

**PROCEEDINGS OF THE MEETING OF STATE LEVEL EXPERT APPRAISAL
COMMITTEE, ODISHA HELD ON 09th APRIL, 2021**

The SEAC met on 09th April, 2021 at 11:00 AM through video conferencing in Google Meet under the Chairmanship of Sri. B.P. Singh. The following members were present in the meeting.

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| 1. Sri. B. P. Singh | - | Chairman |
| 2. Dr. D. Swain | - | Member |
| 3. Prof. (Dr.) P.K. Mohanty | - | Member (through VC) |
| 4. Prof. (Dr.) H.B. Sahu | - | Member (through VC) |
| 5. Sri. J. K. Mahapatra | - | Member |
| 6. Sri. K. R. Acharya | - | Member |
| 7. Prof. (Dr.) B.K. Satpathy | - | Member (through VC) |
| 8. Dr. Sailabala Padhi | - | Member (through VC) |
| 9. Dr. K.C.S Panigrahi | - | Member |

The agenda-wise proceedings and recommendations of the committee are detailed below.

ITEM NO. 01

PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR GONUA IRON ORE MINE OF M/S JSW STEEL LTD FOR PRODUCTION OF 2.99 MTPA (ROM) OF IRON ORE WITH TOTAL EXCAVATION OF 3.4086 MTPA (ROM 2.99 MTPA + OB/SB/IB 0.4186 MTPA) ALONG WITH SCREENING, CRUSHING, 1000 TPH CENTRAL PROCESSING UNIT (CPU) IN LEASE AREA OF 88.516 HA (AS PER DGPS) / 86.886 HA (AS PER ROR) IN VILLAGES GANUA AND PATABEDA, TEHSIL KOIRA, DISTRICT SUNDARGARH, ODISHA STATE OF M/S JSW STEEL LTD - TOR

1. The proposal was considered by the committee to determine the “Terms of Reference (ToR)” for undertaking detailed EIA study for the purpose of obtaining environmental clearance in accordance with the provisions of the EIA Notification, 2006 and amendment thereafter.
2. The project falls under category “B” or activity 1(a) - Mining of Minerals projects under EIA Notification dated 14th September 2006 as amended from time to time.
3. M/s JSW Steel Ltd applied for Terms of Reference for Gonua Iron Ore Mines for production of 2.99 MTPA (ROM) of Iron ore with total excavation of 3.4086 MTPA (ROM 2.99 MTPA + OB/SB/IB 0.4186 MTPA) along with screening, crushing, 1000 TPH Central processing unit (CPU) in lease area of 88.516 ha (As per DGPS) / 86.886 ha (As per ROR) in Villages Ganua and Patabeda, Tehsil Koira, District Sundargarh, Odisha State.
4. The Gonua Iron Ore Mine (erstwhile lessee M/s Pawan Kumar Ahluwalia) was one of the mines whose lease expired on 31.03.2020.
5. In pursuant to the Mines and Minerals (Development and Regulation) Act, 1957 and the Mineral (Auction) Rules, 2015, Govt. of Odisha issued the notice inviting tender dated 6th December, 2019 for commencement of the auction process to grant the mining lease in respect of Gonua Iron Ore Block for a resource size of about 118.731 Million tonnes (Mt). The e-auction process was conducted and M/s JSW Steel Limited was declared as the preferred bidder under Rule 9(9)(iii) of Mineral (Auction) Rules 2015.
6. Now, as per provisions of section 8B(2) of the MMDR Act, 1957, the details of the valid rights, approvals, clearances, licenses and the like held by the previous lessee are vested in favor of M/S JSW Steel Ltd by the Govt. of Odisha for a period of 2 years from the date of execution of

lease deed or till the date of getting fresh approvals, clearances, licenses, permits, and the like, whichever is earlier vide vesting order No-4253/SM, dated 30.05.2020.

7. The mining lease was granted in favor of M/s JSW Steel Limited for a period of 50 years w.e.f 27.06.2020. Subsequent to signing of the MDPA with the Collector, Sundargarh, M/s JSW Steel Limited has made payment of the third instalment being the eighty percent of the upfront value and executed and registered the mining lease with the Government of Odisha on 27.06.2020.
8. JSW Steel Limited proposes to produce 2.99 MTPA (ROM) of Iron ore with total excavation of 3.4086 MTPA (ROM 2.99 MTPA + OB/SB/IB 0.4186 MTPA) along with 1000 TPH Central processing unit (CPU), Screening unit (4 X 400 TPH), crushing unit (3 X 250 TPH) by fully mechanized method in villages Genua and Patabeda, Tehsil Koira, District Sundargarh, Odisha State. The total reserve of Genua mine is about 118.731 Million tonnes (Mt) out of which the mineable iron ore reserve is about 103.009 Mt as on 31.03.2020 as per Mining Plan.
9. The allotted mining block has an area 88.516 ha (As per DGPS) / 86.886 ha (As per ROR). As per LS certified by Tehsildar, Koira, Total lease area includes Forest: 82.724 ha and Non-Forest: 5.662 ha. Stage-II FC of 54.40 ha already diverted on 09.08.1996 & vested to JSW for 2 years. Fresh forest clearance under FC Act, 1980 for diversion of 82.724 ha of forest land has also been applied, vide Proposal No. FP/OR/MIN/51003/2020 dated 15.10.2020.
10. **Location and Connectivity** - The said mining lease is situated on the Southern and South-western flank of Satkutania Pahar in village Genua and Patabeda, Tehsil – Koira in Sundargarh District of Odisha State The area falls under Survey of India Toposheet No. 73 F/8 & G/5. It is bounded by the Latitude 21° 55' 00.52356" to 21° 55' 46.03440" N and Longitude 85° 22' 04.13616" to 85° 22' 36.35616" E. Nearest NH is Keonjhar-Rajamunda road connects NH-215 at distance of 8.6 km. Nearest railway station is Jaroli RS at distance of 5.0 km. Nearest airport is Jharsuguda Airport at distance of 135 km. Nearest town is Joda at distance of 11.4 km and District Headquarters Sundargarh, at distance of 138 km. Nearest Reserve forest is Baitarini RF at 0.7 km. One seasonal nala is passing through Northern side of ML area and Kakarpani Nala at 0.6 km. There are 9 mines within 9km of lease area.
11. The project is a mechanised iron ore mine and is classified as "Category-B" by MoEF&CC, New Delhi as per EIA Notification dated on 14th September, 2006 and amendment thereafter. Environmental baseline study as per Terms of Reference (ToR) and sector specific guidelines is started from 1st October 2020 to 31st December 2020 for air, water, noise and soil along with details of flora, fauna & socio-economic conditions etc. within the study area of 10 km radius from the core area (mine lease boundary).
12. **Method of Mining** - Fully mechanized open cast method of mining by drilling and blasting and by deploying HEMM equipments like hydraulic drills and excavators, wheel loaders, dumpers, will be undertaken. The quarry bench height & width will be maintained at 10m & 15m respectively. But at the ultimate stage the bench height and width will be kept at 10m each. Mining equipment like DTH drill of 115mm dia, dumper (35T), hydraulic excavators of 2.6 cum capacity etc will be used during ensuing plan period to achieve the targeted production. Processes of excavation and loading of overburden/waste will be done by deploying hydraulic excavators and dumpers. The extracted ROM ore will be crushed by primary and secondary crusher and screened in the 1000 TPH Central Processing Unit. Iron ore lumps of size +10 mm will be stored in the CPU storage area and transported through trucks to the nearest railway sidings. Iron ore fines of size -10 mm will be conveyed through road/ rail to beneficiation plant which is located at Nuagaon. And after grinding and desliming of iron ore fines to the required

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particle size further transportation in slurry form through slurry transportation system of Nuagaon to JSW captive steel plants for end use.

13. The excavated ROM ore is proposed to be processed in the 4 x 400 TPH mobile Screening units & 3 x 250 TPH Crushing plant and 1000 TPH Central Processing Unit to obtain the lump and fine ore as product mix.
14. **Water Requirement** - The total make-up water requirement for the proposed mining is about 350 m³/day and it will be met from surface water, ground water borewells and rain water harvesting pond. NOC from CGWA for 75 m³/day is already vested to JSW for 2 years, new application for the CGWA NOC is applied.
15. **Power Requirement** - The total power requirement for the proposed mining will be 2 MW which will be sourced from the nearest grid of state DISCOM.
16. **Green Belt** - During plan period of five years, 6250nos of saplings will be planted within safety zone area of 2.336Ha.
17. The waste generated from the Gouva iron ore mine is proposed to be utilized for internal haul road maintenance and the balance will be dumped at the earmarked waste dump location to be used later for backfilling of quarry.
18. No effluent will be generated due to mining. Sewage generated from toilet blocks would be disposed through septic tank and soak pits.
19. To reduce fugitive dust emissions due to handling of ore, dust suppression systems will be installed at appropriate locations. Plain water type dust suppression system will be provided all around the ore stockpiles. In crushing and screening plant, all dust control measures will be adopted to control the dust emissions within prescribed limit.
20. **Employment Potential** - The proposed mining of Gouva iron ore deposit will employ about 713 people including skilled, semi-skilled, unskilled and clerical manpower apart from managerial staff.
21. The mine area does not cover any habitation. Hence, the mining activities do not involve any displacement of human settlement. No public buildings, places, monuments etc., exist within the lease area or in the vicinity. The mining operations will not disturb / relocate any village. In view of this, there are no Rehabilitation & Resettlement issues.
22. One case is pending for proposed Gouva mine at Odisha High Court with order no. WP (C) 24918/2020 regarding the refund of excess stamp duty paid during the time of registration of lease deed. Till now no order has been passed.
23. Life of Mines is more than 35 years.
24. **Project Cost** - The total capital investment in the Gouva iron ore mine is about Rs. 203 Crores which includes the cost of mine development, CPU, plant & machinery, utility facilities and mine closure cost. The total estimated cost of the project is approximately INR `400 lakhs. and recurring cost (per annum) for the environmental facilities for the proposed mining project works out to be Rs. 40 lakhs and ` 20 lakh / year respectively.
25. The Environment consultant **M/s Vimta Labs Ltd., Hyderabad-500051, Telangana** along with the proponent has made a detailed presentation on the proposal.

Considering the information / documents furnished by the proponent and presentation made by the consultant, the SEAC prescribed the following specific ToRs in addition to standard ToRs as per **Annexure – A** for conducting detailed EIA study.

- i) The Project Proponent shall submit the present state of mine including primary environmental baseline data along with TOR application in order to assess the status and level of environmental compliance while transfer of lease. The Project Proponent must show any non-compliance of earlier EC by previous occupier so that the same can be considered at the time of appraisal for grant of Environmental Clearance.
- ii) The TOR should also include damage assessment due to such noncompliance as one of the activities. In absence of such disclosure by Project Proponent, any subsequent identification of environmental non-compliance would be liability of new Project Proponent. The information to be submitted may be related to, but not limited to,
 - a) Compliance of mining plan, including waste and OB dump management, mine closure plan etc.
 - b) Compliance to Common cause judgment
 - c) Status of R&R
 - d) Compliance of plantation
 - e) Compliance of public hearing issues
 - f) Status of complaints/ court cases/legal action
 - g) Compliance of specific conditions of earlier EC
 - h) Any other relevant environmental issue / parameter.
- iii) The Project Proponent shall undertake the peripheral plantation and closed areas as well as gap plantation within 6 months with the seedling of 4-6 ft height having atleast 90% survival rate. An undertaking for the same also needs to be submitted by Project Proponent.
- iv) New lessee shall take possession of all records and documents related to EC and consent form the earlier lessee, including EIA reports, EC, consent, correspondence with SEIAA, Odisha / MOEF&CC, Govt. of India and SPCB/CPCB etc.
- v) The new lessee shall provide the NRSC certified imaginary of the project site, depicting the real status of land use, canopy coverage, level of plantation, land degradation etc., one at the time of taking possession of lease and second after 6 -12 months to assess changes effected by present occupier.
- vi) Cost of the CER calculated shall be utilized for the concerns of the people in terms of health, education, and infrastructure and environment protection. Project Proponent also shall include the budget for the betterment of schools nearby and to facilitate the online education system by providing Wi-Fi connectivity and desktops/tablets.
- vii) The project proponent should provide in the EIA Report details of all the statutory clearances, permissions, no objection certificates, consents etc. required for this project under various Acts, Rules and regulations and their status or estimated timeline after grant of EC.
- viii) The project proponent should submit the revenue plan for mining lease, revenue plan should be imposed on the satellite imaginary clearly demarcate the Govt. land, private land, agricultural land etc.

- ix) The project proponent should submit the real-time aerial footage & video of the mining lease area and of the transportation route. The project proponent should submit the detailed plan in tabular format (year-wise for life of mine) for afforestation and green belt development in and around the mining lease. The project proponent should submit the number of saplings to be planted, area to be covered under afforestation & green belt, location of plantation, target for survival rate and budget earmarked for the afforestation & green belt development. In addition to this the project proponent should show on a surface plan (5-year interval for life of mine) of suitable scale the area to be covered under afforestation & green belt clearly mentioning the latitude and longitude of the area to be covered during each 5 years. The capital and recurring expenditure to be incurred needs to be submitted. Presently in India there are many agencies which are developing forest in short interval of time. Thus, for the plantation activities details of the experts/agencies to be engaged needs to be provided with budgetary provisions.
- x) The project proponent should submit the quantity of surface or ground water to be used for this project. The complete water balance cycle needs to be submitted. In addition to this PP should submit a detailed plan for rain water harvesting measures to be taken. PP should submit the year wise target for reduction in consumption of the ground/surface water by developing alternative source of water through rain water harvesting measures. The capital and recurring expenditure to be incurred needs to be submitted.
- xi) The project proponent should clearly bring out the details of the manpower to be engaged for this project with their roles /responsibilities/designations. In addition to this the project proponent should mention the number and designation of person to be engaged for implementation of environmental management plan (EMP). The capital and recurring expenditure to be incurred needs to be submitted.
- xii) The project proponent should submit the year-wise, activity wise and time bound budget earmarked for EMP, occupational health surveillance & Corporate Environmental Responsibility. The capital and recurring expenditure to be incurred needs to be submitted.
- xiii) The project proponent should submit the measures/technology to be adopted for prevention of illegal mining and pilferage of mineral. The project proponent should submit the detailed mineralogical and chemical composition of the mineral and percentage of free silica from a NABL/MoEF&CC accredited laboratory.
- xiv) The project proponent should clearly show the transport route of the mineral and protection and mitigative measure to be adopted while transportation of the mineral. The impact from the center line of the road on either side should be clearly brought out supported with the line source modelling and isopleth. Further, frequency of testing of Poly Achromatic Hydrocarbon needs to be submitted along with budget. Based on the above study the compensation to be paid in the event of damage to the crop and land on the either side of the road needs to be mentioned. The project proponent should provide the source of equations used and complete calculations for computing the emission rate from the various sources.
- xv) The project proponent should clearly bring out that what is the specific diesel consumption and steps to be taken for reduction of the same. Year-wise target for reduction in the specific diesel consumption needs to be submitted.
- xvi) The project proponent should bring out the awareness campaign to be carried out on various environmental issues, practical training facility to be provided to the environmental engineer/diploma holders, mining engineer/diploma holders, geologists, and other trades

related to mining operations. Target for the same needs to be submitted.

- xvii) The budget to be earmarked for the various activities shall be decided after perusal of the Standard EC Conditions published by the Ministry, Odisha. After perusal of Standard EC conditions if agreed the project proponent should also submit an undertaking by the way of affidavit for Compliance of Standard EC conditions already prescribed by the Ministry vide O.M. No and Specific condition if prescribed by the SEAC/SEIAA, Odisha.
- xviii) The project proponent should ensure that only NABET accredited consultant shall be engaged for the preparation of EIA/EMP Reports. The project proponent shall ensure that accreditation of consultant shall be valid during the collection of baseline data, preparation of EIA/EMP report and during the appraisal process. The project proponent and consultant should submit an undertaking the information and data provided in the EIA Report and submitted to the SEIAA, Odisha are factually correct and the project proponent and consultant are fully accountable for the same.
- xix) The project proponent should submit the photograph of monitoring stations & sampling locations. The photograph should bear the date, time, latitude & longitude of the monitoring station/sampling location. In addition to this the project proponent should submit the original test reports and certificates of the labs which will analyze the samples.
- xx) The percentage of iron in the final waste generated and not used as iron ore or its upgradation.
- xxi) Compliance to NEERI recommendations.
- xxii) Slope study for both mines and OB /wastes through domain expert to be undertaken and blasting study as well.
- xxiii) Traffic density study, both inside the mines and at haulage road intersecting points of haulage road with public road be undertaken by domain expert.
- xxiv) "Zero discharge" management & "Zero Dust Re-suppression" management with SOP be submitted.
- xxv) Internal roads, drain management with network of the drain, retaining walls and settling tanks / Tailing ponds with ETPs be submitted.
- xxvi) Details of air quality monitoring stations of the area and additional stations at entry and exit of mines and haulage roads, habitation to be considered.
- xxvii) Construction and perennial maintenance of haulage road with details of plantation and the species thereof to be submitted.
- xxviii) Parking plaza layout with maximum no. of vehicles and types of vehicles that can be parked with basic amenities and facilities.
- xxix) FC details with copy of all FC.
- xxx) Status of complaints/ court cases/legal action regarding to lease along with a detailed write up indicating case no., purpose of the case etc.
- xxxi) Copy of lease document.
- xxxii) Details of waste management i.e. composition and nature of waste generated, tabulated form showing year wise waste generation, usage and storage.
- xxxiii) Details of silt, waste and water Management should include the design of drainage

structures.

- xxxiv) Since, the perennial nala is passing nearby, detailed measures to be taken to protect the nala due to mining activity for non-contamination of ground water due to mining.
- xxxv) Comparative matrix previous and proposed production w.r.t overburden, green belt, water balance, haulage roads, settling ponds, ETP.
- xxxvi) Slope study report.
- xxxvii) Layout of previous and proposed location of overburden and tailings.
- xxxviii) Project Proponent shall consider developing a good nursery in nearby village for production of saplings of 4-6feet height for planting in safety zone, sides of external haulage roads and distribution among villagers for planting in their private land/ community land. The nursery may be developed by company on their own or in collaboration with forest department. A detailed proposal to this effect shall be submitted.
- xxxix) Saplings/ trees existing in mining area shall be uprooted and transplanted with ball of earth in safety zone or non-mineral zone. A detailed proposal to this effect shall be submitted.

ITEM NO. 02

PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR CONSTRUCTION OF TOWNSHIP FOR STAFF PROPOSED BY M/S TATA STEEL BSL LIMITED AT: VILLAGE NARENDRAPUR OF ODAPADA TAHASIL DIST. DHENKANAL IN THE DEVELOPMENT PLAN AREA OF TALCHER-ANGUL MERAMANDALI - DEVELOPMENT AUTHORITY.

1. This is a proposal for Environmental Clearance for Construction of township for staff proposed by M/s Tata Steel BSL Limited At: Village Narendrapur of Odapada Tahasil Dist. Dhenkanal in the Development plan area of Talcher-Angul Meramandali - Development Authority.
2. The category of the project is 8(a) as per EIA Notification, 2006 & its amendments.
3. The project involves Construction of township for staff proposed by M/s Tata Steel BSL Limited with total built-up area of 1,46,577 sqm in a total plot area of 2,01,537.497 sqm at Village Narendrapur of Odapada Tahasil, Dist. Dhenkanal in the Development plan area of Talcher-Angul-Meramandali-Development Authority, Odisha by M/s Tata Steel BSL Ltd (formerly Bhushan Steel Limited). The project site is permitted for residential cum commercial use as per approved Master -Plan of the area. Planning /building permission for built up area of 1,46,577 sqm was obtained from the TAMDA (Talcher-Angul- Meramandali Development Authority) vide letter No. 985BP/TAMDA dated 11.05.2017.
4. An application for Environmental Clearance was submitted by the proponent to State Environmental Impact Assessment Authority (SEIAA) in Odisha on 06.02.2014.
5. SEIAA, Odisha observed that construction activity at project site has already started without obtaining prior Environmental Clearance (EC). Therefore, SEIAA, Odisha vide letter dated 15th April, 2017 communicated to the then project proponent to apply for EC at central level as per MoEF & CC Notification dated 14th March, 2017 as regard to grant of EC for violation cases.
6. The Environment Department of the State Government vide letter August, 2014 issued directions u/s 5 of the EP Act, 1986 for the alleged violation of the EIA Notification, 2006, which were replied by the project proponent on 25th August, 2014. The State Government, after taking note of the submissions of the project proponent, confirmed the directions u/s 5 of the EP Act, 1986 on 13th February, 2015, with the directions to stop the construction work till EC is obtained from the competent authority. SEIAA directed the then management to suspend

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further construction and to submit a written resolution in form of commitment to ensure that violation will not be repeated. The Show Cause notice was issued by the Collector & District Magistrate under section 16(1) read with section -19 of the Environment Protection Act-1986. Both were satisfactorily replied with. There have been no more legal interventions and vide letter No. 2813/SEIAA/5 dtd. 15.04.2017, SEIAA, Odisha directed to file application for EC at central level.

7. The construction was reported to be started in 2008 and 75% of the built-up area was completed by December, 2012 without obtaining the prior EC. It is because of this reason the proposal was submitted to the Ministry for consideration in pursuance of the Ministry's Notification dated 14th March, 2017 due to violation of the EIA Notification, 2006.
8. Based on the information provided by the PP, instant Project was treated an integrated project of Steel manufacture. As the proposed residential complex is located within one kilometer of the plant, the aforesaid original' application was treated under category "A" and appraised at central level first by EAC (Violation) in its 8th meeting held on 13- 14th June, 2018.
9. However, at the later stage, the MoEF & CC decided to examine applicability of provisions contained under item 8 (a) of- the Schedule to EIA Notification, 2006. Accordingly, the proposal was appraised by EAC (Violation) in its 21st meeting held during 15-16 April, 2019. It was apprised to the Committee by the new management that M/s Bhushan Steel Ltd has been taken over by M/s Tata Steel Limited and the name of the company is changed to M/s Tata steel BSL Ltd.
10. Thereafter, EAC (Violation), in its 27th meeting held during 31st October, 2019 to 1st November, 2019, noted that the application has also been submitted by the transferee with all the statutory documents required for the name change such as No objection by the transferor and undertaking from transferee that data furnished in the Form 1 application shall be abide by the transferee. The EAC also took note of that the new PP has submitted the site visit report from the concerned regional office of MoEF&CC; wherein it has been mentioned that instant project is not an integrated project. EAC in view of report of MOEF & CC Regional Office decided that the application needs appraisal as per provisions applicable to item 8(a) of the Schedule of EIA Notification, 2006. Hence, it was advised to new PP to submit revised application in Form 1/1A along Conceptual Plan to seek EC as per provisions applicable for item 8(a) of the Schedule to EIA Notification, 2006.
11. Project proponent submitted the requisite information to the Ministry. Accordingly, proposal was again referred to EAC (Violation) in its 32nd meeting held during 22-23 April, 2020 and 35th meeting held during 6-7 August, 2020 for consideration of proposal for grant of Terms of Reference as per provisions applicable to item 8(a) of the Schedule to EIA Notification, 2006. The EAC noted that approximately seventy-five percent (75%) of total construction has been completed and construction for balance area is under suspension which will be completed after obtaining EC.
12. The MoEF&CC, Govt. of India issued Terms of Reference vide F. No* 23-128/2018-IA.III, dated 18.09.2020 under violation project in terms of the provisions of the MoEF&CC, Govt. of India notification dated 14th March 2017.
13. The proponent submitted the final EIA/EMP report prepared as per Terms of Reference issued by the MoEF&CC, Govt. of India to SEIAA, Odisha for consideration of Environmental Clearance as the Building and Construction Project under item 8(a) of schedule to be dealt by SEIAA as per the provisions of EIA notification 2006 and amendment thereafter.

14. The total plot area of the residential township is 201537.49 m² and built-up area 146577 m². Approximately seventy five percent of total construction has been completed and construction for balance area is under suspension for approval. The building plan has been approved by Talcher-Angul-Meramandali- Development Authority (letter no.984/TAMDA, dated 11/5/17/2017, FILE NO. BP/246/2005).
15. **Location and Connectivity:** The geographical co-ordinate of the project site is: Latitude-20°49'4.72"N, Longitude-85°15'35.72"E. The Residential Township is well connected with Bhubaneswar, Cuttack and nearby district town Angul by National Highway. The nearest railway station is Meramandali Railway station, located approx.4.5 Km away from the Residential Township. The nearest Airport is Biju Patnaik International Airport, Bhubaneswar which is approx. 90 Km (Aerial distance) from the Township. There are no wetlands or water bodies in the immediate vicinity. The land filling in some of the areas has been done based on the requirement. There is no natural stream originating or passing through the project area.
16. **Geology** - The recent to sub-recent alluvium occur as flood plain and channel deposits along Brahmani River and its associated tributaries and nalas. It is characterized by fine to coarse grained sand, gravel, sand, silt and clay. Ground Water Level: Water level of monitored sources in the study area falling in Angul district lies in 8.2-8.5 mbgl and majority of those sources falling in Dhenkanal district ranges from 3.0 -15.5 mbgl. However, there will be no negative impact on ground water table because of the project, as the project will not use any ground water. Ecological & Biological Environment: There is no Eco-sensitive areas like National Parks, Wild Life Sanctuaries and migratory routes within the study area. However, about 2.05% of the study area (10 km buffer area) is forest land including two Reserve Forests (RF), one Protected Forest (PF) and one open jungle that promotes great advantage to the project site, acting as "pollutants absorber" of the study area.
17. **Proposed Size of the Project:** Plot area 201537.49 m² (49.801 acres). Proposed Total Ground Coverage 38817.77 m² (19.3 % of total plot area). Total Built-up Area = 146577 m², Maximum number of floors of the Buildings = Basement + Ground + 12. Proposed F.A.R = 0.5, Approved FAR: 0.5. Total number of main dwelling units proposed = 1442. Total parking area provided= 61894.83 m² (42.2% of Built up area). ECS provided is 1934. (For 1200 nos two wheelers & 800 nos four wheelers). Landscape area is 60589.2 m² (@ 30.1 % of the plot area). Area of internal roads is 31056.0 m² (15.4 % of total plot area), Road Side & Open Area Parking- 25293.215 m² (12.6 % of total plot area),
18. **Parking area** - 1599.44 m² (0.8 % of total plot area), Total Open Space (Including paved area of 5089.7 sqm) is 44181.86 m² (21.9 % of total plot area). Total Parking Area is 61894.83 sqm (42.2 % of total built up area) has been proposed and ECS is 1934.
19. **Type of Buildings in Residential Township:**
 The typical configuration for various types of buildings in Residential Township are as follows:
 Type A – Two (2) blocks of High Rise Building, Basement+Ground+9, Built-up area–218865.36 Sq.ft, No. of Flats – 160
 Type B – Two (2) blocks of High Rise Building, Basement+Ground+9, Built-up area – 171262.96 Sq.ft, No. of Flats – 80.
 Type C – Two (2) blocks of High Rise Building, Basement+Ground+12, Built-up area – 201747.62 Sq.ft, No. of Flats – 100.

Type D – Two (2) blocks of High Rise Building, Basement+ Ground+12, Built-up area - 201563.29 Sq.ft, No. of Flats – 150

Club House – Low rise Building, Ground+ 5, Built-up area - 201563.29 Sq. ft, No. of Rooms – 260,

Type F– Nine (9) blocks of Low rise Building, Basement + Ground + 3, Built-up area - 134298.19 Sq.ft, No. of Flats – 144

VP/President Bungalows – Four (4) blocks Low rise Building, Ground+1, Built-up area- 13621.62 Sq.ft, No.of Bungalows– 4, Sr. GM Bungalows – Sixteen (16) blocks Low rise Building, Ground+1, Built-up area-38377.33 Sq. ft.,

No. of Bungalows– 32, GM Bungalows – Fifteen (15) blocks Low rise Building, Ground+1, Built-up area-49001.89 Sq. ft, No. of Bungalows –30, Dy. GM Block – Three (3) blocks Low rise Building, Basement + Ground + 3, Built-up area- 45592.73 Sq. ft, No. of flats – 48.

Dy. Mgr. Block – Low rise Building, Ground+3, Built-up area- 42825.21 Sq.ft, No. of Flats–64, Sr. Mgr. Block – Two (2) blocks Low rise Building, Ground+3, Built-up area-21995.16 Sq.ft, No. of Flats – 32, Mgr. Block – Six (6) blocks Low rise Building, Ground+3, Built-up area - 67865.14 Sq. ft, No. of Flats – 96, DTE/MTE Hostel – Four (4) blocks of Low rise Building, Ground +3, Built-up area -106582.69 Sq. ft, No. of Units – 248. Besides the above, the Residential Township will comprise of one Club House, One no. of Bank, Temple, Two nos. of ATM's & Two nos. of utility buildings and Four wheeler & Two wheeler parking facilities.

20. **Power Requirement:** The average power consumption load for the Township project is approx. 0.8 MW/HR. The power consumption load per square foot is 0.507watt. The power supply is being sourced from TSBSL's own captive power plant. There is provision of (1 x 180 KVA + 1x250 KVA) DG sets for power back up in the residential area. Solar lighting is also planned for common areas and roads through solar lights, about 13200 KWH/Month of energy will be conserved.
21. **Fire Fighting Systems at Township:** Tata Steel BSL has adopted complete pledge of firefighting system for its township. The firefighting system includes manual call point, hooter, flow switch, butterfly valve, pendant sprinkler, ABC fire extinguisher (5 kg) and CO2 fire extinguisher (4.5 kg), 4 way brigade inlet with NRV and butterfly valve, 10. Mm hydrant riser, 150mm sprinkler riser, 50mm sprinkler drain, single headrate hydrant valve, 30m hose reel, 2x15m hose with branch pipe, capacity 75000 liter fire water tank, 230mm x 230mm x 230mm PCC pedestal to run a fire sprinkler connection to an overhead tank. All the above facilities / systems are provided in all tall buildings and planned for remaining 25% construction also.
22. **Status of the Project:** The total plot area of the residential township is 201537.49 sqm and built-up area is 146577 sqm. Approximately, seventy five percent of total construction has been completed and construction for balance area is under suspension, which will be completed after obtaining EC from MoEF&CC.
23. **Baseline Study** - The baseline environmental quality was assessed through field studies within the study area for various components of the environment viz. land, air, noise, water, ecological environment and socio-economic conditions during the month of Jan 2020.
24. **Green Belt** - Evergreen, tall and ornamental trees (3122) and ornamental shrubs (20,000) inside the premises. Developed over 30 % of the plot area (60,589.2 sq m). 500 more trees are proposed for plantation (Remediation Plan)

25. **Water Requirement** - Total fresh Water Requirement has estimated to be 995 KLD which will be sourced from TSBSL's water reservoir.
26. **Waste Water Generation** – Total waste water generated would be 896 KLD. Treated waste water of 303 KLD shall be reused for Green Belt Development & 503 KLD for low end applications in steel plant during non- monsoon. However, entire 806 KLD shall be used in plant during monsoon. Domestic waste water is being treated in STP (MBBR) of 1000 KLD capacity. The sludge generated from the treatment is being used for horticulture and landscaping.
27. **Solid waste Management** - Presently total solid waste generation is about 1.3 T/day. However, it is envisaged to be 3.8 T/day after 100% completion and operation of the project. The generated waste is being handled as per norms. The biodegradable waste (2.134 TPD) will be processed in OWC (Organic waste Converter) and the nonbiodegradable waste (1.734 TPD) will be handed over to authorized local vendor. Hazardous waste like discarded paints and oils to be disposed as per applicable norms. Construction debris shall be disposed in low lying areas for ground levelling and road making.
28. **Rain Water Harvesting** - At present, about 976.53 M³/day of storm water is being treated through pre-treatment system consisting of two chambers for settling and for removal of oil & grease. The treated water is discharged to Kisinda Nala after confirming to the standard. However, 558.976 M³ /day of roof top rainwater has been proposed to be harvested through 1 no collection tank cum de-silting chamber. After treatment, the water is planned to be used in the low end steel plant applications after storage in the TSBSL's water reservoir.
29. **Project Cost:** Total Project cost is Rs. 597.47 Crs. Total EMP expenditure of the project is planned to be Rs. 870 Lacs. Out of which, activities of value Rs. 510 Lacs have been implemented. Therefore, the project proponent has proposed for balance EMP expenditure of Rs. 360 Lacs. Further, recurring expenditure will be 152 Lacs per annum
30. The Environment consultant **M/s Visiontek Consultancy Services Pvt. Ltd., Bhubaneswar** along with the proponent has made a detailed presentation on EIA/EMP report.
31. The SEAC observed the following:
 - a) The proposal was considered by the Expert Appraisal Committee (violation) of MoEF&CC, Govt. of India in its 35th meeting held during 6-7 August, 2020 for appraisal of the proposal for ToR in pursuance of the MoEF&CC, Govt. of India Notification dated 14th March, 2017. The EAC (violation), after deliberations on the proposal in terms of the provisions of the Notification dated 14th March, 2017, confirmed the case to be of violation of the EIA Notification, 2006 and recommended for the following:
 - (i) Grant of Terms of Reference for undertaking EIA and preparation of Environment Management Plan (EMP) for total built-up area of 1,46,577 sqm.
 - (ii) The State Government/SPCB to take action against the project proponent under the provisions of section 19 of the Environment (Protection) Act, 1986, and further no consent to operate or occupancy certificate to be issued till the project is granted EC.
 - (iii) Assessment of ecological damage with respect to air, water, land and other environmental attributes. The collection and analysis of data shall be done by an environmental laboratory duly notified under the Environment (Protection) Act, 1986, or an environmental laboratory accredited by NABL, or a laboratory of a Council of Scientific and Industrial Research (CSIR) institution working in the field of environment.

- (iv) Preparation of EMP comprising remediation plan and natural and community resource augmentation plan corresponding to the ecological damage assessed and economic benefits derived due to violation.
 - (v) The remediation plan and the natural and community resource augmentation plan to be prepared as an independent chapter II the EIA report by the accredited consultants.
 - (vi) The project proponent shall be required to submit a bank guarantee equivalent the amount of remediation plan and natural and community resource augmentation plan with the SPCB prior to the grant-of-EC. The quantum shall be recommended by the SEAC and finalized by the concerned regulatory authority. The bank guarantee shall be released after successful implementation of the EMP, followed by recommendations of the SEAC and approval of the concerned regulatory authority.
- b) EIA/EMP study report has been prepared by a NABET Accredited / NABL Accredited Consultant namely **M/s Visiontek Consultancy Services Pvt. Ltd., Bhubaneswar**.
 - c) Detailed assessment of Ecological Damage, Remediation Plan and Natural and Community Resource Augmentation Plan has been incorporated in the EIA report.
 - d) **Ecological Damage Assessment, Remediation Plan, Natural & Community Resource Augmentation Plan** : Considering the violation made by erstwhile Bhushan Steel Limited and a total spent of Rs.17.36 Crs already incurred by Tata Steel BSL for community development during last 3 years after acquisition, the project proponent requested the SEAC not to recommend any amount or more activities for Carrying out any remediation measures and natural & community resource augmentation activities, and Corporate Environmental Responsibilities. However, the Company is committed for betterment of environment and community and hence shall carry out necessary activities proactively as and when required. The SEAC denied to accept the prayer of the proponent and requested to the proponent to submit a revised ecological damage & remediation plan, natural & community resource augmentation plan before finalization of the proceedings. The project proponent submitted revised ecological damage & remediation plan, natural & community resource augmentation plan.
 - e) An amount of ` **1,24,30,000 (Rupees one crore twenty-four lakhs thirty thousand)** has been estimated towards the cost of revised ecological damage & remediation plan, natural & community resource augmentation plan.
 - f) There is no specific guideline issued by the MoEF&CC, Govt. of India for assessment of Environmental and Ecological Damage as well as estimation of cost for remediation plan as well as Natural and Community Resource Augmentation Plan.
 - g) In the absence of any guidelines, the cost as suggested by the proponent in the EIA report above to be taken into account for remediation plan as well as Natural and Community Resource Augmentation Plan. However, the proponent has to abide by the guidelines if issued by the MoEF&CC, Govt. of India in future and accordingly the proponent has to comply. To this effect, they have to submit an undertaking in form of a legal affidavit.
 - h) The Show Cause notice was issued by the Collector & District Magistrate under section 16(1) read with section -19 of the Environment Protection Act-1986. Both were satisfactorily replied with. There have been no more legal interventions. Present status of filing of case under the provisions of section 19 of the Environment (Protection) Act, 1986

After detailed discussion, the SEAC recommended for grant of Environmental Clearance for Construction of township for staff proposed by M/s Tata Steel BSL Limited At: Village Narendrapur of Odapada Tahasil Dist. Dhenkanal in the Development plan area of Talcher-Angul Meramandali - Development Authority with the following specific conditions in terms of the provisions of MoEF&CC, Govt. of India notification dated 14th March, 2017 in addition to the conditions stipulated as per **Annexure – B. However, the Environmental Clearance shall be issued by the SEIAA after receipt of relevant bank guarantee as indicated below as well as obtaining present status of filing of case under the provisions of section 19 of the Environment (Protection) Act, 1986.**

- i. In consideration of the specific request made by TATA Steel BSL Limited for Grant of conditional EC in the light of the contents in their letter number 47 Dtd. 05/05/21(copy enclosed as Annexure-C, EC may be granted subject to following specific conditions for Compliance within a definite time frame of 3-6 months by the proponent through an undertaking in form of a legal Affidavit followed by a site visit by SEAC Sub Committee soon after three months to verify the status of the compliance and status of the purpose for which the proponent has sought conditional EC. The Compliance report shall be submitted to SEAC/SEIAA with in the time frame. This shall be considered as a single case in view of the Govt. directives to address the Pandemic situation as stated by the proponent in their letter mentioned above and not to be quoted as precedence for future. However, either during the visit of the SEAC Subcommittee and/or at any time or on scrutiny of the Compliance, if it is noticed that the purpose for which conditional EC is sought by the proponent is not in place or found otherwise and/or the Compliances sought and furnished and/or physically found not in order or satisfactory, the conditional EC granted shall be revoked.
- ii. The SEAC recommended for an amount of Rs1,24,30,000(Rupees one crore twenty four lakhs thirty thousand) towards Remediation plan and Natural and Community Resource Augmentation plan as the proponent has gone for construction activity of the project without prior Environmental Clearance under EIA Notification, 2006.
- iii. The project proponent shall be required to submit a bank guarantee of an amount of ` 1,24,30,000 (Rupees one crore twenty four lakhs thirty thousand) towards Remediation plan and Natural and Community Resource Augmentation plan with the State Pollution Control Board, Odisha prior to the grant of Environmental Clearance.
- iv. The bank guarantee shall be released after successful implementation of the EMP, followed by recommendations of the SEAC, Odisha and approval of the regulatory authority (i.e. SEIAA, Odisha).
- v. The proponent has to abide by the guidelines if issued by the MoEF&CC, Govt. of India in future for assessment of Environmental and Ecological Damage as well as estimation of cost for remediation plan as well as Natural and Community Resource Augmentation Plan.
- vi. The proponent shall provide the provision of dual Plumbing for the buildings under construction/to be constructed and same provision as a retrofit in the existing buildings in use and submit the detailed drawing for the same for use of treated waste water from STP in toilet flushing within 3 months.
- vii. The Project Proponent shall ensure zero discharge from project site and no treated water from STP shall be discharged to the stream/river nearby.

- viii. The project proponent shall provide compost pits so that leaf litter from green belt is converted into compost. Under no circumstances, leaf litter shall be burnt.
- ix. The proponent shall convert the existing land for "Industrial use" to "Ghara Bari" kism from the appropriate Govt. Authority for construction of the Township.
- x. The proponent shall use renewable energy/ solar power of at least 5% of projected power requirement for the township.
- xi. The proponent shall provide multi-layer green belt coverage as per the norm excluding landscape around the periphery of the boundary.
- xii. The proponent shall provide rain water harvesting and recharging thereof with necessary structures and it's design vis-à-vis the norm of CGWA against the use of total fresh water.
- xiii. The treated water is said/understood to be the discharge to "kisinda Nala". As such, necessary permission and "NOC" shall be obtained from the concerned authority of the same Nala to take the additional load of discharge of above treated water of TATA BSL LTD Township.
- xiv. Traffic management/Traffic density and Traffic decongestion study at entry and exit to township and at NH shall be undertaken and Complied as per point no 46 of checklist for building and construction project and study report shall be submitted within 06 months of date of issue of Environmental Clearance.
- xv. Comprehensive individual and integrated water management/ water balance, both for township and plant be submitted, taking in to consideration of fresh water/ surface runoff/ storm water, waste water/ treated waste water etc. shall be submitted within 3 months of date of issue of Environmental Clearance.
- xvi. Location of DG Sets along with the layout of stack height/ chimney with reference to the location of dwelling houses/tower vis-à-vis the wind direction be submitted within 3 months of date of issue of Environmental Clearance.
- xvii. **The proponent shall submit duly filled- in checklist (40 points) for building and construction project, area development/township project including hospital projects under ITEM NO-8(a) or 8(b) of the schedule of EIA notification,2006 as per Chairman SEIAA Odisha, Bhubaneswar Office Order NO. 624/SEIAA dated 22.02.2021 available in the PARIVESH PORTAL for the state of Odisha before issue of Environmental Clearance.**
- xviii. In view of the background developments and after takeover of BSL by TATA STEEL during year 2017 and re-naming the company as TATA STEEL BSL Ltd.,obtained revised building plan and area development plan from TAMDA during 2017 by revising the original approval of 2008.A comparative statement of building construction envisaged during 2008 and revised in 2017 with detailed remarks shall be furnished within 3 months of date of issue of Environmental Clearance.
- xix. Since this township project over apporox.50-acre land with around 1000 flats with a project cost of approximately RS.600 crores (year 2008 estimate) has been delinked from the STEEL PLANT & CPP, the township shall be developed as a gated colony with proper boundary wall having linkage to plant road, water supply and power supply.
- xx. The proponent shall obtain Fire Safety Certificate under Odisha Fire Prevention and Fire Safety Rules,2017 (with ammendments) issued by the Fire Safety Wing (Home Dept.) Of

Government of odisha and the Structural Stability (safety) certificate from competent authority for the building constructed in the township.

- xxi. Not with standing to the amount projected by PP for CSR of entire STEEL PLANT Complex, the CER and CSR projection for the stand alone township shall be furnished within 3 months of the issue of the Environmental Clearance.
- xxii. Since the township will have around 1000 flats accommodating around 5000 persons, a detail plan for temporary accommodation of covid warriors, employees and executives of the STEEL PLANT shall be furnished within 3 months of the issue of the Environmental Clearance.
- xxiii. Preparation of a disaster management plan (DMP) under the provision of Disaster Management Act, 2005 through an expert Organisation like OSDMA of Revenue and Disaster Management, Government of Odisha including Onsite emergency plan for the township with linkage to offsite emergency plan of Dhenkanal district to tackle any abnormal and emergency situation.
- xxiv. Development of a register of biodiversity under the provision of biodiversity Act, 2002 for the township through expert Organisation like National Museum of Natural History MoEF & CC, Gol Bhubaneswar or RPRC, F&E Government of Odisha etc and repeat the same after a gap of 10 years to record the changes.
- xxv. Proper Management and handling various waste like SWM, HW, BMW, BATTERY WASTE, E- WASTE and C&D WASTE including linkage with authorise agencies for disposal and reuse shall be done.
- xxvi. The proponent shall encourage composting of organic waste, vermiculture, bee-culture, flori-culture and ornamental horticulture for beautification of the township.
- xxvii. The proponent shall provide open drain network of RCC with cover slab and camouflaged with portrait plants to take care of wastewater and storm water drainage in the township.
- xxviii. The proponent shall provide provision of sinedge road markings for pedestrian pathway cycle track and two wheeler/four wheeler lane with gentle speed breaker (no rumbler or hump), speed limits marking and corner mirrors for smooth movement of traffic within township.
- xxix. The proponent shall provide adequate parking of four wheelers, two wheelers and cycles in the basement, stilt, multi-storied parking plaza, mechanical parking lot and open parking in the township for the dwellers and visitors.
- xxx. The proponent shall provide provision of LED lamps, energy saving fans, refrigeration, air conditioning, pumps, and lifts for common space including swimming pool, integrated community center, mandap, club, yoga center, open area theater, children playground, jogging track, gymnasium and sports complex, parks and gardens and all social and sports activity area in the township.
- xxxi. The proponent shall provide provision of lighting arrester, earthing for all buildings, underground cable network instead of overhead pool cabling for safety of dwellers.

ITEM NO. 03

PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR HOTEL BUILDING PROJECT LOCATED AT PLOT NO- 164, KHATA NO 24, MOUZA- GOPABANDHU NAGAR, UNIT-8, BHUBNESWAR, DIST-KHORDA, ODISHA BY MS LUXURIO ASSETS PRIVATE LTD OF M/S

Proceedings of the SEAC meeting held on 09.04.2021

Environmental Scientist, SEAC

LUXURIO ASSETS PRIVATE LIMITED - EC

1. The proposal is for Environmental Clearance of M/s Luxurio Assets Pvt. Ltd for Hotel Building Project located at plot no- 164, Khata no 24, Mouza- Gopabandhu Nagar, Unit-8, Bhubneswar, Dist-Khorda, Odisha with total built up area 33,834.68 sqm.
2. The project falls under category “B” or activity 8 (a)-Building and Construction projects under EIA Notification dated 14th September 2006 as amended from time to time.
3. M/s Luxurio Assets Pvt. Ltd. aims to provide a Hotel Building Project over Plot No. 164, Khata no. 24, Mouza- Gopabandhu Nagar, Unit-8, District-Khurda, Bhubaneswar, Odisha. on a land measuring 0.70 ha (7001 m² or 1.729 acres)
4. The geographical co-ordinate of the project site is: Latitude -20° 16’ 35.57” N & Longitude - 85° 48’ 17.13” E. The Nearest Highway is NH-5 which is 0.6 km (NW), NH-203 is 6.5 km (ESE) & SH-60 is 13 km (NE) away from project site. The Bhubaneswar Railway Station is 4.0 km (ESE) from the project site. Biju Patnaik International Airport is 1 km (SSW) from project site.
5. The site is coming under development plan of Bhubaneswar Development Authority. The project comprises of the following facilities: Hotel, Restaurant, Banquet Hall and Kitchen.
6. The Building Details Of The Project:

S. No.	Description	Area (m ²)
i.	Plot area	7001
ii.	Permissible Ground Coverage (@40% of plot area)	2,800.4
iii.	Proposed Ground Coverage (@ 39.97% of plot area)	2,798.87
iv.	Permissible FAR (@5.0 of plot area)	35,005.00
v.	Proposed FAR (@ 2.80 of plot area)	19,595.76
vi.	Non-FAR Area (including lift cut outs, shafts, service area, fire refuse area etc)	2,933.56
vii.	Total Basement Area	11,314.36
viii.	Total Built-up area	33,843.68
ix.	Permissible Green Area (@15% of plot area)	1,050.15
x.	Proposed Green Area (@21.03% of the plot area)	1472.80
xi.	Height of the tallest building (m)	47.8

Site plan showing 3 entry/ exit is attached as **Annexure-V. 1.5 m wide road will be reserved for pedestrian pathway.** The site plan showing Pedestrian pathway is attached as **Annexure-VII.**

7. **Water requirement:** The total water requirement for the project will be approx. 443 KLD, out of which domestic water demand is 249 KLD. The fresh water requirement will be 238 KLD (Drinking+ Kitchen+ Lundry+ Make up water for Swimming Pool, Air washer & water body+)

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Boiler feed+ Water Treatment Plant backwash). Fresh water will be supplied by WATCO Division-II, Bhubaneswar.

8. **Power requirement:** The power supply will be supplied by Tata Power Central Odisha Distribution Limited. The requirement load for the project will be approx. 1881 kW. Power Backup: Total 2 nos. of DG sets total 2500 kVA (2*1250 kVA) capacity. 5% (94.05 kVA) energy of total power load from solar lighting will be done in the common areas, stair cases, landscape areas, signage, entry/exit gates and boundary walls. An undertaking for the same is attached as **Annexure-III**. Plan showing Solar panel is attached as **Annexure- IV**.
9. **Rain Water Harvesting:** Rain Water will be harvested through 3 nos. of recharging pits.
10. **Parking Requirement:** Total parking area requirement will be 7838 m² and provision will be 9281.17 m² and Total Parking i.e. 290 ECS will be provided.
11. **Traffic Decongestion plan** for traffic with detailed traffic study report has been submitted.
12. **Firefighting Installations:** Firefighting system will be installed as per recommendation of the Firefighting Officer, Odisha and as per the guideline of NBC (part-4).
13. **Green Belt Development:** Total green area measures 1472.80 m² i.e. 21.03% (Plantation area-1400.20 sqm (20%+Lawn area-72.60 sqm (1.03%)) of the plot area. Total 100 Number of trees will be provided. As per MoEF&CC guidelines, no. of trees required=Plot area/80 sqm.= 7001/80=88 nos. Earlier provision was for 90 trees now as per recommendation, revised no. of Trees to be planted = 90+10=100. Landscape plan showing number of trees is attached as **Annexure-I**.
14. **Waste Water Management** The project will generate approx. 232 KLD of wastewater. The wastewater will be treated in an onsite STP of 280 KLD capacity. The treated water (232 KLD @ 90% of total waste water) will be reused for flushing (29 KLD), horticulture (6 KLD), Paved & Road area (8 KLD), DG set Cooling (30 KLD), & HVAC (126 KLD). 1 KLD treated water will be reused in car washing during monsoon season. This project will be Zero Liquid Discharge project. Hence, it will be Zero Liquid Discharge hotel project. Revised water balance diagram with water management has been submitted.
15. **Solid Waste Management:**

Total Solid Waste Generation	- 450 kg/day
Solid Waste from Hotel Guest Rooms	- 162.0 kg/day
Solid Waste from Hotel Staff	- 121.5 kg/day
Solid Waste from visitors	- 142.5 kg/day
STP Sludge	- 23.54 kg/day
Horticultural waste	- 0.072 kg/day
16. The total population of project after proposed will be 1517 persons (Guests & Staff).
17. The estimated project cost is ` 102.60 Crores
18. The project proponent along with the consultant **M/s Grass Roots Research & Creation India (P) Ltd** made a detailed presentation on the proposal.

Considering the information / documents furnished by the proponent and presentation made by the consultant M/s Grass Roots Research & Creation India (P) Ltd on behalf of the project proponent, the SEAC recommended grant of Environmental Clearance valid for a period of 7 years with stipulated conditions as per **Annexure-D** in addition to the following condition.

- a) The Sub-Committee of SEAC will visit the site within 6 months from the date of issue of Environmental Clearance to verify the progress of the project as well as conditions stipulated in Environmental Clearance.

ITEM NO. 04

Proceedings of the SEAC meeting held on 09.04.2021

Environmental Scientist, SEAC

PROPOSAL OF ENVIRONMENTAL CLEARANCE FOR RIVER BED SAND MINING AT KOTADWAR SAND GHAT ON RIVER MAHANADI OVER AN AREA OF 20.235HA/ 50 ACRE IN VILLAGE PATUGADADHARPUR UNDER BANKI TAHASIL CUTTACK DISTRICT (LEASE PERIOD-5 YEARS) OF SRI ABHISEK MOHANTY - TOR

The project proponent didn't attend the meeting. This is the second time the project proponent did not attend the meeting. The Committee decided to return the proposal to SEIAA, Odisha.

ITEM NO. 05

PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR BASENPALI STONE QUARRY OVER AN AREA OF 5.56 HA. /13.75 ACRES IN VILLAGE- BASENPALI, UNDER TAHASIL - LAKHANPUR OF DISTRICT - JHARSUGUDA OF M/S SHREE RADHARAMAN STONE CRUSHER PVT. LTD. – TOR

1. The proposal was considered by the committee to determine the "Terms of Reference (ToR)" for undertaking detailed EIA study for the purpose of obtaining environmental clearance in accordance with the provisions of the EIA Notification, 2006 and amendment thereafter.
2. The project falls under category "B" or activity 1(a) - Mining of Minerals projects under EIA Notification dated 14th September 2006 as amended from time to time
3. The proposed project is for Basenpali Stone Quarry over an area of 5.56 Ha. /13.75Acres in village- Basenpali, under Tahasil - Lakhanpur of District - Jharsuguda of M/s Shree Radharaman Stone Crusher Pvt. Ltd. Of Sushil Kumar Agrawal, Director.
4. The Basenpali stone quarry has been granted by the Tahasildar, Lakhanpur and M/s Radharaman Stone Crusher Pvt. Ltd has been declared as the successful bidder for grant of Basenpali stone quarry over 13.75 Ac.(5.56 Ha.) in Mouza- Basenpali, Khata No. 1 and Plot No. 1(P),3(P) for a period of 5-Years vide Lease Letter No.102, dated 08.01.2018.
5. The mining plan for Basenpali Stone quarry has been approved by the Director Geology Sambalpur Odisha vide letter no.1269/ZS on dated 17.05.2018.
6. **Location and Connectivity** - The lease is located in survey of India toposheet no. F44R9(64O/9) and bounded between the latitudes of 21°47'30.5" E to 21°47'46.5" E and longitudes of 83°32'57.3" N to 83°33'09.0" N. on Khata No. 1 and Plot No. 1(P),3(P) Kisam: Jalabhandar. Nearest Railway station is Raigarh Railway Station at a distance of 19 Km from the project site. The nearest road is NH 200 located at a distance of 0.5 Km. Nearest airport is Jharsuguda airport at a distance of 55 Km from the mining Lease area. Nearest water reservoir is Hirakud – 4.5km. Nearest habitation – Basenpalli at 1.9km. Nearest RF – Jhargan at 2.5km. Debrigarh wild life sanctuary at 9km. Nearest State Boundaries (Odisha-Chatishgarh) at 1.5km. Nearest road bridge at 0.6km.
7. **Total Reserves** – Geological reserve is 976557cum and Mineable reserve is 596203cum.
8. **Method Of Mining** - The method of mining will be semi mechanized method. The total production in five years is up to 276777m³ per annum. The details of year wise production is given below,

Table No.1.1: Details of Year Wise Production

Year	Length Of Influence(M)	X-Area Of Rock Mass ² (M)	Vol. Of Excavation (M ³)	Vol. Of Rock Mass (M ³)	Vol. Of Waste (M ³)	X-Area Of Soil (M ²)	Vol. Of Soil (M ³)
A	C	D	E= C X D	F=E x 90%	G=E x 10%	H	I= H X C
1st Year	153	400	61200	55080	6120	10	1530
2nd Year	153	401	61353	55218	6135	9	1377
3rd Year	153	402	61506	55355	6151	10	1530
4th	153	403	61659	55493	6166	11	1683

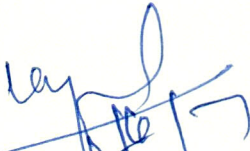
Proceedings of the SEAC meeting held on 09.04.2021

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Year							
5th Year	153	404	61812	55631	6181	10	1530
Total			307530	276777	30753		7650

9. Mining of rock mass will be worked out by opencast method of mining. Handling of rock mass will be done both manually and by excavators. Handpicks, spade, chisel, hammer will be used by manual labors for sorting and sizing. The loosening of rock mass will be done by drilling and blasting. Drilling will be done either by wagon drill or jack hammer taking in to consideration the bench height varying from 3 meter to 6m.
10. Mine road will be maintained between benches with Suitable gradient of haul road will be maintained in between 1 in 16 to 1 in 20.
11. Ultimate depth of Mining 178 mRL respectively. The proposed pit dimension will be 196m x 145m after plan period.
12. **Water Requirement** - 3KLD of water will be required from which 1KLD of water will be required for drinking & domestic purpose. 2 KLD of water is suggested to be utilized for dust suppression and plantation purpose. Water will be sourced from private water tankers and rain water harvesting from the existing quarry.
13. The total excavated rock mass will be utilised as road metal. Hence, 30753 cum of waste/reject will be generated in the plan period. Waste/rejects to be generated from the lease area will be utilised for making of mine road and allied infrastructures. The soil to be generated will be stacked in the earmarked temporary soil stack and will be utilised for the plantation purpose to be undertaken around quarry and adjacent to haul roads.
14. **Green Belt** - In the process, 1618 nos. of saplings will be used for plantation in the quarried out areas of 1.011Ha. within lease respectively.
15. **Power Requirement** - No use of electric power as the operation will be done in day time. However solar lights will be used for day to day living purposes. Tipper & Dumper will be used for transportation. So the approximate quantity of the fuel/Diesel used per day is 100 Lit/day.
16. **Employment Potential** - The mining activity will generate employment for 12 workers (Skilled-1nos., Semi-skilled-02nos. and Un-skilled-07nos.& Mines Manager/Mine Permit Manager-02nos).
17. The project cost is ` 20 lakhs.
18. The Environment consultant **M/s Kalyani Laboratories (Pvt) Ltd. Pahala, Bhubaneswar** along with the proponent has made a presentation on the proposal before the Committee. Considering the information / documents furnished by the proponent and presentation made by the consultant, the SEAC recommended the following:
 - A. The Interstate Boundary Chhatisgarh is 1.5 km away from the boundary of the lease area. The proposal to be examined in light of order of the Hon'ble NGT whether general condition is applicable for this project.
 - B. If general condition is not applicable, then the proponent may be asked to submit the following information / documents followed by site visit of the sub-committee of SEAC to verify the impact of the mining activity on Hirakud Reservoir for taking decision on the proposal.
 - i) Project Proponent shall provide detail justification concerning non applicability of general conditions as project is located at 1.5 Km distance from interstate boundary
 - ii) Certificate from the concerned DFO with respect to DLC land involved in the lease area and exact distance of lease from Eco sensitive Zone of Debrigarh Wild life sanctuary.

- iii) Certificate from the concerned Tahasildar that there is no other mine located within 500 meter of the lease area. Distance of all nearby mines in Topomap with geo coordinates i.e. latitude and longitudes of mines.
- iv) Land documents with kisam of land.
- v) Water bodies within lease area. How mining will be done within water body.
- vi) Mitigation measures to be taken to ensure not to affect Hirakud reservoir and contamination of river due to mining.


Secretary, SEAC


31.05.2021
Chairman, SEAC

TERMS OF REFERENCE (ToR) FOR CONDUCTING ENVIRONMENT IMPACT ASSESSMENT STUDY AND INFORMATION TO BE INCLUDED IN EIA/EMP REPORT FOR GONUA IRON ORE MINE OF M/S JSW STEEL LTD FOR PRODUCTION OF 2.99 MTPA (ROM) OF IRON ORE WITH TOTAL EXCAVATION OF 3.4086 MTPA (ROM 2.99 MTPA + OB/SB/IB 0.4186 MTPA) ALONG WITH SCREENING, CRUSHING, 1000 TPH CENTRAL PROCESSING UNIT (CPU) IN LEASE AREA OF 88.516 HA (AS PER DGPS) / 86.886 HA (AS PER ROR) IN VILLAGES GANUA AND PATABEDA, TEHSIL KOIRA, DISTRICT SUNDARGARH, ODISHA STATE OF M/S JSW STEEL LTD - TOR

A. STANDARD TOR FOR MINING PROJECT

1. The Environmental Clearance will not be operational till such time the Project Proponent complies with all the statutory requirements and judgment of Hon'ble Supreme Court dated the 2nd August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors..
2. Department of Mining & Geology, State Government shall ensure that mining operation shall not commence till the entire compensation levied, 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 the 2nd August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors.
3. Year-wise production details since 1994 should be given, clearly stating the highest production achieved in any one year prior to 1994. It may also be categorically informed whether there had been any increase in production after the EIA Notification 1994 came into force, w.r.t. the highest production achieved prior to 1994.
4. A copy of the document in support of the fact that the Proponent is the rightful lessee of the mine should be given.
5. All documents including approved mine plan, EIA and Public Hearing should be compatible with one another in terms of the mine lease area, production levels, waste generation and its management, mining technology etc. and should be in the name of the lessee.
6. All corner coordinates of the mine lease area, superimposed on a High Resolution Imagery/toposheet, topographic sheet, geomorphology and geology of the area should be provided. Such an Imagery of the proposed area should clearly show the land use and other ecological features of the study area (core and buffer zone).
7. Information should be provided in Survey of India Toposheet in 1:50,000 scale indicating geological map of the area, geomorphology of land forms of the area, existing minerals and mining history of the area, important water bodies, streams and rivers and soil characteristics.
8. Details about the land proposed for mining activities should be given with information as to whether mining conforms to the land use policy of the State; land diversion for mining should have approval from State land use board or the concerned authority.
9. It should be clearly stated whether the proponent Company has a well laid down Environment Policy approved by its Board of Directors? If so, it may be spelt out in the EIA Report with description of the prescribed operating process/procedures to bring into focus

any infringement/deviation/violation of the environmental or forest norms/ conditions? The hierarchical system or administrative order of the Company to deal with the environmental issues and for ensuring compliance with the EC conditions may also be given. The system of reporting of non-compliances / violations of environmental norms to the Board of Directors of the Company and/or shareholders or stakeholders at large, may also be detailed in the proposed safeguard measures in each case should also be provided.

10. The study area will comprise of 10 km zone around the mine lease from lease periphery and the data contained in the EIA such as waste generation etc. should be for the life of the mine / lease period.
11. Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated. Land use plan of the mine lease area should be prepared to encompass preoperational, operational and post operational phases and submitted. Impact, if any, of change of land use should be given.
12. Details of the land for any Over Burden Dumps outside the mine lease, such as extent of land area, distance from mine lease, its land use, R&R issues, if any, should be given.
13. A Certificate from the Competent Authority in the State Forest Department should be provided, confirming the involvement of forest land, if any, in the project area. In the event of any contrary claim by the Project Proponent regarding the status of forests, the site may be inspected by the State Forest Department along with the Regional Office of the Ministry to ascertain the status of forests, based on which, the Certificate in this regard as mentioned above be issued. In all such cases, it would be desirable for representative of the State Forest Department to assist the Expert Appraisal Committees.
14. Status of forestry clearance for the broken up area and virgin forestland involved in the Project including deposition of net present value (NPV) and compensatory afforestation (CA) should be indicated. A copy of the forestry clearance should also be furnished.
15. Implementation status of recognition of forest rights under the Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 should be indicated.
16. The vegetation in the RF / PF areas in the study area, with necessary details, should be given.
17. A study shall be got done to ascertain the impact of the Mining Project on wildlife of the study area and details furnished. Impact of the project on the wildlife in the surrounding and any other protected area and accordingly, detailed mitigative measures required, should be worked out with cost implications and submitted.
18. Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Ramsar site Tiger/Elephant Reserves/(existing as well as proposed), if any, within 10 km of the mine lease should be clearly indicated, supported by a location map duly authenticated by Chief Wildlife Warden. Necessary clearance, as may be applicable to such projects due to proximity of the ecologically sensitive areas as mentioned above, should be obtained from the Standing Committee of National Board of Wildlife and copy furnished.
19. A detailed biological study of the study area [core zone and buffer zone (10 km radius of the periphery of the mine lease)] shall be carried out. Details of flora and fauna, endangered, endemic and RET Species duly authenticated, separately for core and buffer zone should be furnished based on such primary field survey, clearly indicating the

Schedule of the fauna present. In case of any scheduled-I fauna found in the study area, the necessary plan along with budgetary provisions for their conservation should be prepared in consultation with State Forest and Wildlife Department and details furnished. Necessary allocation of funds for implementing the same should be made as part of the project cost.

20. Proximity to Areas declared as 'Critically Polluted' or the Project areas likely to come under the 'Aravali Range', (attracting court restrictions for mining operations), should also be indicated and where so required, clearance certifications from the prescribed Authorities, such as the SPCB or State Mining Dept. Should be secured and furnished to the effect that the proposed mining activities could be considered.
21. Similarly, for coastal Projects, A CRZ map duly authenticated by one of the authorized agencies demarcating LTL, HTL, CRZ area, location of the mine lease w.r.t CRZ, coastal features such as mangroves, if any, should be furnished. (Note: The Mining Projects falling under CRZ would also need to obtain approval of the concerned Coastal Zone Management Authority).
22. R&R Plan/compensation details for the Project Affected People (PAP) should be furnished. While preparing the R&R Plan, the relevant State/National Rehabilitation & Resettlement Policy should be kept in view. In respect of SCs/STs and other weaker sections of the society in the study area, a need based sample survey, family-wise, should be undertaken to assess their requirements, and action programmes prepared and submitted accordingly, integrating the sectoral programmes of line departments of the State Government. It may be clearly brought out whether the village(s) located in the mine (lease area will be shifted or not. The issues relating to shifting of village(s) including their R&R and socio-economic aspects should be discussed in the Report.
23. One season (non-monsoon) [i.e. March - May (Summer Season); October - December (post monsoon season) ; December - February (winter season)] primary baseline data on ambient air quality as per CPCB Notification of 2009, water quality, noise level, soil and flora and fauna shall be collected and the AAQ and other data so compiled presented date-wise in the EIA and EMP Report. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction. The mineralogical composition of PM₁₀, particularly for free silica, should be given.
24. Air quality modelling should be carried out for prediction of impact of the project on the air quality of the area. It should also take into account the impact of movement of vehicles for transportation of mineral. The details of the model used and input parameters used for modelling should be provided. The air quality contours may be shown on a location map clearly indicating the location of the site, location of sensitive receptors, if any, and the habitation. The wind roses showing pre-dominant wind direction may also be indicated on the map.
25. The water requirement for the Project, its availability and source should be furnished. A detailed water balance should also be provided. Fresh water requirement for the Project should be indicated.
26. Necessary clearance from the Competent Authority for drawl of requisite quantity of water

for the Project should be provided.

27. Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided,
28. Impact of the Project on the water quality, both surface and groundwater, should be assessed and necessary safeguard measures, if any required, should be provided.
29. Based on actual monitored data, it may clearly be shown whether working will intersect groundwater, Necessary data and documentation in this regard may be provided. In case the working will intersect groundwater table, a detailed Hydro Geological Study should be undertaken and Report furnished. The Report inter- alia, shall include details of the aquifers present and impact of mining activities on these aquifers. Necessary permission from Central Ground Water Authority for working below ground water and for pumping of ground water should also be obtained and copy furnished.
30. Details of any stream, seasonal or otherwise, passing through the tease area and modification / diversion proposed, if any, and the impact of the same on the hydrology should be.
31. Information on site elevation, working depth, groundwater table etc. Should be provided both in AMSL and BGL. A schematic diagram may also be provided for the same.
32. A time bound Progressive Greenbelt Development Plan shall be prepared in a tabular form (indicating the linear and quantitative coverage, plant species and time frame) and submitted, keeping in mind, the same will have to be executed up front on commencement of the Project. Phase-wise plan of plantation and compensatory afforestation should be charted clearly indicating the area to be covered under plantation and the species to be planted. The details of plantation already done should be given. The plant species selected for green belt should have greater ecological value and should be of good utility value to the local population with emphasis on local and native species and the species which are tolerant to pollution.
33. Impact on local transport infrastructure due to the Project should be indicated. Projected increase in truck traffic as a result of the Project in the present road network (including those outside the Project area) should be worked out, indicating whether it is capable of handling the incremental load. Arrangement for improving the infrastructure, if contemplated (including action to be taken by other agencies such as State Government) should be covered. Project Proponent shall conduct Impact of Transportation study as per Indian Road Congress Guidelines.
34. Details of the onsite shelter and facilities to be provided to the mine workers should be included in the EIA Report.
35. Conceptual post mining land use and Reclamation and Restoration of mined out areas (with plans and with adequate number of sections) should be given in the EIA report.
36. Occupational Health impacts of the Project should be anticipated and the proposed preventive measures spelt out in detail. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP. The project specific occupational health mitigation measures with required facilities proposed in the mining area may be detailed.

37. Public health implications of the Project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations.
38. Measures of socio-economic significance and influence to the local community proposed to be provided by the Project Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation.
39. Detailed environmental management plan (EMP) to mitigate the environmental impacts which, should inter-alia include the impacts of change of land use, loss of agricultural and grazing land, if any, occupational health impacts besides other impacts specific to the proposed Project.
40. Public Hearing points raised and commitment of the Project Proponent on the same along with time bound Action Plan with budgetary provisions to implement the same should be provided and also incorporated in the final EIA/EMP Report of the Project.
41. Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given.
42. The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out.
43. A Disaster management Plan shall be prepared and included in the EIA/EMP Report.
44. Benefits of the Project if the Project is implemented should be spelt out. The benefits of the Project shall clearly indicate environmental, social, economic, employment potential, etc.
45. The activities and budget earmarked for Corporate Environmental Responsibility (CER) shall be as per MoEF&CC, Govt. of India O.M No 22-65/2017-IA. II (M) dated 01.05.2018 and the action plan on the activities proposed under CER shall be submitted at the time of appraisal of the project included in the EIA/EMP Report.
46. The Action Plan on the compliance of the recommendations of the CAG as per MoEF&CC, Govt. of India Circular No. J-11013/71/2016-IA.I (M), dated 25,10.2017 needs to be submitted at the time of appraisal of the project and included in the EIA/EMP Report.
47. Compliance of the MoEF&CC, Govt. of India Office Memorandum No. F: 3-50/2017-IA.III (Pt.), dated 30.05.2018 on the judgement of Hon'ble Supreme Court, dated the 2nd August, 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India needs to be submitted and included in the EIA/EMP Report.

B. Specific TOR: Recommendation of CSIR-NEERI Report on "Carrying Capacity Study for Environmentally Sustainable Iron and Manganese Ore Mining Activity in Keonjhar, Sundargarh and Mayurbhanj districts of Odisha State"

1. Department of Steel & Mines, Govt, of Odisha should prepare 5 years regional plan for annual iron ore requirement from the state, which in turn shall be met from different mines/zones (e.g. Joda, Koira.) in the state. Accordingly, sustainable annual production (SAP) for each zone/mine may be followed adopting necessary environmental protection measures.
2. The expansion or opening of new manganese ore mines may be considered only when the actual production of about 80% is achieved. Further, the mines that have not produced Mn ore for last two years and have no commitment in the current year as well: EC capacity in such cases may be reviewed. The Department of Steel & Mines, Govt, of Odisha shall

submit the Annual Report on this issue to the MoEF&CC for further necessary action.

3. Analysis of baseline environmental quality data for the year 2014 and 2016 indicates that existing mining activities appear to have little / no potential impact on environmental quality, except on air environment, which was mainly due to re-suspension of road dust. Therefore, all the working mines can continue to operate with strict compliance to monitoring of environmental quality parameters as per EC and CTE/CTO conditions of the respective mine, and implementation of suggested measures for control of road dust and air pollution. Odisha State Pollution Control Board has to ensure the compliance of CTE/CTO. Regional office of the MoEF&CC, Bhubaneswar shall monitor the compliance of the EC conditions. Regional office of the Indian Bureau of Mines (IBM) shall monitor the compliance of mining plan and progressive mine closure plan. Any violation by mine lease holder may invite actions per the provisions of applicable acts.
4. Considering the existing environmental quality, EC capacity, production rate, iron ore resources availability and transport infrastructure availability, the share of Joda and Koira sector works out to be 70% and 30% respectively for the existing scenario for the year 2015-16. However, for additional EC capacity, it can be 50:50 subject to commensurate infrastructure improvement (viz. SOTM. pollution free road transport, enhancement of rail network etc.) in the respective regions.
5. Continuous monitoring of different environmental quality parameters as per EC and CTE/CTO conditions with respect to air, noise, water (surface and ground water) and soil quality in each region shall be done. The environmental quality parameters should not indicate any adverse impact on the environment. Monitoring within the mines should be done by individual mine lease holders, whereas outside the mine lease area, monitoring should be done by the Govt, of Odisha through various concerned departments/ authorized agencies. Various monitoring/ studies should be conducted through national reputed institutes, NABET/ MoEF&CC accredited laboratories/organizations. The reports submitted by individual mine lease holders and study reports prepared by other concerned departments/agency for each of the regions should be evaluated and examined by SPCB/ MoEF&CC.
6. Construction of cement concrete road from mine entrance and exit to the main road with proper drainage system and green belt development along the roads and also construction of road minimum 300 m inside the mine should be done. This should be done within one year for existing mines and new mine should have since beginning. The concerned departments should extend full support; wherever the land does not belong to the respective mine lease holders. The Department of Steel & Mines, Govt, of Odisha should ensure the compliance and should not issue the Mining Permits, if mine lease holder has not constructed proper cement concrete road as suggested above.
7. In view of high dust pollution and noise generation due to road transport, it is proposed to regulate/guide the movement of iron and manganese ore material based on the EC capacity of the mines. Accordingly, ore transport mode has been suggested, as given below in Table.

Table : EC Capacity based Suggested Ore Transport Mode (SOTM)

Code	EC	Suggested Ore Transport Mode
SOTM 1	> 5 MTPA	100% by private railway siding or conveyor belt up to public

Code	EC	Suggested Ore Transport Mode
		railway siding or pipeline for captive mines and 70% for non-captive mines
SOTM 2	Between 3 and <5 MTPA	Minimum 70% by public railway siding, through conveyor belt and maximum 30% by road - direct to destination or other public railway siding or above option
SOTM 3	Between 1 and < 3 MTPA	Minimum 70% by public railway siding and maximum 30% by road - direct to destination or by other public railway siding or above options
SOTM 4	<1 MTPA	100 % by 10/17 Ton Trucks or above options

It is mentioned by State Govt, of Odisha that currently about 45% of the iron ore is despatched using rail network and progressively it will be increased to about 60% by rail/slurry over a period of 5 years, taking into account time required to set up more railway sidings.

In view of present ore transport practices and practical limitations, all the existing mines should ensure adoption of SOTM within next 5 years. New mines or mines seeking expansion should incorporate provision of SOTM in the beginning itself, and should have system in place within next 5 years. However, the State Govt, of Odisha shall ensure dust free roads in mining areas wherever the road transportation of mineral is involved. The road shoulders shall be paved with fence besides compliance with IRC guidelines. All the roads should have proper drainage system and apart from paving of entire carriage width the remaining right of way should have native plantation (dust capturing species). Further, regular maintenance should also be ensured by the Govt. of Odisha.

Transportation of iron & manganese ore through river (jetty) to nearest Sea port (Sea cargo option) may be explored or connecting Sea ports with Railway network from the mines to be improved further so that burden on existing road and rail network and also pollution thereof can be minimized.

Progress on development of dust free roads, implementation of SOTM, increased use of existing rail network, development of additional railway network/conveyor belt/ pipelines etc. shall be submitted periodically to MoEF&CC and SEIAA, Odisha. Responsibility: Department of Steel & Mines, Govt. of Odisha; Time Period: 5 Years for developing railway/ conveyor belt facilities

8. Development of parking plazas for trucks with proper basic amenities/ facilities should be done inside mine. This should be done within one year for existing mines and new mines should have since beginning. Small capacity mines (in terms of lease area or production) not having enough space within the mine lease areas should develop parking plaza at a common place within the region with requisite facilities. Responsibility: Individual Mine Lease Holders; Time Period: 1 Year
9. Construction of NH 215 as minimum 4 lane road with proper drainage system and plantation and subsequent regular maintenance of the road as per IRC guidelines. Construction of other mineral carrying roads with proper width and drainage system along with road side plantation to be carried out. Responsibility: Department of Steel & Mines with PWD / NHAI Time Period: 2 Years.
10. Regular vacuum cleaning of all mineral carrying roads aiming at "Zero Dust Resuspension" may be considered. Responsibility: PWD / NHAI/ Mine Lease Holders; Time Period: 3

months for existing roads.

11. Expansion of existing mines and new mines should be considered after conducting recent EIA Study as per the provisions of EIA Notification 2006, as amended time to time) with proper justification on demand scenario for iron ore requirement and availability of pollution free transport network in the region. Responsibility: IBM, Department of Steel & Mines and MoEF&CC, New Delhi.
12. **Mine-wise Allocation of Annual Production:** In case the total requirement of iron ore exceeds the suggested limit for that year, permission for annual production by an individual mine may be decided depending on approved EC capacity (for total actual dispatch) and actual production rate of individual mine during last year or any other criteria set by the State Govt., i.e. Dept, of Steel & Mines. Department of Steel and Mines in consultation with Indian Bureau of Mines-RO should prepare in advance mine-wise annual production scenario as suggested in Table, so that demand for iron ore can be anticipated, and actual production/dispatch does not exceed the suggested annual production.

**Table: Allocation of Production to Different Mines for 5 Years
(as per approved Mining Plan)**

Mine Lease	EC Capacity (MTPA)	Suggested Annual Production (MT)				
		2016-17	2017- 18	2018-19	2019-20	2020-21
		Yr 1	Yr 2	Yr 3	Yr 4	Yr 5
Mine 1	X1					
Mine 2	X2					
Mine 3	X3					
Mine n	Xn					
Total	160 +	105	129	153	177	201
Next year allocation = Average of EC Capacity and Last year production						

13. Expansion of Existing Mines having Validity up to 2020: In view of implementation of MMDR Act 2015, wherein many non-captive mines are expected to be closed by March 2020, total iron ore production scenario has been. It is expected that the non-captive mines having validity till 2020 shall try to maximize their production (limited to EC capacity) in the remaining period. Further, depending upon availability of iron ore resources, these mines may also seek expansion of EC capacity. It may be noted here that total EC capacity of existing 25 working mines having validity upto 2020 is about 85 MTPA, whereas actual production from these mines has been only 44.677 MT (52.6%) during 2015-16 and 57.07 MT (67.1%) during 2016-17. Also, it is expected that these mines would not even be able to achieve ore production as per existing EC capacity till March 2020. Therefore, these existing mines should go for production to the fullest extent to meet the requisite demand from the State. However, where EC limit is exhausted, application for expansion may be considered. Further, the EC process (i.e. Grant of TOR, Baseline data collection, Mining plan/ scheme approval, Public hearing, preparation of EIA/EMP Report. Appraisal by the EAC and grant of EC) takes about one year time. Under such circumstances, it is suggested that further applications for grant of TOR or grant of EC for expansion of production capacity of the mine should be considered for those existing mines, which have exhausted their capacity subject to consideration of all environmental aspects. Responsibility: Department of Steel & Mines and MoEF&CC,

New Delhi.

14. **Sustained Iron Ore Production beyond 2020:** Considering the implementation of MMDR Act 2015, total production of iron ore in Odisha State is anticipated to be about 111 MT during 2016-17 (actual production was - 102.663 MT), 136 MT during 2017-18, 146 MT during 2018-19 and 146 MT during 2019-20. Then there will be substantial drop in total production (to the tune of 73 MT during 2020-21 onwards) due to closure of mines, which are valid up to 2020. Therefore, in order to maintain operation/sustained growth of downstream industries, iron ore mining in the region needs to be continued at a sustainable rate. The State Govt. through Department of Steel and Mines should initiate appropriate action to ensure continued availability of iron ore from the region, as per suggested sustainable annual production
15. **Reserves Estimation**-Mining Plan and Exploration; Appropriate actions (geo- technical investigation for qualitative and quantitative resource estimation & other preparations for auction of mines), may be initiated taken into account the existing working mines, and the mines which were operational at some point of time (but closed presently due to various reasons). The total iron ore reserves/ resources available within the total lease area of each mine should be estimated by State Govt./NMET/ GSI (or any other approved agency) with respect to: (i) Total lease area of mine (surface), (ii) Maximum depth to which resources could be available, (iii) Resources below the ground water table (if intersected), (iv) Reserves are to be estimated as per UNFC code with respect to quantity and quality (% Fe content), (v) Maximum mining rate and area for auction (after 2020) will be calculated based on total resources available and proposed life of mine leading to closure of mine in a stipulated time period. Responsibility: Department of Steel & Mines, IBM and GSI; Time frame: 1 year for the mines to be auctioned for next 2 years. The above mentioned organizations shall ensure the compliance with respect to timelines for implementations.
16. Depending upon availability of extractable iron ore resources within a mine, mining below the ground water table may be permitted after conducting necessary geological and hydro-geological study by GSI and requisite approval from the CGWB/CGWA (Central Ground Water Board/Authority). This can be explored at least in few mines on trial/pilot basis. Further, within a mine, it will be desirable to operate one pit at a time, and next pit should be opened after extracting maximum possible resources from the first pit, so that the exhausted pit can be used for back filling/ storing of low grade iron ore. However, depending upon the quantity and/or quality of iron/ manganese ore, other mine pits in the same mine lease may also be opened for sustainable scientific mining, as per approved mining plan/scheme of mining by IBM. The Department of Steel & Mines, Govt. of Odisha should initiate the pilot project so that minerals are fully utilized.
17. **Commercial Utilization of Low Grade Ore:** R&D studies towards utilization of low-grade iron ore should be conducted through research/academic institutes like IMMT, Bhubaneswar, NML, Jamshedpur, and concerned metallurgical departments in IITs, NITs etc., targeting full utilization of low-grade iron ore (Fe content upto 45% by 2020 and upto 40% by 2025). In fact, life cycle assessment of whole process including environmental considerations should be done for techno-economic and environmental viability. R&D studies on utilization of mine wastewater having high concentration of Fe content for different commercial applications in industries such as cosmetics, pharmaceutical, paint industry should also be explored. Responsibility: IBM, Dept, of Steel & Mines, Individual

Mine Lease Holders.

18. The mining activity in Joda-Koira sector is expected to continue for another 100 years, therefore, it will be desirable to develop proper rail network in the region. Rail transport shall not only be pollution free mode but also will be much economical option for iron ore transport. The rail network and/or conveyor belt system upto public railway siding needs to be created. The total length of the conveyor belt system/ rail network to be developed from mines to nearest railway sidings by 11 mines in Joda region is estimated to be about 64 km. Similarly, in Koira region, total length of rail network/ conveyor system for 8 mines (under SOTM 1 & 2) is estimated to be around 95 km. Further, it is suggested to develop a rail network connecting Banspani (Joda region) and Roxy railway sidings in Koira region. Responsibility: Dept, of Steel & Mines, Govt, of Odisha and Concerned Mines along with Indian Railways. Time Period: Maximum 7 years (by 2025). The Department of Steel & Mines. Govt, of Odisha should follow-up with the concerned Departments and railways so that proposed proper rail network is in place by 2025.
19. State Govt, of Odisha shall make all efforts to ensure exhausting all the iron & manganese ore resources in the existing working mines and from disturbed mining leases/zones in Joda and Koira region. The criteria suggested shall be applicable while suggesting appropriate lease area and sustainable mining rate. Responsibility: Dept, of Steel & Mines, Govt, of Odisha.
20. Large and medium mine leases contribute to better implementation of reclamation and rehabilitation plans to sustain the ecology for scientific and sustainable mining. The small leases do not possess scientific capability of environmentally sustainable mining. Therefore, new mine leases having more than 50 ha area should be encouraged, as far as possible. This will ensure inter-generational resource availability to some extent. Responsibility: Dept, of Steel & Mines, Govt, of Odisha.
21. **Mining Operations/Process Related:** (i) Appropriate mining process and machinery (viz. right capacity, fuel efficient) should be selected to carry out various mining operations that generate minimal dust/air pollution, noise, wastewater and solid waste, e.g. drills should either be operated with dust extractors or equipped with water injection system, (ii) After commencement of mining operation, a study should be conducted to assess and Quantify emission load generation (in terms of air pollution, noise, waste water and solid wasted from each of the mining activity (Including transportation) on annual basis. Efforts should be made to further eliminate/ minimize generation of air pollution/dust, noise, wastewater, solid waste generation in successive years through use of better technology. This shall be ensured by the respective mine lease holders, (iii) Various machineries/equipment selected (viz. dumpers, excavators, crushers, screen plants etc.) and transport means should have optimum fuel/power consumption, and their fuel/power consumption should be recorded on monthly basis. Further, inspection and maintenance of all the machineries/ equipment/ transport vehicles should be followed as per manufacturer's instructions/ recommended time schedule and record should be maintained by the respective mine lease holders, (iv) Digital processing of the entire lease area using remote sensing technique should be carried out regularly once in 3 years for monitoring land use pattern and mining activity taken place. Further, the extent of pit area excavated should also be demarcated based on remote sensing analysis. This should be done by ORSAC (Odisha Space Applications Centre, Bhubaneswar) or an

agency of national repute or if done by a private agency, the report shall be vetted/ authenticated by ORSAC, Bhubaneswar. Expenses towards the same shall be borne by the respective mine lease holders. Responsibility: Individual Mine Lease Holders.

22. **Air Environment Related:** (i) Fugitive dust emissions from all the sources should be controlled regularly on daily basis. Water spraying arrangement on haul roads, loading and unloading and at other transfer points should be provided and properly maintained. Further, it will be desirable to use water fogging system to minimize water consumption. It should be ensured that the ambient air quality parameters conform to the norms prescribed by the GPCB in this regard, (ii) The core zone of mining activity should be monitored on daily basis. Minimum four ambient air quality monitoring stations should be established in the core zone for SPM, PM10, PM2.5, SO₂, NO_x and CO monitoring. Location of air quality monitoring stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets and frequency of monitoring should be undertaken in consultation with the State Pollution Control Board (based on Emission Load Assessment Study). The number of monitoring locations may be more for larger capacity mines and working in larger area. Out of four stations, one should be online monitoring station in the mines having more than 3 MTPA EC Capacity, (iii) Monitoring in buffer zone should be carried out by SPCB or through NABET accredited agency. In addition, air quality parameters (SPM, PM₁₀, PM_{2.5}, SO₂, NO_x and CO) shall be regularly monitored at locations of nearest human habitation including schools and other public amenities located nearest to source of the dust generation as applicable. Further, 11 continuous air quality monitoring systems may be installed in Joida and Koira regions and one in Baripada/ Rairangpur region, (iv) Emissions from vehicles as well as heavy machinery should be kept under control and regularly monitored. Measures should be taken for regular maintenance of vehicles used in mining operations and in transportation of mineral, (v) The vehicles shall be covered with a tarpaulin and should not be overloaded. Further, possibility of using closed container trucks should be explored for direct to destination movement of iron ore. Air quality monitoring at one location should also be carried out along the transport route within the mine (periodically, near truck entry and exit gate). Responsibility: Individual Mine Lease Holders and SPCB.
23. **Noise and Vibration Related:** (i) Blasting operation should be carried out only during daytime. Controlled blasting such as Nonel, should be practiced. The mitigation measures for control of ground vibrations and to arrest fly rocks and boulders should be implemented, (ii) Appropriate measures (detailed in Section 5.4) should be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in operations of HEMM, etc. should be provided with ear plugs/muffs, (iii) Noise levels should be monitored regularly (on weekly basis) near the major sources of noise generation within the core zone. Further, date, time and distance of measurement should also be indicated with the noise levels in the report. The data should be used to map the noise generation from different activities and efforts should be made to maintain the noise levels with the acceptable limits of CPCB (CPCB, 2000) (iv) Similarly, vibration at various sensitive locations should be monitored at least once in month, and mapped for any significant changes due to successive mining operations. Responsibility: Individual Mine Lease Holders.
24. **Water/Wastewater Related :** (i) In general, the mining operations should be

restricted to above ground water table and it should not intersect groundwater table. However, if enough resources are estimated below the ground water table, the same may be explored after conducting detailed geological studies by GSI and hydro- geological studies by CGWB or NIH or institute of national repute, and ensuring that no damage to the land stability/ water aquifer system shall happen. The details/ outcome of such study may be reflected/incorporated in the EIA/EMP report of the mine appropriately, (ii) Natural watercourse and/or water resources should not be obstructed due to any mining operations. Regular monitoring of the flow rate of the springs and perennial nallas should be carried out and records should be maintained. Further, regular monitoring of water quality of nallas and river passing thorough the mine lease area (upstream and downstream locations) should be carried out on monthly basis, (iii) Regular monitoring of ground water level and its quality should be carried out within the mine lease area by establishing a network of existing wells and constructing new piezometers during the mining operation. The monitoring should be carried out on monthly basis, (iv) In order to optimize water requirement, suitable conservation measures to augment ground water resources in the area should be undertaken in consultation with Central Ground Water Board (CGWB). (v) Suitable rainwater harvesting measures on long term basis should be planned and implemented in consultation with CGWB, to recharge the ground water source. Further, CGWB can prepare a comprehensive plan for the whole region, (vi) Appropriate mitigation measures (viz. ETP, STP, garland drains, retaining walls, collection of runoff etc.) should be taken to prevent pollution of nearby river/other water bodies. Water quality monitoring study should be conducted by State Pollution Control Board to ensure quality of surface and ground water sources on regular basis. The study can be conducted through NABL/ NABET approved water testing laboratory. However, the report should be vetted by SPCB. (vii) Industrial wastewater (workshop and wastewater from the mine) should be properly collected, treated in ETP so as to conform to the discharge standards applicable, (viii) Oil and grease trap should be installed before discharge of workshop effluents. Further, sewage treatment plant should be installed for the employees/colony, wherever applicable, (ix) Mine lease holder should ensure that no silt originating due to mining activity is transported in the surface water course or any other water body. Appropriate measures for prevention and control of soil erosion and management of silt should be undertaken. Quantity of silt/soil generated should be measured on regular basis for its better utilization, (x) Erosion from dumps site should be protected by providing geotextile matting or other suitable material, and thick plantation of native trees and shrubs should be carried out at the dump slopes. Further, dumps should be protected by retaining walls.(xi) Trenches / garland drain should be constructed at the foot of dumps to arrest silt from being carried to water bodies. Adequate number of check dams should be constructed across seasonal/perennial nallas (if any) flowing through the mine lease areas and silt be arrested. De-silting at regular intervals should be carried out and quantity should be recorded for its better utilization, after proper soil quality analysis, (xii) The water so collected in the reservoir within the mine should be utilized for the sprinkling on hauls roads, green belt development etc. (xiii) There should be zero waste water discharge from the mine. Based on actual water withdrawal and consumption/ utilization in different activities, water balance diagram should be prepared on monthly basis, and efforts should be made to optimize consumption of water per ton of ore production in successive years. Responsibility: Individual Mine Lease Holders, SPCB and CGWB.

25. **Land/ Soil/ Overburden Related** : (i) The top soil should temporarily be stored at

earmarked site(s) only and it should not be kept unutilized for long (not more than 3 years or as per provisions mentioned in the mine plan/ scheme). The topsoil should be used for land reclamation and plantation appropriately, (ii) Fodder plots should be developed in the non-mineralised area in lieu of use of grazing land, if any. (iii) Over burden/ low grade ore should be stacked at earmarked dump site(s) only and should not be kept active for long period. The dump height should be decided on case to case basis, depending on the size of mine and quantity of waste material generated. However, slope stability study should be conducted for larger heights, as per IBM approved mine plan and DGMS guidelines. The OB dump should be scientifically vegetated with suitable native species to prevent erosion and surface run off. In critical areas, use of geo textiles should be undertaken for stabilization of the dump. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self-sustaining. Proper records should be maintained regarding species, their growth, area coverage etc, (iv) Catch drains and siltation ponds of appropriate size should be constructed to arrest silt and sediment flows from mine operation, soil, OB and mineral dumps. The water so collected can be utilized for watering the mine area, roads, green belt development etc. The drains should be regularly de-silted, particularly after monsoon and should be maintained properly. Appropriate documents should be maintained. Garland drain of appropriate size, gradient and length should be constructed for mine pit, soil, OB and mineral dumps and sump capacity should be designed with appropriate safety margin based on long term rainfall data. Sump capacity should be provided for adequate retention period to allow proper settling of silt material. Sedimentation pits should be constructed at the corners of the garland drains and de-silted at regular intervals, (v) Backfilling should be done as per approved mining plan/scheme. There should be no OB dumps outside the mine lease area. The backfilled area should be afforested, aiming to restore the normal ground level. Monitoring and management of rehabilitated areas should continue till the vegetation is established and becomes self-generating, (vi) Hazardous waste such as, waste oil, lubricants, resin, and coal tar etc. should be disposed off as per provisions of Hazardous Waste Management Rules, 2016, as amended from time to time. Responsibility: Individual Mine Lease Holders.

26. **Ecology/Biodiversity (Flora-Fauna) Related:** (i) As per the Red List of IUCN (International Union for Conservation of Nature), six floral species and 21 faunal species have been reported to be under threatened, vulnerable & endangered category. Protection of these floral and faunal species should be taken by the State Forest & Wildlife Department on priority, particularly in the mining zones, if any, (ii) The mines falling within 5-10 km of the Karo- Karampada Elephant corridor buffer need to take precautionary measures during mining activities. The forest and existing elephant corridor routes are to be protected and conserved. Improvement of habitat by providing food, water and space for the elephants is required to be ensured to avoid Man- Elephant conflicts. Though as per the records of State Forest Department, movement of elephants in the Karo-Karampada elephant corridor within 10 km distance from the mines in Joda and Koira is not observed, the Forest Department shall further record and ensure that elephant's movement is not affected due to mining activities, (iii) All precautionary measures should be taken during mining operation for conservation and protection of endangered fauna namely elephant, sloth bear etc. spotted in the study area. Action plan for conservation of flora and fauna should be prepared and implemented in consultation with the State Forest and Wildlife Department within the mine lease area, whereas outside the mine lease area, the same should be maintained by State Forest Department, (iv) Afforestation is to be done by using

local and mixed species saplings within and outside the mining lease area. The reclamation and afforestation is to be done in such a manner like exploring the growth of fruit bearing trees which will attract the fauna and thus maintaining the biodiversity of the area. As afforestation done so far is very less, forest department needs to identify adequate land and do afforestation by involving local people in a time bound manner, (v) Green belt development carried out by mines should be monitored regularly in every season and parameters like area under vegetation/plantation, type of plantation, type of tree species /grass species/scrubs etc., distance between the plants and survival rate should be recorded, (vi) Green belt is an important sink of air pollutants including noise. Development of green cover in mining area will not only help reducing air and noise pollution but also will improve the ecological conditions and prevent soil erosion to a greater extent. Further, selection of tree species for green belt should constitute dust removal/dust capturing plants since plants can act as efficient biological filters removing significant amounts of particulate pollution. Thus, the identified native trees in the mine area may be encouraged for plantation. Tree species having small leaf area, dense hair on leaf surface (rough surface), deep channels on leaves should be included for plantation, (vii) Vetiver plantation on inactive dumps may be encouraged as the grass species has high strength of anchoring besides medicinal value, (viii) Details of compensatory afforestation done should be recorded and documented by respective forest divisions, and State Forest Department should present mine-wise annual status, along with expenditure details, (ix) Similarly, Wildlife Department is also required to record and document annual status of wildlife in the region and should identify the need for wildlife management on regional level, (x) Maintenance of the ecology of the region is prime responsibility of the State Forest and Wildlife Department. They need to periodically review the status and identify the need for further improvement in the region. The required expenditure may be met from the funds already collected in the form of compensatory afforestation and wildlife management. Further, additional fund, if required can be sought from DMF. Responsibility: Individual Mine Lease Holders and State Forest & Wildlife Department.

27. **Socio-Economic Related:** (i) Public interaction should be done on regular basis and social welfare activities should be done to meet the requirements of the local communities. Further, basic amenities and infrastructure facilities like education, medical, roads, safe drinking water, sanitation, employment, skill development, training institute etc. should be developed to alleviate the quality of life of the people of the region, (ii) Land outtees and land losers/affected people, if any, should be compensated and rehabilitated as per the national/state policy on Resettlement and Rehabilitation, (iii) The socioeconomic development in the region should be focused and aligned with the guidelines/initiatives of Govt, of India/ NITI Aayog / Hon'ble Prime Minister's Vision centring around prosperity, equality, justice, cleanliness, transparency, employment, respect to women, hope etc. This can be achieved by providing adequate and quality facilities for education, medical and developing skills in the people of the region. District administration in association with mine lease holders should plan for "*Samagra Vikas*" of these blocks well as other blocks of the district. While planning for different schemes in the region, the activities should be prioritized as per Pradhan Mantri Khanij Kshetra Kalyan Yojna (PMKKKY), notified by Ministry of Mines, Govt, of India, vide letter no. 16/7/2017-M.VI (Part), dated September 16, 2015. Responsibility: District Administration and Individual Mine Lease Holders.

28. **Road Transport Related:** (i) All the mine lease holders should follow the suggested

ore transport mode (SOTM) based on its EC capacity within next 5 years, (ii) The mine lease holders should ensure construction of cement road of appropriate width from and to the entry and exit gate of the miner as suggested in Chapter 10. Further, maintenance of all the roads should be carried out as per the requirement to ensure dust free road transport, (iii) Transportation of ore should be done by covering the trucks with tarpaulin or other suitable mechanism so that no spillage of ore/dust takes place. Further, air quality in terms of dust, PMin should be monitored near the roads towards entry & exit gate on regular basis, and be maintained within the acceptable limits. Responsibility: Individual Mine Lease Holders and Dept, of Steel & Mines.

29. **Occupational Health Related:** (i) 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 periodically, (ii) Occupational health surveillance program for all the employees/workers (including casual workers) should be undertaken periodically (on annual basis) to observe any changes due to exposure to dust, and corrective measures should be taken immediately, if needed, (iii) Occupational health and safety measures related awareness programs including identification of work related health hazard, training on malaria eradication, HIV and health effects on exposure to mineral dust etc., should be carried out for all the workers on regular basis. A full time qualified doctor should be engaged for the purpose. Periodic monitoring (on 6 monthly basis) for exposure to respirable minerals dust on the workers should be conducted, and record should be maintained including health record of all the workers. Review of impact of various health measures undertaken (at an interval of 3 years or less) should be conducted followed by follow-up of actions, wherever required. Occupational health centre should be established near mine site itself. Responsibility: Individual Mine Lease Holders and District Administration (District Medical Officer),
30. **Reporting of Environmental Sustainability Achievement:** All the mines should prepare annual environmental sustainability report (ESR), highlighting the efforts made towards environmental protection with respect to different environmental components vis-a-vis production performance of the mine on monthly basis. The data collected as per EC and CTE/CTO conditions should be utilized to prepare the annual sustainability report. The mines performing high with effective environmental safeguards may be suitably recognized/rewarded. "Star Rating Format" formulated by the Ministry of Mines along with environmental sustainability report may be used,
31. **Environmental Monitoring Requirements at Regional Level:** Apart from strict compliance and monitoring by individual mine lease holder, there is a need for simultaneous monitoring in each of the regions by competent expert agencies under the guidance/ supervision of concerned regulatory agency. Details of the studies required to be done on regular basis (continuously for 5 years) through responsible agency (organization of national/state repute) and time frame are suggested in Table.

Table: Suggested Environmental Monitoring Requirements and Action Plans at

Sl. No.	Study component / Action Plan	Responsibility	Monitoring and Reporting Time Frame (Approx.)
1.	Environmental Quality Monitoring with	SPCB	Continuous

Sl. No.	Study component / Action Plan	Responsibility	Monitoring and Reporting Time Frame (Approx.)
	respect to Air, Water, Noise and Soil Quality in each region (Joda, Koira and Baripada/Rairangpur) as per specified frequency shall be done by a third party (preferably Govt.) and/or laboratory approved/ recognized by NABET/ CPCB/ SPCB/ MoEF&CC. All the water bodies (rivers, nalias, ponds etc.) shall be monitored. National/State level research/ academic institutes may be involved initially for couple of years to streamline the activity. The report shall be brought out annually by June each year. The study shall be conducted in consultation with MoEF&CC-RO.		Annually
	Installation of online ambient air quality monitor for PM10, PMP.S, SOx and NOx within the mine havina more than 3 MTPA EC Caoacitv	Respective Mine Lease Holders	Continuous Annually
	Installation of online ambient air quality monitor for PM ₁₀ , PM _{2.5} , SOx and NOx in the Joda and Koira Region (total 11 locations).	SPCB	Continuous Annually
2.	Status of flora and fauna in each of the regions shall be assessed on annual basis. Changes, if any, taking place in the region shall be brought out clearly. The study shall be conducted in consultation with State Forest and Wildlife Department.	State Forest & Wildlife Dept.	Annually in mining zone and once in 3 years in the region
3.	Socio-economic study incorporating developments taking place in each of the region, CSR initiatives made by the mining companies shall be conducted on annual basis. Further, micro level developmental needs shall be clearly brought out in the report for each region. The study shall be conducted in consultation with district administration.	Respective District Administration	Annually
4.	A detailed hydro-geological study in	SPCB	Once in 2 years

Sl. No.	Study component / Action Plan	Responsibility	Monitoring and Reporting Time Frame (Approx.)
	each of the regions shall be conducted in an integrated manner in consultation with Regional Director, Central Ground Water Board. Accordingly, all project proponents shall implement suitable conservation measures to augment ground water resources in the area.		
5.	The State Govt. shall ensure construction and maintenance of dust free common roads/ appropriate rail network for transport of ore from mines to the consumer end.	Dept. of Steel & Mines	12 months for road network and 5-7 years for rail network
6.	Construction and maintenance of dust free roads from respective mine to the main road	Respective Mine Lease Holders	Continuous 6 months
7.	Traffic/road inspection study addressing the condition of traffic/roads leading to different mines and connecting to different railway sidings shall be undertaken on annual basis. Further, detailed traffic study shall be undertaken on every 5 yearly basis to ensure adequacy of road/rail infrastructure in each of the regions. The study can be undertaken through national/ state level research/ academic institute (such as CSIR-CRRI, New Delhi).	Dept. of Steel & Mines	Continuous 6 months
8.	Assessment of land use/ land cover changes in each of the regions, with particular focus on mining areas, afforestation activities, variation in flow path of various water bodies etc. using remote sensing data	ORSAC	Annually
9.	R&D Studies for utilization of low-grade iron ore	Dept. of Steel & Mines through R&D / Academic Institutes	Upto 45% by 2020 and upto 40% by 2025

The data so generated for the region should be made available on the website of Department of Steel & Mines and also at MoEF&CC website, so that it can be effectively utilized by Individual Mine Lease Holders for preparing EIA/ EMP reports. This will meet the requirement for separate one season baseline environmental quality data collection by the individual proponents, if the mine proposed is in the same study region. Further. MoEF&CC

through EAC1 can also utilize the data base available in evaluating the proposals for expansion of existing mines or new mines while granting ToR or EC to the mine, taking a holistic view of the region. State Govt, of Odisha should bring out an integrated environmental sustainability report for each of the regions (mainly for Joda and Koia region) incorporating ESR of individual mines and data collected in the region through various agencies, once in 5 years, to plan level of scientific and sustainable mining for the next 5 years.

32. Institutional Mechanism for Implementation of Environmentally Sustainable Mining: The present study is not a one-time study, but a process to ensure environmentally sustainable mining activities in the region on long term basis. Looking into the large-scale mining activities and long term perspective for mining vis-a-vis environmentally sustainable mining and upliftment of people of the region, there is a need to create an agency, who will integrate all the aspects relating to sustainable mining in the region on long term basis. It could be a SPV of Govt, of Odisha or a cell within the overall control and supervision of Dept, of Steel & Mines, with members from

IBM, GSI, OSPCB, MoEF&CC-RO and other concerned Departments and Mine Owners (EZMA), District Administration. It is found that the strong database available for the region needs to be taken into account to map and establish environmental quality of the region on daily, monthly, seasonal and annual basis. Further, the efforts and initiatives of the mines towards environmental protection as well as upliftment of the people of the region are required to be integrated, and a systematic plan at the block/regional level needs to be framed for the overall benefit of the local society, region, district, state and the country as a whole. It will be desirable to have proper environmental quality data management and analysis by NEERI or any other agency for next 5 years (six monthly compliance reports followed by field verification) ensuring sustainable mining practices in the region leading to an overall development of the region. District Mineral Funds should be utilized appropriately for various developmental activities/needs of the region. Further, an environmental sustainability report incorporating environmental status of region coupled with social upliftment may be brought out by SPCB or any other authorized agency on annual basis. This report can be used for supporting the regional EIA study, and also need for environmental quality monitoring by individual mine seeking environmental clearance for new mine/ expansion of mine, including public hearing. Since, outcome of the above study reports shall be in the overall interest of all the stakeholders (including local population) of the region, further planning for the region shall warrant cooperation and assistance of all the stakeholders (mine operators, industries, transporters, State & Central Government Offices, MoEF&CC, CPCB, SPCB, Dept, of Steel & Mines, IBM, IMD, NGOs and local people) in sharing the relevant data/information/ reports/documents etc. to continuously improve upon the environmentally sustainable development plan for economic growth in mining sector as well as for improvement in quality of life of the people of the region.

- C.** Besides the above, the below mentioned general points are also to be followed:-
- a) All documents to be properly referenced with index and continuous page numbering.
 - b) Where data are presented in the Report especially in Tables, the period in which the data were collected and the sources should be indicated.
 - c) Project Proponent shall enclose all the analysis/testing reports of water, air, soil,

noise etc. using the MoEF&CC/NABL accredited laboratories. All the original analysis/testing reports should be available during appraisal of the Project.

- d) Where the documents provided are in a language other than English, an English translation should be provided.
- e) The Questionnaire for environmental appraisal of mining projects as devised earlier by the Ministry shall also be filled and submitted.
- f) While preparing the EIA report, the instructions for the Proponents and instructions for the Consultants issued by MoEF vide O.M. No. J-11013/41/2006- IA.II (I) dated 4th August, 2009, which are available on the website of this Ministry, should be followed.
- g) Changes, if any made in the basic scope and project parameters (as submitted in Form-I and the PFR for securing the TOR) should be brought to the attention of MoEF&CC with reasons for such changes and permission should be sought, as the TOR may also have to be altered. Post Public Hearing changes in structure and content of the draft EIA/EMP (other than modifications arising out of the P.H. process) will entail conducting the PH again with the revised documentation.
- h) As per the circular no. J-11011/618/2010-IA.II (I) dated 30.5.2012, certified report of the status of compliance of the conditions stipulated in the environment clearance for the existing operations of the project, should be obtained from the Regional Office of Ministry of Environment, Forest and Climate Change, as may be applicable.
- i) The EIA report should also include (i) surface plan of the area indicating contours of main topographic features, drainage and mining area, (ii) geological maps and sections and (iii) Sections of the mine pit and external dumps, if any, clearly showing the land features of the adjoining area.

D. The prescribed TOR would be valid for a period of four years for submission of the EIA/EMP report.

CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE FOR CONSTRUCTION OF TOWNSHIP FOR STAFF PROPOSED BY M/S TATA STEEL BSL LIMITED AT: VILLAGE NARENDRAPUR OF ODAPADA TAHASIL DIST. DHENKANAL IN THE DEVELOPMENT PLAN AREA OF TALCHER-ANGUL MERAMANDALI - DEVELOPMENT AUTHORITY – EC.

PART A - SPECIFIC CONDITIONS:

1. Consent to Establish / Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.
2. The approval of the Competent Authority shall be obtained for structural safety of buildings due to earthquakes, adequacy of firefighting equipment etc. as per National Building Code including protection measures from lightning etc.
3. The project proponent shall obtain all necessary clearance/ permission from all relevant agencies including town planning authority before commencement of work. All the construction shall be done in accordance with the local building byelaws.
4. The project proponent shall ensure that the guidelines for building and construction projects issued vide this Ministry's OM NO.19-2/2013-IA.III dated 9th June, 2015, are followed to ensure sustainable environmental management.
5. The proponent shall obtain prior clearance from the Standing Committee of the National Board for Wild Life if the project will be located within any Eco-Sensitive Zone of Wild Life Sanctuary.

TOPOGRAPHY AND NATURAL DRAINAGE

6. The natural drain system should be maintained for ensuring unrestricted flow of water. No construction shall be allowed to obstruct the natural drainage through the site, on wetland and water bodies. Check dams, bio-swales, landscape and other Sustainable Urban Drainage Systems (SUDS) are allowed for maintaining the drainage pattern and to harvest rain water. Buildings shall be designed to follow the natural topography as much as possible. Minimum cutting and filling should be done.
7. The permission from competent authority will be obtained to discharge the excess storm water to drain if any. The proponent shall renovate the existing drain to accommodate the discharge and maintain it perennially.
8. Permission for construction of drain alongside the adjacent NH under construction for allowing the proponent to discharge the treated waste water as well excess runoff water during monsoon from NH Authority shall be obtained. The construction of drains shall be synchronized with the completion of the construction of the Housing Project.

WATER REQUIREMENT, CONSERVATION, RAIN WATER HARVESTING, AND GROUND WATER RECHARGE

9. As proposed, fresh water requirement from ground water shall not exceed 995 KLD.
10. A certificate shall be obtained from the local body supplying water, specifying the total annual water availability with the local authority, the quantity of water already committed, the quantity of water allotted to the project under consideration and the balance water available. This should be specified separately for ground water and surface water sources, ensuring

that there is no impact on other users.

11. The quantity of fresh water usage, water recycling and rainwater harvesting shall be measured and recorded to monitor the water balance as projected by the project proponent. The record shall be submitted to the Regional Office, MoEF&CC and SEIAA, Odisha along with six monthly Monitoring reports.
12. Installation of dual pipe plumbing for supplying fresh water for drinking, cooking and bathing etc. and other for supply of recycled water for flushing, landscape irrigation, car washing, thermal cooling, conditioning etc. shall be done.
13. Use of water saving devices/ fixtures (viz. low flow flushing systems; use of low flow faucets tap aerators etc.) for water conservation shall be incorporated in the building plan.
14. Separation of grey and black water should be done by the use of dual plumbing system. In case of single stack system separate recirculation lines for flushing by giving dual plumbing system be done.
15. Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.
16. The local bye-law provisions on rain water harvesting should be followed. If local bye-law provision is not available, adequate provision for storage and recharge should be followed as per the Ministry of Urban Development Model Building Byelaws, 2016. Rain water harvesting recharge pits of adequate nos. shall be provided.
17. Any ground water dewatering should be properly managed and shall conform to the approvals and the guidelines of the CGWA in the matter. Formal approval shall be taken from the CGWA for any ground water abstraction or dewatering. The proponent shall also obtain permission from Water Resources Department, Govt. of Odisha for drawl of water.
18. The proponent shall keep one bore well as standby domestic water source once municipal water supply is made available in the project area.

SOLID WASTE MANAGEMENT

19. The provisions of the Solid Waste (Management) Rules, 2016, E-Waste (Management) Rules, 2016, and the Plastics Waste (Management) Rules, 2016 shall be followed.
20. Disposal of muck during construction phase shall not create any adverse effect on the neighbouring communities and be disposed taking the necessary precautions for general safety and health aspects of people, only in approved sites with the approval of competent authority.
21. Separate wet and dry bins must be provided in each unit and at the ground level for facilitating segregation of waste. Solid waste shall be segregated into wet garbage and inert materials. Wet garbage shall be composted in Organic Waste Converter. Adequate area shall be provided for solid waste management within the premises which will include area for segregation, composting. The inert waste from group housing project will be sent to dumping site.
22. Any hazardous waste generated during construction phase, shall be disposed off as per applicable rules and norms with necessary approvals of the State Pollution Control Board.
23. A certificate from the competent authority handling municipal solid wastes, indicating the existing civic capacities of handling and their adequacy to cater to the Municipal Solid Waste

generated from project shall be obtained.

SEWAGE TREATMENT PLANT

24. Sewage shall be treated in STP of capacity 1000 KLD. The treated effluent from STP shall be recycled/re-used for flushing and gardening.
25. Excess treated water shall be discharged to the drain only after getting the permission from the concerned authority. The proponent shall renovate the existing drain to accommodate the discharge and maintain it perennially. To this effect the proponent has to give a legal affidavit before going for construction activity.
26. A certificate from the competent authority shall be obtained for discharging treated effluent/untreated effluents into the Public sewer/disposal/drainage systems along with the final disposal point.
27. Separate large recharge pits shall be constructed inside the project area to accommodate the rainwater in case the housing project period and the CDP of the Govt. does not synchronize with reference to construction of road and drain.
28. No sewage or untreated effluent water would be discharged through storm water drains.
29. The installation of the Sewage Treatment Plant (STP) shall be certified by an independent expert and a report in this regard shall be submitted to the SEIAA, Odisha before the project is commissioned for operation. Periodical monitoring of water quality of treated sewage shall be conducted. Necessary measures should be made to mitigate the odour problem from STP.
30. Sludge from the onsite sewage treatment, including septic tanks, shall be collected, conveyed and disposed as per the Ministry of Urban Development, Central Public Health and Environmental Engineering Organization (CPHEEO) Manual on Sewerage and Sewage Treatment Systems, 2013.
31. The proponent shall obtain permission from the concerned authority to discharge the liquid waste to any drain i.e. the competent authority of the drain and "Nala" before commencement of any activity at the project site.

ENERGY

32. Compliance with the Energy Conservation Building Code (ECBC) of Bureau of Energy Efficiency shall be ensured. Buildings in the States which have notified their own ECBC, shall comply with the State ECBC. Outdoor and common area lighting shall be LED. Concept of passive solar design that minimize energy consumption in buildings by using design elements, such as building orientation, landscaping, efficient building envelope, appropriate fenestration, increased day lighting design and thermal mass etc. shall be incorporated in the building design. Wall, window, and roof u-values shall be as per ECBC specifications.
33. Energy conservation measures like installation of CFLs / LED for the lighting the area outside the building should be integral part of the project design and should be in place before project commissioning. Used CFLs, TFL and LED shall be properly collected and disposed off/sent for recycling as per the prevailing guidelines/rules of the regulatory authority to avoid mercury contamination.

34. Solar, wind or other Renewable Energy shall be installed to meet electricity generation equivalent to 5% of the demand load or as per the state level/ local building bye-laws requirement, whichever is higher. Follow super ECBC requirement of ECBC 2017 and provide compliance report.
35. Solar power shall be used for lighting in the apartment to reduce the power load on grid. Separate electric meter shall be installed for solar power. Solar water heating shall be provided to meet 20% of the hot water demand of the commercial and institutional building or as per the requirement of the local building bye-laws, whichever is higher. Residential buildings are also recommended to meet its hot water demand from solar water heaters, as far as possible.
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AIR QUALITY AND NOISE

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39. All construction and demolition debris shall be stored at the site (and not dumped on the roads or open spaces outside) before they are properly disposed. All demolition and construction waste shall be managed as per the provisions of the Construction and Demolition Waste Rules, 2016. All workers working at the construction site and involved in loading, unloading, carriage of construction material and construction debris or working in any area with dust pollution shall be provided with dust mask.
40. **Notification GSR 94(E) dated 25.01.2018 of MoEF&CC regarding Mandatory Implementation of Dust Mitigation Measures for Construction and Demolition Activities for projects requiring Environmental Clearance shall be complied with.**
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45. Topsoil should be stripped to a depth of 20 cm from the areas proposed for buildings, roads, paved areas, and external services. It should be stockpiled appropriately in designated areas and reapplied during plantation of the proposed vegetation on site.

TRANSPORT

46. A comprehensive mobility plan, as per Ministry of Urban Development best practices guidelines (URDPFI), shall be prepared to include motorized, non-motorized, public, and private networks. Road should be designed with due consideration for environment, and safety of users. The road system can be designed with these basic criteria.
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 - Traffic calming measures
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47. A detailed traffic management and traffic decongestion plan shall be drawn up to ensure that the current level of service of the roads within a 05 kms radius of the project is maintained and improved upon after the implementation of the project.
48. This plan should be based on cumulative impact of all development and increased habitation being carried out or proposed to be carried out by the project or other agencies in this 05 Kms radius of the site in different scenarios of space and time and the traffic management plan shall be duly validated and certified by the State Urban Development department and the P.W.D./ competent authority for road augmentation and shall also have their consent to the implementation of components of the plan which involve the participation of these departments.
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ENVIRONMENT MANAGEMENT PLAN

58. An Environmental Management Plan (EMP) shall be prepared and implemented to ensure compliance with the environmental conditions specified above. A dedicated Environment Monitoring Cell with defined functions and responsibility shall be put in place to implement the EMP. The environmental cell shall ensure that the environment infrastructure like Sewage Treatment Plant, Landscaping, Rain Water Harvesting, Energy efficiency and conservation, water efficiency and conservation, solid waste management, renewable energy etc. are kept operational and meet the required standards. The environmental cell shall also keep the record of environment monitoring and those related to the environment infrastructure.

OTHERS

59. Provisions shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
60. A First Aid Room shall be provided in the project both during construction and operations of the project.
61. The company shall draw up and implement corporate social Responsibility plan as per the Company's Act of 2013.
62. As per the MoEF&CC, Govt. of India Office Memorandum F.No.22-65/2017-IA.III dated 1st May 2018, the project proponent is required to prepare and implement Corporate Environment Responsibility (CER) Plan. As per para 6(II) of the said O.M. appropriate funds shall be earmarked for the activities such as infrastructure creation for drinking water supply, sanitation, health, education, skill development, roads, cross drains, electrification including solar power, solid waste management facilities, scientific support and awareness to local farmers to increase yield of crop and fodder, rain water harvesting, soil moisture conservation works, avenue plantation, plantation in community areas etc. The activities proposed under CER shall be restricted to the affected area around the project. The entire activities proposed under the CER shall be treated as project and shall be monitored. The monitoring report shall be submitted to the regional office as a part of half yearly compliance

report, and to the District Collector. It should be posted on the website of the project proponent.

PART B – GENERAL CONDITIONS

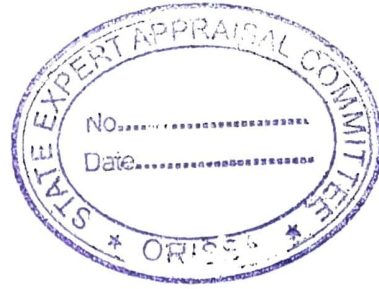
1. A copy of the Environmental Clearance letter shall also be displayed on the website of the concerned State Pollution Control Board. The EC letter shall also be displayed at the Regional Office, District Industries centre and Collector's Office/ Tehsildar's office for 30 days.
2. The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year-wise expenditure shall be reported to the SEIAA, Odisha and MoEF&CC, Govt. of India and its concerned Regional Office.
3. Officials from the Regional Office of MoEF&CC, Bhubaneswar who would be monitoring the implementation of environmental safeguards should be given full cooperation, facilities and documents/data by the project proponents during their inspection.
4. In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by the SEIAA, Odisha.
5. The SEIAA, Odisha reserves the right to add additional safeguard measures subsequently, if found necessary, and to take action including revoking of the environment clearance under the provisions of the Environmental (Protection) Act, 1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.
6. All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department, the Forest Conservation Act, 1980 and the Wildlife (Protection) Act, 1972 etc. shall be obtained, as applicable by project proponents from the respective competent authorities.
7. These stipulations would be enforced among others under the provisions of the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and the EIA Notification, 2006.
8. The project proponent shall advertise in at least two local Newspapers widely circulated in the region, one of which shall be in the vernacular language informing that the project has been accorded Environmental Clearance and copies of clearance letters are available with the State Pollution Control Board and may also be seen on the website of the SEIAA, Odisha. The advertisement shall be made within Seven days from the date of receipt of the Clearance letter and a copy of the same shall be forwarded to the Regional Office of MoEF&CC, Bhubaneswar.
9. Any appeal against this 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.
10. A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zilla Parisad / Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent.

11. The proponent shall submit/upload six monthly reports on the status of compliance of the stipulated Environmental Clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MoEF&CC, Govt. of India, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; SPM, RSPM, SO₂, NO_x (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.
12. The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the respective Regional Offices of MoEF&CC, Govt. of India by E-mail.



TSBSL/SPCB/BS-03/2021-08/44/47
5th May, 2021

**The Chairman,
State Expert Appraisal Committee,
Bhubaneswar, Odisha**



Thro' The Member Secretary, SPCB, Odisha

Sub : Request for grant of conditional EC for carrying out furnishing of the semi-finished buildings for urgent accommodation of the paramedics and emergency operational staffs of Tata Steel BSL Limited.

Dear Sir,

The COVID-19 pandemic is the defining global health crisis of our time and the greatest challenge we have ever faced since 2nd world war. In this difficult time, India is worst effected in the 2nd wave by the Corona Virus and facing serious crisis of medical infrastructure and oxygen to save human life. To overcome the crisis, most of the steel plants in the country have come forward to support the hospitals and the Govt. in different ways. Tata Steel BSL has also deployed all its efforts to supply liquid oxygen to the hospitals both within and outside the states and also developing medical infrastructures in our township to support the cause.

In this context, when we have expedited all our resources to combat the crisis, would like to bring to your notice the difficulty that we are facing. As per the directives of Government, we have temporarily created a 200 bedded COVID Care Centre in our existing completed buildings of the township. The CCC is being manned by 60 paramedic staffs, 3 BAMS/BHMS doctors and 50 housekeeping staffs for 24x7 COVID patient care. Moreover, in the backend we have engaged 8 more doctors and 100 paramedics staffs for the COVID care management. As on date in the CCC, there are 150 positive cases under treatment and the number is increasing day by day. When we are trying hard to take every care of the individuals, support the Govt. and abide by the COVID protocol, the real problem that we are facing now is to provide accommodation to all those paramedics staffs & emergency operational staffs.

Similarly, when the entire nation is suffering because of oxygen crisis, we have geared up our oxygen production and have been able to supply more than 1000 Tons of liquid oxygen to different hospitals. However, to continue production of oxygen in our steel plant and to keep our emergency equipment operational, we need to engage sufficient manpower every day. During this pandemic time and that too in lockdown situation, all those essential staffs require to be provided accommodation in our colony so that the essential services can remain operational uninterruptedly. But the real difficulty is again to provide them accommodation.

TATA STEEL BSL LIMITED



Further, as directed by the Govt. we propose to build a 500 bedded hospital with piped oxygen supply system close to our plant within next 3 months. Installation of such a big hospital will also require providing accommodation to the engineers and supervisors engaged for the purpose. Further, as there is no standard housing facility available nearby, they shall be accommodated in our colony.

In this context, we wish to apprise you that, we have some buildings in our colony with structural and civil work already completed, those were constructed by the erstwhile Bhushan Steel Limited, but are not in use by us as they require cement plaster, white washing and other miscellaneous finishing jobs. Those buildings are on hold since 2014, subsequent to the direction of the Member Secretary, SPCB, Odisha, as the buildings were constructed without obtaining prior environmental clearance and consent to establish (CTE). However, after acquisition of the erstwhile of Bhushan Steel Limited, we have expedited the process of obtaining these clearances. When we have presented the EIA/EMP details of the township project before the State Expert Appraisal Committee (SEAC) on 9th April for grant of EC, our application for grant of CTE is under consideration of the SPCB, Odisha. However, fire license and occupancy certificate for the township have already been received from concerned authorities.

In line with the above, if we see the environmental clearance in the context of this pandemic situation, everything is in line and will be granted. But grant of clearance follows its own process and may take some more time that this pandemic situation does not allow to afford. In simple terms if we say, there are buildings with us those can be used for accommodation of the paramedics and emergency operational staffs to overcome the crisis, but are unable to use as EC is under process.

Therefore, considering the urgency of time and situation, we request you to grant us conditional EC to complete remaining interior and furnishing jobs for accommodation of COVID warriors.

Thanking you,

Yours faithfully,

f: Tata Steel BSL Limited

Manikanta Naik
Chief, Corporate Services

CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE FOR HOTEL BUILDING PROJECT LOCATED AT PLOT NO- 164, KHATA NO 24, MOUZA-GOPABANDHU NAGAR, UNIT-8, BHUBNESWAR, DIST-KHORDA, ODISHA BY MS LUXURIO ASSETS PRIVATE LTD OF M/S LUXURIO ASSETS PRIVATE LIMITED – EC.

PART A - SPECIFIC CONDITIONS:

1. Consent to Establish / Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.
2. The approval of the Competent Authority shall be obtained for structural safety of buildings due to earthquakes, adequacy of firefighting equipment etc. as per National Building Code including protection measures from lightning etc.
3. The project proponent shall obtain all necessary clearance/ permission from all relevant agencies including town planning authority before commencement of work. All the construction shall be done in accordance with the local building byelaws.
4. The project proponent shall ensure that the guidelines for building and construction projects issued vide this Ministry's OM NO.19-2/2013-IA.III dated 9th June, 2015, are followed to ensure sustainable environmental management.
5. The proponent shall obtain prior clearance from the Standing Committee of the National Board for Wild Life if the project will be located within any Eco-Sensitive Zone of Wild Life Sanctuary.

TOPOGRAPHY AND NATURAL DRAINAGE

6. The natural drain system should be maintained for ensuring unrestricted flow of water. No construction shall be allowed to obstruct the natural drainage through the site, on wetland and water bodies. Check dams, bio-swales, landscape and other Sustainable Urban Drainage Systems (SUDS) are allowed for maintaining the drainage pattern and to harvest rain water. Buildings shall be designed to follow the natural topography as much as possible. Minimum cutting and filling should be done.
7. The permission from competent authority will be obtained to discharge the excess storm water to drain if any. The proponent shall renovate the existing drain to accommodate the discharge and maintain it perennially.
8. Permission for construction of drain alongside the adjacent NH under construction for allowing the proponent to discharge the treated waste water as well excess runoff water during monsoon from NH Authority shall be obtained. The construction of drains shall be synchronized with the completion of the construction of the Housing Project.

WATER REQUIREMENT, CONSERVATION, RAIN WATER HARVESTING, AND GROUND WATER RECHARGE

9. As proposed, fresh water requirement from ground water shall not exceed 238 KLD.
10. A certificate shall be obtained from the local body supplying water, specifying the total annual water availability with the local authority, the quantity of water already committed, the quantity of water allotted to the project under consideration and the balance water available. This should be specified separately for ground water and surface water sources, ensuring

that there is no impact on other users.

11. The quantity of fresh water usage, water recycling and rainwater harvesting shall be measured and recorded to monitor the water balance as projected by the project proponent. The record shall be submitted to the Regional Office, MoEF&CC and SEIAA, Odisha along with six monthly Monitoring reports.
12. Installation of dual pipe plumbing for supplying fresh water for drinking, cooking and bathing etc. and other for supply of recycled water for flushing, landscape irrigation, car washing, thermal cooling, conditioning etc. shall be done.
13. Use of water saving devices/ fixtures (viz. low flow flushing systems; use of low flow faucets tap aerators etc.) for water conservation shall be incorporated in the building plan.
14. Separation of grey and black water should be done by the use of dual plumbing system. In case of single stack system separate recirculation lines for flushing by giving dual plumbing system be done.
15. Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.
16. The local bye-law provisions on rain water harvesting should be followed. If local bye-law provision is not available, adequate provision for storage and recharge should be followed as per the Ministry of Urban Development Model Building Byelaws, 2016. Three nos. of Rain water harvesting recharge pits shall be provided.
17. Any ground water dewatering should be properly managed and shall conform to the approvals and the guidelines of the CGWA in the matter. Formal approval shall be taken from the CGWA for any ground water abstraction or dewatering. The proponent shall also obtain permission from Water Resources Department, Govt. of Odisha for drawl of water.
18. The proponent shall keep one bore well as standby domestic water source once municipal water supply is made available in the project area.

SOLID WASTE MANAGEMENT

19. The provisions of the Solid Waste (Management) Rules, 2016, E-Waste (Management) Rules, 2016, and the Plastics Waste (Management) Rules, 2016 shall be followed.
20. Disposal of muck during construction phase shall not create any adverse effect on the neighbouring communities and be disposed taking the necessary precautions for general safety and health aspects of people, only in approved sites with the approval of competent authority.
21. Separate wet and dry bins must be provided in each unit and at the ground level for facilitating segregation of waste. Solid waste shall be segregated into wet garbage and inert materials. Wet garbage shall be composted in Organic Waste Converter. Adequate area shall be provided for solid waste management within the premises which will include area for segregation, composting. The inert waste from group housing project will be sent to dumping site.
22. Any hazardous waste generated during construction phase, shall be disposed off as per applicable rules and norms with necessary approvals of the State Pollution Control Board.
23. A certificate from the competent authority handling municipal solid wastes, indicating the existing civic capacities of handling and their adequacy to cater to the Municipal Solid Waste

generated from project shall be obtained.

SEWAGE TREATMENT PLANT

24. Sewage shall be treated in STP of capacity 280 KLD. The treated effluent from STP shall be recycled/re-used for flushing and gardening.
25. Excess treated water shall be discharged to the drain only after getting the permission from the concerned authority. The proponent shall renovate the existing drain to accommodate the discharge and maintain it perennially. To this effect the proponent has to give a legal affidavit before going for construction activity.
26. A certificate from the competent authority shall be obtained for discharging treated effluent/untreated effluents into the Public sewer/disposal/drainage systems along with the final disposal point.
27. Separate large recharge pits shall be constructed inside the project area to accommodate the rainwater in case the housing project period and the CDP of the Govt. does not synchronize with reference to construction of road and drain.
28. No sewage or untreated effluent water would be discharged through storm water drains.
29. The installation of the Sewage Treatment Plant (STP) shall be certified by an independent expert and a report in this regard shall be submitted to the SEIAA, Odisha before the project is commissioned for operation. Periodical monitoring of water quality of treated sewage shall be conducted. Necessary measures should be made to mitigate the odour problem from STP.
30. Sludge from the onsite sewage treatment, including septic tanks, shall be collected, conveyed and disposed as per the Ministry of Urban Development, Central Public Health and Environmental Engineering Organization (CPHEEO) Manual on Sewerage and Sewage Treatment Systems, 2013.
31. The proponent shall obtain permission from the concerned authority to discharge the liquid waste to any drain i.e. the competent authority of the drain and "Nala" before commencement of any activity at the project site.

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62. As per the MoEF&CC, Govt. of India Office Memorandum F.No.22-65/2017-IA.III dated 1st May 2018, the project proponent is required to prepare and implement Corporate Environment Responsibility (CER) Plan. As per para 6(II) of the said O.M. appropriate funds shall be earmarked for the activities such as infrastructure creation for drinking water supply, sanitation, health, education, skill development, roads, cross drains, electrification including solar power, solid waste management facilities, scientific support and awareness to local farmers to increase yield of crop and fodder, rain water harvesting, soil moisture conservation works, avenue plantation, plantation in community areas etc. The activities proposed under CER shall be restricted to the affected area around the project. The entire

activities proposed under the CER shall be treated as project and shall be monitored. The monitoring report shall be submitted to the regional office as a part of half yearly compliance report, and to the District Collector. It should be posted on the website of the project proponent.

PART B – GENERAL CONDITIONS

1. A copy of the Environmental Clearance letter shall also be displayed on the website of the concerned State Pollution Control Board. The EC letter shall also be displayed at the Regional Office, District Industries centre and Collector's Office/ Tehsildar's office for 30 days.
2. The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year-wise expenditure shall be reported to the SEIAA, Odisha and MoEF&CC, Govt. of India and its concerned Regional Office.
3. Officials from the Regional Office of MoEF&CC, Bhubaneswar who would be monitoring the implementation of environmental safeguards should be given full cooperation, facilities and documents/data by the project proponents during their inspection.
4. In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by the SEIAA, Odisha.
5. The SEIAA, Odisha reserves the right to add additional safeguard measures subsequently, if found necessary, and to take action including revoking of the environment clearance under the provisions of the Environmental (Protection) Act, 1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.
6. All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department, the Forest Conservation Act, 1980 and the Wildlife (Protection) Act, 1972 etc. shall be obtained, as applicable by project proponents from the respective competent authorities.
7. These stipulations would be enforced among others under the provisions of the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and the EIA Notification, 2006.
8. The project proponent shall advertise in at least two local Newspapers widely circulated in the region, one of which shall be in the vernacular language informing that the project has been accorded Environmental Clearance and copies of clearance letters are available with the State Pollution Control Board and may also be seen on the website of the SEIAA, Odisha. The advertisement shall be made within Seven days from the date of receipt of the Clearance letter and a copy of the same shall be forwarded to the Regional Office of MoEF&CC, Bhubaneswar.
9. Any appeal against this 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.
10. A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zilla Parisad / Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal. The

clearance letter shall also be put on the website of the company by the proponent.

11. The proponent shall submit/upload six monthly reports on the status of compliance of the stipulated Environmental Clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MoEF&CC, Govt. of India, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; SPM, RSPM, SO₂, NO_x (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.
12. The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the respective Regional Offices of MoEF&CC, Govt. of India by E-mail.