PROCEEDINGS OF THE MEETING OF STATE LEVEL EXPERT APPRAISAL COMMITTEE, ODISHA HELD ON 08TH OCTOBER, 2021

The SEAC met on 08th October, 2021 at 10:30 AM through Video Conferencing in Google Meet under the Chairmanship of Sri B. P. Singh. The following members were present in the meeting.

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

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

ITEM NO. 01

PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF M/S FERRO ALLOYS CORPORATION LTD. FOR EXPANSION OF KALARANGIATTA CHROMITE MINES FOR INCREASE IN PRODUCTION FROM 0.05 MTPA TO 0.15 MTPA CHROME ORE (ROM) WITH MAXIMUM EXCAVATION OF 0.438 MILLION CUM PER ANNUM OVER AN MINING LEASE AREA: - 23.80HA., AT VILLAGE – KALARANGIATTA, TAHASIL – SUKINDA, DIST – JAJPUR, ODISHA OF SRI. BISWANATH SAHOO, (AUTHORIZED SIGNATORY) - 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. As per EIA Notification dated 14th Sep, 2006 as amended from time to time, the project falls under Category "B", Project or Activity 1(a) – Mining of Minerals.

3. The proposed project is for M/s Ferro Alloys Corporation Ltd. for expansion of Kalarangiatta Chromite mines for increase in production from 0.05 MTPA to 0.15 MTPA Chrome Ore (ROM) with maximum excavation of 0.438 Million cum per annum over an mining lease area: - 23.80Ha., at village – Kalarangiatta, Tahasil – Sukinda, Dist – Jajpur, Odisha of Sri. Biswanath Sahoo, (Authorized Signatory).

4. **Site Location and Connectivity -** The Kalarangiatta Chromite Mine Lease is spread over an area of 23.800 ha and it falls in Survey of India Topo Sheet Open Series Map No. F45N16, F45T09, F45T13 & F45U1 (73G/12) with co-ordinates Latitude: 21° 01' 00.57" N to 21° 01' 29.29" N and Longitude: 85° 44' 18.96" E to 85° 44' 38.02" E. Kalarangiatta Chromite Mine is situated in Jajpur district of Odisha. Tomka Mangalpur Highway passes along the northern boundary of the lease area. Tomka Railway Station is situated about

26.08 km (aerial distance) in ENE-direction from lease area. Biju Patnaik International Airport, Bhubaneswar is about 85.87 km (aerial distance) in S-direction from lease area.

5. **Topography** - The entire lease area is a flat terrain having a gentle slope of 20° from South to North.Maximum elevation : 108 mRL in the Southern Part. Minimum elevation : 96 mRL in the Northern Part. There is no seasonal or perennial surface water body in the mine lease area. Damsal nala, flows next of ML area in N, forms the major drainage of the study area. HFL is at 86mRL. Bottommost elevation of the surrounding lease area is 96mRL.
6. Environmental Clearance is received for production of 0.05 MTPA Chromite Ore vide letter no. J-11015/183/2007/I.A.II(M) dated 13.05.2009 .
7. Govt. of Odisha granted mining lease for 39.318 Ha in Kalarangiatta village, Tehsil Sukinda, District Jajpur on 03.11.2001. M/s Facor proactively surrendered 15.518 Ha of forest land and mining lease was executed for 23.8 Ha of non-forest revenue land on 18.04.2008 for 30 years. Mining operation started from 01.11.2011**.** In compliance to the MMDR Amendment Act 2015, the mining lease period extended for 50 years i.e. up to 17.04 2058.
8. Based on MOEF & CC circular dated 10.03.2015 & as per Sabik settlement records, the status of ML area of 23.800 Ha as on 25/10/1980 is now interpreted as revenue forest land of Sal Jungle Kisam for which forest diversion proposal is under process and in advance stage. Mining operation is going on as per Hon'ble High Court order.
9. In the year 2020, Hon'ble National Company Law Tribunal (NCLT) Cuttack Bench under the provisions of Insolvency and Bankruptcy Code (IBC) -2016 vide its order dated 30.01.2020, has approved the resolution plan of M/s. Sterlite Power Transmission Limited (a group of Vedanta Ltd.). Pursuant to the said order of NCLT Cuttack, the Board of Directors of M/s. Ferro Alloys Corporation Ltd. have also been changed with effective from dated 21.09.2020.
10. Based on the recent exploration activity, updated mine reserve & resource data and updated mining plan, this expansion proposal was submitted to IBM for approval under Rule 17(3) of MCR, 2016 including Progressive Mine Closure Plan under Rule 23 of MCDR, 2017 on the account of production enhancement. IBM has approved the modification of Review of Mining Plan Vide Letter. No. MRMP/AA/09-ORI/BHU/2021-22, Dated. 29.07.2021.
11. **Modified Review of Mining Plan** was approved by IBM, Bhubaneswar dated 29.07.2021 with letter no. MRMP/AA/09-ORI/BHU/2021-22.
12. **Consent to Operate** from SPCB, Odisha vide letter no. 3856/IND.I CON.6318 dated 27.03.2020 Valid till 31.03.2022.
13. **Hazardous Waste Authorization** from SPCB, Odisha vide letter no.: IND-IV-HW-1018/7540, dated 20.08.2020, Valid till 31.03.2022

14. **Ground water withdrawal permission (NOC)** was obtained from CGWA, Vide Ref No. CGWA/NOC/MIN/ORIG/2018/3980, Dated 12.09.2018. Renewal of NOC is under Process.

15. **Forest Diversion proposal of Facor** over 23.80 ha had been recommended to MoEF in 2018, then they directed the State Govt to resubmit the proposal with revised CA scheme. Now revised CA scheme has been approved by DFO and pending with PCCF, BBSR for final approval and communication to MoEF. Mining operation is going on as per High Court Order W.P.(C) No.:19486 of 2016.

16. **Surface right** over 22.739 Ha has been granted by State Government vide Letter No. 4904, Dated 05/05/2010

17. **Reserves** - Geological Reserves is 1.487 Million Tonnes and Mineable Reserves is 0.859 Million Tonnes (as on 31.05.2021). Based on the present reserve estimates and proposed production program, the life of mine is estimated to be about 6 years, which will increase with planned future exploration, road diversion and slope steepening.

18. **Method of Mining** - Fully mechanized Open cast mining is proposed to be carried out during the plan period. The operations like digging, excavation and removal of ore will be done with the help of heavy earth moving machineries. Drilling or blasting is not envisaged at present. However, it will be carried out as per requirement in future with necessary statutory approval.

19. **Production Details:** 0.150 Million TPA Chrome Ore (ROM), max excavation of 0.438 Million CuM per annum. Year wise production details is:

Year	Total Excavation (Tonnes)	ROM (Tonnes)	Waste Generation Top Soil (Tonnes)	Waste Generation OB/SB/IB	ROM:Waste Stripping Ration
2021-22	399600	63600	2800	336000	1:5.33
2022-23	932000	150000	3600	782000	1:5.24

20. **Water Requirement:** About 80 KLD water will be required for dust suppression, plantation, wheel wash, drinking & domestic activities, etc. Mine pit water will be used for dust suppression and plantation activities. Ground water from borewell will be used for drinking and domestic use. Necessary permission for 20 KLD groundwater extraction from borewell and 700 KLD dewatering has been obtained from CGWA by the lessee and the same will be renewed.

21. **Power Requirement:** Currently, 33 KV power is stepped down through 11 KV substations and distributed throughout the mines. A contract demanding 198 KVA with total connected load of 180 KW has been made. Three DG set (250 KVA, 35 KVA, 15 KVA) are deployed to cope up with the power interruption that takes place due to low voltage and frequent tripping.

22. **Employment Potential** - The project will generate 233 manpower for the proposed expansion in the mine.

23. Baseline Environmental Monitoring for Air, water, Noise and Soil has been carried out during Pre Monsoon season (Mar 2021 - May 2021).

24. Total Cost of the proposed project will be ` Rs 12.18 Crores.

25. The project proponent along with the consultant **M/s Visiontek Consultancy Services Pvt. Ltd., Bhubaneswar** made a detailed presentation on the proposal.

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

i) EC conditions wise detailed compliance duly certified by MoEF&CC, Govt. of India, Regional office, Bhubaneswar be given in EIA/EMP along with Consent to Establish, Consent to Operate and Authorization under Hazardous Waste Rules conditions compliance report duly certified by the State Pollution Control Board.

ii) The following information to be submitted in the compliance report:

   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) Compliance to CTO for the existing mines.
   g) Status of complaints/ court cases/legal action
   h) Effluent, garland drain, soil quality including hexavalent chromium
   i) Any other relevant environmental issue / parameter.

iii) The following studies be undertaken by domain experts, viz:

   a) Blast vibration study
   b) Socio economic study of the neighbouring habitation
   c) Biodiversity study with audit mechanism.
   d) Slope stability study for both mines and OB /waste dumps.
   e) Surface runoff management along with rainwater harvesting and ground water recharge include the design of drainage structures.
   f) Traffic density study, both inside the mines and at haulage roads, intersecting points of haulage road with public road.
   g) Hydrology study: The study findings and the mitigation measures thereof to be submitted.

iv) 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.

v) 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.

vi) 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.

vii) 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.

viii) 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.

ix) 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.

x) 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.

xi) 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.

xii) 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 from a NABL/MoEF&CC accredited laboratory.

xiii) The project proponent should submit the detailed mineralogical and chemical composition of the different grades of mineral and percentage of elements from a NABL/MoEF&CC accredited laboratory. Also, management of different grades need to be explained with mass balance. Also the analysis of wastes including presence of chromium, finally to be discarded and dumped with dumping plan.

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. 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, if such objective is planned.

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. 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 date, 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) Internal roads, drain management with network of the drain, retaining walls and settling tanks with ETPs be submitted.

xxi) 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.

xxii) Haulage road drawing with dimensions including provision of suppression of fugitive dust emissions (permanent arrangements) be submitted.

xxiii) Construction and perennial maintenance of haulage road with details of plantation and the species thereof to be submitted.

xxiv) Parking plaza layout with maximum no. of vehicles and types of vehicles that can be parked with basic amenities and facilities.

xxv) Forest Clearance details with copy of all Forest Clearance.

xxvi) Status of complaints/ court cases/legal action regarding to lease along with a detailed write up indicating case no., purpose of the case etc.

xxvii) Copy of lease document.

xxviii) Details of waste management i.e. composition and nature of waste generated, tabulated form showing year wise waste generation, usage and storage and mitigation measures.

xxix) Comparative statement for increase in pollution load for existing production Vrs. proposed production (taking all parameters like water consumption, waste water generation, air pollutants, OB management, greenbelt, haulage roads, settling ponds, ETP etc.) in comparative form on environmental parameter including all forms of chromium and superimposing in layout on physical features.

xxx) Project Proponent shall consider developing a good nursery in nearby village for production of saplings of 4-6 feet 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. The proponent shall ensure to use organic fertilizer in the nursery.

xxxi) Comprehensive water management, water balance with water harvesting and its reuse both monsoon and non-monsoon period. Detailed proposal for Zero Liquid Discharge.

xxxii) STP plan with design with location in the layout map for domestic waste water treatment.

xxxiii) Provision of solar power (percentage wise) with detail plan.

xxxiv) To submit the network with dimension of concrete cement roads inside the mining lease area and haulage road.

xxxv) Plan and SoP to be submitted for water sprinkling inside the mines and outside in haulage road including regular vacuum cleaning and Zero Dust Re-suspension system to completely mitigate and arrest fugitive dust emission.

xxxvi) Comparative data for previous and proposed production w.r.t overburden, waste

generation and management, green belt, water balance, haulage roads, settling ponds, ETP, runoff management etc.

xxxvii) Additional environmental measures taken for expansion of the project be submitted.

xxxviii) Total water management including domestic use w.r.t sourcing from bore-well, rain water harvesting and recycling of waste water from ETP/STP, both for monsoon and non-monsoon be submitted of the existing mines and propose expansion.

xxxix) Measures taken and proposed to be taken further for arresting and mitigation of occupational health hazard including identification of the same, both for employees and nearby/surrounding habitation.

xl) Test report on Cr+6 content in surface water, ground water and underground soil. Technology used for removal of Cr+6 from surface run-off as well as mines drainage water. Proponent should explore using of latest membrane-based technology to mitigate hexavalent chromium.

xli) Since the mine is located at Seismic Zone III (Moderate risk zone), slope study of mines & sumps of mineral water & OB is envitable besides study.

xlii) "No settling Pond" exists. A write up to be submitted why it is no required and how wash off / run off from OB / mineral waste / mineral are treated & disposed.

xliii) Is the existing & proposed expansion is / will be "ZLD"? Whether any treated waste water is discharged to any outside water body including "Damsala Nala" located at 720 mtr from lease boundary? & if so, the permission from the authority of Nala has been later including additional land due to proposed expansion? Existing and proposed measures to protect Damsala nala from getting contaminated due to mining due to mining activity

xliv) Permission for ground water drawal from WR Deptt, Govt of Odisha be submitted.

xlv) Disaster management in case of intersection with ground water be submitted.

ITEM NO. 02

PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF M/S FERRO ALLOYS CORPORATION LTD. FOR EXPANSION OF EXISTING OSTAPAL CHROMITE MINES FOR INCREASE IN PRODUCTION FROM 0.2 MTPA TO 0.240 MTPA CHROMITE ORE (ROM) WITH MAXIMUM EXCAVATION OF 0.579 MILLION CUM PER ANNUM AND BENEFICIATED CHROME ORE OF 0.1 MTPA THROUGH OPENCAST MINING METHOD OVER AN MINING LEASE AREA: - 72.84HA., AT VILLAGE – KALARANGIATTA, TAHASIL – SUKINDA, DIST – JAJPUR, ODISHA OF SRI. BISWANATH SAHOO, (AUTHORIZED SIGNATORY) – 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. As per EIA Notification dated 14th Sep, 2006 as amended from time to time, the project falls under Category "B", Project or Activity 1(a) – Mining of Minerals.

3. M/s Ferro Alloys Corporation Ltd. for Expansion of existing Ostapal chromite Mines for increase in production from 0.2 MTPA to 0.240 MTPA Chromite Ore (ROM) with maximum excavation of 0.579 Million cum per annum and beneficiated Chrome Ore of 0.1 MTPA through opencast mining method over an mining lease area: - 72.84Ha., at village – Kalarangiatta, Tahasil – Sukinda, Dist – Jajpur, Odisha of Sri. Biswanath Sahoo, (Authorized Signatory).

4. **Site Location and Connectivity -** The Ostapal Chromite Mine Lease is spread over an area of 72.843 Ha and it falls in Survey of India Topo Sheet Open Series Map No. F45N16, F45T09, F45T13 & F45U1 (earlier 73G/16). The area is bounded by Latitude 21° 3'26.60" N to 21° 04'00.98" N and Longitude 85° 47'4.39" E to 85° 47' 34.29" E. Ostapal Chromite Mine is situated in Jajpur district of Odisha. Tomka Mangalpur State Highway passes 0.35 km away from mine lease in S-direction. Tomka Railway Station is situated about 19.06 km (aerial distance) in E-direction from lease area. Biju Patnaik International Airport is about 89.02 km (aerial distance) in S-direction from lease area. Lease area partly falls in Daitari Protected Forest. Gurujanga is the adjacent village in the Southern side.

5. **Topography** - The entire lease area is a flat terrain having a gentle slope of 2° from North to South. Maximum elevation: 158 mRL in the Northern Part. Minimum elevation: 135 mRL in the Southern Part. There is no seasonal or perennial surface water body in the mine lease area. Damsal nala, flows at 0.27km away from the ML area in South direction, forms the major drainage of the study area. HFL is at 125mRL and minimum elevation of the surrounding lease area is 135mRL.

6. Mining lease over 72.843 Ha. area was granted to M/s Ferro Alloys Corporation Limited ("FACOR") on 13/08/1985. The Mining lease was granted for a period of 20 years only i.e from 13/08/1985 to 12/08/2005.

7. In compliance to Rule-24A (1) of the Mineral Concession Rules-1960, application for First Renewal of Mining Lease has been filed on dtd. 02.08.2004 i.e prior to one year of expiry of the mining lease period, however, mining operations in the said lease area was going on under the deemed extension provisions of Rule-24 A (6) of the Mineral Concession Rules, 1960 till 21/08 2016. Thereafter, as per the MMDR amendment act, 2015, under Sec. 8A the lease period has been extended for a period of fifty years i.e. from 13/08/1985 to 12/08/2035.

8. The Supplementary Lease Deed has been executed on 22/08/2016 for extension of lease period upto 2035.

9. In the year 2020, Hon'ble National Company Law Tribunal (NCLT) Cuttack Bench under the provisions of Insolvency and Bankruptcy Code (IBC) -2016 vide its order dated 30.01.2020, has approved the resolution plan of M/s. Sterlite Power Transmission Limited (a group of Vedanta Ltd.). Pursuant to the said order of NCLT Cuttack, the Board of Directors of M/s. Ferro Alloys Corporation Ltd. have also been changed with effective from dated 21.09.2020.

10. Based on the recent exploration activity, updated mine reserve & resource data geotechnical study on slope stability and updated mine plan, this expansion proposal

was submitted to IBM for approval under Rule 17(3) of MCR, 2016 including Progressive Mine Closure Plan under Rule 23 of MCDR, 2017 on the account of ROM production enhancement by 20%. IBM has approved the modification of Review of Mining Plan Vide Letter. No. MRMP/A/16-ORI/BHU/2020-21, Dated. 05.08.2021.

11. **Environmental Clearance** is received for production of 0.2 MTPA Chromite Ore and 0.1MTPA beneficiated chrome ore vide letter no. J-11015/38/2006-IA.II(M) dated 06.12.2006.
12. **Modified Review of Mining Plan** was approved by IBM, Bhubaneswar dated 05.08.2021 with letter no. . MRMP/A/16-ORI/BHU/2020-21.
13. **Consent to Operate** from SPCB, Odisha vide letter no. 5320/IND.I CON.1163 dated 27.03.2021 Valid till 31.03.2022.
14. **Hazardous Waste Authorization** from SPCB, Odisha vide letter no.: IND-IV-HW-337/6381,dated 16.04.2021,Valid till 31.03.2022
15. **Ground water withdrawal permission (NOC)** was obtained from CGWA, Vide Ref No. CGWA/NOC/MIN/ORIG/2018/3957, Dated 29.08.2018. Renewal of NOC is under Process.
16. **Forest Clearance** has been obtained from Government of India Ministry of Environment & Forest (F.C Division) New Delhi, Vide Letter No. F.No. 8-86/1996/F.C. (Vol. II) Dated 7th February 2006. Out of total lease area of 72.843 Ha., 68.424 Ha. is forest land & 4.419 Ha. is non forest land. **Out of total Forest Land of 68.424 Ha, 64.354 Ha. is diverted for mining purpose, rest 4.070 Ha has been left for safety zone.**
17. **Surface right:** Out of the total lease area of 72.843 Ha., surface right for 68.668 Ha. is granted by State Government. Balance area has been left as safety zone (4.070Ha.) / Debastali (0.105 Ha.).
18. **Reserves** - Geological Reserves is 10.559 Million Tonnes and Mineable Reserves is 1.536 Million Tonnes (as on 31.05.2021). Based on the present reserve estimates and proposed production program, the life of mine is estimated to be about 10 years, which will increase with planned future exploration, road diversion and slope steepening as well as changing the mining operation to underground method.
19. **Method of Mining** - Fully mechanized Open cast mining is proposed to be carried out during the plan period. The operations like digging, excavation and removal of ore will be done with the help of heavy earth moving machineries. Deep hole drilling and blasting is being carried out as & when required. Control blasting is being practiced.
20. **Production Details:** 0.240 Million TPA Chrome Ore (ROM), max excavation of 0.579 Million CuM per annum. Year wise production details is:

Year	Total Excavation (Tonnes)	ROM (Tonnes)	Waste Generation OB/SB/IB	ROM:Waste Stripping Ration
2021-22 (June	1023358	197958	825400	1:4.2

onwards)				
2022-23	1230000	240000	990000	1:4.1
2023-24	1240000	240000	1000000	1:4.2
2024-25	1240000	240000	1000000	1:4.2
2025-26	1220000	240000	980000	1:4.1
Total	**5953358**	**1157958**	**4795400**	1:4.1

21. **Water Requirement:** 750 KLD, (650 KLD from Mine dewatering For Industrial Use & 100 KLD from Borewell for domestic consumption). Permission for 3300 KLD pit dewatering and 100 KLD from borewell has been obtained from CGWA vide ref no. Vide Ref No. CGWA/NOC/MIN/ORIG/2018/3957, Dated 29.08.2018. Renewal of NOC is under Process.
22. **Power Requirement:** Currently, 33 KV power is stepped down through 11 KV substations and distributed throughout the mines. Power contract demand is available for 600 KVA.
23. **Employment Potential** - The project will generate 595 manpower for the proposed expansion in the mine.
24. Baseline Environmental Monitoring for Air, water, Noise and Soil has been carried out during Pre Monsoon season (Mar 2021 - May 2021).
25. Total Cost of the proposed project will be ` Rs 88.85 Crores.
26. The project proponent along with the consultant **M/s Visiontek Consultancy Services Pvt. Ltd., Bhubaneswar** made a detailed presentation on the proposal.
27. The project proponent had made a submission before the SEAC to exempt Public Consultation as the increase in production is only 20% with an overall excavation impact of about 6% and there are instances of mining projects being considered by MoEF&CC, Govt. of India for issuance of Environment clearance under clause 7(ii) of EIA Notification 2006.
28. **Clause 7(ii) of** EIA notification 2006 and its amendment stipulates "*All applications seeking prior environmental clearance for expansion with increase in the production capacity beyond the capacity for which prior environmental clearance has been granted under this notification or with increase in either lease area or production capacity in the case of mining projects or for the modernization of an existing unit with increase in the total production capacity beyond the threshold limit prescribed in the Schedule of this notification through change in process or technology or involving a change in the product mix shall be made in Form I and they shall be considered by the concerned Expert Appraisal Committee or* ***State Level Expert Appraisal Committee within sixty days, who will decide on the due diligence necessary including preparation of Environmental Impact Assessment and public consultations and the application shall be appraised accordingly for grant of environmental clearance****".*

29. The MoEF&CC, Govt. of India had issued Office Memorandum vide no. J-11013/41/2006-IA.II(I), dated 03.06.2009, which stipulates "In order to enhance the transparency in decision making when the provisions of clause 7(ii) of EIA Notification, 2006 are invoked for exempting Public Hearing for any project, it is requested that this exemption should be applied judiciously, based on the available data on incremental pollution load and use of additional natural resources vis-a-vis sustainable development without compromising on environmental integrity. The reasons for invoking clause 7 (ii) while granting exemption from public hearing should also be appropriately recorded in the minutes of the EAC/SEAC Meeting"

30. The project proponent had intimated the following to the SEAC during presentation.

a) Earlier EC of 2.0 Lac tonne/Annum ROM production is obtained through EIA Notification 2006 dated 06.12.2006 by following all the steps & guidelines along with Public Hearing.

b) Comparison Statement:

i. **Production enhancement between 'Existing EC' & 'Proposed EC enhancement Plan'**

EC comparison	Ore production plan as per approved EC (lakh MT)	OB quantity as per approved EC (lakh m^3)	Total Handling (lakh m^3)
As per approved EC	2.00	4.80	5.46
Present proposal of EC enhancement	2.40	5.00	5.79
Difference (%)	20%	4%	6%

ii. So, increase in total mine excavation is about 6% only.

c) There is no major impact in water consumption as the change in total handling volume is minimum.

d) Impact of Diesel consumption will also be minimum considering the above change in handling volume.

Considering the information / documents furnished by the proponent and presentation made by the consultant **M/s Visiontek Consultancy Services Pvt. Ltd., Bhubaneswar**, the SEAC recommended the following:

A. The proponent may be requested to furnish the following for taking a decision on request of the proponent for exemption of public hearing as per clause 7(ii) of EIA Notification, 2006.

i) Copy of Environmental Clearances and minutes of the meeting of EAC of the Similar type of cases, which have already been considered by MOEF&CC, Govt. of India in recent past under clause 7(ii) of EIA Notification, 2006 and amendment thereafter for exemption of public hearing.

ii) Detailed justification that there will be no increase in pollution load and use of additional natural resources vis-à-vis sustainable development due to the proposed expansion.

B. The decision on issue of Terms of Reference for the proposal will be decided after receipt of clarification from MoEF&CC, Govt. of India. However, following specific Terms of References may be issued for conducting EIA study, while recommending for issue of Terms of Reference for EIA study.

i) EC conditions wise detailed compliance duly certified by MoEF&CC, Govt. of India, Regional office, Bhubaneswar be given in EIA/EMP along with Consent to Establish, Consent to Operate and Authorization under Hazardous Waste Rules conditions compliance report duly certified by the State Pollution Control Board.

ii) The following information to be submitted in the compliance report:

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) Compliance to CTO for the existing mines.

g) Status of complaints/ court cases/legal action.

h) Effluent, garland drain, soil quality including hexavalent chromium

i) Any other relevant environmental issue / parameter.

iii) The following studies be undertaken by domain experts, viz:

a) Blast vibration study

b) Socio economic study of the neighbouring habitation

c) Biodiversity study with audit mechanism.

d) Slope stability study for both mines and OB /waste dumps.

e) Surface runoff management along with rainwater harvesting and ground water recharge include the design of drainage structures.

f) Traffic density study, both inside the mines and at haulage roads, intersecting points of haulage road with public road.

g) Hydrology study: The study findings and the mitigation measures thereof to be submitted

iv) 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.

v) 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.

vi) 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.

vii) 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.

viii) 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.

ix) 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.

x) 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.

xi) 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.

xii) 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 from a NABL/MoEF&CC accredited laboratory.

xiii) The project proponent should submit the detailed mineralogical and chemical composition of the different grades of mineral and percentage of elements from a NABL/MoEF&CC accredited laboratory. Also, management of different grades need to be explained with mass balance. Also the analysis of wastes including presence of chromium, finally to be discarded and dumped with dumping plan.

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. 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, if such objective is planned.

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. 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 date, 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) Internal roads, drain management with network of the drain, retaining walls and settling tanks with ETPs be submitted.

xxi) 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.

xxii) Construction and perennial maintenance of haulage road with details of plantation and the species thereof to be submitted.

xxiii) Parking plaza layout with maximum no. of vehicles and types of vehicles that can be parked with basic amenities and facilities.

xxiv) Forest Clearance details with copy of all Forest Clearance.

xxv) Status of complaints/ court cases/legal action regarding to lease along with a detailed write up indicating case no., purpose of the case etc.

xxvi) Copy of lease document.

xlvi) Details of waste management i.e. composition and nature of waste generated, tabulated form showing year wise waste generation, usage and storage and mitigation measures.

xxvii) Comparative statement for increase in pollution load for existing production vis-à-vis proposed production (taking all parameters like water consumption, waste water generation, air pollutants, OB management, greenbelt, haulage roads, settling ponds, ETP etc.) in comparative form on environmental parameter including all forms of chromium and superimposing in layout on physical features.

xxviii) Project Proponent shall consider developing a good nursery in nearby village for production of saplings of 4-6 feet 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. The proponent shall ensure to use organic fertilizer in the nursery.

xxix) Comprehensive water management, water balance with water harvesting and its reuse both monsoon and non-monsoon period. Detailed proposal for Zero Liquid Discharge.

xxx) STP plan with design with location in the layout map for domestic waste water treatment.

xxxi) Provision of solar power (percentage wise) with detail plan.

xxxii) To submit the network with dimension of concrete cement roads inside the mining lease area and haulage road.

xxxiii) Plan and SoP to be submitted for water sprinkling inside the mines and outside in haulage road including regular vacuum cleaning and Zero Dust Re-suspension system to completely mitigate and arrest fugitive dust emission.

xxxiv) Comparative data for previous and proposed production w.r.t overburden, green belt, water balance, haulage roads, settling ponds, ETP, runoff management etc. including chromium of different forms.

xxxv) Additional environmental measures taken for expansion of the project be submitted.

xxxvi) Total water management including domestic use w.r.t sourcing from bore-well, rain water harvesting and recycling of waste water from ETP/STP, both for monsoon and non-monsoon be submitted of the existing mines and propose expansion.

xxxvii) Measures taken and proposed to be taken further for arresting and mitigation of occupational health hazard including identification of the same, both for employees and nearby/surrounding habitation.

xxxviii) Test report on Cr+6 content in surface water, ground water and underground soil. Technology used for removal of Cr+6 from surface run-off as well as mines drainage water. Proponent should explore using of latest membrane-based technology to mitigate hexavalent chromium

xxxix) Since the mine is located at Seismic Zone III (Moderate risk zone), slope study of mines & sumps of mineral water & OB is envitable besides study.

xl) "No settling Pond" exists. A write up to be submitted why it is no required and how wash off / run off from OB / mineral waste / mineral are treated & disposed.

xli) Is the existing & proposed expansion is / will be "ZLD"? Whether any treated waste water is discharged to any outside water body including "Damsala Nala" located at 270 mtr from lease boundary? & if so, the permission from the authority of Nala has been later including additional land due to proposed expansion? Existing and proposed measures to protect Damsala nala from getting contaminated due to mining due to mining activity.

xlii) Treatment and disposal of mines seepage water of 3300 KLD with SOP be submitted.

xliii) Permission for ground water drawal from WR Deptt, Govt of Odisha be submitted.

xliv) Tomka – Mangalpur State highway is only 340 mtrs south of lease boundary and primary schools are located at 100 mtrs only from the lease boundry. So, safety precautions due to movement of vehicle and blasting be submitted.

xlv) About 0.105 Ha land is "Debasthali" Statue of it is to be submitted.

ITEM NO. 03

PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR M/S. HINDALCO INDUSTRIES LTD. FOR EXPANSION OF EXISTING FRP PLANT FROM 1.35 LAC TPA [HOT ROLLED COIL (HRC) & COLD ROLLED COIL (CRC)] TO 5.85 LAC TPA HOT ROLLED COIL (HRC) INCLUDING EXISTING 1.35 LAC TPA COLD ROLLED COIL (CRC) OVER AN AREA 24.031 HA AT VILLAGES - JAMDA AND JAMDA (NIMPALI), TAHASIL - HIRAKUD, DISTRICT SAMBALPUR, ODISHA OF SRI SANDIP ROY (UNIT HEAD) – 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 schedule 3 (a) "Metallurgical industries (ferrous & non ferrous)" Category-B as per the EIA notifications, 2006 amendments thereafter.
3. M/s. Hindalco Industries Ltd. has proposed for expansion of existing FRP plant from 1.35 Lac TPA [Hot Rolled Coil (HRC) & Cold Rolled Coil (CRC)] to 5.85 Lac TPA Hot

Rolled Coil (HRC) including existing 1.35 Lac TPA Cold Rolled Coil (CRC) over an area 24.031 Ha at villages - Jamda and Jamda (Nimpali), Tahasil - Hirakud, District Sambalpur, Odisha of Sri Sandip Roy (Unit Head).

4. **Location and Connectivity -** Geographical co-ordinates of the Project is Latitude – 21°31'1.51"N to 21°31'28.71"N and Longitude -83°53'57.95"E to 83°54'21.29"E. Project site is falling in Survey of India Toposheet No F44R14 and F44R15, F45M1 & F45M2. Nearest national Highway is NH-6 at 2.5 km and State highway is SH – 10 at 8 km. Nearest Railway station are Hirakud Railway Station is 4 km and Sambalpur Railway station is 6.5 km and Sambalpur Road Railway Station is 8.5 km. Nearest airport is Sambalpur Airport at a distance of approximately 12 km. Nearest Reserve Forests are Lakshmi dungri RF is at 0.5 km, Lamdungri RF at 2 km and Jamarha RF is at 3 km. Nearest water bodies are Mahanadi River adjacent to plant, Hirakud Reservoir is at 2.25 km, Power channel reservoir is at 3 km, Rapta Nala is at 3.5 Km, Kharjor Nala is at 0.8 Km and a low lying area (in Northern corner of the additional land of FRP expansion project).
5. Hindalco Industries Limited has an existing FRP Plant (HRC & CRC) of capacity 1.35 lac TPA at Village Jamda, Tehsil Hirakud, District Sambalpur (Odisha).
6. CTE for FRP Plant 1.35 lac TPA was issued by SPCB, Odisha vide File No. 5288/Ind-II-Noc-4655 dated 27.03.2010. The CTO was issued by OSPCB for FRP Plant (1.35 Lac TPA) vide letter no.10958/Ind-I-Con -6394 dated on 30.05.12. The current CTO issued by OSPCB for 1.35 Lac TPA capacity vide letter no. 3212/ IND-I-CON-6394 dated on 23.03.2018; further amended on 18.12.2020 (valid upto 31.03.2023).
7. Hindalco Industries Limited is proposing to obtain EC for the Proposed Expansion of Existing FRP plant from 1.35 Lac TPA [Hot Rolled Coil (HRC) & Cold Rolled Coil (CRC)] to 5.85 Lac TPA Hot Rolled Coil (HRC) including existing 1.35 Lac TPA Cold Rolled Coil (CRC) at villages Jamda, Jamda (Nimpali), Tehsil Hirakud, District Sambalpur, Odisha.
8. The unit configuration and capacity of existing and proposed project is given as below: -
    a) HRC (Hot Rolled Coil): From 1 x 1.35 Lac TPA to 1 x 5.85 Lac TPA (Expansion)
    b) *CRC (Cold Rolled Coil): 1 x 1.35 Lac TPA (No Change)*
    c) Casting and Remelting Facility *(*Sheet Ingot): *2 x 1 .10 Lac TPA (Proposed)*
9. **Raw materials and process** - The raw materials required for the proposed expansion project include - Ingots from Hirakud Smelter (168350 TPA) and Sheet Ingots from Aditya Aluminium (A Division of Hindalco Industries Ltd.) (450000 TPA including 34000 TPA Molten Aluminium & 110000 TPA Run Around Aluminium). 4.50 Lac TPA Sheet Ingot will be produced at Aditya out of Hot Metal (3.40 Lac TPA) and scrap (1.10 Lac TPA) and alloying element (generated in the rolling and Finishing process at Aditya) will be sent to Hirakud FRP for Hot Rolling. On receiving the Sheet Ingots, there will be 'milling' operation for Oxide layer removal and then it will be heated to a temperature of 600 degree C in Electrically heated furnaces (Pusher furnaces and Soaking pit furnaces) and then process it in Hot Mill. Hot Mill already exists at Hirakud. HIL is right now utilizing the HRM at 25% utilization. HIL will fully utilize this Hot Mill to achieve the proposed expansion. The company will also modify the current Hot Mill to enhance to improve quality and improve coil size. Additionally, we will install Melter and Holder to

melt scrap generated at Hot Mill and will convert them back to Sheet Ingots.

10. **Fuel Requirement** – Fuel required for the proposed expansion project include premium LSHS/LDO (Sulphur <= 1.5%) (21450 KLA) from Oil Refineries at Barauni/ Haldia/ Vizag and PNG (86.32 Million SCM) by GAIL (India) Ltd. Premium LSHS/LDO shall be replaced with PNG in Melting-Holding furnaces, subject to the availability by GAIL (India) Ltd. The equipment will be capable of taking care of PNG fuel also.
11. **Water Requirement** – Water will be sourced from Hirakud CPP. No additional permission for water is required for the proposed expansion project.Existing water Requirement for FRP: 96 KLD and additional water Requirement for FRP: 459 KLD. Total water requirement for FRP after Expansion: 555 KLD. Source: Water is being / will be sourced from Hirakud Reservoir via pipeline through existing CPP. The additional quantity will be within the approved water drawl permission for the complex.Permission for obtaining 14 cusecs water from Hirakud Reservoir has been obtained M/s Hindalco Ltd. Hirakud from Department of Water resources vide letter no. 31007/WR, WR-MAJII-WRC-0007 – 2015.
12. **Power Requirement** - Power will be sourced from Hirakud CPP. No additional permission for power supply is required for the proposed expansion project. Existing Power Requirement FRP: 25MW. Additional Power Requirement: 30 MW. Total Power Requirement after Expansion: 55MW. Source: Existing CPP at Hirakud Complex and no increase in Power plant capacity envisaged.
13. The existing area of FRP Plant is 19.401 Ha. Additional area of 4.63 Ha will be required for proposed expansion project. Total FRP Plant area after expansion will be 24.031 Ha. The same is under possession of the company.
14. **Waste Management** - Total industrial effluent generated from the FRP Plant (existing 71KLD + additional 210.6KLD) will be treated in the existing ETP with RO (to be upgraded from 120KLD to 400KLD) & treated water will be recycled for various processes within the plant premises. Total sewage generated from the FRP Plant (existing 64KLD + additional 7KLD) will be treated in the existing STP (100 KLD). Treated water will be recycled for green belt development & dust suppression within the plant premises. The same practice will be adopted for the proposed expansion project.
15. **Green Belt**- Out of the total FRP plant area i.e. 24.031 ha, 12.61ha has already been covered under plantation inside & outside the plant premises and 2.88 ha will be covered under green belt/plantation within the plant premises for the expansion project.
16. **Employment Potential**: Existing Manpower Requirement -1293nos. Additional Manpower Requirement – 200nos. Total Manpower Requirement after Expansion - 1493nos.
17. The project cost is Rs. 1500 crores. Capital cost for environment protection measures is proposed as Rs. 35 Crores and annual recurring cost as Rs. 1.75 Crore /annum.
18. The project proponent along with the consultant **M/s J.M. Enviro Net Pvt. Ltd**., **Haryana** made a detailed presentation on the proposal.
19. **The SEAC observed the following :**

    i) M/s. Hindalco Industries Limited has an existing Aluminium Smelter of capacity 2.16 Lac TPA, Casting Plant of capacity 2.6 lac TPA and CPP of 467.5 MW capacity at

Villages Jamda, Lambaduguri, Taranagar, Jamda (Nimpali), Larbhanga, Tehsil Hirakud, District Sambalpur (Odisha) operating as per the Environmental Clearance obtained for 360 KTPA smelter & captive power 967.5 MW from MoEF&CC, New Delhi vide Letter No. J-11011/400/2006-IA II dated 6th February, 2008, further amended vide letter no. J-11011/144/2006-IA II (I) dated 19th October, 2009.

ii) The existing area of FRP Plant is 19.401 Ha. Additional area of 4.63 Ha will be required for proposed expansion project. Total FRP Plant area after expansion will be 24.031 Ha. Additional area of 4.63 Ha. is under possession of the company.

iii) FRP plant of M/s Hindalco Industries Ltd. is located outside the premises of existing Aluminium Smelter plant of Hindalco Industries Ltd.

iv) The EIA notification, 2006 and as amended thereafter stipulates "In case of secondary metallurgical processing industrial units, those projects involving operation of furnaces only such as induction & electric arc furnaces, submerged arc furnaces & cupola with capacity more than 30,000 tons per annum (TPA) would require EC". As no such furnaces were proposed in the FRP plant, therefore, No EC was required for the same and the FRP Plant is operating on the basis of Consent to Establish and Consent to Operate obtained from the State Pollution Control Board for the same. The initial Consent to Establish for FRP Plant 1.35 lac TPA was issued by SPCB, Odisha vide File No. 5288/Ind-II-Noc-4655 dated 27.03.2010. The Consent to Operate was issued by OSPCB for proposed FRP Plant (CRM) (1.35 Lac TPA) vide letter no.10958/Ind-I-Con -6394 dated on 30.05.12. Further, the Consent to Operate was issued by OSPCB for Proposed FRP Plant (CRM, HRM) (1.35 Lac TPA) vide letter no. 6919/Ind-I-Con -6394 dated on 01.05.2014. The current Consent to Operate issued by OSPCB for 1.35 Lac TPA capacity vide letter no. 3212/ IND-I-CON-6394 dated on 23.03.2018; further amended on 18.12.2020 (valid upto 31.03.2023).

v) The Hon'ble National Green Tribunal vide order dtd. 12/02/2020, in O.A. No. 55/2019 (WZ) in the matter of Gajubha Jesar Jadeja vs Union of India & Ors. directed MoEF&CC, Govt. of India the following:

   a) Define secondary metallurgical units for the purpose of EIA process,

   b) Clarification about the types of furnace under applicability of MoEF&CC, Govt. of India notification 2006, (iii) clarifying re-rolling vs. cold rolling in the context of Environmental Clearance. Therefore, for further smoothening the EC process for present unit and proposals in future, the MoEF&CC, Govt. of India may consider issuing further clarifications.

   c) In order to address to instant and similar cases where such re rolling/cold rolling units are established or operating with a CTE/CTO from the concerned State Pollution Control Boards, the Ministry may consider directing the State Pollution Control Boards to get a list of all such cases and take further quick actions so that they apply for EC and get covered by the EIA notification 2006. Since, these units are established or operating under the CTEs/CTOs obtained from a statutory authority i.e. the respective State Pollution Control Boards, a period of one year may be allowed for this recommended conversion sure that the units

remain in operation for the allowed period and closures, unemployment and related social issues/unrests are avoided . During this period of one year, they will have to follow all the conditions imposed under the CTE and CTO.

d) It would appear from the sequence of events that the position that subsisted earlier in respect of Cold Rolled Coils (CRC) of stainless steel was quite obscure as it was not clear as to whether such activity would require environmental clearance under the EIA notification, 2006. The MoEF&CC, Govt. of India upon consideration of the expert opinion appears to have now clarified that such industry do require prior environmental clearance but, having regard to the fact that there were a large number of such mills operating on the strength of CTE and CTO, opportunity should be provide to such units to fall within the EC regime by granting a period of at least one year to operate for the purpose.

vi) Therefore, considering all the facts given above, HIL has proposed to obtain EC for the Proposed Expansion of Existing FRP plant from 1.35 Lac TPA [Hot Rolled Coil (HRC) & Cold Rolled Coil (CRC)] to 5.85 Lac TPA Hot Rolled Coil (HRC) including existing 1.35 Lac TPA Cold Rolled Coil (CRC) at villages Jamda, Jamda (Nimpali), Tehsil Hirakud, District Sambalpur, Odisha.

vii) Baseline monitoring has been carried out as per Standard ToR during March to May, 2021 as reported by the proponent during presentation.

viii) The MoEF&CC, Govt. of India has not yet notified any guideline or procedure for processing of EC applications of Rolling Mill or Cold Rolling Mill, which are operating with Consent to Establish and Consent to Operate of State Pollution Control Board.. Moreover, the MoEF&CC, Govt. of India has also not clarified if such existing operational Rolling Mill will come under violation case.

Considering the information / documents furnished by the proponent and presentation made by the consultant **M/s J.M. Enviro Net Pvt. Ltd., Haryana**, the SEAC recommended the following:

A. The SEIAA, Odisha may consider to issue the following specific ToRs in addition to standard ToRs as per **Annexure – B** for conducting detailed EIA study to obtain EC for the Proposed Expansion of Existing FRP plant from 1.35 Lac TPA [Hot Rolled Coil (HRC) & Cold Rolled Coil (CRC)] to 5.85 Lac TPA Hot Rolled Coil (HRC) including existing 1.35 Lac TPA Cold Rolled Coil (CRC).

i) 'Kissam' of the existing land of 19.40 Ha where existing FRP plant situated is not known and 'Kissam' of the additional land of 4.63 Ha for expansion purpose is "Agricultural" land. 'Kissam' of the existing land of 9.40 ha to be confirmed with supporting land document from appropriate Revenue authority and 'Kissam' of the additional land need to be converted to 'Industrial use' before start of the construction of the proposed expansion of the 'Kissam' of existing land is not for 'Industrial use', the same need to be converted to 'Industrial use'.

ii) How existing FRP unit is operating without EC since one year after the order Hon'ble NGT? Please submit the justification why it will not be treated as a Violation case, since plant operation beyond the said date is illegal.

iii) Existing green belt coverage is 2.88 ha which works out to approx. 10-11% of total area and much less than 33% of norm. So, how the project proponent planning to meet the norm of 33% greenbelt showing the same in the layout map with dimension. Green Belt outside the plant area will not be considered for this purpose.

iv) Quantity (with basis of calculation) & quality (with chemical Analysis) of ETP sludge and hazardous waste (with details) to be submitted.

v) Traffic will go up by 118 trips/day due to expansion. So, traffic density study by domain expert to be undertaken at the interacting point with public road as well inside the plant and submit the same with detailed Traffic Management Plan.

vi) Water management with water balance to be submitted both for existing and the proposed expansion.

vii) Details of water Harvesting and water recharging be submitted.

viii) Provision of solar power detail calculation (for existing as well as expansion) to be submitted and to indicate some as a percentage of total power demand / consumption.

ix) Certificate from DFO, Wild life, Hirakud to be submitted that it does not fall within ESZ indicating the distance.

x) A comparative data of all environmental parameters, technology & Physical features of the existing and the proposed expansion be submitted and in case of physical features, it needs to be shown in the layout map with dimension.

xi) Quality and quantity of wastes given to cement plant. Supporting documents for tie up with cement plants.

xii) Safety measures taken for transportation of molten metal and distance of new unit from smelter plant.

B. The SEIAA, Odisha may consider to seek a clarification from MoEF&CC, Govt. of India about procedure to be adopted for consideration of Environmental Clearance for existing operational Re-Rolling Mill and Environmental Clearance for the existing as well as proposed expansion of FRP plant of M/s Hindalco Industries Ltd. shall be issued after receipt of clarification from MoEF&CC, Govt. of India.

C. The project proponent shall abide by the procedure/guidelines any to be issued by the MoEF&CC, Govt. of India in future for processing of EC application of existing FRP plant.

ITEM NO. 04

PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR M/S. JSW CEMENT LTD. FOR EXPANSION OF EXISTING CEMENT GRINDING UNIT FROM 1.2 MTPA TO 2.4 MTPA TO PRODUCE ORDINARY PORTLAND CEMENT (OPC), PORTLAND SLAG CEMENT (PSC), PORTLAND POZZOLANA CEMENT (PPC), COMPOSITE CEMENT AND GROUND

GRANULATED BLAST FURNACE SLAG (GGBS) OVER AN AREA 9.29HA. AT - KALINGA NAGAR INDUSTRIAL COMPLEX, VILLAGE - JAKHPURA, TAHASIL - DANAGADI, DISTRICT – JAJPUR, ODISHA OF SRI. NITESH KUMAR (JR. MANAGER - ENV) – 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 schedule 3 (b) "Cement Plants" Category-B as per the EIA notifications, 2006 amendments thereafter.
3. M/s. JSW Cement Ltd. has proposed for expansion of existing Cement Grinding Unit from 1.2 MTPA to 2.4 MTPA to produce Ordinary Portland Cement (OPC), Portland Slag Cement (PSC), Portland Pozzolana Cement (PPC), Composite Cement and Ground Granulated Blast Furnace Slag (GGBS) over an area 9.29Ha. at - Kalinga Nagar Industrial Complex, Village - Jakhpura, Tahasil - Danagadi, District – Jajpur, Odisha of Sri. Nitesh Kumar (Jr. Manager - Env).
4. **Location and Connectivity -** Geographical co-ordinates of the Project is Latitude –20° 57' 7.95"N to 20°57' 18.31" N and Longitude - 86° 2' 14.79" E to 86° 2' 33.01" E. Project site is falling in Survey of India Toposheet No F45N16 (73 G/16), F45T13 (73 H/13), F45O4 (73 K/4) & F45U1 (73L/1). Nearest national Highway is NH-200 at 4.5 km and State highway is SH – 20 at 2 km. Nearest Railway station is Sukinda Road Railway Station (2.5 km in NNE direction). Nearest airport is Biju Patnaik International Airport, Bhubaneswar at a distance of approximately 80 km. Nearest Reserve Forest is Dangdi PF is at 3.5 km. Nearest water body is Brahmani River is at 6.5 km.
5. M/s. JSW Cement Limited is operating Cement Grinding Unit with Cement production capacity of 1.2 MTPA (OPC, PPC, PSC, GGBS and Composite Cement) at Kalinga Nagar Industrial Complex, Village - Jakhpura, Tehsil - Danagadi, District - Jajpur (Odisha).
6. Environmental Clearance for the existing Grinding Unit has been obtained from SEIAA, Odisha vide letter no. 3693/SEIAA/ /06-2017 and file no. 19604/4-IND dated 17th October, 2017.
7. Now, the company is proposing expansion of Existing Cement Grinding Unit from 1.2 MTPA to 2.4 MTPA to produce Ordinary Portland Cement (OPC), Portland Slag Cement (PSC), Portland Pozzolana Cement (PPC), Composite Cement and Ground Granulated Blast Furnace Slag (GGBS) at Kalinga Nagar Industrial Complex, Village - Jakhpura, Tehsil - Danagadi, District - Jajpur (Odisha). Hindalco Industries Limited has an existing FRP Plant (HRC & CRC) of capacity 1.35 lac TPA at Village Jamda, Tehsil Hirakud, District Sambalpur (Odisha).
8. **Raw materials and Fuel requirement** - Raw materials required for the expansion project are Clinker; which will be Imported from Thailand, China and Indonesia and Indigenous - JSW Cement Nandyal unit, Fly ash will be purchase from Jindal Stainless Limited, Jajpur Plant, Gypsum will be sourced from Imported/ Fertilizer Industries and Slag will be sourced from JSL, Tata Steel, Nilanchal Ispat Ltd. and Slag will be sourced from JSL, Tata Steel, Nilanchal Ispat Ltd. Fuel to be used is Coal will be imported / local and HSD will be sourced from BPCL.

9. **Water Requirement** – The existing water requirement is 245 KLD. Additional water requirement for proposed expansion will be 220 KLD; thus, the total water requirement after expansion will be 465 KLD which is being / will be sourced from surface water i.e. Brahmani River.
10. **Power Requirement** - The existing power requirement is 8 MW and additional 7 MW will be required for expansion. Therefore, total power requirement will be 15 MW which is being / will be sourced from Grid (State DISCOM). Also, company has 2 x 500 KVA D.G. Sets for back up.
11. Total Plant Area: 9.29 ha (22.96 acres), out of which 6.07 ha (15.0 acres) existing plant area and 3.22 ha (7.96 acres) additional land.
12. **Waste Water Management** - No industrial waste water generation from Grinding Unit. Water used for cooling at various stages of cement manufacturing be partially recirculated; hence, no waste water will be discharged. Water used for cooling at various stages of Cement plant is being / will be partially subjected to evaporation and partially recycled; hence, no waste water is being / will be discharged from the process.Domestic waste water (11 KLD) generated from office toilets and canteen will be treated in STP of 20 KLD capacity and treated water will be used for greenbelt development / plantation. Sludge of (~2.0 Tonnes/Annum) will be used as manure in greenbelt development / plantation.
13. **Solid Waste Management** - Dust collected in air pollution control equipment (APCE's) will be recycled back into the process. Sewage sludge generated from STP will be used as manure in greenbelt development/ plantation. Municipal waste will be segregated on the basis of organic and inorganic content. Organic waste and horticulture waste will be composted and will be used as manure. Inorganic waste shall be disposed-off properly. Used or Spent Oil will be generated as per Schedule - I of Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.
14. **Green Belt**- Out of the total plant area, approx. 3.06 ha (7.57 acre) area will be covered under greenbelt / plantation; Out of which; 1.01 ha (2.5 acre) area has already been covered under greenbelt / plantation.
15. **Employment Potential**: The total manpower requirement during operation phase of the project is estimated to be 440 Persons; out of which, 365 persons are existing manpower and 75 persons will be employed for the expansion. During Implementation phase, 500 persons will be employed for construction. Unskilled/ semi-skilled manpower will be sourced from the local area and skilled manpower will be sourced from outside/ local as per availability.
16. Total Cost of the Proposed Expansion Project - Rs. 170 Crores. Capital cost for environment protection measures is proposed as Rs. 5.1 Crores and annual recurring cost as Rs. 0.25 Crore /annum.
17. The project proponent along with the consultant **M/s J.M. Enviro Net Pvt. Ltd**., Haryana made a detailed presentation on the proposal.
18. The project proponent had made a submission before the SEAC to exempt Public Consultation for the proposal as there are instances of similar cases considered by the MoEF&CC, Govt. of India and/or other SEIAAs for issuance of Environment clearance

under clause 7(ii) of EIA Notification 2006.

19. **Clause 7(ii) of** EIA notification 2006 and its amendment stipulates "*All applications seeking prior environmental clearance for expansion with increase in the production capacity beyond the capacity for which prior environmental clearance has been granted under this notification or with increase in either lease area or production capacity in the case of mining projects or for the modernization of an existing unit with increase in the total production capacity beyond the threshold limit prescribed in the Schedule of this notification through change in process or technology or involving a change in the product mix shall be made in Form I and they shall be considered by the concerned Expert Appraisal Committee or* ***State Level Expert Appraisal Committee within sixty days, who will decide on the due diligence necessary including preparation of Environmental Impact Assessment and public consultations and the application shall be appraised accordingly for grant of environmental clearance****".*

20. The MoEF&CC, Govt. of India had issued Office Memorandum vide no. J-11013/41/2006-IA.II(I), dated 03.06.2009, which stipulates "In order to enhance the transparency in decision making when the provisions of clause 7(ii) of EIA Notification, 2006 are invoked for exempting Public Hearing for any project, it is requested that this exemption should be applied judiciously, based on the available data on incremental pollution load and use of additional natural resources vis-a-vis sustainable development without compromising on environmental integrity. The reasons for invoking clause 7 (ii) while granting exemption from public hearing should also be appropriately recorded in the minutes of the EAC/SEAC Meeting"

Considering the information / documents furnished by the proponent and presentation made by the consultant **M/s J.M. Enviro Net Pvt. Ltd., Haryana**, the SEAC recommended the following:

A. The proponent may be requested to furnish the following for taking a decision on request of the proponent for exemption of public hearing as per clause 7(ii) of EIA Notification, 2006.

i) Copy of Environmental Clearances and minutes of the meeting of EAC/SEACs of the similar type of cases, which have already been considered by MOEF&CC, Govt. of India and/or SEIAAs in recent past under clause 7(ii) of EIA Notification, 2006 and amendment thereafter for exemption of public hearing.

ii) Detailed justification that there will be no increase in pollution load and use of additional natural resources vis-à-vis sustainable development due to the proposed expansion.

B. The decision on issue of Terms of Reference for the proposal will be decided after receipt of clarification/document from the proponent. However, following specific Terms of References may be issued for conducting EIA study, while recommending for issue of Terms of Reference for EIA study for the proposal.

i) EC conditions wise detailed compliance duly certified by MoEF&CC, Govt. of India, Regional office, Bhubaneswar be given in EIA/EMP along with Consent to Establish, Consent to Operate and Authorization under Hazardous Waste Rules conditions compliance report duly certified by the State Pollution Control Board.

ii) Comparative matrix of the existing plant & proposed expansion on environmental parameters & physical features to be submitted showing the details of physical features on the layout map.

iii) Existing green belt coverage is only 2.5 Ac which is less than 20% as against the norm of 33% even after 4 years of EC granted. Thus, to show the vacant place for green belt in the original layout map for which EC was granted and the reasons for non-compliance/ lapse as committed. Also to submit the proposed green belt coverage details with the proposed layout map with dimensions separately.

iv) Existing power consumption is stated to be 8MW and no solar / renewable power provision is made, the reasons for the same to be submitted.

v) While the manpower is 440 plus the floating population, detail of existing STP & proposed to be submitted.

vi) Rain water harvesting & recharging details of the existing and proposed expansion to be submitted.

vii) Comparison of base line date between the present and the date submitted while made application for the existing EC be furnished and difference be indicated & highlighted.

viii) Since, Cement is dust prone industry and there exists another cement plant very closely proximate to this plant, Dispersion/ Inversion study be undertaken and results submitted.

ix) Justification of use of imported Gypsum from outside Odisha/ India be submitted.

x) Since the existing unit and the proposed expansion double the capacity is within the premises of Jindal Stainless Ltd and located at Kalinganagar Industrial complex, traffic density study by domain expert be undertaken at interacting print with public road, at entry & exit print of the plant vehicle gate (s) and Traffic Management plan be submitted.

xi) Details of storage shed (existing & proposed) for Coal - Design & drawing against possible heavy rain & cyclone be submitted so that coal fines do not ingress to drains.

xii) What are the occupational health hazardous identified of the employees & locality and measures taken including engagement of occupational health expert be submitted.

xiii) Firefighting measures.

xiv) Detailed report on carbon sequestration.

xv) Details of coal and gypsum imported.

C. A site visit to be conducted by the Sub-Committee of SEAC before issue of ToRs to suggest additional / specific ToRs if any.

ITEM NO. 05

PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF M/S. UTKAL ENVIROCARE FOR COMMON BIO - MEDICAL WASTE TREATMENT FACILITY PROJECT OVER AN AREA

0.60HA. AT KHATA NO. 81/17, PLOT NO. 15, MOUZA – BALIBAD, TAHASIL – SORO, DIST – BALASORE, ODISHA OF SRI GANESH PRASAD SWAIN (PROPRIETOR) - 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 schedule 7 (da) "Biomedical Waste Treatment Facility" Category-B as per the EIA notifications, 2006 amendments dated 17th April, 2015.
3. M/s. Utkal Envirocare for Common Bio - Medical Waste Treatment Facility Project over an area 0.60Ha. at Khata no. 81/17, Plot No. 15, Mouza – Balibad, Tahasil – Soro, Dist – Balasore, Odisha of Sri Ganesh Prasad Swain (Proprietor).
4. **Location and Connectivity -** Geographical co-ordinates of the Project is Latitude 21°18' 51.04" N & Longitude 86° 40' 54.72" E. Project site is falling in Survey of India Toposheet No. F45O11, F45O12, F45O15 & F45O16. Soro Railway station – 26 km. NH-16 – 2.2km and metal road at 0.2km. Biju Pattanaik International Airport-148 Km. Nearest river – Pitakalia at 8km. Nearest sanctuary is Kuldiha Wildlife Sanctuary at 5.5km. Nearest habitation are Balibad – 1.2 km.
5. The proposed CBWTF unit consist of Incinerator (3.2TPD) - 1no, Autoclave (2TPD) - 1no., Shredder (2-3TPD) - 1 no. and ETP (10KLD) – 1 no.
6. **Water Requirement** – The total water requirement is 21 KLD and daily fresh water requirement would be 16KLD which would be fetch from Soro Block. The wastewater after treatment in the proposed 10 KLD ETP would be recycled to reduce the consumption of fresh water requirement. Rooftop rain water harvesting would be done to further reduce the consumption of fresh water.
7. **Power Requirement** - The electricity would be taken from the TPNODL (TP Northern Odisha Distribution limited, Odisha with 100 KW and there would be 100 KVA DG set would be installed as a backup.
8. **Waste water Management** - The main wastewater generations sources in the proposed project are recirculating water of quencher- wet scrubber, cleaning of the floors and pavements of the facility and vehicles, vehicle wash area, etc will be treated in ETP (10 KLD).The entire wastewater collected at the sump shall be treated in In-house Effluent Treatment Plant (ETP) and the treated water shall be reused primarily in APCDs connected to the incinerator and will be continuously re-circulated to meet the requirement. No treated wastewater shall be discharged out of the premises of the CBWTF. Unit will be operated as ZLD.The domestic waste water will be disposed in septic tank followed by soak pit.
9. **Solid waste Management -** Wastes will be generated in the form of ash and other residues. Ash will be generated approx. 100 Kg to 150 Kg per day and Quantity of other residues generated will be approx. 10 Kg to 20 Kg per day. Ash residue from high temperature incineration and other material residues shall be collected into containers / bags and stored at temporary ash storage shed and shall be disposed into the secured landfill periodically after sufficient accumulation. All hazardous waste shall be strictly disposed as per Hazardous & Other Waste (Management & Trans-boundary movement) Rule, 2016.

10. **Green Belt**- A three tier canopy green belt will be developed with flowering species to abate dust, noise and odour and to increase the aesthetic value. The green belt will cover 33.19% of the total project area i.e. 2015.28 sqm. About 504 number of saplings are recommended for developing the green belt to abate dust, noise, odour and soil erosion.
11. **Parking Details -** Total parking area will be 303.6 sqm./ 13 ECS.
12. **Employment Potential**: Total employment for the operation will be 48 including support staff, skilled and unskilled workers.
13. **Solid waste generation** -. During operation of the unit main waste will be Ash from incinerator and Sludge from ETP. Total 100-150 kg/day of Incineration Ash and 10-20 kg/day of Residues shall be generated from the Treatment Unit. Ash Residue from High Temperature Incineration and Other Material Residues from the process shall be collected into Containers / Bags and shall be stored at temporary ash storage shed and shall be disposed into the secured Landfill periodically after sufficient accumulation. Approx. 50-100 kg /month of Sludge will be generated from ETP. During Operation Phase 45 persons are engaged in operation phase and approx. 15 kg/day municipal solid waste is generated. All generated waste shall be disposed to secured Land Fill site as per the direction of OSPCB.
14. The project cost is ` 260 lakhs.
15. The project proponent along with the consultant **M/s Grass Roots Research & Creation India (P) Ltd.**., **Noida** made a detailed presentation on the proposal.

16. The SEAC observed the following during the presentation:

    i) Para 7 (3) of Bio-Medical Waste Management Rules, 2016 stipulates “No occupier shall establish on-site treatment and disposal facility, if a service of Common Bio-medical Waste Treatment Facility is available at a distance of seventy-five kilometers”.

    ii) Another proposal of Common Bio-medical Waste Treatment Facility in the name of M/s Ecokart Technology Private Limited has proposed for setting up a Common Bio-Medical Waste Treatment Facility over an area 0.918 Ac./0.3715Ha. located at - Plot No.- D1/54,55,56 Somnathpur Industrial Estate, Tahasil – Remuna, Dist – Balasore, Odisha of Sri Debasis Suara. The SEAC has already recommended for issue of ToRs to this Common Bio-Medical Waste Treatment Facility. The distance between these two Common Bio-Medical Waste Treatment Facility may less than 75 kms.

Considering the information / documents furnished by the proponent and presentation made by the consultant **M/s Grass Roots Research & Creation India (P) Ltd.., Noida**, the SEAC decided to take decision on the proposal after receipt of the following information / documents from the proponent.

i. Certificate from concerned DFO regarding distance of proposed unit from Eco sensitive zone of Kuldiha wildlife sanctuary.

ii. Distance of the other Common facility proposed to be established in the name of M/s Ecokart Technology Private Limited located at - Plot No.- D1/54,55,56 Somnathpur Industrial Estate, Tahasil – Remuna, Dist – Balasore to whom ToRs have been recommended.

iii. Detailed justification as to why the proposal shall not be rejected as per Para 7 (3) of Bio-Medical Waste Management Rules, 2016 as another facility proposed to be come up within 75 kms..

ITEM NO. 06

PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF M/S. SUN ALLOYS & MINERALS LTD. FOR PATAMUNDA MANGANESE MINES OVER AN AREA OF 43.532 HA. AT VILLAGE - PATAMUNDA, TAHASIL - KOIDA, DISTRICT - SUNDERGARH, ODISHA OF SRI RAJIB LOCHAN MOHANTY (MANAGING DIRECTOR) – 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. M/s. Sun Alloys & Minerals Ltd. for Patamunda Manganese mines over an area of 43.532 Ha. at Village - Patamunda, Tahasil - Koida, District - Sundergarh, Odisha of Sri Rajib Lochan Mohanty (Managing Director).
3. The project falls under category "B" or activity 1 (a) - Mining of Minerals under EIA Notification dated 14th September 2006 as amended from time to time.
4. Patmunda Manganese Mining Lease in village Patmunda of Sundergarh District Odisha was granted over an area of over 81.197 Ha in favour of Sun alloys & Minerals Ltd on 23.10.1991 which was executed on 12.02.1996 for 10 years i.e. till 11.02.2006.
5. First RML application was filed on 04.02.2005 (one year before the expiry of the lease) for 20 years (form 12.02.2006 to 11.02.2026) on a reduced area over an area of 43.568 Ha deleting 37.629 Ha area occupied by tenants and local inhabitants within the executed ML area of 81.179 Ha. Mining operation continued within the ML area till 22.12.2009 under deemed clause of Rule 24 A (6) of MCR 1960. Mining operation within the ML was closed by the DFO, Bonai vide letter No 6264 dt 22.12.2009 for want of forest clearance over an area of 0.036 Ha of DLC forest land.
6. The lessee again deleted 0.036 Ha DLC area from 43.568 Ha of applied RML area and submitted a letter to the Principal Secretary to Government, Department of Steel & Mines, Govt. of Odisha vide letter no. SAML/CO/2010-11/08-06 dated 06.08.2010 along with a fresh map over 43.532 Ha for consideration in respect of renewal of the lease area. The lessee deposited the demanded amount of Rs 2,03,00,894.96 (Rupees two crore three lakh eight hundred ninety four and ninety six paise only) arising out of the final judgement of the Honourable Apex court dated 02,08,17 in the aforesaid Common Cause Matter of WP (C) 114/2014 related to Section 21 (5) of MMDR Act 1957.Based on the order of RA, lessee submitted his request to the state Govt for revocation of the lapsing order on 10.01.19 and 06.03.21 which is under active consideration.

7. The Mining Lease was subsisting as on 12.01.2015, the date on which the MMDR Act, 1957 was amended. As per the provisions of Section 8A (3) read with Section 8A (9) of the amended provisions of the Act, the period of the Mining Lease is deemed to have been extended up to 11.02.2046 (for a total period of 50 years).
8. The application for EC was made by the lessee and Public hearing for the said project was conducted on 10.04.2010
9. The proposal was considered for EC at SEAC, Odisha on 18.10.2012 and Member Secretary State Environment Impact Assessment Authority (SEIAA) Odisha vide Letter No 365/SEIAA dated 27.12.2012 asked to submit the authentic copy of Stage – I forest clearance within 12 months for issuance of Environmental Clearance. In reply the lessee submitted a letter to Member Secretary SEIAA vide their letter No SAML/CO/2012-13/03-21 dated 11.03.2013. In this letter the lessee informed that the revised RML area over 43.568 Ha includes 0.036 Ha DLC forest land in south eastern boundary of the lease which has been deleted, retaining the RML applied area of 43.532 Ha. FMCP on 0.036 Ha area which was approved by IBM vide Letter No ORI/BHU/2011-12 Dated 28.10.2011.
10. Replying the above letter of the lessee Member Secretary SEIAA issued a letter (Letter No 726/SEIAA dated 28.04.2014 –to submit the proposal afresh as per EIA Notification 2006.
11. State Pollution Control Board, Odisha accorded Consent to Establish vide their letter No 22809/Ind-II-5429 dated 12.11.2012.
12. At the initial stage with reference to the application of the lessee dated 27.03.2006, OSPCB, Bhubaneswar issued consent order for air (Prevention & Control of Pollution) & Water (Prevention & Control of Pollution) vide their letter dated 13.07.2006 for production of manganese ore to the tune of 300 tonnes per month for Air/18B for Water). This was valid upto 31.03.2011.
13. Mining within the ML area started in 1997-98 and continued till 2009-10 and was closed by the DFO, Bonai vide letter No 6264 dt 22.12.2009 (Annexure XIX) for want of forest clearance over an area of 0.036 Ha of DLC forest land. The mine is yet to be re-opened.
14. The Mine was operating since 1997-98 and continued operation till 2009-10 without obtaining Environment clearance. Environment clearance is applicable to the mines under EIA Notification 1994 as well as 2006.
15. Violation has been made by the lessee under E(P) Act, 1986 and the application for ToR has been made under the case of violation.
16. The mining plan approved in 2016-17 and due to lack of violation, this mining plan was lapsed in 2015.The lease area is reduced to 43.532 Ha in the renewal application. Proposed production from the lease area during the revised scheme period from 2016-17 to 2020-21.
17. Final Mine Closure Plan on 0.036 Ha DLC area was approved vide IBM Letter No FMCP/OTFM/03-ORI/BHU/2011-12 dated 28.10.2011. Certificates obtained under sub rule (2) of rule 29 (A) of MCR 1960 on approved FMCP over 0.036 Ha. Accordingly, a letter was submitted to The Principal Secretary to Government, Department of Steel &

Mines, Govt. of Odisha vide letter no. SAML/CO/2010-11/08-06 dated 06.08.2010 along with a fresh map for considering the RML area as 43.532 Ha. As Per Mines & Minerals (Development and Regulation) Amendment Act 2015 the lease shall be extended for a period of forty years i.e., 11.02.2046 (Total lease period is 50 years) w.e. from 12.02.1996.

18. Recent mining plan approved by Indian Bureau of Mines, Bhubaneswar vide letter no: RMP/A/04-ORI/BHU/2021-22, dated 17.06.2021.

19. **Location and Connectivity**: Patmunda Manganese ore Mines over an area of 43.568Ha. located in Patmunda Village, under Sub-division Bonai, Tahsil Koida in Sundargarh District, Odisha. Out of the total lease area 43.568 Ha, 43.532 Ha Govt. non-forest land, and 0.036Ha is Govt. forest land. Lease area is a part of Survey of India toposheet No 73G/5 and is bounded by the latitudes from Latitude 21^0 52' 15.58"N and Longitude 85^0 18'16.839"E as per survey. Nearest railway stations is Barbil Railway Station at an distance of 45 Km. Nearest town is Koira is 10km. State capital Bhubaneswar via Jajpur – Keonjhor Road, is at a distance of 318 km where Airport is there. Rourkela Steel City via Lohanipura and Koira – Bhadrasahi is at a distance of 115 km. Jamsedpur via Chaibasa and Noamundi is 185 km far from the lease area. Paradeep port is at about 310 km and nearest NH is NH 215 at a distance of 6 km from the lease area. Suna River at a distance of 4.5Km. Nearest Reserve forest is Khajurdihi RF – 4.8km.

20. **Reserves** - The mineable reserve of manganese ore in the lease area is 1,98,538 MT. In the ensuing plan period about 21,734 MT will be exploited. After this plan period balance mineable reserves of 1,77,164 MT of manganese ore will be available. Keeping in view the production of manganese ore @5500 per annum, life of the mine will be 32.21 years or say 33 years after the current plan period. So, total life of the mine will be 33 years including this plan period.

21. Presently there are four existing quarries namely Quarry-1,2,3 and 4. There are seven nos. of existing dumps are present in the lease area.

22. **Method of Mining** - Open cast semi mechanized system of mining is in practice since long to mine the manganese ore deposit adopting a system of bench formation keeping In mind the quality, cost, safety and conservation of mineral. No change in method of mining has been envisaged during the proposed review period. Quarry-2 and 4 shall be developed during the proposed review period (2022-2023 to 2025-26) from the insitu ore zone with lateral and depth ward extension. There is no regular need of blasting in the over burden and mineralized zone for development and ore production. Once the mineralized zone is exposed, low scale drilling shall be required which will be done by rock drill machine attached with compatible compressor for loosening the ore zone formation.

23. **Production Details:** The different types of ore production year-wise is given as follows :-

Year	Total Saleable ore(MT)	Total Mineral Reject (MT)	Total ROM (MT)
2021-22	52 numbers diamond core drilling under exploration programme		
2022-23	5346	0	5346
2023-24	5445	0	5445

2024-25	5434	0	5434
2025-26	5509	0	5509
Total	21734	0	21734

24. **Waste management** - A total quantity of 145245 m3 waste (generated from the lease area + Rehandled existing waste dump) will be accommodated on the proposed dump over an area of 2.014 Ha. At the end of the conceptual period the total waste over the proposed dump will be utilized for backfilling of the exhausted quarries. Conceptually,7272 MT of mineral rejects will be generated. This mineral rejects will be stored in the earmarked site covering an area of 0.18 Ha. These mineral rejects shall be blended as far as practicable as per the demand of buyers.

25. **Green Belt** - The plant species which preferably will be nitrogen fixers, pollution abaters, fruit bearing shall be taken up for plantation. During the plan period afforestation programme (23000 nos.) will be carried out over an area of 15.381 hectares of safety zone area and backfilled and reclaimed area.

26. **Water Requirement** - Water consumption will be limited to 10 KLD which consist of 2.5 KLD for domestic, 5 KLD for dust suppression, 2.5 KL For green belt development purpose. Water for drinking / domestic use will be sourced from the tankers while water for non-domestic use such as plantation, water sprinkling etc. will be sourced from water harvesting ponds.

27. **Power Requirement** - Electricity is available in the M.L area. As the mine is operated in day shift only, there is no necessity of power for illumination at mines. Energy required: Diesel 800 Ltr/ Day.

28. A total of 100 workers (Direct - 68nos., Indirect - 32nos.) will be employed during mining operation.

29. The cost of Project is ` 295 lakh.

30. The Environment Consultant **M/s Kalyani Laboratories Pvt. Ltd. Bhubaneswar** along with the proponent made a detailed presentation on the proposal before the Committee.

31. The project proponent has made an appeal before the committee for exemption of public hearing as per MoEF&CC O.M 22-4/2020.IA.III and MoEF&CC O.M 22-28/200.IA.III due to the following reasons:

    (i) The public hearing for the said project was already conducted on 10.04.2012.

    (ii) There is no increase in lease area or production capacity for which public hearing has already been conducted.

    (iii) There is no proposed change in mining activity or method.

    (iv) No mining activities carried out in the lease area after public hearing.

Considering the information / documents furnished by the proponent and presentation made by the consultant **M/s Kalyani Laboratories Pvt. Ltd. Bhubaneswar**, the SEAC recommended the following:

A. Proposal to be considered for issue of ToRs under violation case after receipt of the following information / documents from the proponent.

30. The Environment Consultant **M/s Kalyani Laboratories Pvt. Ltd. Bhubaneswar** along with the proponent made a detailed presentation on the proposal before the Committee.

31. The project proponent has made an appeal before the committee for exemption of public hearing as per MoEF&CC O.M 22-4/2020.IA.III and MoEF&CC O.M 22-28/200.IA.III due to the following reasons:

    (i) The public hearing for the said project was already conducted on 10.04.2012.

    (ii) There is no increase in lease area or production capacity for which public hearing has already been conducted.

    (iii) There is no proposed change in mining activity or method.

    (iv) No mining activities carried out in the lease area after public hearing.

Considering the information / documents furnished by the proponent and presentation made by the consultant **M/s Kalyani Laboratories Pvt. Ltd. Bhubaneswar**, the SEAC recommended the following:

A. Proposal to be considered for issue of ToRs under violation case after receipt of the following information / documents from the proponent.

i) Permission for new or expansion of manganese ore mine is terms of NEERI recommendations to be submitted from Steel & Mines Deptt., Govt of Odisha.

ii) Documentary evidence that the proposal had been submitted in violation portal of MoEF&CC, Govt. of India.

iii) Detailed write up with justification along with copy of OMs of MoEF&CC, Govt. of India for exemption of public hearing.

B. Following specific ToRs may be issued while issue of ToRs for EIA study for the proposal.

i) EC conditions wise detailed compliance duly certified by MoEF&CC, Govt. of India, Regional office, Bhubaneswar be given in EIA/EMP along with Consent to Establish, Consent to Operate and Authorization under Hazardous Waste Rules conditions compliance report duly certified by the State Pollution Control Board.

ii) One village road is stated to have been passing through in between quarries and to be diverted. Details of existing road and proposed diversion in the lay out map to be submitted.

iii) Details of STP design and capacity to be submitted since employee strength is100 besides floating population.

Approved

02.11.2021

SECRETARY, SEAC

CHAIRMAN, SEAC

ANNEXURE – A

TERMS OF REFERENCE (ToR) FOR CONDUCTING ENVIRONMENT IMPACT ASSESSMENT STUDY AND INFORMATION TO BE INCLUDED IN EIA/EMP REPORT FOR M/S FERRO ALLOYS CORPORATION LTD. FOR EXPANSION OF KALARANGIATTA CHROMITE MINES FOR INCREASE IN PRODUCTION FROM 0.05 MTPA TO 0.15 MTPA CHROME ORE (ROM) WITH MAXIMUM EXCAVATION OF 0.438 MILLION CUM PER ANNUM OVER AN MINING LEASE AREA: - 23.80HA., AT VILLAGE – KALARANGIATTA, TAHASIL – SUKINDA, DIST – JAJPUR, ODISHA OF SRI. BISWANATH SAHOO, (AUTHORIZED SIGNATORY) - TOR

A. ADDITIONAL TOR's:

i) 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.

ii) Project proponent should submit the revenue plan for mining lease, revenue plan should be superimposed on the satellite imaginary clearly demarcate the Govt. land, private land, agricultural land etc.

iii) Project proponent should submit the real-time aerial footage & video of the mining lease area and of the transportation route. Project proponent should submit the detailed plan in tabular format (year-wise for life of mine) for afforestation and greenbelt 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 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.

iv) Project proponent should submit the quantity of surface or ground water to be used for this project. The complete water balance cycle need to be submitted. In addition to this project proponent should submit a detailed plan for rain water harvesting measures to be taken. Project proponent 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.

v) 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 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.

Environmental Scientist, SEAC

vi) 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.

vii) Project proponent should submit the measures/technology to be adopted for prevention of illegal mining and pilferage of mineral. 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.

viii) 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 centre 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.

ix) 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.

x) 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.

xi) The budget to be earmarked for the various activities shall be decided after perusal of the Standard EC Conditions published by the MoEF&CC, Govt. of India. After perusal of Standard EC conditions if agreed, 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 / MoEF&CC.

xii) The project proponent should ensure that only NABET accredited consultant shall be engaged for the preparation of EIA/EMP Reports. Project proponent shall ensure that accreditation of consultant shall be valid during the collection of baseline date, 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 Ministry are factually correct and Project proponent and consultant are fully accountable for the same.

xiii) 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 Project proponent should submit the original test reports and certificates of the labs which will analyse the samples.

B. STANDARD TOR FOR MINING PROJECT

i) Year-wise production details since 1994 should be given; clearly stating the highest production achieved in anyone year prior to1994. 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 to1994.

ii) A copy of the document in support of the fact that the proponent is the rightful lessee of the mine should be given.

iii) 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.

iv) All corner coordinates of the mine lease area, superimposed on a High-Resolution Imagery / top sheet, 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).

v) 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.

vi) 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.

vii) 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.

viii) Issue relating to mine safety, including subsidence study in case of underground mining and slope study in case of open cast mining, blasting study etc. should be detailed. The proposed safeguard measures in each case should also be provided.

ix) 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.

x) Land use of the study area delineating forest area, agricultural land, gazing 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.

xi) 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.

xii) 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.

xiii) 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.

xiv) 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.

xv) The vegetation in the RF / PF areas in the study area, with necessary details, should be given.

xvi) 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.

xvii) 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.

xviii) 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.

xix) 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.

xx) 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).

xxi) 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,

xxii) 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.

xxiii) 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.

xxiv) 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.

xxv) Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the Project should be provided.

xxvi) 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.

xxvii) 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.

xxviii) 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.

xxix) Details of any stream, seasonal or otherwise, passing through the lease area and modification / diversion proposed, if any, and the impact of the same on the hydrology should be.

xxx) 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.

Environmental Scientist, SEAC

xxxi) 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.

xxxii) 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.

xxxiii) Details of the onsite shelter and facilities to be provided to the mine workers should be included in the EIA Report.

xxxiv) 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.

xxxv) 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.

xxxvi) 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.

xxxvii) 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.

xxxviii) 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.

xxxix) 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.

xl) Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given.

xli) The cost of the project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out.

xlii) A Disaster Management plan shall be prepared and included in the EIA/EMP report.

Environmental Scientist, SEAC

xliii) 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.

xliv) Activity-wise time-bound action plan on the issues raised and commitment made during public hearing to be submitted as part of the final EMP Report in compliance of the Ministry's OM F.No.22-65/2017- IA.III dated 30th September, 2020

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.

Environmental Scientist, SEAC

ANNEXURE – B

TERMS OF REFERENCE (ToR) FOR CONDUCTING ENVIRONMENT IMPACT ASSESSMENT STUDY AND INFORMATION TO BE INCLUDED IN EIA/EMP REPORT FOR M/S. HINDALCO INDUSTRIES LTD. FOR EXPANSION OF EXISTING FRP PLANT FROM 1.35 LAC TPA [HOT ROLLED COIL (HRC) & COLD ROLLED COIL (CRC)] TO 5.85 LAC TPA HOT ROLLED COIL (HRC) INCLUDING EXISTING 1.35 LAC TPA COLD ROLLED COIL (CRC) OVER AN AREA 24.031 HA AT VILLAGES - JAMDA AND JAMDA (NIMPALI), TAHASIL - HIRAKUD, DISTRICT SAMBALPUR, ODISHA OF SRI SANDIP ROY (UNIT HEAD) – TOR

STANDARD TERMS OF REFERENCE (TOR):

1. **Executive Summary.**
2. **Introduction**
    i. Details of the EIA Consultant including NABET accreditation.
    ii. Information about the project proponent.
    iii. Importance and benefits of the project.
3. **Project Description**
    i. Cost of project and time of completion.
    ii. Products with capacities for the proposed project.
    iii. If expansion project, details of existing products with capacities and whether adequate land is available for expansion, reference of earlier EC if any.
    iv. List of raw materials required and their source along with mode of transportation.
    v. Other chemicals and materials required with quantities and storage capacities
    vi. Details of Emission, effluents, hazardous waste generation and their management.
    vii. Requirement of water, power, with source of supply, status of approval, water balance diagram, man-power requirement (regular and contract).
    viii. Process description along with major equipments and machineries, process flow sheet (quantative) from raw material to products to be provided.
    ix. Hazard identification and details of proposed safety systems.
    x. Expansion/modernization proposals:
        a) Copy of all the Environmental Clearance(s) including Amendments thereto obtained for the project from MOEF/SEIAA shall be attached as an Annexure. A certified copy of the latest Monitoring Report of the Regional Office of the Ministry of Environment and Forests as per circular dated 30th May, 2012 on the status of compliance of conditions stipulated in all the existing environmental clearances including

Amendments shall be provided. In addition, status of compliance of Consent to Operate for the ongoing existing operation of the project from SPCB shall be attached with the EIA-EMP report.

b) In case the existing project has not obtained environmental clearance, reasons for not taking EC under the provisions of the EIA Notification 1994 and/or EIA Notification 2006 shall be provided. Copies of Consent to Establish/No Objection Certificate and Consent to Operate (in case of units operating prior to EIA Notification 2006, CTE and CTO of FY 2005-2006) obtained from the SPCB shall be submitted. Further, compliance report to the conditions of consents from the SPCB shall be submitted.

4. **Site Details**

i. Location of the project site covering village, Taluka/Tehsil, District and State, Justification for selecting the site, whether other sites were considered.

ii. A toposheet of the study area of radius of 10km and site location on 1:50,000/1:25,000 scale on an A3/A2 sheet. (Including all eco-sensitive areas and environmentally sensitive places).

iii. Details w.r.t. option analysis for selection of site.

iv. Co-ordinates (lat-long) of all four corners of the site.

v. Google map-Earth downloaded of the project site.

vi. Layout maps indicating existing unit as well as proposed unit indicating storage area, plant area, greenbelt area, utilities etc. If located within an Industrial area/Estate/Complex, layout of Industrial Area indicating location of unit within the Industrial area/Estate.

vii. Photographs of the proposed and existing (if applicable) plant site. If existing, show photographs of plantation/greenbelt, in particular.

viii. Land use break-up of total land of the project site (identified and acquired), government/ private - agricultural, forest, wasteland, water bodies, settlements, etc shall be included. (not required for industrial area)

ix. A list of major industries with name and type within study area (10km radius) shall be incorporated. Land use details of the study area.

x. Geological features and Geo-hydrological status of the study area shall be included.

xi. Details of Drainage of the project upto 5km radius of study area. If the site is within 1 km radius of any major river, peak and lean season river discharge as well as flood occurrence frequency based on peak rainfall data of the past 30 years. Details of Flood Level of the project site and maximum Flood Level of the river shall also be provided. (mega green field projects).

xii. Status of acquisition of land. If acquisition is not complete, stage of the acquisition process and expected time of complete possession of the land.

xiii. R&R details in respect of land in line with state Government policy.

5. **Forest and wildlife related issues (if applicable):**

   i. Permission and approval for the use of forest land (forestry clearance), if any, and recommendations of the State Forest Department. (if applicable).

   ii. Land use map based on High resolution satellite imagery (GPS) of the proposed site delineating the forestland (in case of projects involving forest land more than 40 ha).

   iii. Status of Application submitted for obtaining the stage I forestry clearance along with latest status shall be submitted.

   iv. The projects to be located within 10 km of the National Parks, Sanctuaries, Biosphere Reserves, Migratory Corridors of Wild Animals, the project proponent shall submit the map duly authenticated by Chief Wildlife Warden showing these features vis-à-vis the project location and the recommendations or comments of the Chief Wildlife Warden-thereon.

   v. Wildlife Conservation Plan duly authenticated by the Chief Wildlife Warden of the State Government for conservation of Schedule I fauna, if any exists in the study area.

   vi. Copy of application submitted for clearance under the Wildlife (Protection) Act, 1972, to the Standing Committee of the National Board for Wildlife.

6. **Environmental Status**

   i. Determination of atmospheric inversion level at the project site and site-specific micro- meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall.

   ii. AAQ data (except monsoon) at 8 locations for PM10, PM2.5, SO2, NOX, CO and other parameters relevant to the project shall be collected. The monitoring stations shall be based CPCB guidelines and take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests.

   iii. Raw data of all AAQ measurement for 12 weeks of all stations as per frequency given in the NAQQM Notification of Nov. 2009 along with - min., max., average and 98% values for each of the AAQ parameters from data of all AAQ stations should be provided as an annexure to the EIA Report.

   iv. Surface water quality of nearby River (100m upstream and downstream of discharge point) and other surface drains at eight locations as per CPCB/MoEF&CC guidelines.

   v. Whether the site falls near to polluted stretch of river identified by the CPCB/MoEF&CC, if yes give details.

   vi. Ground water monitoring at minimum at 8 locations shall be included.

   vii. Noise levels monitoring at 8 locations within the study area.

   viii. Soil Characteristic as per CPCB guidelines.

   ix. Traffic study of the area, type of vehicles, frequency of vehicles for transportation of materials, additional traffic due to proposed project, parking

arrangement etc.

x. Detailed description of flora and fauna (terrestrial and aquatic) existing in the study area shall be given with special reference to rare, endemic and endangered species. If Schedule- I fauna are found within the study area, a Wildlife Conservation Plan shall be prepared and furnished.

xi. Socio-economic status of the study area.

7. **Impact and Environment Management Plan**

i. Assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. In case the project is located on a hilly terrain, the AQIP Modelling shall be done using inputs of the specific terrain characteristics for determining the potential impacts of the project on the AAQ. Cumulative impact of all sources of emissions (including transportation) on the AAQ of the area shall be assessed. Details of the model used and the input data used for modelling shall also be provided. The air quality contours shall be plotted on a location map showing the location of project site, habitation nearby, sensitive receptors, if any.

ii. Water Quality modelling - in case of discharge in water body

iii. Impact of the transport of the raw materials and end products on the surrounding environment shall be assessed and provided. In this regard, options for transport of raw materials and finished products and wastes (large quantities) by rail or rail-cum road transport or conveyor- cum-rail transport shall be examined.

iv. A note on treatment of wastewater from different plant operations, extent recycled and reused for different purposes shall be included. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the prescribed standards of discharge under E(P) Rules.

v. Details of stack emission and action plan for control of emissions to meet standards. vi. Measures for fugitive emission control

vi. Details of hazardous waste generation and their storage, utilization and management. Copies of MOU regarding utilization of solid and hazardous waste in cement plant shall also be included. EMP shall include the concept of waste-minimization, recycle/reuse/recover techniques, Energy conservation, and natural resource conservation.

vii. Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 2009. A detailed plan of action shall be provided.

viii. Action plan for the green belt development plan in 33 % area i.e. land with not less than

ix. 1,500 trees per ha. Giving details of species, width of plantation, planning schedule etc. shall be included. The green belt shall be around the project boundary and a scheme for greening of the roads used for the project shall also be incorporated.

x. Action plan for rainwater harvesting measures at plant site shall be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources.

xi. Total capital cost and recurring cost/annum for environmental pollution control measures shall be included.

xii. Action plan for post-project environmental monitoring shall be submitted.

xiii. Onsite and Offsite Disaster (natural and Man-made) Preparedness and Emergency Management Plan including Risk Assessment and damage control. Disaster management plan should be linked with District Disaster Management Plan.

8. **Occupational health**

i. Plan and fund allocation to ensure the occupational health & safety of all contract and casual workers.

ii. Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and periodical examinations give the details of the same. Details regarding last month analysed data of above mentioned parameters as per age, sex, duration of exposure and department wise.

iii. Details of existing Occupational & Safety Hazards. What are the exposure levels of hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,

iv. Annual report of health status of workers with special reference to Occupational Health and Safety.

9. **Corporate Environment Policy**

i. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.

ii. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.

iii. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions? Details of this system may be given.

iv. Does the company have 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? This reporting mechanism shall be detailed in the EIA report.

10. Details regarding infrastructure facilities such as sanitation, fuel, restroom etc. to be provided to the labour force during construction as well as to the casual workers including truck drivers during operation phase.
11. Enterprise Social Commitment (ESC)
    i. Adequate funds (at least 2.5 % of the project cost) shall be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan shall be included. Socio-economic development activities need to be elaborated upon.
12. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof shall also be included. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, details thereof and compliance/ATR to the notice(s) and present status of the case.
13. 'A tabular chart with index for point wise compliance of above TOR.

Environmental Scientist, SEAC