	5 lakhs per solar structure	3 nos.	15	5	5	5
3	Drinking water	Installation of RO plants in surrounding schools	Mahudi, Noamundi Basti, Sarbil, Bhangaon, Leping, Jampani	5 lakhs per unit	7 nos.	35	10	10	15
4	Health facility	Sponsoring Eye-camps in collaboration with Shankar Netralaya	Jaganathpur, Sarbil	7.5 lakhs per camp	2 camps	15	0	7.5	7.5

5	Agriculture	Installation of lift irrigation	Kumirta	10 lakhs per structure	1 nos.	10	0	10	0
6	Agriculture	Construction of check-dams along with feeder canals	Kutingta, Kotgarh	10 lakhs per structure	2 nos.	20	0	10	10
7	Infrastructure development	Construction of Munda /Manki Bhavan	Dukasai, Baljodi, Gundijoda, Meralgara	20 lakhs per structure	4 structures	80	20	30	30
<b>Sub-total (c)</b>						<b>183</b>	<b>35</b>	<b>76.5</b>	<b>71.5</b>
<b>Grand total (a+b+c)</b>						<b>1570</b>	<b>460</b>	<b>551.5</b>	<b>558.5</b>

**Total budget provision for:**

- |      |                                       |                        |
|------|---------------------------------------|------------------------|
| i.   | Remediation Plan:                     | Rs. 4.90 crores        |
| ii.  | Natural Resource Augmentation Plan:   | Rs. 8.97 crores        |
| iii. | Community Resource Augmentation Plan: | Rs.1.83 crores         |
| iv.  | <b>Grand Total:</b>                   | <b>Rs 15.70 crores</b> |

**Note:** Rs.15.7 crores being budgeted towards Remediation Plan, Natural Resource Augmentation Plan (NRAP) and Community Resource Augmentation Plan (CRAP) is inclusive of 3% of the profit accrued due to excess production. Remediation Plan, NRAP and CRAP will be implemented in 3 years.

2).

**Budget – PH commitments**

S. No	Sector	Description	Location	Unit rate	Total Quantity	Total Cost in Rs lakhs	Yr 1	Yr 2	Yr 3
1	Infrastructure development	Construction of haat (market sheds)	Bhangaon, Kotgarh, Jetia	5 lakhs/unit	3 units	15	5	5	5
2		Development of play-grounds for promoting sport activities	Mahudi, Sarbil, Bhangaon	50 lakhs/ground	3 grounds	150	50	50	50
3		Repair of roads in the surrounding villages	(1) Road from Mohudi village to Sarbil (2) Road from Bobonga petrol pump to Dondiya sahi	43 lakhs/km	8 kms	344	150	194	0
4	Drinking water	Provision of drinking water	Noamundi, Mahudi	Lumpsum	2 areas	100	0	50	50
5	Skill development	Increase in capacity of ITI College, construction & equipping of related infrastructure	Jagannathpur	Lumpsum	1 unit	150	0	75	75
6	Agriculture	Implementation of solar-powered micro lift irrigation projects	Surrounding villages	10 lakhs/unit	5 units	50	0	30	20

7	Education	Construction of Science Lab	Kotgarh, Sialjoda	30 lakhs/unit	2 nos.	60	60	0	0
8		Provision of lab-on-wheels	Noamundi Block	Lumpsum	1 no.	60	0	0	60
9		Construction of rooms, hostel, computer lab and auditorium	Noamundi	Lumpsum	1 unit	750	0	250	500
10		Provision of school bus	Baitarini route	35 lakhs/bus	2 no.	70	0	35	35
11	Livelihood	Infrastructure support for Mushroom cultivation	Surrounding villages	25000/shed	100 sheds	25	5	10	10
12		Provision of Goatery sheds	Surrounding villages	25000/shed	100 sheds	25	5	10	10
13	Green belt development	Development of fruit orchards at village area	Dongoaposi, Goud Dighiya, Ram Tirath, Katikora, Kutingta	21 lakhs per acre	35 acres	735	250	250	235
14	Health care	Provision of critical care ambulance	Surrounding villages	Lumpsum	2 nos.	36	18	18	0
15	Swachh Bharat	Provision of toilet facility	Noamundi Bazaar, DVC Gate Bus Stand	3.5 lakhs/unit	2 nos.	7	7	0	0
16		Provision of community toilet and bathing complex	Azad Basti, Lakhansaah	20 lakhs/unit	2 nos.	40	0	20	20
17		Providing toilets in schools	5 schools in surrounding villages	12 lakh/unit	5 units	60	12	24	24
18		Augmentation of solid waste management facility	Noamundi Bazar, Kotgarh	Lumpsum	2 units	30	0	15	15
19		Installation of electric crematorium for ensuring cleaner ghats	Dukasai	Lumpsum	1 nos.	500	250	250	0
<b>Total</b>						<b>3207</b>	<b>812</b>	<b>1286</b>	<b>1109</b>

**Grand Total of budget towards PH commitments: Rs. 32.07 crores**

**3) EMP implementation cost - Capital**

S. No	Component	Description	Location	Unit rate	Total Quantity	Total Cost in Rs lakhs	Yr 1	Yr 2	Yr 3
1	Air Environment	Commissioning of mobile water sprinkler (50 KL capacity)	Within lease	Lumpsum	1 no	700	700	0	0
2	Air Environment	Dry fog system for each module of Mobile Crushing & Screening Plant	Within lease (processing plants)	25 lakhs/unit	4 nos.	100	25	25	50
3	Air Environment	Installation of DE system at Iron Ore	Within lease	Lumpsum	1 no	50	0	0	50



	t	Processing Plant							
4	Air Environment	Extension of Fixed water sprinkler network	Within lease	30 lakhs/km	5 km	150	50	50	50
5	Air Environment	Installation of Wind-shield around the proposed mobile crushing and screening plant	Within lease	20 lakhs/100 m boundary	2500 m	500	160	160	180
6	Air Environment	Installation of mist cannons	Within lease	10 lakhs/unit	20 nos.	200	60	70	70
7	Air Environment	Black-topping of haul road	Within lease	100 lakhs/km	6.4 km	640	200	200	240
8	Air Environment	Commissioning of mechanical sweeper	Within lease	Lumpsum	1 unit	200	0	0	200
9	Air Environment	Continuous online monitoring of HEMM parameters	Within lease	Lumpsum	1 unit	300	0	150	150
10	Water Environment	Installation of paste thickener	Within lease	1600 lakhs/unit	2 units	2900	0	1450	1450
11	Water Environment	Installation of thickener(HRT)	Within lease	Lumpsum	1 unit	2100	0	0	2100
12	Water Environment	Commissioning of STP	Within lease (Housing area)	Lumpsum	300 KLD	260	60	100	100
13	Environment Laboratory	Upgradation of Environment Laboratory	Within lease	Lumpsum	1 lab	150	100	50	0
14	Social Environment	Construction of Rain water harvesting pond structures in surrounding village	Sarbil, Dudhvila, Padapahar, Kadajamda, Gundijora, Iterbaljori	3.5 lakhs per pond	6 ponds	20	0	8	12
15	Social Environment	Provision of Solar lighting in village area	Noamundi Basti	Rs 35000 per unit	60 units	20	0	0	20
16	Social Environment	Maintenance of road in village area	Baitarini route, Deogaon	45 lakhs/km	4.5 km	200	60	70	70
<b>Total</b>						<b>8490</b>	<b>1415</b>	<b>2333</b>	<b>4742</b>

### EMP implementation cost - Recurring

Annual operation expenses (OPEX) for operation and maintenance of EMP pollution control measures would be around Rs. 4.5 crores per annum. For afforestation activities, green-belt development, tailings management, PMCP implementation, the mine is already spending around 7 crores per annum and it will continue in future also. These estimates may escalate year-on-year basis.

Grand total for EMP cost (Capital):  
Grand total for EMP cost (Recurring):

Rs.84.9 crores  
Rs.11.5 crores per annum

*RW*

#### 4). Environmental Monitoring Cost

Sl.No.	Particulars	Frequency	Duration of Sampling	Parameters	Monitoring methodology	Cost (in Rs. Lakhs per annum)
<b>Air Quality</b>						
1	AAQ - 4 locations	Twice in a week	24 hr continuously	PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>x</sub> , NO <sub>x</sub>	Manual method as per NAAQS 2009	10
2	Continuous ambient air quality monitoring system - 2 stations	Continuous	Real-time	PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>x</sub> , NO <sub>x</sub> , CO	Automatic (Online) PM <sub>10</sub> & PM <sub>2.5</sub> : Beta attenuation SO <sub>2</sub> : UV Fluorescence NO <sub>x</sub> : Chemiluminescence CO: Non-dispersive Infrared (NDIR)	20
3	Stack monitoring (DG Set)	Once in a quarter	One time	PM <sub>10</sub> , NO <sub>x</sub> , SO <sub>x</sub>	Isokinetic sampling	2
4	Fugitive dust emission monitoring	Once in a fortnight	24 hr continuously	SPM	Manual method as per CTO guidelines	3
<b>Meteorology</b>						
1	Meteorological data	Daily	Continuous Monitoring	Wind speed, direction, temperature, relative humidity and rainfall	As per IMD guidelines	2
<b>Water and Wastewater Quality</b>						
<b>A Industrial/Domestic waste water</b>						
1	ETP/STP inlet and outlet	Monthly	Grab	pH, TSS, BOD, COD, Oil & grease	As per EP Rules/ CTO guidelines	2
<b>B Water quality in the study area</b>						
1	Ground Water quality	4 times in a year	Grab	pH, TDS, DO, BOD, COD	As per IS:10500	2
2	Ground Water level (well water)	Monthly	Once	Depth	Water levels	1
3	Ground Water level (Piezometric with telemetry)	Continuous	Once	Depth	Water levels	1
4	Surface Water quality	Once in quarter	Grab	pH, TSS, BOD, COD, Oil & grease	As per IS:2296 (Class C)	2
5	Water flows in nearby streams	Once in a season	Once	Flow-rate	As per IS specifications	1
<b>Noise Levels</b>						
<b>A Industrial Noise Levels/ Ground Vibrations</b>						
1	Noise quality - mine workings, plant	Fortnight	Once	Leq, Noise level in dB(A)	As per EP Rules/ CTO guidelines	1.5
2	Ground Vibration	Per Blast	Once	Peak Particle Velocity (mm/sec)	As per DGMS guidelines	96

<b>B</b>	<b>Ambient Noise Levels</b>					
1	Ambient noise at 6 locations around the mine lease area	Fortnight	Once	Leq, Noise level in dB(A)	As per EP Rules/ CTO guidelines	1
<b>Soil Characteristics</b>						
1	Soil quality - core and buffer zone (6 locations)	Half-yearly	Grab	Texture, pH, Electrical Conductivity, Nitrogen, Phosphorous, Potassium, Sulfur, Organic Carbon	As per applicable IS parameters	6
<b>Aquatic Ecology</b>						
1	Aquatic life	Once every season	Grab	Phytoplankton, Zooplankton, Bio-assay, Fishes, etc	As per BSI and ZSI	15
<b>Total</b>						<b>165.5</b>

**Grand Total for Environmental Monitoring Cost:** Rs. 1.65 Crores per annum

17. After detailed deliberations made by the Project Proponent and the Consultant, the Committee **recommended** the proposal for Environmental Clearance of Noamundi Iron Ore Mine for the production from 10 MTPA to 19 MTPA (ROM) with total excavation of 27 MTPA over mining lease area 768.55 ha (Forest Clearance for 370.92 ha + non forest area 397.63 ha) out of total project area 1230.42 ha along with increase of Iron ore beneficiation plant capacity (Feed to Plant) from 18 MTPA to 27 MTPA located at Mahul, Balijore, Korta, Noamundi, Sarbil and Barabalijori villages, West Singhbhum District, Jharkhand by M/s Tata Steel Limited.

18. The Ministry has examined the proposal in accordance with the Environmental Impact Assessment Notification, 2006 and further amendments thereto; and after accepting the recommendation of 31<sup>st</sup> meeting of the Expert Appraisal Committee for Environmental Appraisal of Mining Projects (Non-Coal) held during 9<sup>th</sup> to 11<sup>th</sup> June and 14<sup>th</sup> to 15<sup>th</sup> June, 2021 and corrigendum made in 32<sup>nd</sup> meeting of the Expert Appraisal Committee for Environmental Appraisal of Mining Projects (Non-Coal) held during 28<sup>th</sup> June to 1<sup>st</sup> July 2021 and 34<sup>th</sup> meeting of the Expert Appraisal Committee for Environmental Appraisal of Mining Projects (Non-Coal) held during 27<sup>th</sup> to 30<sup>th</sup> July 2021. Based on the documents submitted and presentation made by the Project Proponent and the Consultant, the Committee recommended the proposal for Environmental Clearance of Noamundi Iron Ore Mine for the production from 10 MTPA to 19 MTPA (ROM) with total excavation of 27 MTPA over mining lease area 768.55 ha (Forest Clearance for 370.92 ha + non forest area 397.63 ha) out of total project area 1230.42 ha along with increase of Iron ore beneficiation plant capacity (Feed to Plant) from 18 MTPA to 27 MTPA located at Mahul, Balijore, Korta, Noamundi, Sarbil and Barabalijori villages, West Singhbhum District, Jharkhand by M/s Tata Steel Limited with the following specific conditions and

standard conditions subject to compliance of the followings terms and conditions and environmental safeguards mentioned below.

#### **A. Specific conditions**

1. Implementation of the revised remediation plan, natural resource augmentation plan (NRAP) and community resource augmentation plan (CRAP) which was submitted by PP after the EAC meeting.
2. Implementation of the environmental monitoring plan with emphasis on air quality, noise and vibration, water quality as well as soil degradation to be submitted.
3. Wildlife conservation plan be augmented with additional points revised in the light of guidance given by EAC during the meeting with more emphasis on wildlife conservation rather than creating infrastructure which cannot be controlled by project proponent.
4. Public hearing concerns must be addressed as committed.
5. The EMP cost should include plantation within the mine lease area whereas plantation outside the mine lease area will be given to NRAP cost.
6. No mining activities will be allowed in the forest area for which forest clearance is not available.
7. As the public hearing has been carried out for the entire project area and PP has paid the NPV for entire forest land involved in the project area, PP after taking stage-II Forest Clearance for remaining area i.e. 391.51 Ha; may again approach the Ministry for undertaking mining in the remaining area with the proper mining plan.

#### **B. Standard conditions**

##### **I. Statutory compliance**

- (1) This Environmental Clearance (EC) is subject to orders/ judgment of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, Common Cause Conditions as may be applicable.
- (2) The Project proponent complies with all the statutory requirements and judgment of Hon'ble Supreme Court dated 2nd August, 2017 in Writ Petition (Civil) No. 114 of 2014 in matter of Common Cause versus Union of India & Ors before commencing the mining operations.
- (3) The State Government concerned shall ensure that mining operation shall not be commenced till the entire compensation levied, if any, for illegal mining paid by the Project Proponent through their respective Department of Mining & Geology in strict compliance of Judgment of Hon'ble Supreme Court dated 2nd August, 2017 in Writ Petition (Civil) No. 114 of 2014 in matter of Common Cause versus Union of India & Ors.
- (4) This Environmental Clearance shall become operational only after receiving formal NBWL Clearance from MoEF&CC subsequent to the recommendations of the Standing Committee of National Board for Wildlife, if applicable to the Project.
- (5) This Environmental Clearance shall become operational only after receiving formal Forest Clearance (FC) under the provision of Forest Conservation Act, 1980, if applicable to the Project.
- (6) Project Proponent (PP) shall obtain Consent to Operate after grant of EC and effectively implement all the conditions stipulated therein. The mining activity shall not commence prior to obtaining Consent to Establish / Consent to Operate from the concerned State Pollution Control Board/Committee.

- (7) The PP shall adhere to the provision of the Mines Act, 1952, Mines and Mineral (Development & Regulation), Act, 2015 and rules & regulations made there under. PP shall adhere to various circulars issued by Directorate General Mines Safety (DGMS) and Indian Bureau of Mines from time to time.
- (8) The Project Proponent shall obtain consents from all the concerned land owners, before start of mining operations, as per the provisions of MMDR Act, 1957 and rules made there under in respect of lands which are not owned by it.
- (9) The Project Proponent shall follow the mitigation measures provided in MoEFCC's Office Memorandum No. Z-11013/57/2014-IA.II (M), dated 29th October, 2014, titled "Impact of mining activities on Habitations-Issues related to the mining Projects wherein Habitations and villages are the part of mine lease areas or Habitations and villages are surrounded by the mine lease area".
- (10) The Project Proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of surface water and from CGWA for withdrawal of ground water for the project.
- (11) A copy of EC letter will be marked to concerned Panchayat / local NGO etc. if any, from whom suggestion / representation has been received while processing the proposal.
- (12) State Pollution Control Board/Committee shall be responsible for display of this EC letter at its Regional office, District Industries Centre and Collector's office/ Tehsildar's Office for 30 days.
- (13) The Project Authorities should widely advertise about the grant of this EC letter by printing the same in at least two local newspapers, one of which shall be in vernacular language of the concerned area. The advertisement shall be done within 7 days of the issue of the clearance letter mentioning that the instant project has been accorded EC and copy of the EC letter is available with the State Pollution Control Board/Committee and web site of the Ministry of Environment, Forest and Climate Change ([www.parivesh.nic.in](http://www.parivesh.nic.in)). A copy of the advertisement may be forwarded to the concerned MoEFCC Regional Office for compliance and record.
- (14) The Project Proponent shall inform the MoEF&CC for any change in ownership of the mining lease. In case there is any change in ownership or mining lease is transferred than mining operation shall only be carried out after transfer of EC as per provisions of the para 11 of EIA Notification, 2006 as amended from time to time.

## **II. Air quality monitoring and preservation**

- (1) The Project Proponent shall install a minimum of 3 (three) online Ambient Air Quality Monitoring Stations with 1 (one) in upwind and 2 (two) in downwind direction based on long term climatological data about wind direction such that an angle of 120° is made between the monitoring locations to monitor critical parameters, relevant for mining operations, of air pollution viz. PM10, PM2.5, NO<sub>2</sub>, CO and SO<sub>2</sub> etc. as per the methodology mentioned in NAAQS Notification No. B-29016/20/90/PCI/I, dated 18.11.2009 covering the aspects of transportation and use of heavy machinery in the impact zone. The ambient air quality shall also be monitored at prominent places like office building, canteen etc. as per the site condition to ascertain the exposure characteristics at specific places. The above data shall be digitally displayed within 03 months in front of the main Gate of the mine site.

- (2) Effective safeguard measures for prevention of dust generation and subsequent suppression (like regular water sprinkling, metalled road construction etc.) shall be carried out in areas prone to air pollution wherein high levels of PM10 and PM2.5 are evident such as haul road, loading and unloading point and transfer points. The Fugitive dust emissions from all sources shall be regularly controlled by installation of required equipments/ machineries and preventive maintenance. Use of suitable water-soluble chemical dust suppressing agents may be explored for better effectiveness of dust control system. It shall be ensured that air pollution level conform to the standards prescribed by the MoEFCC/ Central Pollution Control Board.

### **III. Water quality monitoring and preservation**


- (1) In case, immediate mining scheme envisages intersection of ground water table, then Environmental Clearance shall become operational only after receiving formal clearance from CGWA. In case, mining operation involves intersection of ground water table at a later stage, then PP shall ensure that prior approval from CGWA and MoEFCC is in place before such mining operations. The permission for intersection of ground water table shall essentially be based on detailed hydro-geological study of the area.
- (2) Regular monitoring of the flow rate of the springs and perennial nallahs flowing in and around the mine lease shall be carried out and records maintain. The natural water bodies and or streams which are flowing in an around the village, should not be disturbed. The Water Table should be nurtured so as not to go down below the pre-mining period. In case of any water scarcity in the area, the Project Proponent has to provide water to the villagers for their use. A provision for regular monitoring of water table in open dug wall located in village should be incorporated to ascertain the impact of mining over ground water table. The Report on changes in Ground water level and quality shall be submitted on six-monthly basis to the Regional Office of the Ministry, CGWA and State Groundwater Department / State Pollution Control Board.
- (3) Project Proponent shall regularly monitor and maintain records w.r.t. ground water level and quality in and around the mine lease by establishing a network of existing wells as well as new piezo-meter installations during the mining operation in consultation with Central Ground Water Authority/ State Ground Water Department. The Report on changes in Ground water level and quality shall be submitted on six-monthly basis to the Regional Office of the Ministry, CGWA and State Groundwater Department / State Pollution Control Board.
- (4) The Project Proponent shall undertake regular monitoring of natural water course/ water resources/ springs and perennial nallahs existing/ flowing in and around the mine lease and maintain its records. The project proponent shall undertake regular monitoring of water quality upstream and downstream of water bodies passing within and nearby/ adjacent to the mine lease and maintain its records. Sufficient number of gullies shall be provided at appropriate places within the lease for management of water. PP shall carryout regular monitoring w.r.t. pH and included the same in monitoring plan. The parameters to be monitored shall include their water quality vis-à-vis suitability for usage as per CPCB criteria and flow rate. It shall be ensured that no obstruction and/ or alteration be made to water bodies during mining operations without justification and prior approval of MoEFCC. The monitoring of water courses/

bodies existing in lease area shall be carried out four times in a year viz. pre- monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January) and the record of monitored data may be sent regularly to Ministry of Environment, Forest and Climate Change and its Regional Office, Central Ground Water Authority and Regional Director, Central Ground Water Board, State Pollution Control Board and Central Pollution Control Board. Clearly showing the trend analysis on six-monthly basis.

- (5) Quality of polluted water generated from mining operations which include Chemical Oxygen Demand (COD) in mines run-off; acid mine drainage and metal contamination in runoff shall be monitored along with Total Suspended Solids (TDS), Dissolved Oxygen (DO), pH and Total Suspended Solids (TSS). The monitored data shall be uploaded on the website of the company as well as displayed at the project site in public domain, on a display board, at a suitable location near the main gate of the Company. The circular No. J- 20012/1/2006-IA.II (M) dated 27.05.2009 issued by Ministry of Environment, Forest and Climate Change may also be referred in this regard.
- (6) Project Proponent shall plan, develop and implement rainwater harvesting measures on long term basis to augment ground water resources in the area in consultation with Central Ground Water Board/ State Groundwater Department. A report on amount of water recharged needs to be submitted to Regional Office MoEFCC annually.
- (7) Industrial waste water (workshop and waste water from the mine) should be properly collected and treated so as to conform to the notified standards prescribed from time to time. The standards shall be prescribed through Consent to Operate (CTO) issued by concerned State Pollution Control Board (SPCB). The workshop effluent shall be treated after its initial passage through Oil and grease trap.
- (8) The water balance/water auditing shall be carried out and measure for reducing the consumption of water shall be taken up and reported to the Regional Office of the MoEF&CC and State Pollution Control Board/Committee.

#### **IV. Noise and vibration monitoring and prevention**

- (1) The peak particle velocity at 500m distance or within the nearest habitation, whichever is closer shall be monitored periodically as per applicable DGMS guidelines.
- (2) The illumination and sound at night at project sites disturb the villages in respect of both human and animal population. Consequent sleeping disorders and stress may affect the health in the villages located close to mining operations. Habitations have a right for darkness and minimal noise levels at night. PPs must ensure that the biological clock of the villages is not disturbed; by orienting the floodlights/ masks away from the villagers and keeping the noise levels well within the prescribed limits for day /night hours.
- (3) The Project Proponent shall take measures for control of noise levels below 85 dBA in the work environment. The workers engaged in operations of HEMM, etc. should be provided with ear plugs /muffs. All personnel including laborers working in dusty areas shall be provided with protective respiratory devices along with adequate training, awareness and information on safety and health aspects. The PP shall be held responsible in case it has been found that workers/ personals/ laborers are working without personal protective equipment.



## **V. Mining plan**

- (1) The Project Proponent shall adhere to the working parameters of mining plan which was submitted at the time of EC appraisal wherein year-wise plan was mentioned for total excavation i.e. quantum of mineral, waste, over burden, inter burden and top soil etc.. No change in basic mining proposal like mining technology, total excavation, mineral & waste production, lease area and scope of working (viz. method of mining, overburden & dump management, O.B & dump mining, mineral transportation mode, ultimate depth of mining etc.) shall not be carried out without prior approval of the Ministry of Environment, Forest and Climate Change, which entail adverse environmental impacts, even if it is a part of approved mining plan modified after grant of EC or granted by State Govt. in the form to Short Term Permit (STP), Query license or any other name.
- (2) The Project Proponent shall get the Final Mine Closure Plan along with Financial Assurance approved from Indian Bureau of Mines/Department of Mining & Geology as required under the Provision of the MMDR Act, 1957 and Rules/ Guidelines made there under. A copy of approved final mine closure plan shall be submitted within 2 months of the approval of the same from the competent authority to the concerned Regional Office of the Ministry of Environment, Forest and Climate Change for record and verification.
- (3) The land-use of the mine lease area at various stages of mining scheme as well as at the end-of-life shall be governed as per the approved Mining Plan. The excavation vis-à-vis backfilling in the mine lease area and corresponding afforestation to be raised in the reclaimed area shall be governed as per approved mining plan. PP shall ensure the monitoring and management of rehabilitated areas until the vegetation becomes self-sustaining. The compliance status shall be submitted half-yearly to the MoEFCC and its concerned Regional Office.

## **VI. Land reclamation**

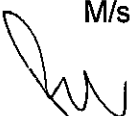
- (1) The Overburden (O.B.) generated during the mining operations shall be stacked at earmarked OB dump site(s) only and it should not be kept active for a long period of time. The physical parameters of the OB dumps like height, width and angle of slope shall be governed as per the approved Mining Plan as per the guidelines/circulars issued by D.G.M.S w.r.t. safety in mining operations shall be strictly adhered to maintain the stability of top soil/OB dumps. The topsoil shall be used for land reclamation and plantation.
- (2) The reject/waste generated during the mining operations shall be stacked at earmarked waste dump site(s) only. The physical parameters of the waste dumps like height, width and angle of slope shall be governed as per the approved Mining Plan as per the guidelines/circulars issued by DGMS w.r.t. safety in mining operations shall be strictly adhered to maintain the stability of waste dumps.
- (3) The reclamation of waste dump sites shall be done in scientific manner as per the Approved Mining Plan cum Progressive Mine Closure Plan.



- (4) The slope of dumps shall be vegetated in scientific manner with suitable native species to maintain the slope stability, prevent erosion and surface run off. The selection of local species regulates local climatic parameters and help in adaptation of plant species to the microclimate. The gullies formed on slopes should be adequately taken care of as it impacts the overall stability of dumps. The dump mass should be consolidated with the help of dozer/ compactors thereby ensuring proper filling/ leveling of dump mass. In critical areas, use of geo textiles/ geo-membranes / clay liners / Bentonite etc. shall be undertaken for stabilization of the dump.
- (5) The Project Proponent shall carry out slope stability study in case the dump height is more than 30 meters. The slope stability report shall be submitted to concerned regional office of MoEF&CC.
- (6) Catch drains, settling tanks and siltation ponds of appropriate size shall be constructed around the mine working, mineral yards and Top Soil/OB/Waste dumps to prevent run off of water and flow of sediments directly into the water bodies (Nallah/ River/ Pond etc.). The collected water should be utilized for watering the mine area, roads, green belt development, plantation etc. The drains/ sedimentation sumps etc. shall be de-silted regularly, particularly after monsoon season, and maintained properly.
- (7) Check dams of appropriate size, gradient and length shall be constructed around mine pit and OB dumps to prevent storm run-off and sediment flow into adjoining water bodies. A safety margin of 50% shall be kept for designing of sump structures over and above peak rainfall (based on 50 years data) and maximum discharge in the mine and its adjoining area which shall also help in providing adequate retention time period thereby allowing proper settling of sediments/ silt material. The sedimentation pits/ sumps shall be constructed at the corners of the garland drains.
- (8) The top soil, if any, shall temporarily be stored at earmarked site(s) within the mine lease only and should not be kept unutilized for long. The physical parameters of the top soil dumps like height, width and angle of slope shall be governed as per the approved Mining Plan and as per the guidelines framed by DGMS w.r.t. safety in mining operations shall be strictly adhered to maintain the stability of dumps. The topsoil shall be used for land reclamation and plantation purpose.

## **VII. Transportation**

- (1) No Transportation of the minerals shall be allowed in case of roads passing through villages/ habitations. In such cases, PP shall construct a 'bypass' road for the purpose of transportation of the minerals leaving an adequate gap (say at least 200 meters) so that the adverse impact of sound and dust along with chances of accidents could be mitigated. All costs resulting from widening and strengthening of existing public road network shall be borne by the PP in consultation with nodal State Govt. Department. Transportation of minerals through road movement in case of existing village/ rural roads shall be allowed in consultation with nodal State Govt. Department only after required strengthening such that the carrying capacity of roads is increased to handle the traffic load. The pollution due to transportation load on the environment will be effectively controlled and water sprinkling will also be done regularly. Vehicular emissions shall be kept under control and regularly monitored. Project should obtain



Pollution Under Control (PUC) certificate for all the vehicles from authorized pollution testing centers.

- (2) The Main haulage road within the mine lease should be provided with a permanent water sprinkling arrangement for dust suppression. Other roads within the mine lease should be wetted regularly with tanker-mounted water sprinkling system. The other areas of dust generation like crushing zone, material transfer points, material yards etc. should invariably be provided with dust suppression arrangements. The air pollution control equipments like bag filters, vacuum suction hoods, dry fogging system etc. shall be installed at Crushers, belt-conveyors and other areas prone to air pollution. The belt conveyor should be fully covered to avoid generation of dust while transportation. PP shall take necessary measures to avoid generation of fugitive dust emissions.

### **VIII. Green Belt**

- (1) The Project Proponent shall develop greenbelt in 7.5m wide safety zone all along the mine lease boundary as per the guidelines of CPCB in order to arrest pollution emanating from mining operations within the lease. The whole Green belt shall be developed within first 5 years starting from windward side of the active mining area. The development of greenbelt shall be governed as per the EC granted by the Ministry irrespective of the stipulation made in approved mine plan.
- (2) The Project Proponent shall carryout plantation/ afforestation in backfilled and reclaimed area of mining lease, around water body, along the roadsides, in community areas etc. by planting the native species in consultation with the State Forest Department/ Agriculture Department/ Rural development department/ Tribal Welfare Department/ Gram Panchayat such that only those species be selected which are of use to the local people. The CPCB guidelines in this respect shall also be adhered. The density of the trees should be around 2500 saplings per Hectare. Adequate budgetary provision shall be made for protection and care of trees.
- (3) The Project Proponent shall make necessary alternative arrangements for livestock feed by developing grazing land with a view to compensate those areas which are coming within the mine lease. The development of such grazing land shall be done in consultation with the State Government. In this regard, Project Proponent should essentially implement the directions of the Hon'ble Supreme Court with regard to acquisition of grazing land. The sparse trees on such grazing ground, which provide mid-day shelter from the scorching sun, should be scrupulously guarded/ protected against felling and plantation of such trees should be promoted.
- (4) The Project Proponent shall undertake all precautionary measures for conservation and protection of endangered flora and fauna and Schedule-I species during mining operation. A Wildlife Conservation Plan shall be prepared for the same clearly delineating action to be taken for conservation of flora and fauna. The Plan shall be approved by Chief Wild Life Warden of the State Govt.
- (5) And implemented in consultation with the State Forest and Wildlife Department. A copy of Wildlife Conservation Plan and its implementation status (annual) shall be submitted to the Regional Office of the Ministry.

## IX. Public hearing and human health issues

- (1) The Project Proponent shall appoint an Occupational Health Specialist for Regular as well as Periodical medical examination of the workers engaged in the mining activities, as per the DGMS guidelines. The records shall be maintained properly. PP shall also carryout Occupational health check-ups in respect of workers which are having ailments like BP, diabetes, habitual smoking, etc. The check-ups shall be undertaken once in six months and necessary remedial/ preventive measures be taken. A status report on the same may be sent to MoEFCC Regional Office and DGMS on half-yearly basis.
- (2) The Project Proponent must demonstrate commitment to work towards 'Zero Harm' from their mining activities and carry out Health Risk Assessment (HRA) for identification workplace hazards and assess their potential risks to health and determine appropriate control measures to protect the health and wellbeing of workers and nearby community. The proponent shall maintain accurate and systematic records of the HRA. The HRA for neighborhood has to focus on Public Health Problems like Malaria, Tuberculosis, HIV, Anaemia, Diarrhoea in children under five, respiratory infections due to bio mass cooking. The proponent shall also create awareness and educate the nearby community and workers for Sanitation, Personal Hygiene, Hand washing, not to defecate in open, Women Health and Hygiene (Providing Sanitary Napkins), hazard of tobacco and alcohol use. The Proponent shall carryout base line HRA for all the category of workers and thereafter every five years.
- (3) The Proponent shall carry out Occupational health surveillance which be a part of HRA and include Biological Monitoring where practical and feasible, and the tests and investigations relevant to the exposure (e.g. for Dust a X-Ray chest; For Noise Audiometric; for Lead Exposure Blood Lead, For Welders Full Ophthalmologic Assessment; for Manganese Miners a complete Neurological Assessment by a Certified Neurologist, and Manganese (Mn) Estimation in Blood; For Inorganic Chromium- Fortnightly skin inspection of hands and forearms by a responsible person. Except routine tests all tests would be carried out in a Lab accredited by NABH. Records of Health Surveillance must be kept for 30 years, including the results of and the records of Physical examination and tests. The record of exposure due to materials like Asbestos, Hard Rock Mining, Silica, Gold, Kaolin, Aluminium, Iron, Manganese, Chromium, Lead, Uranium need to be handed over to the Mining Department of the State in case the life of the mine is less than 30 years. It would be obligatory for the State Mines Departments to make arrangements for the safe and secure storage of the records including X-Ray. Only conventional X-Ray will be accepted for record purposes and not the digital one). X-Ray must meet ILO criteria (17 x14 inches and of good quality).
- (4) The Proponent shall maintained a record of performance indicators for workers which includes (a) there should not be a significant decline in their Body Mass Index and it should stay between 18.5 -24.9, (b) the Final Chest X-Ray compared with the base line X-Ray should not show any capacities ,(c) At the end of their leaving job there should be no Diminution in their Lung Functions Forced Expiratory Volume in one second (FEV1), Forced Vital Capacity (FVC), and the ratio) unless they are smokers which has to be adjusted, and the effect of age, (d) their hearing should not be affected. As a proof an Audiogram (first and last need to be presented), (e) they should not have developed any Persistent Back Pain, Neck Pain, and the movement of their

- Hip, Knee and other joints should have normal range of movement, (f) they should not have suffered loss of any body part. The record of the same should be submitted to the Regional Office, MoEFCC annually along with details of the relief and compensation paid to workers having above indications.
- (5) The Project Proponent shall ensure that Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects.
  - (6) Project Proponent shall make provision for the housing for workers/labors or shall construct labor camps within/outside (company owned land) with necessary basic infrastructure/ facilities like fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche for kids etc. The housing may be provided in the form of temporary structures which can be removed after the completion of the project related infrastructure. The domestic waste water should be treated with STP in order to avoid contamination of underground water.
  - (7) The activities proposed in Action plan prepared for addressing the issues raised during the Public Hearing shall be completed as per the budgetary provisions mentioned in the Action Plan and within the stipulated time frame. The Status Report on implementation of Action Plan shall be submitted to the concerned Regional Office of the Ministry along with District Administration.

#### **X. Corporate Environment Responsibility (CER)**

- (1) The activities and budget earmarked for Corporate Environmental Responsibility (CER) as per Ministry's O.M No 22-65/2017-IA. II (M) dated 01.05.2018 or as proposed by EAC should be kept in a separate bank account. The activities proposed for CER shall be implemented in a time bound manner and annual report of implementation of the same along with documentary proof viz. photographs, purchase documents, latitude & longitude of infrastructure developed & road constructed needs to be submitted to Regional Office MoEF&CC annually along with audited statement.
- (2) Project Proponent shall keep the funds earmarked for environmental protection measures in a separate account and refrain from diverting the same for other purposes. The Year wise expenditure of such funds should be reported to the MoEFCC and its concerned Regional Office.

#### **XI. Miscellaneous**

- (1) The Project Proponent shall prepare digital map (land use & land cover) of the entire lease area once in five years purpose of monitoring land use pattern and submit a report to concerned Regional Office of the MoEF&CC.
- (2) The Project Authorities should inform to the Regional Office regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.
- (3) The Project Proponent shall submit six monthly compliance reports on the status of the implementation of the stipulated environmental safeguards to the MOEFCC & its concerned Regional Office, Central Pollution Control Board and State Pollution Control Board.

- (4) A separate 'Environmental Management Cell' with suitable qualified manpower should be set-up under the control of a Senior Executive. The Senior Executive shall directly report to Head of the Organization. Adequate number of qualified Environmental Scientists and Mining Engineers shall be appointed and submit a report to RO, MoEFCC.
- (5) The concerned Regional Office of the MoEFCC shall randomly monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the MoEFCC officer(s) by furnishing the requisite data / information / monitoring reports.

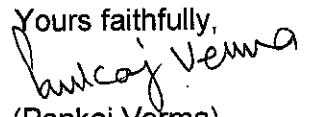
22. The Ministry or any other competent authority may alter/modify the above conditions or stipulate any further condition in the interest of environment protection.

23. Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attracts action under the provisions of Environment (Protection) Act, 1986.

24. The above conditions will be enforced inter-alia, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991 along with their amendments and rules made there under and also any other orders passed by the Hon'ble Supreme Court of India/ High Court of Chhattisgarh and any other Court of Law relating to the subject matter.

25. Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.


26. This issues with the approval of Competent Authority.

Yours faithfully,  
  
(Pankaj Verma)  
Scientist E

**Copy to:**

- (1) The Secretary, Ministry of Mines, Government of India, Shastri Bhawan, New Delhi-110 001.
- (2) The Secretary, Department of Mines & Geology, Government of Jharkhand, Secretariat, Ranchi.
- (3) The Secretary, Department of Environment, Government of Jharkhand, Secretariat, Ranchi.
- (4) The Secretary, Department of Forest, Government of Jharkhand, Secretariat, Ranchi.
- (5) The Chief Wildlife Warden, Forest Department, Ranchi
- (6) The Addl. Principal Chief Conservator of Forests (C), Ministry of Environment, Forest and Climate Change, Regional Office (ECZ), Bunglow No. A-2, 34, Shyamali Colony, Ranchi - 834 002.
- (7) The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110 032.

- (8) The Member Secretary, Central Ground Water Authority, 18/11, Jam Nagar House, Man Singh Road, New Delhi-110 011.
- (9) The Chairman, Jharkhand State Pollution Control Board, Ranchi.
- (10) The Controller General, Indian Bureau of Mines, Indira Bhawan, Civil Lines, Nagpur-440 001.
- (11) The District Collector, West Singhbhum.
- (12) Guard File.
- (13) MoEF&CC Website.

  
(Pankaj Verma)  
Scientist E