PROCEEDINGS OF THE MEETING OF STATE LEVEL EXPERT APPRAISAL COMMITTEE, ODISHA HELD ON 20TH FEBRUARY, 2023

The SEAC met on 20th February, 2023 at 10:30 AM by both physical and Virtual mode (VC) through video conferencing in Google Meet under the Chairmanship of Sri Sashi Paul. The following members were present in the meeting.

1.	Sri Sashi Paul	-	Chairman
2.	Dr. K. Murugesan	-	Member Secretary
3.	Dr. Rabi Narayan Patra	-	Member (through VC)
4.	Dr. Chittaranjan Panda	-	Member
5.	Prof. (Dr.) H.B. Sahu	-	Member (through VC)
6.	Prof. (Dr.) Abanti Sahoo	-	Member (through VC)
7.	Dr. Ashok Kumar Sahu	-	Member
8.	Er. Fakir Mohan Panigrahi	-	Member (through VC)
9.	Prof. (Dr.) B.K. Satpathy	-	Member
10.	Dr. K.C.S Panigrahi	-	Member (through VC)
11.	Shri Jayant Kumar Das	-	Member

CONSIDERATION OF OLD PROPOSALS (COMPLIANCE RECEIVED):

The compliances furnished by the proponents were verified by the members through e-mail and also proceedings of the meeting were confirmed by the members through e-mail. The decision of the committee on case-to-case basis as follows:

ITEM NO. 01

PROPOSAL OF ENVIRONMENTAL CLEARANCE FOR CHANDANIA STONE QUARRIES CLUSTER OVER AN AREA OF 75.742 ACRES OR 30.651 HECTARES IN MOUZA - CHANDANIA HILL, TAHASIL - KUKUDAKHANDI IN DISTRICT - GANJAM, STATE - ODISHA OF TAHASILDAR KUKUDAKHANDI (SUBMITTED UNDER CLUSTER APPROACH WITH TOTAL CLUSTER AREA 30.651 HECTARES, CONSISTING OF 5 STONE QUARRIES) - 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. **Category**: This proposal falls under Category "B1", 1(a) - Mining of Minerals as the Mining lease area is more than 5.0 Ha. as per the EIA notification 2006 and its subsequent amendments
3. Chandania Stone quarries cluster is mining of stone, over an area of 75.742acre or 30.651ha. in Mouza Chandania hill, Tahasil Kukudakhandi in district Ganjam,State Odisha of Tahasildar Kukudakhandi.
4. The Quarry leases will be granted to successful Bidders by the Tahasildar, Kukudakhandi after obtaining statutory clearances. Presently, Tahasildar, Kukudakhandi is the lessee for the Chandania Stone quarries cluster.

5. The total Cluster is consisting of 9 stone quarries but 4 stone quarries are in operational stage and their EC has not expired, hence the proposed cluster is confined to 5 Stone Quarries only as per the given table.

Sl no.	Quarry name
i)	Chandania Stone Quarry Plot no. 86, (4.245 Ha)
ii)	Chandania Stone Quarry Plot no. 83, (4.785 Ha)
iii)	Chandania Stone Quarry Plot no. 08,10,02,25 & 5/307, (12.516 Ha)
iv)	Chandania Stone Quarry Plot no. 22 &33, (4.654 Ha)
v)	Chandania Stone Quarry Plot no. 40/P, (4.451 Ha)
Total	

6. Mining plans has been approved by the Deputy Directorate of Geology, O/o Joint Director of Geology, South Zone, Berhampur.
7. Mining lease is an identified sairat source in the DSR - page no. 88, 89, sl.no. 150,151,153, 154, 156. These sairat sources are existing. There are no other mines within 500m of proposed Cluster. The sairat sources are not coming in DLC report as certified by Tahasildar, Kukudakhandi.
8. **Location**: The proposed Chandania Stone Quarries Cluster is located in Khata no. 117, Plot no. 86, 83, 08,10,02,25 & 5/307, 40/P & 22, 33 of kissam “Parbat, Pathrabani, Patita” in Mouza Chandania Hill, Tahasil- Kukudakhandi, District Ganjam, Odisha over an area of 75.742acre or 30.651ha. The geo coordinates are Latitude -19°19’15.24"N to 19°19’39.98"N and Longitude - 84°43’55.21"E to 84°44’51.22"E. The area falls in Survey of India Topo sheet no. 74A/11(E45A11).
9. **Connectivity**: The quarry area is accessible by all weather & well-connected by road and rail. The nearest Railway line is at Berhampur Railway Station at a distance of 6.50km in SE. Nearest National Highway is NH-59 is at a distance of 2.70km in SE. Nearest State Highway is SH-17 at a distance of 1.90km in NE. Nearest river embankment is at Bodalundi. Road bridge on Ghodahada River at a distance of 15.00km in NW. Nearest Sanctuary is Lakhari valley wildlife sanctuary at a distance of 36.00km in NW. Nearest reserve forest is Ramagurha Reserve Forest is at a distance of 3.50km in NW. Nearest Archaeological site is Asoka rock Edict at Jaugada Pandia at a distance of 24.00km in NE.
10. No ecologically sensitive areas such as wildlife sanctuary, Bioreserve, etc. are coming under 10km radius of the proposed lease area.
11. **Reserves** - The total Geological reserve of cluster area is 5623207cum and Mineable reserve is 4099499cum.
12. **Mining method and production**: The method of mining is opencast semi-mechanized mining method. Around 8397cum per month will be dispatched from the mine. The total production

annually is 75573cum of stone and 342340cum is the total production from the cluster during the plan period. The excavated stone will be directly sent to the nearest stone crusher for crushing.

13. **Waste generation and management** - During plan period 41985cum of waste will be generated from the total cluster area. Considering swell factor as 1.2 the total broken volume will be 50382cum. For dumping these waste materials a proposed dump has been suggested in the SE part of quarry area covering an area of 0.7Ha. Around 40% of waste will be utilized in the development mine haulage road. A retaining wall around the dump will be constructed to prevent the wash off of dumps. Around the retaining wall a garland drain and settling tank will be provided to prevent the possible transportation of mine dust or fines.
14. **Drainage** - The surface runoff water from the quarry will be discharged directly to the river channel. There is no possibility of ground water puncture during the plan period.
15. **Water requirement**: The total water requirement will be approx. 16KLD for the cluster for different purposes like Domestic(1.39KLD), Dust suppression(14.58KLD), plantation purposes(0.46KLD). Water will be resourced from the nearby village through tankers.
16. **Power requirement**: No electricity required at quarry site. Only diesel is used for operating mining equipment only. For which 4 KL of HSD will be used and sourced from local market.
17. **Manpower**: Around 139 nos. of person are to be employed. Indirect employment through creation of hired vehicles, etc also can be generated to full fill the day to day requirements of the mining personals.
18. **Green belt** shall be developed along the boundary of stone quarry area with the native tree species. Around 1150 saplings will be planted over an area of 0.550 ha in the safety zone. Species likely to be planted are Chakunda, neem etc. as per the availability. Spacing between the saplings will be kept 2.5 meters x 2.5 meters only.
19. **Project cost:** The approximate cost of the project comes around ` 2.0 Crores (cluster) and ` 4.0 lakhs for CER.
20. **Environment Consultancy**: The proponent along with the consultant **M/s P & M Solution**, **Noida** made a detailed presentation before the SEAC on 29.11.2022. The SEAC decided to take decision on the proposal after receipt of certain information / documents from the proponent.
21. The proponent has furnished the compliance and the SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
i)	There are total 9 quarries in cluster approach. Out of which 4 quarries with total lease area 4.785 ha. are in operation after obtaining EC from DEIAA, Ganjam. The DEIAA had the power to grant EC for total lease area of ≤ 5 ha. in cluster approach. Clarification shall be submitted how	The cluster consisting of 9 quarries but the total 9 applications were not submitted in DEIAA at a time as a result the EC were granted in different Letter. The details is given below: Chandania S.Q (7.5 Acres) — Cluster EC granted vide letter no. 421 Dated Chandania S.Q	They have applied for EC for individual quarry just to avoid cluster approach. Hence, these 4 quarries should be part of the cluster for which EC has been applied. They

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent		Views of SEAC
	DEIAA has given EC for 4 quarries only when there are another 5 quarries of total lease area 30.651 ha. in cluster.	(8.930 Acres)	04.07.2018	need to include these 4 quarries in cluster approach and submit revised EMP in cluster approach for 9 quarries.
		Chandania S.Q (7.40 Acres)		
		Chandania S.Q (4.855 Acres)	Individual EC granted vide letter no. 409 Dated 04.07.2018	
ii) qu	Distance between each quarry for 9 stone quarries in cluster.	Distance certificate is attached as Annexure -I		The distance as mentioned in the Annexure is confusing. They need to submit a map indicating distance between 9 stone quarries in cluster.
iii)	Detailed safety procedure for fly-rocks during blasting.	Attached as Annexure-II		-------
iv)	Traffic study details of the area.	Attached as Annexure-III		-------
v)	Re-submit the KML data file with boundary co-ordinations of each quarry and boundary demarcation of each quarry in yellow colour.	Google map submitted		-------
vi)	Copy of Environmental Clearance of each individual quarry operating in a cluster of 4 quarries.	EC Copies of all 4 quarries are attached		-------
vii)	Certified copy of compliance to conditions of EC, CTE and CTO of operational 4 stone quarries.	Full compliance report along the all 4 EC copy and CTO Copy is attached.		-------

After detailed discussion, the SEAC decided to take decision on the proposal after receipt of the following information / documents from the proponent.

a) Environmental Clearance has applied to DEIAA, Ganjam for 4 stone quarries individually just to avoid cluster approach. Hence, these 4 quarries shall be part of the cluster for which EC has been applied. They shall include these 4 quarries in cluster approach and submit revised EMP in cluster approach for 9 quarries.

b) The distance as mentioned in the **Annexure-I** is confusing. They shall submit google map with boundary co-ordinations of each quarry and boundary demarcation of each quarry in yellow colour for 9 stone quarries in cluster approach and also mentioning the distance between each quarry.

ITEM NO. 02

PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF M/S. TATA STEEL MINING LIMITED FOR KAMARDA CHROMITE BLOCK (ML AREA: 107.240 HA) FOR PRODUCTION OF 0.30 MTPA CHROMITE ORE (ROM) WITH MAXIMUM EXCAVATION OF 2.50 MILLION CUM PER ANNUM THROUGH OPENCAST MINING LOCATED AT VILLAGE - TALANGI, KAMARDA & BALIPADA TAHASIL - SUKINDA, DISTRICT - JAJPUR OF SRI BIBHU DUTTA NANDA – EC

1. This proposal is for Environment Clearance of M/s. Tata Steel Mining Limited for Kamarda Chromite Block (ML Area: 107.240 Ha) for Production of 0.30 MTPA Chromite Ore (ROM) with Maximum Excavation of 2.50 Million Cum Per Annum Through Opencast Mining located at Village - Talangi, Kamarda & Balipada Tahasil - Sukinda, District Jajpur of Sri Bibhu Dutta Nanda.
2. The project falls under Category 'B' of schedule 1(a) of EIA notification 2006 and amendments thereof as per the MoEF&CC, Govt. of India notification vide SO 1886(E), dated 20th April 2022.
3. The Kamarda Chromite Block Mining lease comprising of 107.24 Hectare area was originally granted and executed in favour of Sri B. C. Mohanty for a period of 20 years with effect from 22.02.1968.
4. The e-auction process was conducted in accordance with the tender document for the Kamarda Chromite Block and M/s Tata Steel Mining Limited (Formerly known as M/s T.S. Alloys Limited).
5. Clearances held by Sri B C Mohanty has been vested to M/s Tata Steel Mining Limited as per Vesting Order issued vide Letter No 4129/SM dated 28th May 2020.
6. Mining Plan has been approved by IBM, Bhubaneswar dated 25.09.2018. Mining Plan of TSML was approved on 28.09.2020.
7. Environmental Clearance has been obtained from MoEF&CC, Govt. of India on dated 08.05.2008 for production of 0.088 MTPA Chromite Ore and 0.036 MTPA Chrome Concentrate production.
8. Forest Diversion has been obtained from MoEF&CC, Govt. of India, dated 28.03.2008 over an area of 87.44 Ha of entire forest land involved. The previous lessee has paid ` 7,89,68,200 towards NPV (Net Present Value) for the total forest area of 105.78 Ha. Tata Steel Mining Limited has also paid the NPV of ` 7,93,35,000/- over entire forest land of 105.78 Ha.
9. Consent to Establish has been obtained from SPCB, Odisha on dated 31.03.2020 & Consent to Operate from SPCB, Odisha on dated 31.03.2021.
10. Surface right from District Collector, Jajpur over 108.92 Ha. has been obtained.
11. Ground water drawl permission has been obtained from CGWA, (GoI) dated 16.07.201 & fresh applied vide Application Number: 21-4/4185/OR/MIN/2022 on 31.08.2022.
12. Deep hole blasting & use of HEMM permission has been obtained from DGMS, (GoI) dated 04.01.2019 (TSML has also obtained the fresh 106 (2) (B) on 25.08.2021)

Proceedings of the SEAC meeting held on 20.02.2023 (Old proposals – compliance received)

13. The proponent has applied for state road diversion passed through mining lease.

14. The MOEF & CC,Govt.of India had issued the Terms of Reference for the Project vide letter no. F. No. J11015/56/2021-IA.II Dated 5th February, 2021.Public hearing for the proposal was conducted on 22.12.2021 at 2.00PM.

15. **Location and Connectivity** - The Kamarda Chromite Block is located in three villages – Tailangi, Kamarda & Balipada, Tehsil- Sukinda, District- Jajpur, Odisha over an area of 107.240 ha in which 101.850 ha land is forest land and rest 5.390 ha land is non forest land as per HAL Settlement and 105.780 Ha is Forest Land and 1.460 Ha is non forest land as per Sabik Settlement. The Kamarda Chromite Block is spread over an area of 107.240 Ha, and it falls in Survey of India Topo Sheet/Open Series Map No. F45N16 (73G/16). The lease area represents undulating topography marked by linearly disposed mounds of low relief. The area is bounded by latitude 21°03'06.11316" - 21°03'50.88708" and longitude 85°49'22.45836" - 85°50'11.31576" and covered by survey of India Toposheet no 73 G/16. The maximum elevation of the area is 180 m RL on the southern side while the minimum elevation is 160 m RL on the western portion of the area. The gradient of the area is 15O. The mine is well connected by NH-200, which is about 11 km in S. Nearest Railway Station is Daitari Railway Station which is about 9.50 km, in NE direction. Biju Patnaik International Airport, Bhubaneswar is about 140 km in SE direction from the project site.

16. Mining plan details: The method of mining will be open cast fully mechanized mining. Fully mechanized Opencast 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. Keeping in view the production of 0.3 Million Ton of Chromite ore (ROM) per annum, life of the mine will be about 8½ years. Life of the mine may be increase after future exploration and Slope Steepening.

17. **Water Requirement**: About 330 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.

18. **Power Requirement:** The use of electricity will be for lighting/illumination purpose in mining operations and will be obtained from TPCODL. A total of 450 KVA will be required.

19. **Manpower Requirement:** A total of about 440 persons will be required to carry out the opencast mining operation.

20. **Rehabilitation & Resettlement**: Rehabilitation & resettlement plan for 68 housing projects have been proposed in the SIA report. Total cost of R&R is proposed to be Rs. 0.77 Crores.

21. **Baseline details**:

Period	October – December 2020
AAQ Parameter at 8 locations	PM_{10} = 29 to 64.1 µg/m^3 $PM_{2.5}$ = 17 to 38.5 µg/m^3 SO_2 = <4 to 8.1 µg/m^3

Proceedings of the SEAC meeting held on 20.02.2023 (Old proposals – compliance received)

Environmental Scientist, SEAC

	NO_x = <9 to 13.6 µg/m^3
Noise quality at 8 locations	Ambient noise ranges from 36.7 dBA to 60.4 dBA
Surface water at 8 locations	pH ranges from 7.21 to 7.84, DO ranges from 4.4 to 6.3 mg/l, COD ranges from 6.0 to 20 mg/l
Ground water at 8 locations	pH ranges from 5.06 to 7.78, total hardness varies from 14 to 180 mg/l, chloride ranges from 3.8 to 38 mg/l, TDS ranges from 20 to 316 mg/l
Soil at 12 locations	pH ranges from 7.03 to 7.24, SAR ranges from 2.6 to 4.4 %, clay percent ranges from 59.8 to 73, all the metals are below detectable level

22. The cost of the project has been estimated to be Rs. 83.50 Crore.
23. The project proponent along with the consultant **M/s Visiontek Consultancy Services Pvt. Ltd., Bhubaneswar** made a detailed presentation on the proposal on 02.11.2022.
24. The SEAC in its meeting held on 02.11.2022 decided to take decision on the proposal after receipt of the following from the proponent:
25. The proponent has furnished the compliance and the SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
a)	Detailed Water balance showing input, effluent output, and augmentation made, capacity of ETP and effluent quality.	Detailed have been given in **Annexure I**.	-----
b)	Status of Forest Clearance for the forest land involved in the lease area.	Detailed have been given in **Annexure II**. Non-diverted Forest area is 18.34 ha. Diversion process is in progress. They have undertaken not to carry out any activity in non-diverted area.	Condition to be stipulated in EC.
c)	Breif note on alternative methods tried earlier for augmentation of water quality.	Table mentioning other treatment technologies were tried earlier is submitted.	Condition to be stipulated in EC.
d)	Slope study made on dump with its back-up calculation to be submitted.	Details is attached as **Annexure I**.	-----
e)	Layout showing garland drain, ETP and dump site.	Details is attached as **Annexure II**	Condition to be stipulated in EC.

Proceedings of the SEAC meeting held on 20.02.2023 (Old proposals – compliance received)

Environmental Scientist, SEAC

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
f)	Detailed note on process of storage and usage of low grade ore.	Details of storage and usage of low grade ore has been submitted in compliance report.	Condition to be stipulated in EC.
g)	Report regarding hexavalent chromium present within surrounding areas.	Detailed analysis report submitted.	-----
h)	Brief note on treatment and monitoring of hexavalent chromium and mitigation measures taken for prevention of its impact to surroundings.	**Details on treatment and monitoring of hexavalent chromium is given below**. Major hexavalent Chromium concentration is observed from the mine quarry water and run-off from ore stack yard. As it is an open cast mines, the seepage water is stored in sumps of quarry floor and is simultaneously pumped to Effluent Treatment Plant (ETP) for treatment. During rainy days the surface run-off from ore stack yard is channelized through garland drains with check dam & settling pit to mine quarry for storage and afterward pumped to ETP for treatment of Cr+6 and Total Suspended Solid (TSS). The treated water is then used for different process such as dust suppression, vehicle washing, plantation and garden use. On monthly basis the ground water quality is being investigated from bore wells to know any contamination of ground water through MoEF&CC & SPCB certified laboratory. At any point of time, no contaminated water from mines is discharged to any soil surface without treatment. Effluent Treatment Plant (ETP) is already in operation in the mine lease area with 200 KL/h treatment capacity. The construction activities for installation of 1200 m3/Hr ETP to treat all the surface run off and mine quarry water without any storage, is in progress. It will be used to treat effluents from Kamarda as well as Saruabil chromite block which is adjacent to mine lease. **Basic Treatment Methodology** The existing treatment technology adopted for hexavalent chromium containing mine drainage water is reduction of hexavalent chromium to trivalent chromium using Ferrous Iron	Condition to be stipulated in EC.

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
		in the form of Ferrous Sulphate. The reduced Chromium is precipitated as Hydroxide form [Cr(OH3)]. Ferrous Iron added for reduction of Hexavalent Chromium is being oxidized to Ferric Iron & subsequently precipitated as Hydroxide [Fe(OH3)]. Chromium hydroxide is then separated in a Clariflocculator. The flocculent system will be enhanced by dosing with polyelectrolyte. This water is treated in the filtration system (sand bed) and Iron exchange removal. The chromium hydroxide precipitate will be disposed off to an authorised Treatment, Storage and Disposal facility (TSDF). The treated water will be discharged into Damsal Nala. **Process Design comprises of the following units:** (i) **Rapid mixing unit for chemical dosing:** The mine drainage water is directly pumped to the inlet chamber of baffle units where Ferrous Sulphate dosing is done. (ii) **Collection tank 1 for chemically treated water:** The chemically treated water is stored in the existing settling tank. A pump is installed at the sump which is the part of the tank to deliver wastewater along with solids to the Flash mixing unit. (iii) **Flash mixer unit:** The wastewater is mixed with Polyelectrolyte in the flash mixing unit prior to the clarifloculation. The Flash mixing unit is attached to the clarifloculator with the tank dimension 1.5m (L) x 1.5m (W) x 1.5m (D). (iv) **Clarifloculator:** The floculator well is designed for a detention time of 20 minutes. The diameter of floculator unit is 5.6m and depth is 2.5m and 0.5m free board. The clarifier unit is designed for surface overflow rate around 30m3/m2/d. The diameter of clarifier is 15m and side water	

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
		depth is 3m with 0.5m free board. (v) **Collection tank 2 for clarified water:** The clarified water required storage & the existing lamella clarifier tank serves the purpose of storage. (vi) **Pressure Sand Filter unit:** The pressure sand filter unit operates at a rate of filtration 15m3/m2/h. The treated water from the treated collection tank is furthers passed through sand filter tanks with high pressure to filter extra TSS in treated water. (vii) **Filter press:** The settled sludge in the bottom of the clarifier is dewatered to sludge chamber from where it is pumped to Filter press achieving a consistency of 40% and then to drying beds & to dispose to hazardous waste management facilities. Filter press containing plate size 1.2m x 1.2m x 0.5m & 36 nos. of chambers is for sludge dewatering. viii) **Chemical dosing & electrical panel room:** All the dosing work i.e. Ferrous Sulphate, Lime, Polyelectrolyte, etc. are made through dosing pumps. These chemical dosing, electrical work & chemical storing are done from separate buildings. The first floor has dosing solution preparation facility & ground floor has MCC area for Ferrous Sulphate, Polyelectrolyte and lime/NaOH storage. **Mitigation measures taken to check the Cr+6 contamination to surrounding** It is ensuring that no single contaminated water is being discharged to the inland water or Damsala Nalla from the mining area. Water from mine quarry, surface run-off from ore stack yard and overburden dump is being channelized to mine quarry and further, it is being	

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
		treated at ETP and the excess water from ETP is discharged to the Damsala Nala. Online continuous Effluent Monitoring station is installed at ETP in-let and Out-let to monitor the water quality, which connected to the SPCB server without any intermediated server. We are also continuously analyzing the quality Damsala Nala before and after of the lease area. Quarterly, the flow rate of the Damsala Nala is being monitored and reported to SPCB, Odisha MoEF&CC.	
i)	Brief process to be followed on water treatment & monitoring device with photographs.	As given in reply to point "h", we have installed Effluent treatment Plant to treat hexavalent contaminated water from mine quarry and ore stack yard. Further, the construction activities for installation of 1200 m3/Hr ETP to treat all the surface run off and mine quarry water without any storage, is in progress. It will be used to treat effluents from Kamarda as well as Saruabil chromite block which is adjacent to mine lease. The monitoring devises such as hexavalent chromium analyser, Total Suspended Solid sensor and pH sensor are installed at in-let and out-let of the ETP to monitor the water quality. The reak time analysis data of in-let and out-let water is being transmitted to State Pollution Control Board server without any intermediate server. The monitoring device photographs are given below	----
j)	Detailed surface run-off management plan.	Details is attached as **Annexure III**.	Condition to be stipulated in EC.
k)	Report on process of stabilization of overburden.	Detail note submitted in compliance report.	-----
l)	Short note on process of storage of sludge and its end use.	Treated water from ETP is passed through filter press to collect the sludge coagulated after addition of polyelectrolyte during the treatment process. The wet sludge is collected generally contained 60% of moisture in it, which will increase the weight of the sludge and difficult to safe handle. The sludge collected and stored in sludge	Condition to be stipulated in EC.

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
		pit to air dry and percolation of water through sand bed to the drainage. After dried of the sludge, the sludge is sold to Re Sustainability Limited (Formerly M/s Ramky Enviro Engineers Ltd, Odisha Waste Management project) for safe land fill approved by State Pollution Control Board.	
m)	Submit detailed map showing State Highway passing within lease area. Status of permission applied for diversion of SH.	As shown in the map (Annexure – IV), the state highway is passed through our lease and blocking resources under it. Now, PWD of State Govt is doubling the road width with two ways. Thus, we have approached to state govt through PWD to modify the route to be outside of the lease boundary. Considering our request, PWD has asked to pay an amount of 34.67 crore, which will be required for diversion of the road from existing condition. In first instalment, we have deposited the 50% of the amount to PWD, Govt. of Odisha. Now the revised proposal under consideration for forest diversion by PWD dept. The payment demand letter and Payment slip is attached.	----
n)	Attach salient points of public hearing and traffic study data.	Detail note submitted in compliance report.	Condition to be stipulated in EC.
o)	Undertaking for facilitation of displacement of small encroachments in the lease area.	Attached as **Annexure – V**.	Condition to be stipulated in EC.
p)	Plantation activity to be carried out with consultation forest department. Detailed proposal to be submitted.	Detail note submitted in compliance report.	Condition to be stipulated in EC.
q)	Layout showing garland drain, ETP and dump site etc.	Given above as reply to point no “e”.	----
r)	Detailed note on process of storage, area and usage of low-grade ore if any including OB.	Given above as reply to point no “f”.	----
s)	Report regarding hexavalent chromium present within surrounding areas vs norms.	Given above as reply to point no “g”.	----

Considering the information furnished and the presentation made by the consultant **M/s Visiontek Consultancy Services Pvt. Ltd, Bhubaneswar** along with the project proponent, the SEAC recommended for grant of Environmental Clearance with stipulated conditions as per **Annexure – A** and following specific conditions**.**

i) The proponent shall not carry out any activity including mining in non-diverted Forest area of 18.34 ha. till they obtained Forest Clearance. The proponent shall strictly follow the procedure laid

down in guidelines for diversion of forest land issued by MoEF&CC, Govt of India vide F. No. 11-599/2014-FC, dated 01.04.2015 (copy enclosed as **Annexure - B**).

ii) The mine shall take adequate measures to minimize the discharge of treated waste water to Damsala nallah.

iii) The project proponent shall monitor analysis of hexavalent chromium in nearby soil and water body periodically and follow mitigation measures if necessary.

iv) **All the compliances submitted/ committed by PP (s) shall be strictly adhered to by them.**

ITEM NO. 03

PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF M/S A-3 MINERALS & METAL EXPORTS PVT. LTD FOR CHROME ORE BENEFICIATION UNIT OF THROUGHPUT CAPACITY 18,500 TPA OVER AN AREA OF 2.54 ACRE AT VILLAGE- BYREE, PO- BYREE, DIST- JAJPUR FOR OF SRI AKSHAYA KUMAR SAMAL- EC

1. This proposal is for Environment Clearance of M/s A-3 Minerals & Metal Exports Pvt. Ltd for Chrome Ore Beneficiation unit of throughput capacity 18,500 TPA over an area of 2.54 acre at village- Byree, Po- Byree, Dist- Jajpur of Sri Akshaya Kumar Samal.
2. The project is coming under category 'B2 'as the throughput capacity of the beneficiation plant is 18500 TPA (<20,000 TPA) as per MOEF&CC, Govt. of India OM vide no. J/13012/12/2013-IA-II(I), dated 24.12.2013.
3. M/s A3 Minerals and Metal Export Pvt Ltd proposes for establishment of Chrome ore Beneficiation plant over an area of 2.545 Acres with throughput capacity of 18,500 TPA within the existing Chrome monolithic unit. The promoter of the project is M/s A3 Minerals and Export Pvt Ltd, and Proprietor of the project is Sri. Akshaya Kumar Samal.
4. The existing chrome monolithic unit obtained consent to establish vide letter no. 1198/IND-41 on dated 10.07.2020.
5. The existing Chrome monolithic unit was operating under the ownership of M/s R.C. Metals Industries. The consent to operate was transferred in the name of M/s A3 Minerals on 23.10.2019 for production of 625 TPM monlithics and other refractories.
6. Further M/s R.C Metal Industries obtained consent to operate for production of 30 TPM chrome concentrate which was also transferred in the name of M/s A3 Mineral.
7. Location and Connectivity - The project is located at Byre village over an area of 2.545 Acres in Plot No- 4149/4683, 4146, 4157/4872, 4156/4871, 4152, 4158, 4149 and 4159 bearing Khata No: 1268/439, 1268/433, 1268/432, 1268/432, 1268/431, 1268/436, 1268/437, 1268/438. The project can be identified in Survey of India Toposheet No.: F45 T14/ F45U2, Latitude: 20˚38'25.0" N; Longitude: 20˚38'25.0" N. The mining lease area is also accessible NH-5 through Kalkala Chatia road which pass near the project site. Bairi railway station is nearest at a distance of 1.2 km from the M.L area. Nearest airport is Biju Pattnaik Bhubaneswar Airport 50 Kms from project site. Nearest river/Jor is Bansi Jor at 2.5km, Mendhakhai river at 8 km & Birupa River at 10 km and. Nearest town is Chatia at 5 km. Nearest forest Dalijoda Reserve forest at 0.3km. Nearest habitation is within 3km from project site. Kapilash wild life sanctuary – 11km.There is no wild life sanctuary, corridor, National park, biosphere reserve located within 10 Km buffer zone of the project site

8. The Terms of Reference (TOR) was issued by SEIAA, Odisha vide no. 4181/ SEIAA, dated 03.03.2022.Public Hearing was exempted as project comes under B2 category with throughput <20,000TPA as per MOEF&CC, Govt. of India OM No. J/13012/12/2013-IA-II(I), dated 24.12.2013.
9. Baseline study was conducted from October – December 2020.
10. The raw material i.e. low grade chrome ore will be sourced from mines of Odisha Mining Corporation, Sukinda which is located at a distance of 35Km from the project site. The transportation of ore from the mines to the project site will be done through covered trucks.
11. **Process** - The beneficiation process of chrome ore involves up-gradation of low grade chrome ore (<40% Cr2O3) to semi high grade ore (50-65% of Cr2O3). The beneficiation process of chrome ore include dispersal of the ferruginous coating and removal of the gangue material from the ore. Before the low grade feed to the beneficiation plant the chromites ore lumps were screened and oversized material i.e -20 to 100 mm size material will sent to the grinding unit.
12. **Solid waste generation** - The major solid waste will be the tailings generated from the beneficiation process. The quantity of tailings to be 4700 TPA having <10% Cr2O3. The tailings will be collected and dried through a filter press. Further, the tailing will be stored in the tailing dump. After drying the tailing will be blended in the chrome refractory mortar as per the demand of the customer. An area has been demarcated for storage of tailing within the plant premises.
13. **Water Requirement** - Total water requirement for the proposed project will be 150 KLD and make up water requirement will be 10 KLD. Makeup water requirement will be sourced from borewell and rain water harvesting pond. The plant has obtained permission from CGWA for with drawl of 20 KLD ground water.
14. **Rain water harvesting system** - Two rain water **harvesting** pond will be constructed within the plant premises over an area of 2165 Sq.m. with a depth of 4 m. The rain water harvesting pond is connected to surface water drains and collect all the surface runoff from the project site. Water storage capacity of RWH pond = 8660 Cu.m.
15. The plant will operate with Zero Liquid Discharge (ZLD) technology as the entire process water will be recirculated after treatment through ETP.
16. **Power Requirement**: The total power requirement is estimated as 100KVA. It is proposed to draw the power from the NESCO.
17. **Manpower**: The project generates employment opportunities for 12 personnel which includes operator -2, supervisor 2, 4 no of semi-skilled labor and 4 no. of unskilled labour.
18. The project proponent submitted that no R&R plan is required as no displacement of people is proposed for the expansion of the project.
19. **Green Belt -** There is plantation of 200 trees within the plant boundary and with the EC proposal there is the planning for three tier plantations along the boundary along with open space plantation. An area of 3400 Sq.m has been allocated for green belt development with about 600 saplings plantation proposal as mentioned in table.

(a) Total Area of Green Belt (in hectare)	0.33994
(b) Percentage of Total Project Area	33.00
(c) No. of Plants to be Planted	3400
(d) Funds Allocated for Plantation	200000

20. The cost of the project has been estimated to be Rs. 175.00 Lakhs. For implementation for EMP for the project the allocated capital budget will be Rs.32 lakhs and recurring budget will be Rs.5 lakhs.

21. As per the social need assessment and suggestion of village committee a CSR plan has been prepared with a proposed cost estimate of Rs.9.5 Lakhs which will be utilized within a period of 3 years.

22. The proponent along with the consultant **M/s Kalyani Laboratories Pvt. Ltd., Bhubaneswar** made a detailed presentation before the SEAC on 02.11.2022. The SEAC decided to take decision on the proposal after receipt of the certain information / documents from the proponent. The proponent has furnished the compliance and the SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
i)	Layout map of the plant (both monolithic & beneficiation).	Layout map of the project showing monolithic unit and beneficiation plan is attached as **Annexure 1**.
ii)	Operating procedure for monolithic unit.	Detail operating procedure of monolithic plant is attached as **Annexure 2**.
iii)	Monitoring procedure followed to prevent hexavalent chromium contamination.	To prevent hexavalent chromium contamination following procedure will be followed in the plant: Plant will operate with zero liquid discharge technology. The process water will completely recycled. During the rainy season the surface runoff from the lease area will be settle treated in ETP and stored in the Rain water harvesting pond for process use. The raw material and product will be stored under covered shed to reduce fugitive emission of dust containing hexavalent chromium. Regular monitoring of surface water, ground water, soil and respirable dust for presence of hexavalent chromium a defined in the post EC monitoring schedule.
iv)	Plan for rainy season water management.	Detail plan for rainy season water management is given as **Annexure 3**.
v)	Procedure for workers safety management.	Detail procedure for workers safety management is given in **Annexure 4**.
vi)	Study on hexavalent chromium intake by the fruit plants of the orchard.	Analysis of mango leaves for intake of hexavalent chromium has been carried out and report is attached **Annexure 5**.
vii)	Regular monitoring and evaluation of	Post is monitoring proposal for evaluation of

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
	the soil, surface water and groundwater for presence of hexavalent chromium in different time intervals and at different locations.	the soil, surface water and groundwater for presence of hexavalent chromium in different time intervals and at different locations is attached as **Annexure 6**.
viii)	Layout map showing location of monitoring stations.	Map showing the location of monitoring stations area given as **Annexure 7**.
ix)	Copy of Consent to Operate obtained from the Board for production of 30 TPM chrome concentrate. Consent to Operate and Env. Clearance status of the unit for production of 30 TPM chrome concentrate and justification as to why this will be not treated as a violation case.	The existing unit with 30 TPM chrome concentrate plant was established by M/s. R.C metals Industries and transferred to M/s. A3 Minerals. The date of establishment of existing unit was 19.05.2004. Copy of CTE in the name of M/s. R.C Metals attached **Annexure 8**. This plant with all the existing facility has been purchased by M/s. A3 Minerals Private Limited and consent to operate has been obtained for the existing unit by M/s. A3 minerals vide letter no. 1983/KNG/IND/41 dated 23.10.2019. copy attached **Annexure 9**. As this is the plant established before the applicability of EIA notification 2006 and operating based on CTO and CTE and no enhancement in production or expansion has been done the EC was not applicable for the project. With the proposal for enhancement in production the application for environment clearance has been made by M/s. A3 minerals private Limited. So this is not a case of violation to EIA Notification, 2006.

Considering the information furnished and the presentation made by the consultant, **M/s Kalyani Laboratories Pvt. Ltd. Bhubaneswar** along with the project proponent, the SEAC recommended for grant of Environmental Clearance valid for 10 years with stipulated conditions as per **Annexure – C** in addition to the following specific conditions:

i) The waste water that will be generated from the tailings shall be treated in ETP wherein hexavalent Chromium shall be reduced to trivalent Chromium by dosing it with appropriate standard chemical following due technical procedure.

ii) The PP shall obtain NOC to use the Panchayat roads from the concerned BDO for transportation of both input materials and finished products including the responsibility of maintaining the road if damaged by such transportation.

iii) The proponent shall maintain Zero Liquid Discharge (ZLD).

iv) Schedule monitoring of Hexavalent Chromium in nearby drain, soil and water body shall be carried out along with mitigation measures if required.

ITEM NO. 04

PROPOSAL OF ENVIRONMENTAL CLEARANCE FOR MANGANESE ORE 0.04 MTPA AND IRON ORE 0.3 MTPA AT KOLMONG IRON & MANGANESE BLOCK OVER AN AREA OF 218.481 HA (AS PER DGPS)/218.530 HA (AS PER ROR) (FOREST: 155.326 HA & NON-FOREST: 63.204 HA) IN VILLAGE-KOLMONG UNDER KOIRA TAHASIL OF SUNDARGARH DISTRICT FOR YAZDANI STEEL & POWER LIMITED OF SRI BINODA KUMAR ACHARYA – EC

1. The proposal is for Environmental Clearance of M/s Yazdani Steel & Power Limited for Manganese Ore 0.04 MTPA and Iron Ore 0.3 MTPA at Kolmong Iron & Manganese Block over an area of 218.481 ha (as per DGPS)/218.530 ha (as per RoR) (Forest: 155.326 Ha & Non-Forest: 63.204 Ha) in village-Kolmong under Koira Tahasil of Sundargarh District.
2. The project falls under category “B” or activity 1 (a) - Mineral of Minerals under EIA Notification dated 14th September 2006 as amended from time to time.
3. Yazdani Steel & Power LTD. (YSPL) was awarded the Kolmong Iron & Manganese Block over an area of 218.481 ha (as per DGPS)/218.530 ha (as per RoR) in village-Kolmong under Koira Tahasil of Sundargarh district of Odisha being the successful bidder the lease was granted under Non captive category for 50 years.
4. The vesting Order issued by the Noda Officer, Steel and Mines Department, Government of Odisha vide No-4369/SM, dated 02.06.2020.Pursuant to the provisions contained in Rule 9A(2) of the Mineral (Other than Atomic and Hydrocarbon Energy Minerals)Concession Rule,2016 order that all the valid rights, approvals, clearances, licenses and the like vested in the previous lessee in respect of the Kolmong Iron & Manganese Block are deemed to have vested in favour of the holder of the letter of intent on the same terms and conditions of every rights, approvals, clearances, licenses and the like which vested with previous lessee.
5. Modified Mining Plan along with Progressive Mine Closure plan was obtained under Rule 23 of MCDR, 2017 form IBM, Bhubaneswar vide letter no MP/A/26-OR/BHU/2020-21 date 20.11.2020 for production of 0.04 MTPA Manganese Ore and 0.3 MTPA Iron Ore with Opencast Fully Mechanized Mining Method. for the period of 202021-2024-25 .In order to regularize the statutory provisions, it is proposed to obtain Environmental Clearance for proposed production as per approve mining plan and ToRs Vide no F.No.J11015/05/2021-Ia.II(M) dated 4th March,2021 to prepare EIA/EMP report as requirement of Environmental Clearance. Baseline data for environmental parameters was collected during October to December,2020 and public hearing was held on 20th December,2021
6. Kolmong Iron & Manganese Block spreads over an area of 218.481 ha (as per DGPS)/218.530 ha(as per RoR) (Forest: 155.277 Ha & Non-Forest: 63.204 Ha) in village-Kolmong under Koira Tahasil of Sundargarh district of Odisha, The lease area is moderately flat, though there are occasional mounds within the area, studded with flat topped low ridges, reassembling a relict type of topography controlled by differential hardness of rocks. The maximum RL of the area is 654m at the southern part of lease area and the minimum RL of the area is 576m. The area falls in Survey of India Toposheet no.73 G/5. The area is bounded by latitude 21°56'20.01" to 21°57'32.24" N Longitude 85° 18'24.54" to 85°19'22.72"E. The Nearest railway station Barbil is 28 Kms from the lease, to connect Tata Nagar, Kolkata & Bhubaneswar.

Proceedings of the SEAC meeting held on 20.02.2023 (Old proposals – compliance received)

7. The nearest important public road is National Highway-215 connecting Panikoili to Rajamunda at an distance of 5 km . Bhubaneswar airport (340 km away) is the nearest airport from the area. There is an airstrip/helipad near Bhadrasahi, Barbil which is around 18 km from the lease area
8. There is no perennial river or water body in the project area. The major drainage channel of the area is kundra nala which is located in the eastern and south-eastern side of the lease hold area.
9. Date of execution of Lease is 30.06.2020 and valid for 50 years upto 30.06.2070.
10. ML area : 218.481 ha(as per DGPS)/218.530 ha(as per RoR) (Forest: 155.277 Ha & Non-Forest: 63.204 Ha)
11. Capital cost of the project is estimated to be Rs. 68.50 Crore, and Capital cost for EMP is estimated to be 3.16 Crore and annual recurring cost is 0.53 Crore
12. Mining operation is semi mechanized opencast with both mechanized and manual excavation of manganese ore, manual breaking, sorting & sizing of manganese ore. Development work will be done by excavator (0.9 m3) and tipper combination. Similarly for iron ore, the production of ROM will be carried out by dumper shovel configuration and the processing will be carried out by mechanized method. During the proposed mining operation period, total maximum ROM of Iron Ore will be handled 1.0498 Million Ton from in-situ ore zone and Maximum 0.2 Million Ton ROM for Manganese Ore. The mining operation will be of one shift.
13. Total 64.633 ha. Land will be proposed to be excavated to mine the Manganese ore. So, it is estimated that from 2020-21 to end of life of mine 1,03,02,939m3 of waste will be generated during mining operation. Out of total waste generation of waste 95,22,919 m3 will be used for backfilling the exhausted quarry. The balance 7,80,020m3 will be dumped on external dumps.
14. Electricity requirement: The electricity is supplied to the project by WESCO through 1 nos. transformers of capacity 1500 KVA /day inside the lease hold. Solar system shall be installed for lighting at admin building and other mining area. 500KVA of DG Set available in the mine for stand by purpose.
15. H.S.D. requirement: Requirement of H.S.D is 11.0 KLD
16. Manpower requirement of project is 316 nos
17. Peak Water Requirement of the project is 173 KLD and average water requirement of the project is 86 KLDB
18. Before auction and total 53.540 ha of area has been already utilized and as per present mining plan additional 26.417 ha shall be utilized and 138.573 ha shall be remain unutilized
19. Based on the Geological Report as supplied by the State Govt., the total resources of ROM (under G2 Level) for both high grade & low grade of Mn ore as on 01.01.2019 was 37,23,658 (MT) and Iron Ore 13,97,650 (MT). After depletion upto 31.03.2020 by the previous lessee, the resource of Manganese Ore was 3722397 MT and the Iron Ore was 1397650 MT (no depletion of iron ore).

20. As on 01.10.2020, the residual reserved Manganese Ore is 34,24,605 MT and considering the target production of 40,000 MT per year, the life of mine will be 85.66 year.
21. As on 01.10.2020, the residual reserved Iron Ore is 12,57,585 MT and considering the target production of 3,00,000 MT per year, the life of mine will be 4.19 year.
22. The life of mine will be increased, If the reserve will increase due to proposed future exploration
23. The Kolmong Iron & Manganese Ore Mine is 'A'-OTFM category mine and mining operation is semi-mechanized open cast.
24. Manganese ore is soft in nature and generally occurs in small pockets. Grade of the ore also varies widely within the ore pockets. The iron ore deposit has also been proposed for semi-mechanized open cast mining. Excavator (0.9m3) and dumpers combination will be used for development of benches in both waste and ore.
25. Deep hole drilling & blasting will be occasionally used to dislodge the hard strata. Rock breaker has been utilized in the area where blasting is not possible. As the manganese ore occurs in the form of small and big pockets in this area, mining operation is of mixed type.
26. In this mine, Manganese ore pockets and iron ore (ROM) will be excavated out by excavator (0.9m3). Then the excavated ROM (Mn) ore material goes to manual ore sorting / sizing yard for sorted out the manganese ore lumps from ROM ore material and the iron ore (ROM) shall be crushed and screened in different size and grade as per the nature.
27. These manganese ore lumps will be then stacked separately as per the grade. The sub grade/ low grade manganese ore are stacked separately. Manganese ore fines are also stacked separately. Then the sized manganese ore are loaded into truck either manually or through machine for dispatch to buyer's destination.
28. The waste material is dumped in Dump-D1 & D3 as well as utilized for the backfilling of part of Quarry-6 & 7.
29. Regarding mining operation, excavator of capacity 0.9m3 and tippers of capacity 20 MT will be used for excavation and transportation of wastes & ROM ore. In the quarry bench height will vary from 3 to 4 m and width will vary from 6-10 m. If necessary, 4 m bench will be divided into small benches. Dump leveling and dump terracing will be done through dozer as per requirement. During the proposed plan period maximum annual production of Manganese ore will be 40,000 MT & Iron Ore will be 3,00,000 MT per annum
30. During proposed period of mining operation total handling of Iron Ore (ROM) from the mine will be around 3,00,000 (MT) and the production of Manganese ore will be around 40,000 MT obtained from insitu body.
31. During the proposed period of mining operation four nos of quarry will operate namely New Pit, Quarry 6 & 7, Dhandariya Pit & Magazine Pit for Mn Ore & Quarry namely New Pit & Dhandariya Pit for Iron Ore. The mining operation will be carried out by Sovel & Tipper combination for excavation of both Ore & Waste.
32. The excavator of capacity 0.9 m3 will be used for feeding of ROM to screening & crushing plant for Iron Ore & the Mn ore will be processed manually.

33. Rock breakers are used to avoid secondary blasting as per the requirements. .
34. There will be no change in proposed method of mining.
35. This working mine shall bring tremendous benefits in the area like:
36. Direct employment opportunities for more than 500 persons.
37. Indirect employment for more than 3000 persons through various service related activities connected with the project operations
38. Improvements in infrastructure in the area Road Network, Water supply to villages through Water tankers & overhead tanks with pipe lines, Electricity facilitation, Healthcare, Education, Other Social Welfare Activities Providing certain facilities for the local panchayats.
39. Financial gains for the state and central Governments, through collection of various taxes like royalty, GST, DMF and NMET (National Mineral Exploration Trust) etc., Increase in General Awareness of the People
40. Improvement of the General Living Standard of the People in the Vicinity.
41. Generation of self-employment through self-help groups.
42. Improvement in Per Capita Income.
43. The user agency as well as Govt of Odisha will be benefitted financially due to the commencement of project
44. Environmental protection as well as the development of the people will be worked in a systematic manner at the block/regional level for overall benefit of the society, region, district and state. The Company will extend their co-operation and assistance in sharing the relevant data/ information/ reports/ documents etc. for continuous improvement of Sustainable Environment Development Plan for economic growth in the mining sector.
45. The Environment Consultant **Ardra Consulting Services Pvt. Ltd., A/79, Sahidnagar, Bhubaneswar, Odisha-751007** along with the proponent made a detailed presentation on the proposal before the Committee on 02.09.2022. The SEAC decided to take decision on the proposal after receipt of certain information / documents from the proponent. The proponent has furnished the compliance and the SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
i)	Detail of different grades of Iron from 45+ Fe to 55+ Fe to be used, and of non utilised ore and its management. Complete material balance including source, end use and storage and its moving inventory with layout map.	Brief note on mineable reserve and pre-feasibility resource of Iron ore, grades of ore processing and end use products for different industries has been submitted.

Proceedings of the SEAC meeting held on 20.02.2023 (Old proposals – compliance received)

Environmental Scientist, SEAC

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
ii)	Details of 1100KLD HSD, its procurement and storage.	HSD requirement of the proposed project is 7 KLD, which will be procured from the local filling station. There will be no storage of HSD at Mines.
iii)	Complete water balance	Total quantity of water required for mining and processing is 86 cum/day. The required quantity is being fulfilled from ground water source. Detailed water balance given.
iv)	Water Balance details with focus on rain water harvesting and use, lesser drawl of ground water.	Project had developed four rain water harvesting pits and a pond in the mine lease area. A rainwater harvesting pond is already constructed within the lease area to accumulate the rainwater with dimension 40x40x5 (in meter). The rainwater during the monsoon has tendency to discharge into the natural drainage system of the area. There will be no discharge from the mine. It is required to ensure runoff water quality during rainy season before it joins the seasonal nalla in the core zone. Precautionary measures by constructing check dams & settling sumps at appropriate places will help in making the discharge water free from any silt during rains. Toe walls & garland drains around dumps will be provided to check the run-off. • Presently, during rainy season, the water collected in the mine area is drained to the sump floor of each quarry. The sump acts as a good rainwater recharge structure and the collected rainwater normally seeps into the ground within few days • Rain water harvesting at mine site is important to conserve the rainwater for reuse and thus reducing the overall raw water consumption for mine requirements. The following methods of water harvesting are carried out: • The mine sump itself acts as a good rain water harvesting pond. Sump is created at the bottom of the working pit and the rainfall directly falling in the mine area is drained towards the sump in the bottom of the mine pit for harvesting it. • Construction of settling pond/percolation pond at various strategic locations across the mine. • Suitable storm water drainage system along the roads are provided to dispose storm water effectively. The surface runoff collected in the storm water drains are channelized through a series of settling cum percolation ponds before discharged. Staggered trenches are proposed to be constructed along the contours so that during sudden storm, good amount of runoff can be harvested which will maintain a good amount of soil moisture
v)	There should be atleast 50% of ground water recharge as per the total water requirement for the project. So design and dimensions of rain water harvesting pond with its capacity that will be	Total Water requirement for the project will be 20640 KLA, it is proposed to harvest 19285 KLA of rainwater through surface rain water harvesting methods. (Detail report attached as **Annexure -1**)

<table>
<tr><th>Sl. No.</th><th>Information Sought by SEAC</th><th>Compliance furnished by the proponent</th></tr>
<tr><td></td><td>put up in the project to hold the rain water.</td><td></td></tr>
<tr><td>vi)</td><td>Silt management practice measures to be followed for protecting nala nearby.</td><td>Compliance Details given in report prepared for Nala Management (Attached as Annexure-2)</td></tr>
<tr><td>vii)</td><td>Compliance to Additional ToR point no. 7 with detail chemical composition of different grades including silica.</td><td>Kolmong Manganese Mine supplies mainly two types of ore;
a. Low grade ore to Ferro Alloys Plants & Steel Plants.
b. Medium grade ore to Ferro Alloys Plants.
The specification (Chemical) is as follows:
i) Low grade ore:
Mn. - 24% Max.
Fe - 15% Max.
A12O3 - 7% Max.
SiO2 - 13% (Max)
P - 0.15% (Max)
Size - 10-40 mm
ii) Medium grade ore:
Mn. - 38% Min.
Fe - 16% Max.
A12O3 - 8% Max.
SiO2 - 6% Max.
P - 0.1% Max.
Size - 10-75 mm
Kolmong Iron & Manganese Mine dispatches Manganese ore of different size & grade to different industries of the country and abroad. Following processed Manganese ore will be dispatched to different Manganese industries.
Processed Mn ore:
<table><tr><th>Sl. No.</th><th>Mn%</th><th>Fe%</th><th>SiO_2%</th><th>Size (mm)</th><th>Remarks</th></tr><tr><td>1</td><td>28-30</td><td>24-22</td><td>5-2</td><td>10-40</td><td>Will be utilized for ferromanganese production</td></tr><tr><td>2</td><td>30-35</td><td>22-20</td><td>5-2</td><td>10-40</td><td>Will be utilized for ferromanganese production</td></tr><tr><td>3</td><td>35-40</td><td>18-16</td><td>5-2</td><td>10-40</td><td>Will be utilized for ferromanganese production</td></tr></table>
IRON ORE:
The intermediate industries involved in the up-gradation of mineral before its end use is crushing and screening unit, etc. ROM iron ore will be crushed and screened in the M.L area to cater the need of buyers in respect of size and grade.
Manganese ore is not supplied to intermediate industries for up-gradation.
DRI Plant, palletization plant etc are considered as Intermediate</td></tr>
</table>

<table>
<tr><th>Sl. No.</th><th>Information Sought by SEAC</th><th>Compliance furnished by the proponent</th></tr>
<tr><td></td><td></td><td>industries for iron ore. The YSPL Steel Plant is situated in Odisha.

<u>Sponge iron plant</u> <u>Palletization Plant</u>
<table>
<tr><td>Fe
Sj02</td><td>:60-62%
:4.0-2.6 %</td><td>Fe
Sj02</td><td>:55-65%
:3.40-2.98%</td></tr>
<tr><td>P</td><td>:0.02-0.045%</td><td>P</td><td>:0.011-0.03%</td></tr>
<tr><td>S</td><td>:0.005%</td><td>S</td><td>:0.005-0.006%</td></tr>
<tr><td>LOI</td><td>:3%</td><td>LOI</td><td>:3%</td></tr>
<tr><td>Size</td><td>:3-15mm/5-</td><td>Size (fines)</td><td>:0-10mm</td></tr>
</table></td></tr>
<tr><td>viii)</td><td>Layout plan showing Iron and Manganese reserves, its mining areas, storage and dump areas.</td><td>Compliance: On account of exposures of Iron & Mn ore and its limited depth of occurrence, opencast method of mining will be continued on three shift basis with the deployment of Pneumatic drills, associated compressors, dumpers, excavators and other auxiliary equipment for development, production, processing, protection of environment and safety. Separate year wise development plan and composite development plans showing pit layouts, dumps, stacks of mineral rejects along with sections are attached with mining plan. Copies of same attached as Annexure-3.</td></tr>
<tr><td>ix)</td><td>Layout map of total broken up area existing and proposed to be broken.</td><td><u>Compliance: Land use Pattern of lease area:</u>
➢ The Kolmong Iron & Manganese Mine over 218.481 ha in Kolmong village under KoiraTahasil of Sundargarh district of Odisha.
➢ The Mines is located in Sundargarh District of Odisha. The NH-215 is about 9 KM from Mine. Koira& the distance of other important towns is Koira- 9 KM, Joda- 25 KM, Barbil- 32 KM. The nearest railway station and International Air Port are at Barbil& Bhubaneswar at a distance of 32 KM & 310 KM, respectively.
➢ There are 4 quarries has been exposed by the previous lessee viz. New Pit, Quarry-6 & 7, Dhandaria Pit and Magazine Pit as on 31.03.2020.
➢ The lease area is an moderately flat, though there are occasional mount within the area studied with flat topped low ridged, re-assembling a relict type of topography controlled by a differential hardness of law. The maximum RL of the area is 654 m at the southern part of the lease area and the minimum RL of the area is 567 m.
a. <u>Existing land use pattern:</u>
The area occupies low to medium range hill surrounded by plain country. Within the lease, the area occupied by quarries, dumps, roads and structures etc. are as follows:
<table>
<tr><th>Sl. No.</th><th>Head</th><th>Existing Area (ha)</th></tr>
<tr><td>1.</td><td>Area under mining</td><td>34.479</td></tr>
<tr><td>2.</td><td>Storage for top soil</td><td>--</td></tr>
<tr><td>3.</td><td>OB Dump Site</td><td>6.660</td></tr>
</table></td></tr>
</table>

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent

4.	Mineral storage	3.560
5.	Infrastructure, workshop, Admin Building etc.	0.051
6.	Roads	1.740
7.	Railways	--
8.	Green Belt	4.950
9.	Tailing pond	--
10.	Effluent treatment plant	--
11.	Mineral separation plant	--
12.	Mine camp	2.100
13.	Others(to Specify)	--
Total		5.540

The existing land use pattern of the leasehold area and approx.500m around the lease area as under

b. <u>Lease area:</u>

The approx. land use pattern within the lease area may be summarized as under:

Land use pattern within the ML area

Sl. No.	Particulars	Percentage
1.	Pahar/Jungle/Dungri	64.30
2.	Quarry/Dump cover	6.27
3.	Waste land	3.83
4.	Cultivated Land	16.76
5.	Settlement	6.4
6.	Quarry road/water body	2.44

Proposed Land use Plan

Sl. No.	Item	Existing (Ha)	At the end of Plan period(2019-20) (Ha)	Proposed for Conceptual period
1.	Quarry	34.479	57.916	57.916
2.	Dump	6.66	10.000	10.000
3.	Storage pf top soil	--	--	--
4.	Area for mineral storage	3.560	3.560	3.560
5.	Infrastructure	0.051	0.051	0.051
6.	Roads	1.740	2.380	2.380
7.	Railways	--	--	--
8.	Green Belt	4.950	4.950	4.950
9.	Mineral separation plant/crushing plant	--	--	--
10.	Mine camp	2.100	2.1	2.1
Total		53.540	79.957	79.957

Proceedings of the SEAC meeting held on 20.02.2023 (Old proposals – compliance received)

Environmental Scientist, SEAC

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
x)	Compliance to NEERI recommendation for Manganese mine expansion to be submitted.	Compliance to NEERI recommendation for proposed expansion is attached a **Annexure-4.**
xi)	Detailed plan for Dump management, dust suppression and mitigation measures suggested.	Breif note on Dump present and management has been submitted in compliance report.
xii)	Cross-sectional dimension of retaining wall and garland drain shall be furnished.	Dimension of retaining wall and garland drain has been submitted in compliance report.
xiii)	Specific measures taken for Manganese poisoning in that area.	**MANGANESE POISIONING:** Manganese poisoning is referred to as manganism, the result of excessive or prolonged exposure to manganese dust. When the human body absorbs a large amount of manganese there is a toxic effect, resulting in serious health conditions and diseases. Sometimes people use manganism and Parkinson's disease to describe the same adverse manganese effect due to the similarity of the conditions. Manganese has a very long elimination from the central nervous system so the effects of manganism are not always immediately evident. The time weighted average concentration of Mn should not be more than 5mg/cum in 8 hours exposures. **MANGANISM SYMPTOMS:** Miners are considered to be at the highest risk for developing manganism. There are three different stages that are differentiated in manganism, including behavioural changes, parkinsonian features, and dystonia and gait disturbances. The onset of manganism can be observed through symptoms of fatigue, headache, muscle cramps, loss of appetite, apathy, insomnia, and a diminished libido. Other symptoms of manganese may include: ➢ Muscle stiffness ➢ Weakness ➢ Tremors ➢ Breathing and swallowing problems **PREVENTIVE MEASURES BY YSPL AT KOLMONG IRON & MN MINES**: To prevent manganese within miners, YSPL is taking care of all the miners and has adopted various preventive measures like: ➢ Wet drilling arrangement ➢ Periodic air monitoring to recognize the content of manganese in the core as well as buffer zone. ➢ Periodic health examination ➢ Change of cloth after coming from the work place

Proceedings of the SEAC meeting held on 20.02.2023 (Old proposals – compliance received)

Environmental Scientist, SEAC

<table>
<tr><th>Sl. No.</th><th>Information Sought by SEAC</th><th>Compliance furnished by the proponent</th></tr>
<tr><td></td><td></td><td>

Provision of Nose mask to all the miners.
Provision of bath head room and washing room for cleanliness.
Provision of clean and hygienic room for taking food.
Water sprinkling for dust suppression at manganese handling points.

</td></tr>
<tr><td>xiv)</td><td>Reclamation Plan for Dump after conceptual plan.</td><td>
Already carried out by earlier lessee
As this mine is operating since last few decades, for the purpose of mining and allied activity and considerable initiatives are already carried out in this mines by earlier Lessee.

Inactive &non-operational, stabilization will be carried out.
Terrace will have developed in all the dumps
Plantation is already carried out on the existing 03 nos of waste. Further dump slopes are also planted
Boulder retaining wall and garland drain have been provided along all the existing dump toes
03 nos. of settling tanks and 03 nos. of catch drains have been constructed
In all the dumps terraces are made inwardly sloping.
All the existing retaining walls shall be maintained in good condition and shall be repaired if required.
Causality replacement i.e gap plantation will be carried out (if required) on the dump slopes for proper rehabilitation and restoration of flora & fauna.
Already 2.5 ha is exhausted and is reclaimed by backfilling in quarry 6 & 7.
All along the boundary of mining area (where possible) safety zone green belt of width 7.5 m is developed

<u>Proposed during plan period</u>
During the plan period an area of 3.27 Ha will be backfilled. It has been planned to reclaimed the mined out area by Back-filling and plantation. The details of reclamation will be as follows:
(a) Back-filling
During plan period
<u>Details of backfilling proposal</u>
<table>
<tr><th>Year</th><th>Volume of waste to be backfilled (m^3)</th><th>Backfilling RL</th><th>TRL & BRL</th><th>Location</th><th>Remarks</th></tr>
<tr><td>2020-21</td><td>25,694</td><td>TRL-590</td><td>TRL-590</td><td rowspan="2">326300E TO326550E & 2428710N TO 2428900N</td><td>Increase in height and extended</td></tr>
<tr><td>2021-22</td><td>37,932</td><td>TRL-590</td><td>TRL-590</td><td>Extended towards</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><th>Sl. No.</th><th>Information Sought by SEAC</th><th>Compliance furnished by the proponent</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><td></td><td></td><td></td><td></td><td></td><td>S-W</td></tr>
<tr><td>2022-23</td><td>69,620</td><td>TRL-590</td><td>TRL-590</td><td></td><td>Extended towards S-W</td></tr>
<tr><td>2023-24</td><td>65,579</td><td>TRL-590</td><td>TRL-590</td><td></td><td>Extended towards S-W</td></tr>
<tr><td>2024-25</td><td>1,26,906</td><td>TRL-590</td><td>TRL-590</td><td></td><td>Extended towards S-W</td></tr>
<tr><td>Total</td><td>3,24,921</td><td></td><td></td><td></td><td></td></tr>
</table>

The gap plantation will be carried out in the waste dump, safety zone etc area. The aea said area will be covered by plantation / regressing during the plan period by planting 4000no: of saplings.
<table>
<tr><th>Year</th><th>Dump/ Safety Zone</th><th>Area of Plantation (Ha)</th><th>No of saplings/re-grassing</th><th>Name of the species</th></tr>
<tr><td>2021-22</td><td>Dump/Safety Zone</td><td>Nil</td><td>1000</td><td rowspan="5">Neem, Mango, Chakunda, Krishnachuda, Radhachuda, Sissom, Shrubs etc Further dump slopes will be covered with grass</td></tr>
<tr><td>2022-23</td><td>Dump/Safety Zone</td><td>Nil</td><td>1000</td></tr>
<tr><td>2023-24</td><td>Dump/Safety Zone</td><td>Nil</td><td>1000</td></tr>
<tr><td>2024-25</td><td>Dump/Safety Zone</td><td>Nil</td><td>1000</td></tr>
<tr><td>Total</td><td></td><td></td><td>4000</td></tr>
</table>
</td></tr>
<tr><td>xv)</td><td>Revalidation the Site specific wildlife Management plan for entire area duly approved by PCCF wildlife and contribution to Regional Wildlife plan details.</td><td>Site specific conservation plan was prepared and approved by Forest department during previous lease period, which is vested in favor of the new Lessee, however we New Lessee also undertakes to pay the cost of Site specific conservation plan freshly prepared by the DFO, Bonai and also contribute the towards Regional Wildlife plan if demand raised by the DFO, Bonai.
Copy of SWLP and payment details attached as Annexure-5 and Undertaking regarding same attached as Annexure-6.</td></tr>
<tr><td>xvi)</td><td>Plot wise kissam of land in tabulated form for non-forest land (63.204ha.) duly certified by</td><td>Land schedule showing plot wise kissam of Land authenticated by Tahsildar is attached as Annexure-7.</td></tr>
</table>

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
	concerned Tahasildar and its conversion to mining/industrial use.	
xvii)	Unexplored area of 138Ha. can be utilised for installation of solar panels to meet power requirement partially/fully.	Unexplored area of 138 ha shall be utilized for installation of solar panels to meet power requirement partially/fully, if same found to be non-mineralized zone. Undertaking regarding same is attached as **Annexure -8.**
xviii)	No. of check dams/settling ponds with capacity to be constructed for protection of the Nala.	Details of check dams /settling ponds to be constructed for protection of Nala is given Nala Management Plan attached as **Annexure-2**.
xix)	Latest Compliance Report for Previous EC Conditions.	Compliance report of previous EC condition is attached as **Annexure-9**
xx)	Proposed R & R plan.	Proposed R& R Plan is attached as **Annexure-10.**
xxi)	Identification of sources of fluoride and its control.	It may be noted that in this region, Overburden disposal is being carried out in some of abandoned quarries and mines sumps. It is the possible leaching of different hazardous pollutants, including fluoride. However as per it is envisaged there is less chance of fluoride However it is planned to, removal of fluoride by coagulation process using Alum and 100% of fluoride can be removed with 0.3gm/l of fluoride. In order to reduce the cost, the treatment can also be carried out with 0.1 gm/l of alum, since the fluoride concentration usually comes below the permissible limit after 1 hour of treatment. Fluoride is also found in natural water at some concentration level. In seawater, fluoride is found 1 mg/l. In river and lakes, less than 0.5 mg/l. of fluoride is found and high concentration of fluoride occurs in groundwater. The occurrence of fluoride in groundwater is due to weathering and leaching of fluoride bearing minerals from rocks and sediments. Fluoride when ingested in small quantities (<0.5 mg/L) is beneficial in promoting dental health by reducing dental caries, whereas higher concentrations (>1.5 mg/L) may cause fluorosis. Therefore, an attempt has been made to investigate the concentration of fluoride in the selected location and to find out their source. Additionally an attempt has been made to find out an effective treatment method as well as optimum dose for removal of fluoride from the collected samples.
xxii)	Incremental concentration of $PM_{2.5}$ and PM_{10} and their control.	Details has been submitted in compliance report
xxiii)	Regular monitoring of the water quality	Details has been submitted in compliance report

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
	of discharge and also that of Kundra nana. Since the water is proposed to be discharged to kundra nala, at no pint of time the water quality parameters should exceed the standard limits.	
xxiv)	Bench and dump Slope stability studies	Study on dump slope stability has been carried out by CIMFR, Dhanbad ,Copy attached as **Annexure-10.A.**
xxv)	Protection measures against hazards arising out of vibration and fly rocks.	Details has been submitted in compliance report
xxvi)	Certificate from the Mining Department regarding the mineralised zone.	Total Mineralized zone is 78.620 Ha, as per Mineral Block Summary published by Govt of Odisha 06.12.2019 as per Directorate of Mines Steel & Mines Department Government of Odisha notification dated December 06, 2019. Copy attached as **Annexure-11**.
xxvii)	NoC from CGWA for ground water and permission/ Agreement with State Government Water Resource Department.	Necessary permission was obtained by previous Lessee for drawl of requisite quantity of surface water and groundwater. The same has been vested in favor of M/s YAZDANI Steel Pvt Ltd. Copies of CGWA NOC and surface water permission are attached as **Annexure: 12** and vesting order for same is attached as **Annexure-12. A.**
xxviii)	Biodiversity register for the ML area as per Biodiversity Conservation Act, 2003.	Register shall be maintained on status of plantation carried out by the project, the project will also abide by the any directives as per Biodiversity Conservation Act, 2002. Undertaking regarding same is attached as **Annexure-13.**
xxix)	Energy Conservation as per BEE and Energy Conservation Act, 2002.	Regular audit shall be carried out engaging accredited energy auditor and necessary steps shall be taken up as per the recommendation in audit report after commencement of the project. Necessary undertaking is attached as **Annexure-14.**
xxx)	On site Emergency plan, Off site Emergency plan linked with District Administration and Disaster Management Plan as per Disaster Management Act, 2005.	Onsite emergency plan and Disaster Management plan is attached as **Annexure- 15**.
xxxi)	Permission of District Collector with	Certificate under FRA ACT,2006 was issued in favor of previous Lessee M/s Rungta Mine Ltd for 85.567 ha which is diverted an

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
	respect to Forest Right Act, 2006 and compliance of its condition.	disused Stage-II clearance under scetion-2 of F.C Act,1980 of forest land involved in the lease area vide letter no F.No 8-94/2003-FC date 25th October,2011 for utilization for mining purpose. The same permission has been vested in favor of M/s YSPL and for balance forest area, application is under active consideration with District collector.
xxxii)	Compliance of condition of Forest Clearance as per Forest Conservation Act, 1980.	Status of compliance to the stage-II clearance accorded is attached as **Annexure-16.**
xxxiii)	Site specific, Wildlife Conservation and Management plan as per Wildlife Protection Act, 1972 and Odisha State Government Rule, 2006 along with proof of deposit of funds with respective Authorities.	Site specific conservation plan was prepared and approved by Forest department during previous lease period, which is vested in favor of the new Lessee, however we New Lessee also undertakes to pay the cost of Site specific conservation plan freshly prepared by the DFO, Bonai and also contribute the towards Regional Wildlife plan if demand raised by the DFO, Bonai. Copy of SWLP and payment details attached as **Annexure-5** and Undertaking regarding same attached as **Annexure-6**.
xxxiv)	To submit a Fire Safety Clearance Certificate for the project.	Fire Safety Clearance Certificate for the project shall be submitted after commencement of project. Undertaking regarding same attached as **Annexure-17**
xxxv)	Compliance of Hazardous Waste Rule, 2016, SWM, Hazardous Chemical Rule, Battery Rule, DG Rule, C&D Rule, Electrical & Electronic Rule compliance reports duly Certified by Regional Officer SPCB, Odisha.	There will be no generation of any hazardous waste during mining activity, hence necessary permission has not been obtained for OSPCB, however necessary compliance report regarding Hazardous Waste Rule, 2016, SWM, Hazardous Chemical Rule, Battery Rule shall be submitted to OSPCB. At present there is no DG set present at mines Necessary permission shall be taken from appropriate authority during installation of DG set before commencement of the project. Undertaking regarding same is attached as **Annxure-18**.
xxxvi)	Permission of use of explosives from Chief Controller of Explosives and its condition compliance report.	There will be storage of explosive inside mines, hence no permission is required. Undertaking regarding same is attached as **Annexure-19**. (**The proponent shall obtain NoC from appropriate explosive authority for storage of explosive within the mining lease area**.)
xxxvii)	Status of installation of Weather Monitoring System	Weather monitoring system shall be installed after commencement of project. Undertaking regarding same is attached as **Annexure-20.**
xxxviii)	Status of Occupational health services for Mine employees and	Following measures shall be taken for management of Occupational Health • Rules and Safety guidelines will be followed. Dedicated Safety Officer will be employed in the mine.

<table>
<tr><th>Sl. No.</th><th>Information Sought by SEAC</th><th>Compliance furnished by the proponent</th></tr>
<tr><td></td><td>peripheral villagers.</td><td>

Awareness creation by displaying banners, posters, slogans etc. awareness for use of the safety equipment will be done.
First-aid boxes shall be kept in the mine office at proposed mine for easy and quick access.
On the regular basis for the proposed mine Occupational Risk assessment will be carried out and the main of the assessment will be to identify hazards, and to determine the risk ratings. On the basis on risk assessment an Annual Plan will be regularly revised to eliminate the risks which are identified. Implementation of safety in the proposed mine for all workers, the safety experience which are followed by nearby mines.
Regular monitoring of environmental parameters shall be done in the work zone.

Details of IME/PME don so far is given below

Details of IME/PME
<table>
<tr><th>Year</th><th>IME</th><th>PME</th><th>Remark</th></tr>
<tr><td>2021</td><td>0</td><td>NIL</td><td></td></tr>
<tr><td>2022</td><td>27</td><td>NIL</td><td></td></tr>
</table>
Regular health camp shall be arranged for local persons.
</td></tr>
<tr><td>xxxix)</td><td>Organogram for Management of Pollution control, Environment Management, Forest Management and afforestation, Wildlife Management, Safety Management, Occupational Health services and social accountability</td><td>Inorder to systematic management of the Pollution control, Environment Management, Forest Management and afforestation, Wildlife Management, Safety Management, Occupational Health services and social accountability as separate management cell shall be established</td></tr>
<tr><td>xl)</td><td>Clarification on applicability of PESA Act for this project</td><td>The project does not involve any issues like customary resources, minor forest produce, minor minerals, minor water bodies, selection of beneficiaries, sanction of projects, and control over local, hence applicability of PESA is not envisaged.</td></tr>
</table>

46. The SEAC observed that the **Annexures** as mentioned in the ADS have not been furnished.

    After detailed discussion, the SEAC decided to take decision on the proposal after the proponent upload the ADS once again along with all the **Annexures** as mentioned in ADS.

ITEM NO. 05

PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF M/S RISHABH MINING PVT.LTD. FOR GANDHARGALA DECORATIVE STONE MINES OVER AN AREA OF 32.60 ACRES OR 13.193 HA. AT VILLAGE - GANDHARGALA, TAHASIL - TITLAGARH, DISTRICT - BOLANGIR, ODISHA OF SRI SUMAT CHAND JAIN (DIRECTOR) – EC UNDER VIOLATION CATEGORY.

1. This proposal is for environmental clearance of M/s Rishabh Mining Pvt. Ltd. for Gandhargala Decorative stone mines over an area of 32.60 acres or 13.193 Ha. at Village - Gandhargala, Tahasil - Titlagarh, Dist -Bolangir, Odisha of Sri Sumat Chand Jain.
2. This proposal falls under Category "B1", 1(a) - Mining of Minerals as per the EIA notification 2006 and its subsequent amendments**.**
3. **Status of Lease**: Gandhargala Decorative Stone Quarry over 32.60 acres or 13.193 hectares is located at Khata no: 54, Plot no: 1/P, 298/P, 299/P in village Gandhargala, P.S. Titlagarh, District Balangir, Odisha. The lease was originally executed on Dtd.16.12.1999 for a period of 10 years in favour of M/s Rishabh Mining Private Limited up to 15.12.2009 and presently is under the process of renewal. The lease is under subsistence vide letter no. M XIV (i) – 20/2009 5132 Dated 13.07.2021 issued by the Directorate of Mining Odisha, Bhubaneswar is attached for reference. As per Odisha Minor Mineral Concession Rule, 2016 the validity of lease is deemed to be extended up to Dtd.15.12.2029.
4. **Violation to EIA notification,2006**: Gandhargala Decorative stone Mines was in operation from 2010 to 2014 without obtaining prior Environment Clearance from SEIAA, Odisha, as per EIA Notification 2006, thereby attracting the Violation to Environment Protection Act 1986. The matter was deliberated by SEAC in terms of provisions of the MoEF and CC, Govt. of India Notification dated 14th March 2017 and amendments thereto and confirmed the case to a violation of EIA Notification 2006. Based on the Assessment carried out by Hon'ble State Expert Appraisal Committee,
5. The EIA/EMP report is prepared in compliance with the approved Violation ToR issued by SEIAA, Odisha as per recommendation of SEAC vide letter no. 3994/ SEIAA dated 07.02.2022.
6. Based on the violation committed by the project proponent a damage assessment report and community resource augmentation plan has been prepared. Budgetary allocation for violation activity including the penalty amount is Rs. 30,50,557.00 (i.e. Budget under Remediation plan based on the damage assessment due to violation – Rs. 11,55,000+ Natural Resource Augmentation Plan – Rs. 14,80,000+ Penalty due to violation – Rs.4,15,557.00)
7. Further, the EMP cost proposed for the project will be 21.0 Lakhs as capital investment and 6.0 Lakhs/ Annum as recurring cost.
8. **Mining plan approval**: Approval of mining plan and PMCP in respect to Gandhargala, Decorative stone mine over 32.60 acres or 13.193 hectares in village Gandhargala, under Titlagarh Tahasil of Balangir district of Rishabh Mining Private Limited for the period of 5 year has been approved vide letter no. 6244/DM , dated 18.08.2021.
9. Another mine of Midley Minerals over an area of 29.77 Ha located within 500m of project site. (EC granted vide letter no. SEIAA/2128 dated 27.10.2016). Hence the mines has not taken into

cluster consideration. Further the quarry lease under consideration is granted before 9th Sept. 2013 before the applicability of cluster condition as per MoEF& CC notification S.O. 2269(E) dated 01.07.2016.

10. The preparation of District Survey Report is under process by The Collector, Bolangir and will be submitted after the completion of the DSR.

11. There is no forest land within the mine area as certified by DFO, Balangir Forest Division.

12. **Public hearing details**: The Public Hearing for Gandhargala Decorative Stone Mine over an area of 13.193 Ha. was conducted on 14.09.2022 at 10.00 A.M Gandhagala village of Balangir District. Attended by: 60 persons; Issues raised by 8 persons. Public Hearing Issues Are: Protection of natural environment, Pollution control, Protection of grazing land, and agricultural land, protection of existing plantation. Based on the public hearing a time bound action plan for complying the public demand has been prepared. A total cost of 14.80 Lakhs of rupees has been allocated for peripheral developmental activities by the project proponent.

13. **Location and connectivity**: Mining lease over 32.60 acres or 13.193 hectares for decorative stone/Granite is located in village Gandhargala, PS Titlagarh, district Balangir, Odisha with Khata no: 54, Plot no: 1/P, 298/P, 299/P. The leasehold area features in Survey of India, toposheet No. 64P/4 and bounded by the latitudes of 20º13'53.5" & 20º14'13.7" N and longitudes of 83º02'28.4" & 83º02'51.4"E.Area of 13.193 hectares Government owned under the revenue head of "Abad Ajogya Anabadi The entire area of 13.193 hectares is a barren hilly terrain. Highest and lowest altitudes are at 285m (highest) and 200m (lowest) above mean sea level. The nearest railway line is Titlagarh(10.87kms) while the nearest National Highway is NH -201(18kms) and the nearest State Highway is SH 16 (9kms). Nearest major habitation - Gandhargala at a distance of 2 Km.

14. The area is devoid of any stream. The drainage pattern of the area is dendrite. As the region shows an undulated hilly topography, there is neither any seasonal nor any perennial nalla flowing within the applied mining lease area.

15. **Reserves**: The geological and mineable reserve of Gandhargala Decorative stone Mines over an area of 13.193 Ha is 667227cu.m and 442008cu.m respectively.

16. **Mining method**: There will be excavation of decorative stone from the lease area through done by opencast and semi mechanized method. The project is proposed for Maximum production of decorative stone of 6006m^3/annum when the mine is fully developed. Total excavation will be 20020 m^3. Height and width of the benches will be kept at 6m each and overall slope angle will be 45º with the horizontal.

Year	Total Excavation (A)	Volume of Waste (70% of A)	Production of Decorative stone		
			Volume of presently non-saleable stone (5% of A)	Volume of usable / saleable decorative Stone (25% of A)	Total
	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)

Proceedings of the SEAC meeting held on 20.02.2023 (Old proposals – compliance received)

Environmental Scientist, SEAC

1st Year	20,020	14,014	1,001	5,005	6,006
2nd Year	20,020	14,014	1,001	5,005	6,006
3rd Year	20,020	14,014	1,001	5,005	6,006
4th Year	20,020	14,014	1,001	5,005	6,006
5th Year	20,020	14,014	1,001	5,005	6,006
Total	**1,00,100**	**70,070**	**5,005**	**25,025**	**30,030**

17. **Land use:** The land use plan is as per the following table.

Sl. No.	**Type of land use**		**At present (ha)**	**At the end of plan period (ha)**	**At the end of Conceptual period (ha)**
1	Area under excavation		0.490	1.247	2.752
2	Waste Dump		1.289	1.712	2.300
3	Mineral storage	Usable/saleable	0.500	0.500	0.500
		Presently-non saleable	---	0.080	0.080
4	Road		0.836	1.072	1.072
5	Infrastructure		0.005	0.055	0.055
---	Sub-total		3.120	4.666	6.759
6	Safety zone under plantation		---	0.400	1.208
7	Area remains as such		10.073	8.127	5.226
---	Sub-total		10.073	8.527	6.434
Total	**---**		**13.193**	**13.193**	**13.193**

18. **Water requirement**: Total water requirement for the project will be 3.5KLD out of which 1KLD will be required for drinking and domestic purpose and 1KLD for dust suppression and 1.5KLD for plantation purpose. Source of water will be Tanker and Rain water harvesting.

19. **Power requirement:** No electricity connection within ML area. However solar lights will be employed for day to day living purposes. Diesel requirement will be 1000 litres / month.

20. **Baseline study** was conducted during December 2021 – February 2022. Following results were obtained :

PERIOD	**DECEMBER '2021 TO FEBRUARY'2022**
AAQ PARAMETERS AT 7 LOCATIONS	PM2.5 – 19.3 to 39.1 µg/cu.m PM10 – 38.0 to 77.3 µg/cu.m SO2 -4.2 to 10.5 µg/cu.m NO2 -10.2 to 17.3 µg/cu.m
AAQ Modeling (Incremental GLCs) AERMOD Cloud remote version	PM_{10} – 1.36 µg/m^3 in the lease area

Ground water Quality at 6 Location	pH- 6.5 to 7.2; Total Hardness – 52 - 196 mg/l , Chloride – 12- 90 mg/l , Fluorides – 0.05 – 0.15 mg/l, TDS – 90 - 380 mg/l, Heavy metals (Cd <0.001, Hg<0.0005, As<0.001)
Surface water at 4 locations	pH – 6.6 to 8.4, DO- 4.9 to 7.3 mg/l, BOD- <1.0 mg/l, COD <5.0 mg/l, Heavy metals (Cd <0.001, Hg<0.001, As<0.01)
Noise level at 7 locations	30.4 – 45.3 dBA for day time and 22.6 to 33.4 dBA during night time
Soil Quality at 5 locations	pH – 5.3 to 8.0, Potassium – 121-520 Kg/Ha, Phosphorous – 11.1 to 154.3 Kg/ Ha, Nitrogen – 163 – 251 Kg/Ha, Electrical Conductivity- 55 to 272 ms/cm

21. **Manpower:** The mining activity will generate employment for 40nos. of administrative staffs 04 nos, skilled worker 13 nos, and Semi-skilled 5 nos Employees.

22. **Solid waste management:** During the proposed plan period a total of 7329.00 m^2 of waste will generate due to course of mining. However about 40% of the generated waste will be utilized for maintenance and construction of the hual road, approach and existing roads in the surrounding area periodically.

23. **Greenbelt:** The program of afforestation is to plant 1200 saplings in the safety zone over an area of 4800sq.m. during the five-year plan period. Local species like Mango, Neem, Mahaneem, Chakunda, Gambhari & other related are proposed to be planted with 10m spacing between two consecutive saplings. Initially the plantation has been taken up in the safety zone. There was proposal to plant 500 numbers saplings over an area of 3250 m^2 Ha in the safety zone during the1^{s}t 2 year of plan period. Spacing of the saplings was proposed to be kept at 2.5m.

24. **Project cost**: The overall estimated project cost is INR 400 lakhs. The capital cost for EMP is proposed as 21.0 Lakhs and recurring cost is proposed as 6.0 Lakhs.

25. **Environment Consultancy**: The proponent along with the consultant **M/s Kalyani Laboratories Pvt. Ltd., Bhubaneswar**, made a detailed presentation before the SEAC.

26. The SEAC in its meeting dated 23.12.2023 decided to take decision on the proposal after receipt of the following from the proponent:

27. The proponent has furnished the compliance and the SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
i)	Mitigation measures for the silt over flowing to nearby streams/water channels and de siltation management plan to prevent choking of Nalla.	The nearby streams/water channels is at a distance of 300m, from the Mining area from the point E & F. The silt coming out on the top of the hill portion under Mining out of wire saw cutting will flow on the downside in the rainy season between C to D point and will settle in setting tank where drain water will be pouring through drainage starting from D point towards 'C' point. As there will not be any Mining towards 'E' to 'F' side of the hill there is no necessary to construct any settling tank on this side of the Lease area presently. Detail mitigating measures for

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
		silt generation is given in **Annexure 1**.
ii)	Layout and design of settling tanks/pits according to rainfall and topography of the site.	The lease area of 32.60 Acre is part of total hill of Approx. 500 acre and this lease area is situated in the middle of the Bill. On the one side of the Hill there are point A-B-C-D on the bottom and on the other side there is point E to F. The height of the Hill is around 150 feet on both side. As the tilt of the water flowing during rainfall carrying dust generated in wire flowing during rainfall carrying dust generated in wire saw cutting will be towards point C to D, hence drainage laid down in the bottom will carry water at settling tank on adjoining 'C' point as per enclosed design. Further another settling tank is proposed near the point D4. The garland drains (400mx1m) will provide with 4 nos. settling tanks of 20 m x 5mx5m (500cu.m) where water will be settled and the lease area. The layout map showing the location of the settling pits has been given in the **Annexure -2**.
iii)	Dedicated medical checkup for the employees of the mine.	One Physician will be deputed on contract basis to come to Mining site from Titilagarh and complete regular medical checkup of employees will e conducted. Further co-ordination will be kept with Govt. Hospital at Titilagarh for any eventuality. The lessee also proposed for carrying out half yearly health check-up camp in the village.
iv)	Mitigation measures taken for pollution generated due to fine particles in the mining process should be addressed.	The Dust generated due to mining activities mainly due to drilling, block cutting, dressing and transportation. Mitigation measures proposed area Wet drilling is in practice. The drill will be provided with dust extractor, Driller provided with dust mask and ear muffs, Provision for water sprinkle system on permanent road and water spray by tankers on temporary road.
v)	Supporting documents regarding utilization of waste and its management.	The waste generated will be initially utilized for haul road development and maintenance of the connecting road. Rest of the waste will be sold to mainly to just adjacent stone crusher M/s. Amma Bhagwan Stone owned by Mr. Gyan Ranjan Dass after depositing the Royalty as per Rule. This is a large crusher and previously also using stone of this Hill. The copies of letter dated 01.12.2021 from this crusher along with supporting documents of the crusher area enclosed in **Annexure 3**.
vi)	NOC of BDO or Panchayat for usage of haulage road/Panchayat Road and undertaking by the project proponent to maintain the road.	NOC of the Kholan Panchayat passed vide Gram Panchayat Resolution No.02 dated 03.09.2021 permitting us for using haulage / Panachayat Road is enclosed. The undertaking of the transportation of blocks extract during Mining is also enclosed in **Annexure 4**.
vii)	During the public hearing, all the people present in the public hearing had objected the project. Point-wise compliance to issues raised by the public in the public	Keeping in view the apprehensions raised by the Villagers present in Public Hearing on various issues, the project proponent requested on 05.11.2022 the Sub- Collector, Titlagarh (who was present during the

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
	hearing proceedings to be submitted.	public meeting along with A.D.M and Regional Officer Balangir) to get the Lease area surveyed through Tahasildar Titilagarh for getting Status Report of the area. On our request, Sub Collector directed the Titilagarh, Tahasildar who submitted his lease site status report to Sub-Collector on 11.11.2022. The certified copy from the Office of Sub Collector, Titilagarh was obtained by us on 21.11.2022 which is enclosed herewith for better appreciation of the issues raised in the public meeting, statement made by the project proponent in the public meeting vis-s-vis report of the Sub collector. It is not out of place to mention that actual Mining in the area by the project proponent was restricted to year 20.11.2022 to year 2013-14 as mentioned in approved Mining Plan dated 18.08.2021. Prior to Mining by project Proponent, the other Lessees namely M/s. Middle Minerals Ltd was operating on the Lessees namely M/s. Middle Minerals Ltd was operating on the other side of point D to E and M/s. Sri Ram Minerals was operating on the other side of Point F to G to H. Since 1990 under traditional system of Mining of drilling, blasting and extracting under above facts, parawise reply to the issues raised during Public meeting are given attached **Annexure 5**.
viii)	Clarification from concerned ADM about grazing land present in the lease area as raised by the public during public hearing.	The status of present grazing land in the Lease area is explained in the Tahasil report obtained through Sub Collector office on 21.11.2022 clearly exhibit that there is no grass suited for grazing. Letter attached in **Annexure 6**.
ix)	Certificate from the concerned DFO that there is no DLC land involved in the lease area.	That the forest clearance issued by D.F.O on Dated 20.09.2010 clearly mentions that Lease area is not coming under D.L.C Report and Lease is subsisting with Lessee as confirmed by the Director of Mines vide Letter dated 13.07.2021 as attached in **Annexure 7**.

28. **The SEAC observed the following:**

a) The proposal was considered by the State Level Expert Appraisal Committee (SEAC), Odisha in its meeting held on 22.11.2021 for appraisal of the proposal for ToR in pursuance of the MoEF&CC, Govt. of India Notification dated 14th March, 2017. The SEAC, after deliberations on the proposal in terms of the provisions of the Notification dated 14th March, 2017, confirmed the case to be of violation of the EIA Notification, 2006 and recommended for the following:

   (i) The State Government to take action against the project proponent under the provisions of section 19 of the Environment (Protection) Act, 1986, and further no Consent to Operate to be issued till the project is granted Environmental Clearance.

   (ii) The project proponent shall be required to submit a bank guarantee equivalent to the amount of remediation plan and natural and community resource augmentation plan with the SPCB prior to the grant of Environmental Clearance. The quantum is recommended by

the SEAC based on EIA report and finalized by the regulatory authority i.e. SEIAA, Odisha. The bank guarantee shall be released after successful implementation of the EMP, followed by recommendations of the SEAC and approval of the regulatory authority i.e. SEIAA, Odisha.

(iii) Public hearing has already been conducted for the proposal on 14.09.2022, a copy of which is also furnished with EIA/EMP.

b) EIA/EMP study report has been prepared by a NABET Accredited / NABL Accredited Consultant namely **M/s Kalyani Laboratories Pvt. Ltd. Bhubaneswar**.

c) Detailed assessment of Ecological Damage, Remediation Plan and Natural and Community Resource Augmentation Plan has been incorporated in the EIA report.

d) An amount of ` 30, 50, 557.00/- (Rupees Thirty lakhs Fifty Thousand Five Hundred and Fifty-Seven only) has been estimated in the EIA / EMP report towards the cost of assessment of Environmental / Ecological damage due to violation as well as Natural and Community Resource Augmentation Plan (i.e. Budget under Remediation plan based on the damage assessment due to violation – Rs. 11,55,000+ Natural Resource Augmentation Plan – Rs. 14,80,000+ Penalty due to violation – Rs.4,15,557.00)

e) There is no specific guideline issued by the MoEF&CC, Govt. of India for assessment of Environmental and Ecological Damage as well as estimation of cost for remediation plan as well as Natural and Community Resource Augmentation Plan.

f) In the absence of any guidelines, the cost as suggested by the proponent in the EIA report above to be taken into account for remediation plan as well as Natural and Community Resource Augmentation Plan. However, the proponent has to abide by the guidelines if issued by the MoEF&CC, Govt. of India in future and accordingly the proponent has to comply. To this effect, they have to submit an undertaking in form of a legal affidavit.

g) No record is available in the file about initiation of legal action against the project proponent by the State Govt./SPCB under the provisions of section 19 of the Environment (Protection) Act, 1986 for violation of the EIA Notification, 2006. To this effect, they have to submit a legal affidavit that no legal action is either initiated or pending against them.

After detailed discussion, the SEAC recommended for grant of Environmental Clearance for Gandhargala Decorative stone mines over an area of 32.60 acres or 13.193 Ha. at Village - Gandhargala, Tahasil - Titlagarh, Dist -Bolangir, Odisha with the following specific conditions in terms of the provisions of the MoEF&CC, Govt. of India notification dated 14th March, 2017 and SoPs for violation cases issued by the MoEF&CC, Govt. of India in addition to the conditions stipulated as per **Annexure – D**. **However, the Environmental Clearance shall be issued by the SEIAA after receipt of relevant bank guarantee as stated above.**

(i) The SEAC recommended for an amount of ` 30, 50, 557.00/- (Rupees Thirty lakhs Fifty Thousand Five Hundred and Fifty-Seven only) towards Remediation plan and Natural and Community Resource Augmentation plan as the proponent has gone for production without prior Environmental Clearance under EIA Notification, 2006.

(ii) The project proponent shall be required to submit a Bank Guarantee of an amount of ` 30, 50, 557.00/- (Rupees Thirty lakhs Fifty Thousand Five Hundred and Fifty-Seven only) towards Remediation plan and Natural and Community Resource Augmentation plan with the State Pollution Control Board, Odisha prior to the grant of Environmental Clearance.

(iii) The bank guarantee shall be released after successful implementation of the EMP, followed by recommendations of the SEAC, Odisha and approval of the regulatory authority (i.e. SEIAA, Odisha).

(iv) The SEIAA, Odisha may consider to request to the Govt. in F&E Deptt., Govt. of Odisha to take action against the project proponent under the provisions of section 19 of the Environment (Protection) Act, 1986 for violation of the EIA Notification, 2006. Environmental Clearance is to be issued after initiation of legal action against the project proponent.

(v) The proponent has to abide by the SoPs for violation cases issued by the MoEF&CC, Govt. of India.

(vi) Following specific conditions to be stipulated in Environmental Clearance:

(a) Haulage road shall be developed and maintained perennially and perpetually by the proponent in consultation with the concerned authority of the Govt.

(b) CER related issues as per MoM of public hearing held on 14.09.2022 may be prescribed as special condition in EC.

(c) The project proponent shall maintain periodic health check-up records of their employees and ensure use of face mask by workers in crushing and handling sections of the decorative stone quarry for ensuring that working personnel are not affected by silicosis.

ITEM NO. 06

PROPOSAL OF ENVIRONMENTAL CLEARANCE FOR ENHANCEMENT IN PRODUCTION OF IRON ORE FROM 3,00,300 (0.3 MILLION) TPA TO 7,00,005 (0.7 MILLION) TPA ROM WITH TOTAL EXCAVATION OF 1.024 MILLION TPA (ROM OF 0.7 MILLION TPA + 0.324 MILLION TPA WASTE), SETTING UP TWO MOBILE CRUSHING OF 150 TPH CAPACITY EACH AND TWO MOBILE SCREENING UNITS OF 250 TPH CAPACITY EACH IN ADAGHAT IRON ORE MINES OVER AN AREA OF 15.074 HA. OF M/S NATIONAL ENTERPRISES IN VILLAGE-ADAGHAT UNDER BLOCK & TEHSIL: KOIDA, SUBDIVISION- BONAI IN DISTRICT: SUNDARGARH OF SRI CHARANJIT SINGH GREWAL - EC

1. This proposal is for environmental clearance for enhancement in production of Iron ore from 3,00,300 (0.3 million) TPA to 7,00,005 (0.7 million) TPA ROM with total excavation of 1.024 million TPA (ROM of 0.7 million TPA + 0.324 million TPA waste), setting up two mobile crushing of 150 TPH capacity each and two mobile screening units of 250 TPH capacity each in Adaghat Iron ore mines over an area of 15.074 Ha. of M/s National Enterprises in village-Adaghat under Block & Tahasil: Koida, Subdivision- Bonai in District: Sundargarh of Sri Charanjit Singh Grewal.

Proceedings of the SEAC meeting held on 20.02.2023 (Old proposals – compliance received)

2. The project falls under category “B” or activity 1 (a) - Mining of Minerals projects under EIA Notification dated 14th September 2006 as amended from time to time.
3. Mining lease for iron ore was granted in favour of M/s National Enterprises for 20 years vide letter no. 12730/SM dated 20.10.2000 of Dept. of Steel & Mines, Govt. of Odisha. Later as per MMDR Amendment Act, 2015 the lease deed was executed for entire lease area over 15.074 ha. on 11.01.2017 for a period of 50years from the date of execution.
4. Modified mining plan was approved by Regional Controller of Mines, Indian Bureau of Mines vide letter no- MPM/OTF-MECH/14-ORI/BHU/2010-11, dated 27-09-2010.
5. The Review of Mining Plan along with Progressive Mine Closure Plan has been approved for the period 2021-22 to 2025-26 by the same authority vide letter no- RMP/A/22-ORI/BHU/2020-21, dated 09-11-2020.
6. The entire Mining Lease area of 15.074 ha. is in DLC forest land.
7. Stage –II clearance for the forest land involved in the lease area has been issued by the Eastern Regional Office, Bhubaneswar of the MoEF & CC vide letter no. 5-ORC256/2015-BHU,dt. 05.08.2019.
8. Certificate under Forest Right Act has been issued by the Collector, Sundargarh for the forest land of 15.074 ha. in two phases.
9. As per the report of the DFO, Bonai Forest Division there is no violation under FC Act, 1980.
10. Due to presence of Indian Elephant & Sloth Bear (Schedule- I species), Site Specific Conservation Plan has been prepared with a budgetary provision of Rs 290.40 lakhs; which has been approved by the PCCF (Wildlife) vide Memo no. 4763/1WL(C)SSP-348/2012, dt 12th May, 2014.
11. Adaghat Iron Ore Mines has Environmental Clearance from SEIAA, Odisha vide letter no. 7695/SEIAA, dated 24.12.2019 for production of 3,00,300 (0.3 million) TPA of iron ore.
12. Consent to Operate has been issued by SPCB, Odisha for the same quantity vide letter no. no. 4943/IND-I-CON-6689, dated 29.03.2022, valid upto 31.03.2023.
13. Certified report on previous EC conditions was obtained from MoEF&CC, IRO, Bhubaneswar vide file no. 1083/22/EPE, dt 07.10.2022.
14. The present lessee has started the mining operation within the lease area for production of iron ore with effect from 04.01.2020. Now, the lessee has planned to enhance the produce of iron ore to maximum ROM of 7,00,005 (0.7 million) TPA (5,47,830 TPA of +55% grade iron ore and 1,52,175 TPA of +45 to +55% grade iron ore) with total excavation of 10,24,625 (1.024 million) TPA (ROM of 7,00,005 TPA + 3,24,620 TPA of waste) and setting up two mobile Crushers of 150 TPH capacity each & two mobile Screening Plants of 250 TPH Capacity each within the lease area.
15. **Location and connectivity**: The project is coming under village Adaghat of Bonai Sub-division in Sundargarh District and is at a distance of 8km from Koida town. The ML area is covered under the SOI toposheet No. 73 G/5 and the geo coordinates are Latitude- 21^0 55’ 25.22002” N to 21^0 55’ 43.04502” N and Longitude - 85^0 19’ 07.43920” E to 85^0 19’ 48.30132”

E. The project site is at a distance of 290km from Bhubaneswar; 28 km from Barbil railway station, 36km from Barsuan railway siding and 11km from Jaroli railway station & siding on Daitari-Bansapani line. Nearest airport is Veer Surendra Sai Airport, Jharsuguda at 180km away.

16. Drainage system of the area is dendrite type. The Suna Nadi is a tributary of Baitarani River which controls the drainages system of the area and flows due north in the region and then east to meet the Bay of Bengal. Apart from Suna /Kundra river, other major river /nala are Teherai nala (in South direction, 3km away), Kakarpani nala (in East direction, 4km away) and Karo river (in NW direction, 7.8km away).

17. There is no human settlement within the ML area. The area does not have any monuments of historical or archeological importance, pilgrimage, any place of tourist interest, national park, bird or wild life sanctuary.

18. The mining lease area coming under kissam "Pahad", which is entirely over DLC forest land. MoEF & CC, Govt. of India has granted Stage – II diversion for 15.074 ha. forest land, including safety zone of 1.40 ha. vide letter no. 5-ORC256/2015-BHU, dated 05.08.2019.

19. The Geological Reserve within the lease area is re-estimated to be 4.188 million tons whereas the Mineable Reserve is 3.949 million tons and production of mines as per given table:

Production Year	Total Excavation in MT	ROM in MT	Saleable Ore in MT	Mineral Rejects in MT	Intercalated Waste in cum
1st Year (2021-22)	4,39,603	3,00,323	2,35,035	65,288	69,640 (1,39,280 MT)
2nd Year (2022-23)	4,59,298	3,13,778	2,45,565	68,216	72,760 (1,45,520 MT)
3rd Year (2023-24)	6,12,060	4,18,140	3,27,240	90,900	96,960 (1,93,920 MT)
4th Year (2024-25)	7,87,840	5,38,200	4,21,200	1,17,000	1,24,800 (2,49,640 MT)
5th Year (2024-25)	10,24,645	7,00,005	5,47,830	1,52,175	1,62,320 (3,24,640 MT)

20. **Mining Process:** Open cast mechanized method of mining on single shift basis is proposed to excavate iron ore to gradually achieve the production target. Drilling and blasting will be adopted for loosening of hard rock mass by rock drill. Ore to waste ratio is 1: 1.5 (both in cum).

21. **Topography**: Applied mining lease area is mainly dominated by the hill slopes and belongs to a part of a NW-SE trending hill. North-eastern part of applied area is comparatively flat than south-western part. The altitude of the highest part of the area is 635m RL while that of the lowest part is 560m RL. The elevation difference is 75m. Forest growth is observed to be sparse in the places of in-situ iron ore exposures and dense on the float ores. A part of the area around float quarry and mine road is free from forest growth.

22. **Green belt:** During the conceptual period, 18280 nos. of plants will be planted on the backfilled area of 11.424 ha., which includes 2240 plantation as bench plantation over exhausted benches of 1.4 ha. Apart from it, 1.4 ha. of the conceptual dump area will be terraced & plantation will be developed on each terrace; 0.25 ha. of mineral separation area will also be covered under plantation.
23. **Water requirement:** The maximum water requirement in the project will be 30 KLD; which will be drawn from Suna River with required permission. Out of the 30 KLD water, 2 KLD will be used for drinking and washing purposes, 25 KLD for dust suppression in haul road, screening & crushing area and 3 KLD will be consumed by plantation.
24. **Power requirement:** The supply of electrical energy for the mine site shall be received from CESCO. The approximate maximum power requirement for the mining complex (including office) shall be 500KVA.
25. **Public Consultation**: Public Hearing for Enhancement in Production from Adaghat Iron Ore Mines was conducted on 21.12.2021 at 11.00 A.M. in the open ground, near Hanuman Temple in Adaghat village in accordance with the MoEF, Govt. of India, EIA Notification No.SO-155 3(E) dt.14.09.2006. As per the demands, the project proponent has committed to take dust control measures, undertake plantation, give priority to local employment, to make concrete village road, provide bore well for drinking water, electrification of village road, etc. Rs 16 lakhs will be spent under CER for various socio-economic activities, whereas Rs 5 lakhs will be spent annually towards regular maintenance & recurring activities.
26. **Baseline study** of the study area was conducted during Summer season (March 2021 to May 2021). Following results were obtained:
    - Ambient Air Quality Monitoring made in 8 locations & results shows the values of PM_{10} – 60.8 µg/m3 - 81.3 µg/m3, $PM_{2.5}$ – 31.9µg/m3 – 42.5µg/m3, SO_2 – 5.8µg/m3 – 12.9µg/m3, NOx – 10.4 µg/m3 -18.8 µg/m3.
    - Noise Quality ranges from 40.2 dB(A) – 71.5 dB(A) during day time and 35.6 dB(A) – 42.3 dB(A) during night time.
    - Surface water quality monitored in 5 locations and pH range from 7.21 to 7.94., total dissolved solids – 144.8mg/L to 171.6 mg/L, Iron content ranges from 0.32 mg/L to 0.42 mg/L, Chloride content ranges from 31.9 mg/L to 34.9 mg/L, sulphate content ranges from 6.4 mg/L to 8.6 mg/L, BOD content ranges from 2.8 mg/L to <2.0 mg/L, Fluroide content ranges from 0.12 mg/L to 0.21 mg/L, Nitrate content ranges from 2.9 mg/L to 5.2 mg/L. Total coliforms ranges from 270 MPN/100ML to 1600 MPN/100ML. All other parameters were also found to be within the permissible limits.
    - Ground water quality monitored in 5 locations and pH ranges from 6.72 to 7.22., total dissolved solids ranges from 248mg/L to 294 mg/L, total Hardness as $CaCO_3$ ranges from 130 mg/L to 152 mg/L, total alkalinity ranges from 106 mg/L to 132 mg/L .Iron content ranges from 0.23mg/L to 0.26 mg/L, Chloride content ranges from 31 mg/L to 41 mg/L, sulphate content ranges from 21.7 mg/L to 29.1 mg/L, Fluroide content ranges from 0.11 mg/L to 0.27 mg/L, Nitrate content ranges from

2.1 mg/L to 4.1 mg/L. Magnesium content ranges from 10.21 mg/L to 13.12 mg/L. All other parameters were also found to be within the permissible limits.

- Soil quality measured in 5 locations and color of soil found to be reddish brown, texture of soil is sandy loamy, moisture content ranges from 5.4% to 8.2%, pH ranges from 5.84 to 6.31, Available Organic carbon (%) – 1.11 to 1.62 etc.

27. Land Use/ Land cover – The land utilization plan as per the table:

Type of land use	Existing Land use (in ha.)	At the end of Plan Period (in ha.)	At the end of Conceptual Period (in ha.)
Area under excavation	1.860	8.264	11.424
Overburden dump	0.100	1.30	1.40
Mineral storage	0.500	---	---
Infrastructure (office, canteen, rest shelter, weigh bridge, etc)	0.200	0.200	0.200
Road	0.200	0.200	0.400
Green belt in safety zone	0.400	1.000	1.400
Mineral Separation Plant	0.250	0.250	0.250
Sub-Total	**3.510**	**11.214**	**15.074**
Untouched area	11.564	3.860	---
Total	**15.074**	**15.074**	**15.074**

28. **Manpower:** All total 59 persons will have direct employment in the mines after proposed enhancement in production, which includes managerial /supervisory staff.

29. **Project Cost:** The project cost is estimated to be Rs 9 crores and there is a budgetary provision of Rs 135 lakhs as capital cost & Rs 40 lakhs as annual recurring cost towards environmental protection measures; which includes air pollution control measures like Installation & maintenance more Automatic Sprinklers, Purchase & maintenance of one more water tanker & machineries for water sprinkling, etc; water pollution control measures like Construction & maintenance of boulder wall and garland drain, Modification of existing settling ponds & it's collecting drains, Desilting of pond & drains, etc , noise pollution control measures training to employees, maintenance of vehicles, etc, Environment Monitoring and Management, Occupational Health and Green Belt Development and Maintenance.

30. The proponent along with the consultant **M/s Centre for Envotech and Management Consultancy Pvt. Ltd., Bhubaneshwar**, made a detailed presentation before the SEAC.

31. The SEAC in its meeting dated 12.12.2022 decided to take decision on the proposal after receipt of the following from the proponent followed by site visit of the Sub-Committee of SEAC:

    i) The Site-Specific Wildlife Conservation Plan needs to be relooked in consultation with DFO & Chief Wildlife Warden and modified accordingly. Modified Site-Specific Conservation Plan to be submitted.

    ii) Quantitative and Qualitative classification of the Iron grade and waste.

    iii) Details of storage and usage of sub-grade Iron and dimension of OB dump.

Proceedings of the SEAC meeting held on 20.02.2023 (Old proposals – compliance received)

iv) Slope study for the OB dump should be done taking into consideration of rainfall data of past 100 years for stabilization of the dump.

v) Dimension of settling pond for Surface Run-Off Management along with photograph.

32. The project proponent was requested vide letter no. 01 / SEAC – (Misc) - 28, dated 04.01.2023 to submit the information / documents as sought by the SEAC at para 31 above.

33. The proposed site was visited by the sub-committee of SEAC on 18.01.2023. Following are the observations of the sub-committee**:**

- It was observed that the excavation is being carried out in two quarries. The stripping ration being very low, a small quantity of over burden (OB) has been generated, which is storied in the OB dump located in the North western part of the lease. As per mine management, the small amount of lop soil generated is utilized in the plantation carried out in dumps and mine boundary.
- The runoff generated from the quarry areas goes to the deep most part of the quarries and percolates underground.
- Two settling ponds have been constructed in the North-West and North-East corners of the lease to store the runoff from areas. Drains have been provided to channelize the runoff to both the sumps. It was felt that the size of the settling ponds are small and may not be adequate to store the runoff generated during heavy rainfall in the monsoon season. Moreover, the settling pond in the North-west corner is very close to the OB dump, which may cause instability of the dump in future. It is advised that settling pond may be relocated to a convenient location away from the OB dump. Moreover, the sizes of settling ponds are required to be determined based on available past rainfall data.
- The mine management was advised to carry out the slope stability study of the OB dumps, even though the OB dump is very small at the moment. With enhanced production, the size of the OB dump will increase, and thus it is desirable to implement the suggestions of the scientist study to ensure its stability against failure.
- The existing mobile screening units have been provided with water spraying arrangement to prevent the dust from getting air borne. The mine management was advised to explore the possibility of replacing the nozzles with the ones that will produce fine atomized spray instead of coarse water droplets.

34. The proponent has also furnished the compliance to the queries of SEAC as requested at para-32 above. The SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
i)	The Site-Specific Wildlife Conservation Plan needs to be relooked in consultation with DFO & Chief Wildlife Warden and modified accordingly. Modified Site-Specific Conservation Plan to be submitted.	A Site Specific Conservation Plan has been prepared with a budgetary provision of Rs 290.40 lakhs; which has been approved by the PCCF (Wildlife) vide Memo no. 4763/1WL(C)SSP-348/2012, dt 12th May, 2014. However, DFO, Bonai in his letter No. 757/6F-(Mg), dt 27.01.2023, has clearly stated that the

<table>
<tr><th>Sl. No.</th><th>Information Sought by SEAC</th><th>Compliance furnished by the proponent</th></tr>
<tr><td></td><td></td><td>said plan is yet to be implemented; hence, revision/ updation of the approved plan shall be done only after the implementation of the approved plan. The letter of DFO, Bonai in this regard is attached as Annexure I.</td></tr>
<tr><td>ii)</td><td>Quantitative and Qualitative classification of the Iron grade and waste.</td><td>As per the guideline of IBM, calculation of reserve is done under different range of Fe% i.e. 45 to 55% Fe and above 55% Fe. While above 55% Fe ore is termed as saleable ore, below that upto 45-55% Fe is itemed as mineral rejects. ore containing less than 45% Fe is considered as mineral waste. As per review of mining plan (Pg 41), following is the Quantitative and Qualitative classification of the Iron grade and waste;

<table>
<tr><th>Year</th><th>+55% Fe</th><th>45-55% Fe</th><th>-45% Fe</th></tr>
<tr><td>2021-22</td><td>2,35,035 MT</td><td>65,288 MT</td><td>69,640 MT</td></tr>
<tr><td>2022-23</td><td>2,45,565 MT</td><td>68,213 MT</td><td>72,760 MT</td></tr>
<tr><td>2023-24</td><td>3,27,240 MT</td><td>90,900 MT</td><td>96,960 MT</td></tr>
<tr><td>2024-25</td><td>4,21,200 MT</td><td>1,17,000 MT</td><td>1,24,800 MT</td></tr>
<tr><td>2025-26</td><td>5,47,830 MT</td><td>1,52,175 MT</td><td>1,62,320 MT</td></tr>
</table></td></tr>
<tr><td>iii)</td><td>Details of storage and usage of sub-grade Iron and dimension of OB dump.</td><td>At present, within the lease boundary 60,024 tons of processed sub grade (or mineral reject) iron ore of 0- 5mm and 0-200mm present in form of seven stocks covering total area of 0.5 ha. Sub grade of iron ore are consider to have +45% - 55% Fe and these will be sold /dispatched to beneficiation plants, Pelletization plants as per demand. Details of the seven existing sub-grade & 10-30mm stack are given in Annexure II.

The waste material generated during the process of mining and dry processing shall be shifted to existing Dump- 1, which is on the north-west part of the lease area spreading over 0.1 ha. Detail of the exiting dump is given in Annexure II. Conceptually the dump will occupy 1.4 ha. area and attain a height upto 20m in two tires. Retreating method will be adopted for the disposal of waste at the dumping site. Conceptually, 50% of the waste material will be used in backfilling of mined out area and balance to be used in road maintenance.</td></tr>
<tr><td>iv)</td><td>Slope study for the OB dump should</td><td>The Slope study provides very useful information</td></tr>
</table>

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
	be done taking into consideration of rainfall data of past 100 years for stabilization of the dump.	about the dump slope of Adaghat Iron ore mine. The flat slope results gradual dissipation of infiltrated rainfall compared to those with steep slope angles. Small benches will be stable with steep OB dump slope angle. The mean factor of safety of the dump slope of the area is about 1.23, which is critically stable. The full study report prepared by taking into consideration of rainfall data of past 100 years is attached as **Annexure III**.
v)	Dimension of settling pond for Surface Run-Off Management along with photograph.	At present there is one settling pond with dimension of 10m long X 8m wide X 2m deep for surface runoff management. The photograph of the existing settling pond is attached as **Annexure IV**. However, with the enhancement in production of iron the size of the settling pond will also increases. Based on maximum rainfall of 25mm /hr and 2 hours' detention time, the size of the pond will be modified to 35m long X 30m wide X 4m deep. The detail of the calculation is given in Pg C4-17 of the EIA /EMP Report, which is already submitted near the committee.

Considering the information furnished and the presentation made by the consultant **M/s Centre for Envotech and Management Consultancy Pvt. Ltd., Bhubaneshwar** along with the project proponent, the SEAC recommended for grant of Environmental Clearance with stipulated conditions as per **Annexure –E** and following specific conditions.

a) The proponent shall utilize different grades of iron ore (ROM) and waste generated according to IBM guidelines.
b) The proponent shall carryout compensatory afforestation for the project site.
c) The proponent shall adopt additional measures for dust suppression.
d) Conversion of Gochar / Grazing land if involved in lease area shall be made before going for mining activity.
e) Rainwater harvesting structures shall be implemented.
f) The lessee shall take adequate safeguard measures to ensure the free flow of the nearby tributaries/nallahs if any.
g) The EC is limited to secondary crushing and screening operations (dry process) as per approved mining plan. Under no circumstances, the lessee shall carry out any beneficiation activity (wet process) of low grade ore.
h) All the ores (45-55) and +55 grades shall be used and ores & rejects shall be transported as per approved mining plan for their use. Only temporary stacks shall be operated. The mine shall avoid segregation & generation of fines and flow of silt during rainy session.
i) Green processes like Controlled drilling, Environment friendly blasting, safe transportation and conveying, silt-management shall be followed as per guidelines.

j) The settling pond shall be relocated to a convenient location away from the OB dump. The sizes of settling ponds shall be determined based on available past rainfall data.
k) The mine shall explore the possibility of replacing the nozzles with the ones that will produce fine atomized spray instead of coarse water droplets.
l) The mine shall carry out the slope stability study of the OB dumps for the enhanced production capacity.

ITEM NO. 07

PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF M/s RUNGTA MINES LIMITED FOR PROPOSED (S+9) STORIED KANTHER-KOIDA RESIDENTIAL COLONY OVER AN BUILT-UP AREA 57963.68 SQM LOCATED IN VILLAGE KANTHER-KOIRA IN DISTRICT, SUNDERGARH OF SRI HIRAK MAZUMDER - EC

1. This proposal is for Environmental Clearance of proposed (S+9) storied Kanther-Koida Residential Colony of Rungta Mines Limited over an built-up area 57963.68 sqm located in village Kanther-Koira in District, Sundergarh of Sri Hirak Mazumder.

2. This project falls under category "B" or activity 8(a) – Building and construction projects under EIA Notification dated 14th September 2006 as amended from time to time.

3. Kamanda steel Plant had obtained Environmental Clearance from MoEF&CC vide letter no. J-11011/434/2009-IA.II (I), dated 08.05.2021. M/s Rungta Mines Limited (Kamanda Steel Plant) has proposed a Kanther-Koira Residential colony near Kamanda steel plant to accommodate the non-native employees.

4. **Location and connectivity**: The proposed residential project site is located in Plot No: 1173, 1175/2362, 1175/2363, 1175/2364, 1446, 1446/2495 of Khata No.: 149/224 in village Kanther-Koira, Mouza - Koira in District Sundergarh, Odisha. The location of the project area can be seen in Survey of India Open Series No. F45N1 & F45N5. The co-ordinates of the site Latitude is 21° 53' 51.16'' N and Longitude: 85° 15' 15.80" E. The site is accessible by all weather road from the district collector Keonjhar (51 km) and town Koida (1.3 km). The site is located near Koira-Barsuan Road which is 0.8 km from project site and National Highway-520 is 1.2 km from project site, which connects Parsora to Rajamunda. The nearest railway station is Barsuan at a distance of 15.2 km. The nearest airport Birsa Munda Airport is at Ranchi, which is approximately 157 km from the site.

5. **Area details**: There are few existing buildings in the proposed site which will be untouched. There will be total 476 numbers of flats to be constructed and total population will be 2452.

Particular	**Existing**	**Proposed**	**Total**
Plot Area	8.20 Ac. (33,196.28 sqm)		
Ground Coverage	4946.84 sqm	4845.73 sqm	9792.57 sqm (29.49%)
FAR Area	14644.71 sqm	34623.99 sqm	49268.70 sqm
FAR (Floor Area Ratio)	--	--	1.48

Built up Area (construction)	18804.88 sqm	39158.80 sqm	57963.68 sqm
Maximum Height	14.40 mt.	35.67 mt.	
Road Area			9,412.33 sqm
Stilt Parking	3,706.45 sqm	4534.81 sqm	8241.26 sqm
Open Surface Parking	2232.20 sqm	1860.81 sqm	4093.01 sqm
Total Parking Area	**5938.65 sqm**	**6395.62 sqm**	**12334.27 sqm**
Green Belt Area			6650.23 sqm (20.03%)
No. of Tower	28	5	33
No. of Unit	152	324	476

6. **Water requirements and Wastewater generation** - Total freshwater requirement will be 229.0 KLD. It will be taken from Surface Water. It is expected that the project will generate approx. 324.1 m^3 /day of wastewater. The wastewater will be treated in the STP of capacity of 400 m^3 /day provided within the complex. Out of which 307.9 m^3 /day will be recycled within the project for flushing (118.0 m^3 /day), landscaping (34.5 m^3 /day), Dust Suppression (25.0 m^3 /day), STP loss (16.2 m^3 /day) & 130.4 m^3 /day will be discharged to drain in case of non-monsoon period and 189.9 m^3 /day. The storm water & treated water will be discharge to nearby drain.
7. **Rainwater harvesting pits:** Total number of Rainwater Harvesting Pit provided is 35.
8. **Power requirement** - The total consolidated electrical load estimate for proposed project is about 1817 KW. To meet emergency power requirements during the grid failure, there is provision of 1 no. of DG set of 550 KVA capacity. The stack height of the DG set will be 40.36m. DG set installed will be Silent DG Set as per BS 6 & Latest CPCB Norms with Electronic Governor and Synchronization Compatibility. Solar Energy proposed is 5.15% of total power through 40 Nos. of Solar Street Light poles of 2.88 KW capacities will be directly connected with Solar Panel and 90.85 KW Solar energy generated from 75 nos. of PV Panel is directly connected with electric grid.
9. **Firefighting:** Firefighting system will be installed as per recommendation of the Firefighting Officer, Odisha and as per the guideline of NBC (part-4). The firefighting system comprises of Hose Reel, Down Comer, Manual operated electric fire alarm system, Terrace Tank, Extinguisher and Terrace pump. Safe evacuation rout for building residents should be cleared marked to ensure safety of residents during any emergency.
10. **Traffic study**: For transportation of construction materials expected traffic volumes will be average 6 tippers per day. During the operation period there will be increase in traffic density due to the movement of residential people and guests.
11. **Green belt** - An adequate greenbelt 6650.23sqm (20.03% of the plot area) or plantation around the project will be developed by using the local species like Radhachuda, Nageswar, Akash Neem, Ashok, Polanga, Karang, Bela, Pijilu, Kaniara, Tagar, Hena, etc. The plantation

matrix adopted for the green belt development includes pit of 0.3 m x 0.3 m size with a spacing of 2 m x 2 m. Multi-layered plantation comprising of medium height trees (7 m to 10 m) and shrubs (5 m height) are proposed for the green belt.

12. **Solid waste Generation**: From the residential complex solid waste in form of food waste from kitchen and miscellaneous waste will be generated @ 0.45 kg/person/day, which will be about 1105.2 kg/day. The generated solid waste from the residential complex will be segregated as biodegradable and non-biodegradable. This will be collected in separate colored bins. Proper waste management practices will be adopted during the collection, storage and disposal of the generated solid waste and construction and demolition waste. Solid waste from sweeping and Dry Garbage containing non bio degradable wastes like polythene bags, metal, ceramic Waste, glass etc. shall be stored in separate garbage bin and send to approved recyclers.

S. No.	Category	Counts (heads)	Waste generated (kg/day)
i)	Residential Population	2456 @ 0.45 kg/day	1105.2
ii)	Floating Population	123 @ 0.15 kg/day	18.45
iii)	STP Sludge	--	45.0
	Total		**1168.65**

13. **Parking details:** Total Parking Area provided is greater than Parking Area required (as per Odisha Bye-laws) and Parking Area needed as per NBC 2005 norms

Parking Area Provided			
Open Parking			4093.01 sqm
Stilt Parking			8241.26 sqm
Total Parking	--	--	**12334.27 sqm**
Equivalent Car Space Provided			
	Area (sqm)	**Area/ECS**	
Open Parking	4093.01	25	164 ECS
Stilt Parking	8241.26	28	294 ECS
Total Parking Provided			**458 ECS**

14. **Project cost** - The estimated project cost is around Rs 73.0 Crores while Environment Management Capital Cost is 90 Lakhs and recurring Cost is 17.2 Lakhs.

15. The Environment consultant Centre for **M/s Centre for Envotech and Management Consultancy Pvt. Ltd., Bhubaneswar,** along with the proponent made a presentation on the proposal before the Committee.

16. The SEAC in its meeting held on 23.12.2022 decided to take decision on the proposal after receipt of the following from the proponent. The proponent has furnished the compliance and the SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent

Proceedings of the SEAC meeting held on 20.02.2023 (Old proposals – compliance received)

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
i)	NOC from concerned authority for discharge of treated water into the nearby Nallah.	We have received the NOC from Koira Gram Panchayat on dt. 11.02.2023 for discharge of treated water in nearby nallah through ROW of Koira Panchayat road. NOC from Koira Gram Panchayat is attached in **Annexure-1**.
ii)	Supporting documents for laydown of pipeline connection in private/govt. land for drainage.	The pipeline route is passing through two plots i.e Plot No. 1172, Khata No. 149/168 (M/s. Mangilall Rungta) and Plot No. 1176/1921, Khata No. 149/835 (Mr. Mansingh Sunami). The pipeline route map showing drainage line is attached in **Annexure-2** and consent letter from land owners are attached in **Annexure-3**.
iii)	A comparative statement w.r.t project features, water consumption, waste water generation and management, Solid waste generation and management and other environmental parameters for existing and proposed project.	The comparative statement of existing & proposed project is attached in **Annexure-4**.

Considering the information furnished and the presentation made by the consultant, **M/s Centre for Envotech & Management Consultancy Pvt. Ltd., Bhubaneswar** along with the project proponent, the SEAC recommended for grant of Environmental Clearance valid for 10 years with stipulated conditions as per **Annexure – F** in addition to the following specific conditions**.**

i) **The Proponent before implementation of the project shall convert the land to Gharabari and shall take the ownership of the land if not already taken.**

ii) **The Proponent shall obtain permission/NOC from Executive Engg (PHD) and / or from the appropriate authority for disposal of excess STP treated water to the nearest drain without which the Proponent will not start construction work. Also, in case of the connecting drain passing through others land (Govt. or Private land), the Proponent shall obtain the permission and possession as the case may be.**

iii) The proponent shall use solar energy atleast to the tune of 5%of total power requirement as proposed.

iv) The proponent shall obtain permission from concerned Fire Safety Authority.

v) Trees located within the project area shall be transplanted to alongside the boundary green development area.

vi) To reduce discharge of treated water to open drain, the proponent shall use more water for increased number of trees proposed to be planted in the green belt area & shall also utilize this treated water for car washing, floor washing to minimize the surplus discharge to drain.

vii) The proponent shall implement the Pollution Control Measures and safeguards as proposed in the Environment Management Plan (EMP) of project report.

Proceedings of the SEAC meeting held on 20.02.2023 (Old proposals – compliance received)

Environmental Scientist, SEAC

viii) **All compliances submitted/ committed by PP(s) shall be strictly adhered to them in addition to all the conditions/ specific conditions of EC.**

ITEM NO. 08

PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF M/S K R ENTERPRISES FOR ADDITIONAL 2.4 MTPA OF COAL WASHERY UNIT IN THE EXISTING COAL CRUSHING AND SCREENING PLANT OF CAPACITY 2.4 MTPA AT VILLAGE - REMUAN, TEHSIL – TALCHER, DISTRICT – ANGUL, ODISHA OF SRI JAYABARDHAN MISHRA (PARTNER) – VIOLATION 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 K R Enterprises has applied for "Terms of Reference (ToR)" for Additional 2.4 MTPA of Coal Washery unit in the existing Coal Crushing and Screening Plant of capacity 2.4 MTPA at Village - Remuan, Tehsil – Talcher, District – Angul, Odisha.
3. The category of the project is 2(a) Coal Washeries under Category "B" as per EIA Notification, 2006 & its amendments.
4. **Location and Connectivity** - The project is of total area 11.938ha. and located at Village – Remuan, Tehsil – Talcher, Dist – Angul, Odisha. The Geographical co-ordinates of the project site is: Latitude - 20° 57' 25.542" N to 20° 57' 53.315" N & Longitude - 85° 13' 5.650" E to 85° 13' 19.605" E and finds place in Toposheet no - F45T1, F45T5, F45N4, F45N8. The nearest NH is NH 149 adjacent to the site. The nearest railway station is Talcher Railway Station (3.46 km, SW). The nearest airport is Bhubaneswar International Airport (99.62 km, SE) from project site. Nearest Habitation is Remuan (0.25 km, SW) and Talcher (0.76 km, S). Nearest Canal is Right Bank Canal (Adjacent to the Project Site) and nearest river is Brahmani River (1.54 km, E). Nearest Reserve forest is Gengutia RF (0.68 km, W). Elevation of the project site is 84 to 93 m above mean sea level. No forest Land is involved.
5. The existing project was accorded 1st CTE from OSPCB vide letter no. 3058, Dated 25/08/2016, Current CTO from OSPCB vide Ref. No. 804/MB/ROSPCB/AGL/17/2013-14, dated 30/03/2020 is valid for the period from 01.04.2020 to 31.03.2025 by the State Pollution Control Board.
6. Details of Existing Production Capacity

Name of the Units	Production Capacity	CTE from OSPCB	CTO from OSPCB & Validity	Operational Unit as per valid CTO
Coal Grinding & Screening	2,00,000 MT/month	vide letter no. 3058, Dated 25/08/2016	vide Ref. No. 804/MB/ROSPCB/AGL/17/2013-14, dated 30/03/2020	2,00,000 MT/month

7. The unit configuration and capacity of Expansion project is given below:

Sl. No	Plant Facilities	Plant Existing Configuration	Proposed Configuration	Total Capacity (TPA)
1	**Crushing & Screening Plant**			
	Crushing & Screening Plant	2.4 MTPA	-	**2.4 MTPA**
2	**Coal Washery**			
	Coal Washery	-	2.4 MTPA (throughput)	**2.4 MTPA (throughput)**

Proceedings of the SEAC meeting held on 20.02.2023 (Old proposals – compliance received)

Environmental Scientist, SEAC

8. The details of the raw material requirement for the Expansion project along with its source and mode of transportation is given as below:

Raw Material Required	Quantity in Tons per Annum	Source	Distance from site (Kms)	Mode of Transportation
ROM Coal	2,400,000 TPA	MCL	10 km	Road

9. **Water Requirement** - The total water required is 430 KLD (make-up), Existing 56 KLD & Proposed 374 KLD, which will be obtained from RWH 80 KLD & remaining water 350 KLD from Surface Water (Brahmani River, Permission for the same will be obtained). Waste water generated is 9KLD which will be treated in STP of capacity 15KLD and the treated water will be used in greenbelt.
10. **Power Requirement** - The total power requirement for plant is 0.70 MW per hour. Existing power requirement is 0.3 MW. The remaining power requirement for the project is estimated as 0.4 MW, which will be obtained from TPCODL.
11. **Green Belt** - The total green belt area is 3.971 Ha. (33.26% of total plot area).
12. **Solid Waste Generation** – The total solid waste generated from the project is 14270 TPA which will be dewatered and stored in slime/tailing storage area & the collected water will be recycled in process. The tailings will be disposed to construction contractors for road & construction filings.
13. **Employment Potential**: The project will generate direct to the tune of about 250 persons as well as indirect employment opportunities for the nearby villages.
14. **Project Cost** - The capital cost of the project is Rs. 16.68 Crores rupees (Existing Rs. 4.54 Crores & Proposed Rs. 12.14 Crores) and capital cost for Environmental Protection Measures is proposed as Rs. 1.334 Crores (Existing Rs. 0.125 Crores & Proposed Rs. 1.209 Crores). Employment generation from the expansion is 362 (Existing 47, Proposed 65 & Indirect 250).
15. There is no court case pending or violation under EIA notification 2006, to the project or related activity.
16. The project proponent along with the consultant **M/s Visiontek Consultancy Services Pvt. Ltd., Bhubaneswar** made a detailed presentation on the proposal on 08.07.2022.
17. The SEAC in its meeting held on dated 08-07-2022 decided to take decision on the proposal after receipt of certain information / documents from the proponent followed by site visit of Sub-Committee of SEAC to verify the present status.
18. The proponent has furnished the compliance and the SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
1.	Management of wash liquor and it's composition, uses to be worked out in details.	Management of wash liquor and its composition are explained in **Annexure I**.	Complied
2.	The proponent has to clarify why it is an additional 2.4 MTPA capacity Coal Washery? is there any coal washery do exists within the premises? if so, details of such coal washery to be	• KR Enterprises had constructed 2.4 MTPA throughput Coal washery (almost 90% done as on 05.04.2016) without obtaining permission from SPCB and EC from concerned authorities. However, it	This will be dealt as violation case as they have already started

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
	submitted.	was not operated. • Closure notice for stoppage of Construction of Coal Washery work was issued by regional Officer (RO) SPCB, Angul vide letter no. 1365, dated 05.04.2016. • On 08.04.2016, KR Enterprises replied to Regional Officer (RO) SPCB, Angul that, after closure notice dated 05.04.2016, there was no progress in construction work of Coal Washery. • Coal Washery unit was inspected by the RO Officials of SPCB on dated 17.06.2016 & 09.08.2016 & it was observed that Coal Impactor, screens & Washery equipment installed but was not in operation. • In the meantime, KR Enterprises had also applied for CTE of coal washery, dated 13.07.2016. • RO, Angul replied vide letter no. 2947, dated 11.08.2016 to obtain EC for coal washery before taking CTE. • RO, Angul, vide letter no.3004, dated 19.08.2016, issued show cause notice reg. revocation of CTO order for construction of Coal washery without permission. • On 20.08.2016, KR Enterprises replied to the Show Cause notice mentioning that existing Washery unit was not operated at any time and had modernized the plant with setting up of a new coal impactor and screens for enhancement of the capacity. • After that, on 11.04.2018, The Coal Washery unit was sealed jointly by Assistant Collector, Talcher & Regional Officer (RO) SPCB, Angul. • Now KR Enterprises proposes for obtaining EC for regularization of existing 2.4 MTPA throughput Coal washery (About 90% constructed). Details Chronology of the plant since inception are mentioned in **Annexure II**.	construction work of the project without Environmental Clearance.
3.	Detailed raw material linkage along with supporting documents.	For existing coal crushing & screening plant, coal is being procured through e-Auction from ALPS Mining Services (Rajgangpur) & NLC Tamilnadu Power Limited. Furthermore, M/s. K. R Enterprises is also in	E-Auction orders attached

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
		process of obtaining coal linkage for the proposed expansion of Plant. Related documents w.r.t present e-auctions are attached as **Annexure III**.	
4.	Detailed land documents with kisam of land.	The present land use (Kisam) of the site is Talia -1, Bagayat -3 & Sharad -3. Conversation and Transfer of Land has been applied to the appropriate Authorities. However, the matted is under Sub-Judice. Land Documents of 11.938 Ha. (29.59 Acre) with kisam details attached as **Annexure IV**.	_____
5.	CTE, CTO status of existing units within the premises.	• 1st CTE was granted by SPCB, Odisha for coal Crushing & Screening Plant vide letter no. 910, dtd 28/03/2008 • 1st CTO was granted by SPCB, Odisha for Coal Crushing & Screening Plant vide letter no. 1254, dtd 17/05/2008. • Current CTO was granted by SPCB, Odisha vide letter no 804, dtd 30/03/2020 for Coal Crushing & Screening Plant valid up to 31/03/2025. • CTE & CTO Details with CTO Compliance of Coal Crushing & Screening Plant are mentioned in **Annexure V**.	complied
6.	Provision of RWH.	Provision of Rainwater Harvesting (RWH) with Calculation is mentioned in **Annexure VI.**	_____
7.	Design and Capacity of STP with basis.	Design and Capacity of sewage Treatment Plant (STP) with basis mentioned in **Annexure VII**	_____
8.	Water balance both during monsoon and non-monsoon.	Water Balance for both during Monsoon and non-monsoon mentioned in **Annexure VIII**	_____
9.	Traffic study at important intersecting points like nearest habitation, Talcher College etc.	Traffic Study will be conducted during EIA/EMP study.	This will be specified in the ToRs.

19. The proposed site was visited by the sub-committee of SEAC on 15.02.2023. Following are the observations of the sub-committee and proponent needs to submit relevant documents as below:

a) The plant is under shutdown and even the crushing and grinding unit is also shutdown. The cause was due to non-availability of order as informed by the proponent.
b) It was found that the coal washing system has been installed and about 80-90% of the plant installation work is done. It's a new unit and there is still some work left to complete the unit. There is no operation in this washing unit.
c) They showed us a valid Consent to operation order from SPCB, for the crushing and grinding unit. The proponent was asked to submit last 3 years production report of this unit during application for EC.

Proceedings of the SEAC meeting held on 20.02.2023 (Old proposals – compliance received)

d) Proponent was informed to conduct a traffic study while submitting for EC.
e) Installation of dust control systems like- Bag filters and sludge belt filter to separate fines were installed. Slimes and fines are thickened and used. The plant is based on ZLD concept with no solid wastes discharged.
f) A settling pond is found to be there to take care of any spillage or emergency operation for further treatment and use.
g) RWH units are installed and dust sprinklers are used as and when required.
h) A stock pile of coal was available in the plant premises.
i) Adequate greenery and green belt were observed.

The SEAC observed that the proponent has already constructed 2.4 MTPA throughput Coal washery (almost 90% done as on 05.04.2016) without obtaining Environmental Clearance as per EIA Notification 14th Sept. 2006 and amendment thereafter. The SEAC, after detailed deliberations on the proposal in terms of the provisions of the MoEF&CC, Govt. of India Notification dated 14th March, 2017, confirmed the case to be of violation of the EIA Notification, 2006 and **recommended for issuing Standard Term of Reference as per Annexure – G along with the following specific Term of Reference** for undertaking EIA and preparation of Environmental Management Plan (EMP):

(i) The State Government to take action against the project proponent under the provisions of section 19 of the Environment (Protection) Act, 1986, and further no Consent to Operate to be issued till the project is granted Environmental Clearance.

(ii) The project proponent shall be required to submit a bank guarantee equivalent to the amount of remediation plan and natural and community resource augmentation plan with the SPCB prior to the grant of Environmental Clearance. The quantum shall be recommended by the SEAC and finalized by the regulatory authority i.e. SEIAA, Odisha. The bank guarantee shall be released after successful implementation of the EMP, followed by recommendations of the SEAC and approval of the regulatory authority i.e. SEIAA, Odisha.

(iii) Assessment of ecological damage with respect to air, water, land and other environmental attributes. The collection and analysis of data shall be done by an environmental laboratory duly notified under the Environment (Protection) Act, 1986, or an environmental laboratory accredited by NABL, or a laboratory of a Council of Scientific and Industrial Research (CSIR) institution working in the field of environment.

(iv) Preparation of EMP comprising remediation plan and natural and community resource augmentation plan corresponding to the ecological damage assessed and economic benefits derived due to violation.

(v) The remediation plan and the natural and community resource augmentation plan to be prepared as an independent chapter in the EIA report by the accredited consultants.

(vi) Public hearing shall be conducted for the proposal as per procedure laid down in EIA Notification, 2006 and amendment thereafter.

ITEM NO. 09

PROPOSAL OF ENVIRONMENTAL CLEARANCE FOR RAJNAGAR SAND MINE WITH PROPOSED EXCAVATION OF 40,002 m^3/year OF SAND, AT SUBARNAREKHA RIVER BED HAVING AN AREA OF 5.48 HA LOCATED AT KHATA NO. - 377, PLOT NO - 1295/1300 VILLAGE - RAJNAGAR, TAHASIL - JALESWAR, DISTRICT - BALASORE OF SMT LAXMIPRIYA PRUSTY- EC

1. This proposal is for environmental clearance for Rajnagar sand mine at Subarnarekha River bed, over a mining lease area of 5.48ha. located at khata no. - 377, plot no - 1295/1300, village - Rajnagar, Tahasil - Jaleswar, District Balasore with proposed excavation of 40,002 m3/year of sand of Smt. Laxmipriya Prusty.
2. **Category**: This proposal falls under Category "B1", 1(a) - Mining of Minerals as the Mining lease area is more than 5.0 Ha. as per the EIA notification 2006 and its subsequent amendments.
3. The mining lease has been granted to Smt. Laxmipriya Prusty, W/o-Ratikant Rout, resident of Balaramprasad village, P.S-Motanga of Dhenkanal district from Tahsildar cum-Competent Authority, Jaleswar, Dist-Baleswar, Odisha vide letter no. 5056 dated 20.11.2019.
4. Mining Plan has been approved by the Directorate of Geology & Mining, Bhubaneswar vide letter No.1061 dated 18.04.2018 for a period of 5 years.
5. The quarry has no other mines within 500 meters. It is a new sand quarry.
6. Mining lease is an identified sairat source in the DSR - page no. 35, sl.no. 23 of Annexure I.
7. **Location**: Rajnagar Sand Mine is at bank of Subarnarekha river on Khata No.377, Plot No.1295/1300 at village - Rajnagar, Tahasil – Jaleswar, District - Balasore (Odisha). The geo coordinates are Latitude: 21°48'30.9" N to 21°48'20.9"N & Longitude: E87°12'52.2" to 87°12'43.2"E. The area falls in Survey of India Topo sheet No.73O/1(F45P1).
8. **Connectivity**: The area is approachable by fair weather road. The nearest National Highway is NH – 60 about 3.25km, nearest railway station is at Jaleswar about 1.30km and nearest Airport is Netaji Subhas Chandra Bose International Airport, Kolkata at about 150 km from the mining site.
9. **TOR Details**: SEIAA has issued the Terms of Reference to quarry vide Proposal No SIA/OR/MIN/54634/2020 & letter no.9237/SEIAA, dated 14.10.2020 & File no: 54634/38-MINB1/09-2020.
10. **Public hearing**: Public hearing was conducted on date 11.05.2022 at 10:00AM, in the locality of the sand quarry, near Shikharpur Gram Panchayat Office, under Jaleswar Block under Balasore district.
11. **Issues raised during public hearing for this project –** Operation of the sand quarry as per the Environmental Rules and Regulation**,** Dust suppression, safety and protection of road during transportation, mode of transportation, cost of Sand, timing of mining and restriction of transportation of sand during night time.

Proceedings of the SEAC meeting held on 20.02.2023 (Old proposals – compliance received)

Environmental Scientist, SEAC

12. **Topography** - The lease area is almost flat land covered with sand, during monsoon season due to heavy flow of water; sand dunes are formed within the lease area. Mining will be carried out at 18mRL upto an maximum depth of 3m; 15 mRL will be the quarry floor at the end of the plan period. The river flows towards NE - SW direction.

13. **Total Reserves and Mining method**: Geological Reserves of project site is 164400m^3 and mineable reserves are 139563m^3. As per the mining plan, mining will be by means of opencast manual mining method. The proposed annual production capacity is 40,002cum and total production is 200010cum during the plan period.

14. **Water Requirement**: The total water requirement for the project estimated to be 5KLD i.e., for dust suppression (2KLD), greenbelt development (1.5KLD) and domestic uses (1.5KLD) and will be sourced from nearby available water resource and for drinking water it will be sourced from tanker.

15. **Waste water generation**: No liquid waste will be generated from mining activities. A small amount of domestic waste water from office toilet will be discharged into the soak pits/septic tank.

16. **Manpower**: Total manpower of 46 persons will be required for the proposed project.

17. **Power requirement**: No electricity required for operations of the mining, the mining will be worked out during day time only. The power required for office is minimal, shall be taken from the General Electric supply of the area.

18. **Greenbelt:** The plantation will be developed in the haul roads and other places. During plan period, it has been proposed by the lessee to plant 200 nos. of saplings, covering 1000sqm. of area.

19. **Baseline stud**y has been conducted during Post Monsoon Season of 2020 i.e., 01 October 2020 to 31 December 2020. Ambient Air Quality Monitoring made in 8 locations & the results shows the values of PM10 ranges from – 61.2µg/m3 to 89.8µg/m3, PM2.5 – 19.6µg/m3 to 27.8µg/m3, SO_2 – 5.8µg/m3 to 9.9µg/m3, NOx – 9.2µg/m3 -13.9 µg/m3. Water Quality Monitoring made in 6 locations for ground water and 4 locations for surface water. For ground water all parameters like TDS (322 to 405mg/l), pH (7.24 to 7.86), Chloride (84 mg/l to 101 mg/l), Fluoride (0.21mg/l to 0.40mg/l) etc. are found within permissible limits & fit for consumption and for surface water values of pH (7.24 to 7.56), Chloride (37– 41 mg/l) DO (6.8 to 7.1 mg/l) etc. are found within permissible limits & fit for consumption. Similarly, noise was monitored at 6 locations and value ranges from 34.2dB(A) – 50.5dB(A) during day time and 40.5dB(A) – 67.8dB(A) during night time.

20. **Project cost**: The estimated cost of the project is 10 lakhs. Cost for implementation of EMP is - Capital cost - Rs 145000 and Recurring cost - Rs 75000/annum. The CER budget allotted – Rs. 20,000.

21. **Environment Consultancy**: The proponent along with the consultant **M/s Green Circle Inc, Gujarat**, made a detailed presentation before the SEAC.

22. The SEAC in its meeting held on 29.11.2022 decided to take decision on the proposal after receipt of the following from the proponent:

Proceedings of the SEAC meeting held on 20.02.2023 (Old proposals – compliance received)

23. The proponent has furnished the compliance and the SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
i)	Replenishment Study Report details i.e., photographs, co-ordinates of pits, depth and volume of sand before and after monsoon period and correlate the result with the values obtained.	a) Photographs are attached as **Annexure-1**. b) Co-ordinates of pits are attached as **Annexure -2**. c) Depth of Sand is 1m. d) Volume of Sand before and after monsoon is 15950cum.	
ii)	Kissam details of land and NOC from Tahasildar for usage of approach road from proposed quarry to main road.	Kissam details & NOC from Tahasildar is attached as an **Annexure-3**.	complied
iii)	An undertaking that plantation shall be carried out both the side of haulage road.	Undertaking is attached as an **Annexure -4**.	complied
iv)	Authorization letter of the project proponent for engagement of Environmental Consultant for execution and monitoring of Environment Management Plan.	Authorization letter is attached as an **Annexure -5**.	complied
v)	Since, school and village are nearby, detailed guideline for plying of vehicles on the haulage road near village & school area for safety of school students and nearby habitation.	Authorization Letter as an **Annexure-6**.	Undertaking by PP to follow the guideline for plying of vehicles on the haulage road near village & school area.

24. The committee opined that this proposal needs further examination. Applied quantity is 40002 cum/annum. Figure given for replenishment in compliance letter is 15950 cum/annum. The Committee could not find replenishment study details in uploaded documents. Quantity to be allowed need to be confirmed. Secondly, there is a NGT case pending for Balasore dist. on DSR. It need to be examined from that angle also.

After detailed discussion, the SEAC decided to defer the proposal and take decision on the proposal after receipt of the following clarification / documents from the proponent;

a) Applied quantity is 40002 cum/annum. Figure given for replenishment in compliance letter is 15950 cum/annum. The Committee could not find replenishment study details in uploaded documents. Quantity to be allowed need to be confirmed. Secondly, there is a NGT case pending for Balasore dist. on DSR.

Member Secretary, SEAC

ANNEXURE- A

CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE FOR KAMARDA CHROMITE BLOCK (ML AREA: 107.240 HA) FOR PRODUCTION OF 0.30 MTPA CHROMITE ORE (ROM) WITH MAXIMUM EXCAVATION OF 2.50 MILLION CUM PER ANNUM THROUGH OPENCAST MINING LOCATED AT VILLAGE - TALANGI, KAMARDA & BALIPADA TAHASIL - SUKINDA, DISTRICT - JAJPUR OF SRI BIBHU DUTTA NANDA - EC.

A. SPECIFIC CONDITIONS:

1) Waste should be dumped on the earmarked sites within the mining lease area and no waste should be dumped outside the lease area.

2) The Project Proponent shall start the planation and cover at least 50% of the proposed area under plantation in the next 5 years. The density of the plantation should not be less than 2500 saplings/Ha. The species to be selected for the plantation should be in consultation with local forest department or any other expert agency engaged for the same. The Project Proponent shall keep the record of saplings planted, survival rate, area covered under plantation, location etc. In addition to this gap filling needs to be done to as and when require for maintaining the density of plantation. The PP shall submit the drone images of area before and after the plantation. PP shall carry out pilot study for phytoremediation of hexavalent chromium through IMMT, CSIR, Bhubaneswar. The budget earmarked for the plantation shall be kept in separate bank account and audited annually. PP shall submit the detail such as photographs (before & after with gee-location date & time), details of expert agency engaged, details of species planted, number of species planted, survival rate, density of plantation and outcome of the pilot study etc. to the Regional Office of MoEF&CC, Bhubaneswar and SEIAA, Odisha before 1st July of every year for the activities carried out during previous year.

3) Approval/permission of CGWA/SGWA shall be obtained before drawing ground water for the project activities. State Pollution Control Board (SPCB) concerned shall not issue Consent to Operate (CTO) till the project proponent obtains such permission.

4) The amount proposed under **Corporate Environment Responsibility (CER)** head should be kept in a separate bank account and should be audited annually. The PP should annually submit the audited statement and details of implementation of CER activities along with proof of activities viz. photographs (before & after with geo-location date & time), purchase documents, photographs & Geo-location of the infrastructures/facilities developed, etc. to the Regional Office of MoEF&CC, Bhubaneswar and SEIAA, Odisha before 1st July of every year for the activities carried out during previous year.

5) The amount (except occupational health) proposed under Environmental Management Plan (EMP) head should be kept in a separate bank account and should be audited annually. The PP should annually submit the audited statement and detailed environment monitoring report along with proof of activities viz. photographs (before & after with geo-location date & time), purchase documents, sampling reports, photographs& Geo-location of the infrastructures/facilities developed, details of persons engaged in Environment Management Cell etc. to the Regional Office of MoEF&CC, Bhubaneswar and SEIAA, Odisha before 1st July of every year for the

activities carried out during previous year.

6) The amount proposed under Occupational Health plan head should be kept in a separate bank account and should be audited annually. The PP should annually submit the audited statement and detailed environment monitoring report along with proof of activities viz. photographs (before & after with geo-location date & time), purchase documents, sampling reports, photographs& Geo-location of the infrastructures/facilities developed, details of persons engaged in Environment Management Cell etc. to the Regional Office of MoEF&CC, Bhubaneswar and SEIAA, Odisha before 1st July of every year for the activities carried out during previous year.

7) The Project Proponent shall set up an Environmental Management Cell comprises of persons having qualification and experience in the field of environment along with supporting staff. The details of the same needs to be submitted to the SEIAA, Odisha within 3 months of the grant of EC.

8) The project proponent shall give an undertaking by way of affidavit to comply with all the statutory requirements and judgment of Hon'ble Supreme Court dated the 2ndAugust 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors. before grant of ToR/ EC. The undertaking inter-alia include commitment of the PP not to repeat any such violation in future.

9) In case of violation of above undertaking, the ToR/Environmental Clearance shall be liable to be terminated forthwith.

10) The Environmental Clearance will not be operational till such time the Project Proponent complies with all the statutory requirements and judgment of Hon'ble Supreme Court dated the 2nd August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors.

11) State Government concerned shall ensure that mining operation shall not commence till the entire compensation levied, if any, for illegal mining paid by the Project Proponent through their respective Department of Mining & Geology in strict compliance of judgment of Hon'ble Supreme Court dated the 2nd August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors.

12) The Project Proponent shall implement the short term and long term measures proposed to be taken in order to get rid from the adversity of Cr (VI) contamination, needs to be implemented and status report of the same along with benefit occurred needs to be submitted to Regional Office of MoEF&CC, Bhubaneswar and SEIAA, Odisha annually.

13) The Project Proponent shall keep a record of each blasting viz. location, number of holes, delay assigned of each hole, explosive quantity of each hole, blasting pattern etc.

B. STANDARD CONDITIONS: (AS MINISTRY'S O.M NO 22-34/2018-IA.III DATED 8.01.2019 &16.01.2020)

Statutory compliance

14) This Environmental Clearance (EC) is subject to orders/ judgment of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, Common Cause Conditions as may be applicable.

15) The Project Proponent complies with all the statutory requirements and judgment of Hon'ble Supreme Court dated 2nd August,2017 in Writ Petition (Civil) No. 114 of 2014 in matter of Common Cause versus Union of India &Ors before commencing the mining operations.

16) The State Government concerned shall ensure that mining operation shall not be commenced till the entire compensation levied, if any, for illegal mining paid by the Project Proponent through their respective Department of Mining & Geology in strict compliance of Judgment of Hon'ble Supreme Court dated 2nd August, 2017 in Writ Petition (Civil) No. 114 of 2014 in matter of Common Cause versus Union of India & Ors.

17) This Environmental Clearance shall become operational only after receiving formal NBWL Clearance from MoEF&CC subsequent to the recommendations of the Standing Committee of National Board for Wildlife, if applicable to the Project.

18) This Environmental Clearance shall become operational only after receiving formal Forest Clearance (FC) under the provision of Forest Conservation Act, 1980, if applicable to the Project.

19) Project Proponent (PP) shall obtain Consent to Operate after grant of EC and effectively implement all the conditions stipulated therein. The mining activity shall not commence prior to obtaining Consent to Establish / Consent to Operate from the concerned State Pollution Control Board/Committee.

20) The Project Proponent shall adhere to the provision of the Mines Act, 1952, Mines and Mineral (Development & Regulation), Act, 2015 and rules & regulations made there under. PP shall adhere to various circulars issued by Directorate General Mines Safety (DGMS) and Indian Bureau of Mines from time to time.

21) The Project Proponent shall obtain consents from all the concerned land owners, before start of mining operations, as per the provisions of MMDR Act, 1957 and rules made there under in respect of lands which are not owned by it.

22) The Project Proponent shall follow the mitigation measures provided in MoEF&CC's Office Memorandum No. Z-11013/57/2014-1A. II (M), dated 29th October, 2014, titled "Impact of mining activities on Habitations-Issues related to the mining Projects wherein habitations and villages are the part of mine lease areas or Habitations and villages are surrounded by the mine lease area".

23) The Project Proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of surface water and from CGWA for withdrawal of ground water for the project.

24) A copy of EC letter will be marked to concerned Panchayat / local NGO etc. if any, from whom suggestion / representation has been received while processing the proposal.

25) State Pollution Control Board/Committee shall be responsible for display of this EC letter at its Regional office, District Industries Centre and Collector's office/ Tehsildar's Office for 30 days.

26) The Project Authorities should widely advertise about the grant of this EC letter by printing the same in at least two local newspapers, one of which shall be in vernacular language of the concerned area. The advertisement shall be done within 7 days of the issue of the clearance letter mentioning that the instant project has been accorded EC and copy of the EC letter is available with the

27) State Pollution Control Board/Committee and web site of the Ministry of Environment, Forest and Climate Change (www.parivesh.nic.in). A copy of the advertisement may be forwarded to the concerned MoEF&CC Regional Office for compliance and record.

28) The Project Proponent shall inform the MoEF&CC for any change in ownership of the mining lease. In case there is any change in ownership or mining lease is transferred than mining operation shall only be carried out after transfer of EC as per provisions of the para 11 of EIA Notification, 2006 as amended from time to time.

Air quality monitoring and preservation

29) The Project Proponent shall install a minimum of 3 (three) online Ambient Air Quality Monitoring Stations with 1 (one) in upwind and 2 (two) in downwind direction based on long term climatological data about wind direction such that an angle of 120° is made between the monitoring locations to monitor critical parameters, relevant for mining operations, of air pollution viz. PM 10, PM2.5, N02, CO and S02 etc. as per the methodology mentioned in NAAQS Notification No. B-29016/20/90/PCI/l, dated 18.11.2009 covering the aspects of transportation and use of heavy machinery in the impact zone. The ambient air quality shall also be monitored at prominent places like office building, canteen etc. as per the site condition to ascertain the exposure characteristics at specific places. The above data shall be digitally displayed within 03 months in front of the main Gate of the mine site.

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

Water quality monitoring and preservation

31) In case, immediate mining scheme envisages intersection of ground water table, then Environmental Clearance shall become operational only after receiving formal clearance from CGWA. In case, mining operation involves intersection of ground water table at a later stage, then PP shall ensure that prior approval from CGWA and MoEF&CC is in place before such mining operations. The permission for intersection of ground water table shall essentially be based on detailed hydro-geological study of the area.

32) Regular monitoring of the flow rate of the springs and perennial nallahs flowing in and around the mine lease shall be carried out and records maintain. The natural water bodies and or streams which are flowing in an around the village, should not be disturbed. The Water Table should be nurtured so as not to go down below the pre-mining period. In case of any water scarcity in the area, the Project Proponent has to provide water to the villagers for their use. A provision for regular monitoring of water table in open dug wall located in village should be incorporated to ascertain the impact of mining over ground water table. The Report on changes in Ground water level and quality shall be submitted on six- monthly basis to the Regional Office of the Ministry, CGWA and State Groundwater Department / State Pollution Control Board.

33) The Project Proponent shall regularly monitor and maintain records w.r.t. ground water level and quality in and around the mine lease by establishing a network of existing wells as well as new piezo-meter installations during the mining operation in consultation with Central Ground Water Authority/ State Ground Water Department. The Report on changes in Ground water level and quality shall be submitted on six-monthly basis to the Regional Office of the Ministry, CGWA and State Groundwater Department / State Pollution Control Board.

34) The Project Proponent shall undertake regular monitoring of natural water course/ water resources/ springs and perennial nallahs existing/ flowing in and around the mine lease and maintain its records. The project proponent shall undertake regular monitoring of water quality upstream and downstream of water bodies passing within and nearby/ adjacent to the mine lease and maintain its records. Sufficient number of gullies shall be provided at appropriate places within the lease for management of water. PP shall carryout regular monitoring w.r.t. pH and included the same in monitoring plan. The parameters to be monitored shall include their water quality vis-a-vis suitability for usage as per CPCB criteria and flow rate. It shall be ensured that no obstruction and/ or alteration be made to water bodies during mining operations without justification and prior approval of MoEF&CC. The monitoring of water courses/ bodies existing in lease area shall be carried out four times in a year viz. pre- monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January) and the record of monitored data may be sent regularly to Ministry of Environment, Forest and Climate Change and its Regional Office, Central Ground Water Authority and Regional Director, Central Ground Water Board, State Pollution Control Board and Central Pollution Control Board. Clearly showing the trend analysis on six-monthly basis.

35) Quality of polluted water generated from mining operations which include Chemical Oxygen Demand (COD) in mines run-off; acid mine drainage and metal contamination in runoff shall be monitored along with Total Suspended Solids (TDS), Dissolved Oxygen (DO), pH and Total Suspended Solids (TSS). The monitored data shall be uploaded on the website of the company as well as displayed at the project site in public domain, on a display board, at a suitable location near the main gate of the Company. The circular No. J- 20012/1/2006-IA.II (M) dated 27.05.2009 issued by Ministry of Environment, Forest and Climate Change may also be referred in this regard.

36) Project Proponent shall plan, develop and implement rainwater harvesting measures on long term basis to augment ground water resources in the area in consultation with Central Ground Water Board/ State Groundwater Department. A report on amount of

water recharged needs to be submitted to Regional Office MoEF&CC annually.

37) Industrial waste water (workshop and waste water from the mine) should be properly collected and treated so as to conform to the notified standards prescribed from time to time. The standards shall be prescribed through Consent to Operate (CTO) issued by concerned State Pollution Control Board (SPCB). The workshop effluent shall be treated after its initial passage through Oil and grease trap.

38) The water balance/water auditing shall be carried out and measure for reducing the consumption of water shall be taken up and reported to the Regional Office of the MoEF&CC and State Pollution Control Board/Committee.

Noise and vibration monitoring and prevention

39) The peak particle velocity at 500m distance or within the nearest habitation, whichever is closer shall be monitored periodically as per applicable DGMS guidelines.

40) The illumination and sound at night at project sites disturb the villages in respect of both human and animal population. Consequent sleeping disorders and stress may affect the health in the villages located close to mining operations. Habitations have a right for darkness and minimal noise levels at night. PPs must ensure that the biological clock of the villages is not disturbed; by orienting the floodlights/ masks away from the villagers and keeping the noise levels well within the prescribed limits for day /night hours.

41) The Project Proponent shall take measures for control of noise levels below 85 dBA in the work environment. The workers engaged in operations of HEMM, etc. should be provided with ear plugs /muffs. All personnel including laborers working in dusty areas shall be provided with protective respiratory devices along with adequate training, awareness and information on safety and health aspects. The PP shall be held responsible in case it has been found that workers/ personals/ laborers are working without personal protective equipment.

Mining plan

42) The Project Proponent shall adhere to the working parameters of mining plan which was submitted at the time of EC appraisal wherein year-wise plan was mentioned for total excavation i.e. quantum of mineral, waste, over burden, inter burden and top soil etc.. No change in basic mining proposal like mining technology, total excavation, mineral & waste production, lease area and scope of working (viz. method of mining, overburden & dump management , O.B & dump mining, mineral transportation mode, ultimate depth of mining etc.) shall not be carried out without prior approval of the Ministry of Environment, Forest and Climate Change, which entail adverse environmental impacts, even if it is a part of approved mining plan modified after grant of EC or granted by State Govt., in the form to Short Term Permit (STP), Query license or any other name.

43) The Project Proponent shall get the Final Mine Closure Plan along with Financial Assurance approved from Indian Bureau of Mines/Department of Mining & Geology as required under the Provision of the MMDR Act, 1957 and Rules/ Guidelines made there under. A copy of approved final mine closure plan shall be submitted within 2 months of the approval of the same from the competent authority to the concerned Regional Office of the Ministry of Environment, Forest and Climate Change for record and

verification.

44) The land-use of the mine lease area at various stages of mining scheme as well as at the end-of-life shall be governed as per the approved Mining Plan. The excavation vis-a-vis backfilling in the mine lease area and corresponding afforestation to be raised in the reclaimed area shall be governed as per approved mining plan. PP shall ensure the monitoring and management of rehabilitated areas until the vegetation becomes self-sustaining. The compliance status shall be submitted half-yearly to the MoEF&CC and its concerned Regional Office.

Land reclamation

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

46) The reject/waste generated during the mining operations shall be stacked at earmarked waste dump site(s) only. The physical parameters of the waste dumps like height, width and angle of slope shall be governed as per the approved Mining Plan as per the guidelines/circulars issued by DGMS w.r.t. safety in mining operations shall be strictly adhered to maintain the stability of waste dumps.

47) The reclamation of waste dump sites shall be done in scientific manner as per the Approved Mining Plan cum Progressive Mine Closure Plan.

48) The slope of dumps shall be vegetated in scientific manner with suitable native species to maintain the slope stability, prevent erosion and surface run off. The selection of local species regulates local climatic parameters and help in adaptation of plant species to the microclimate. The gullies formed on slopes should be adequately taken care of as it impacts the overall stability of dumps. The dump mass should be consolidated with the help of dozer/ compactors thereby ensuring proper filling/ leveling of dump mass. In critical areas, use of geo textiles/ geo-membranes / clay liners / Bentonite etc. shall be undertaken for stabilization of the dump.

49) The Project Proponent shall carry out slope stability study in case the dump height is more than 30 meters. The slope stability report shall be submitted to concerned regional office of MoEF&CC.

50) Catch drains, settling tanks and siltation ponds of appropriate size shall be constructed around the mine working, mineral yards and Top Soil/OBA/Vaste dumps to prevent run off of water and flow of sediments directly into the water bodies (Nallah/ River/ Pond etc.). The collected water should be utilized for watering the mine area, roads, green belt development, plantation etc. The drains/ sedimentation sumps etc. shall be de-silted regularly, particularly after monsoon season, and maintained properly.

51) Check dams of appropriate size, gradient and length shall be constructed around mine pit and OB dumps to prevent storm run-off and sediment flow into adjoining water bodies. A safety margin of 50% shall be kept for designing of sump structures over and above peak rainfall (based on 50 years data) and maximum discharge in the mine and

its adjoining area which shall also help in providing adequate retention time period thereby allowing proper settling of sediments/ silt material. The sedimentation pits/ sumps shall be constructed at the corners of the garland drains.

52) The top soil, if any, shall temporarily be stored at earmarked site(s) within the mine lease only and should not be kept unutilized for long. The physical parameters of the top soil dumps like height, width and angle of slope shall be governed as per the approved Mining Plan and as per the guidelines framed by DGMS w.r.t. safety in mining operations shall be strictly adhered to maintain the stability of dumps. The topsoil shall be used for land reclamation and plantation purpose.

53) The mining lease holders shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc.

54) Slope study by an expert of repute of water dumps to be done and submitted within six months from the date of issue of EC to SEAC / SEIAA

Transportation

55) No Transportation of the minerals shall be allowed in case of roads passing through villages/ habitations. In such cases, PP shall construct a 'bypass' road for the purpose of transportation of the minerals leaving an adequate gap (say at least 200 meters) so that the adverse impact of sound and dust along with chances of accidents could be mitigated. All costs resulting from widening and strengthening of existing public road network shall be borne by the PP in consultation with nodal State Govt. Department. Transportation of minerals through road movement in case of existing village/ rural roads shall be allowed in consultation with nodal State Govt. Department only after required strengthening such that the carrying capacity of roads is increased to handle the traffic load.

56) The pollution due to transportation load on the environment will be effectively controlled and water sprinkling will also be done regularly. Vehicular emissions shall be kept under control and regularly monitored. Project should obtain Pollution Under Control (PUC) certificate for all the vehicles from authorized pollution testing centers.

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

58) Haulage road shall be developed and maintained perennially and perpetually by the proponent in construction with the concerned authority of the Govt. and to this effect, the proponent shall submit an undertaking in form of a legal affidavit

59) Traffic density study if not done by domain expert, then the expert to be ratified / authenticated by domain expert and submitted within a month time.

Green Belt

60) The Project Proponent shall develop greenbelt in 7.5m wide safety zone all along the mine lease boundary as per the guidelines of CPCB in order to arrest pollution emanating from mining operations within the lease. The whole Green belt shall be developed within first 5 years starting from windward side of the active mining area. The development of greenbelt shall be governed as per the EC granted by the Ministry irrespective of the stipulation made in approved mine plan.

61) The Project Proponent shall carryout plantation/ afforestation in backfilled and reclaimed area of mining lease, around water body, along the roadsides, in community areas etc. by planting the native species in consultation with the State Forest Department/ Agriculture Department/ Rural development department/ Tribal Welfare Department/ Gram Panchayat such that only those species be selected which are of use to the local people. The CPCB guidelines in this respect shall also be adhered. The density of the trees should be around 2500 saplings per Hectare. Adequate budgetary provision shall be made for protection and care of trees.

62) The Project Proponent shall make necessary alternative arrangements for livestock feed by developing grazing land with a view to compensate those areas which are coming within the mine lease. The development of such grazing land shall be done in consultation with the State Government. In this regard, Project Proponent should essentially implement the directions of the Hon'ble Supreme Court with regard to acquisition of grazing land. The sparse trees on such grazing ground, which provide mid-day shelter from the scorching sun, should be scrupulously guarded/ protected against felling and plantation of such trees should be promoted.

63) The Project Proponent shall undertake all precautionary measures for conservation and protection of endangered flora and fauna and Schedule-1 species during mining operation. A Wildlife Conservation Plan shall be prepared for the same clearly delineating action to be taken for conservation of flora and fauna. The Plan shall be approved by Chief Wild Life Warden of the State Govt.

64) And implemented in consultation with the State Forest and Wildlife Department. A copy of Wildlife Conservation Plan and its implementation status (annual) shall be submitted to the Regional Office of the Ministry.

Human Health Issues

65) The Project Proponent shall appoint an Occupational Health Specialist for Regular as well as Periodical medical examination of the workers engaged in the mining activities, as per the DGMS guidelines. The records shall be maintained properly. PP shall also carryout Occupational health check-ups in respect of workers which are having ailments like BP, diabetes, habitual smoking, etc. The check-ups shall be undertaken once in six months and necessary remedial/ preventive measures be taken. A status report on the same may be sent to MoEF&CC Regional Office and DGMS on half-yearly basis.

66) The Project Proponent must demonstrate commitment to work towards 'Zero Harm' from their mining activities and carry out Health Risk Assessment (HRA) for identification workplace hazards and assess their potential risks to health and determine appropriate control measures to protect the health and wellbeing of workers

and nearby community. The proponent shall maintain accurate and systematic records of the HRA. The HRA for neighborhood has to focus on Public Health Problems like Malaria, Tuberculosis, HIV, Anaemia, Diarrhoea in children under five, respiratory infections due to bio mass cooking. The proponent shall also create awareness and educate the nearby community and workers for Sanitation, Personal Hygiene, Hand washing, not to defecate in open, Women Health and Hygiene (Providing Sanitary Napkins), hazard of tobacco and alcohol use. The Proponent shall carryout base line HRA for all the category of workers and thereafter every five years.

67) The Proponent shall carry out Occupational health surveillance which be a part of HRA and include Biological Monitoring where practical and feasible, and the tests and investigations relevant to the exposure (e.g. for Dust a X-Ray chest; For Noise Audiometric; for Lead Exposure Blood Lead, For Welders Full Ophthalmologic Assessment; for Manganese Miners a complete Neurological Assessment by a Certified Neurologist, and Manganese (Mn) Estimation in Blood; For Inorganic Chromium- Fortnightly skin inspection of hands and forearms by a responsible person. Except routine tests all tests would be carried out in a Lab accredited by NABH. Records of Health Surveillance must be kept for 30 years, including the results of and the records of Physical examination and tests. The record of exposure due to materials like Asbestos, Hard Rock Mining, Silica, Gold, Kaolin, Aluminium, Iron, Manganese, Chromium, Lead, Uranium need to be handed over to the Mining Department of the State in case the life of the mine is less than 30 years. It would be obligatory for the State Mines Departments to make arrangements for the safe and secure storage of the records including X-Ray. Only conventional X-Ray will be accepted for record purposes and not the digital one). X-Ray must meet ILO criteria (17 x14 inches and of good quality).

68) The Proponent shall maintained a record of performance indicators for workers which includes (a) there should not be a significant decline in their Body Mass Index and it should stay between 18.5 -24.9, (b) the Final Chest X-Ray compared with the base line X-Ray should not show any capacities ,(c) At the end of their leaving job there should be no Diminution in their Lung Functions Forced Expiratory Volume in one second (FEV1),Forced Vital Capacity (FVC), and the ratio) unless they are smokers which has to be adjusted, and the effect of age, (d) their hearing should not be affected. As a proof an Audiogram (first and last need to be presented), (e) they should not have developed any Persistent Back Pain, Neck Pain, and the movement of their Hip, Knee and other joints should have normal range of movement, (f) they should not have suffered loss of any body part. The record of the same should be submitted to the Regional Office, MoEF&CC annually along with details of the relief and compensation paid to workers having above indications.

69) The Project Proponent shall ensure that Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects.

70) Project Proponent shall make provision for the housing for workers/labors or shall construct labor camps within/outside (company owned land) with necessary basic infrastructure/ facilities like fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche for kids etc. The housing may be provided in the form of temporary structures which can be removed after the completion of the project

related infrastructure. The domestic waste water should be treated with STP in order to avoid contamination of underground water.

71) The proponent shall implement the mitigative measures as suggested in the Study Report on effect of chromite mines to nearest human habitation.

72) Occupational health check-up shall be done by occupational health expert periodically for employees as well as nearby villagers.

Corporate Environment Responsibility (CER)

73) The activities and budget earmarked for Corporate Environmental Responsibility (CER) as per Ministry's O.M No 22-65/2017-IA. II (M) dated 01.05.2018 or as proposed by EAC should be kept in a separate bank account. The activities proposed for CER shall be implemented in a time bound manner and annual report of implementation of the same along with documentary proof viz. photographs, purchase documents, latitude & longitude of infrastructure developed & road constructed needs to be submitted to Regional Office MoEF&CC annually along with audited statement.

74) Project Proponent shall keep the funds earmarked for environmental protection measures in a separate account and refrain from diverting the same for other purposes. The Year wise expenditure of such funds should be reported to the MoEF&CC and its concerned Regional Office.

Miscellaneous

75) The Project Proponent shall prepare digital map (land use & land cover) of the entire lease area once in five years purpose of monitoring land use pattern and submit a report to concerned Regional Office of the MoEF&CC, Bhubaneswar and SEIAA, Odisha.

76) The Project Authorities should inform to the Regional Office regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.

77) The project proponent shall install solar panel inside the mine to generate 5KW of power required for Administrative Building as proposed.

78) The Project Proponent shall submit six monthly compliance reports on the status of the implementation of the stipulated environmental safeguards to the MOEF&CC & its concerned Regional Office, Central Pollution Control Board and State Pollution Control Board.

79) A separate 'Environmental Management Cell' with suitable qualified manpower should be set-up under the control of a Senior Executive. The Senior Executive shall directly report to Head of the Organization. Adequate number of qualified Environmental Scientists and Mining Engineers shall be appointed and submit a report to RO, MoEF&CC, Bhubaneswar and SEIAA, Odisha.

80) The concerned Regional Office of the MoEF&CC shall randomly monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the MoEF&CC officer(s) by furnishing the requisite data / information / monitoring reports.

81) In pursuant to Ministry's O.M No 22-34/2018-IA.III dated 16.01.2020 to comply with the direction made by Hon'ble Supreme Court on 8.01.2020 in W.P. (Civil) No 114/2014 in

the matter Common Cause vs Union of India, the mining lease holder shall after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to other mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc.

82) The SEIAA, Odisha or any other competent authority may alter/modify the above conditions or stipulate any further condition in the interest of environment protection.

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

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

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

F. No. 11-599/ 2014-FC
Government of India
Ministry of Environment, Forest and Climate Change
(Forest Conservation Division)

Indira Paryavaran Bhawan
Aliganj, Jorbagh Road
New Delhi - 110 003
Dated: 1st April, 2015

To

The Principal Secretary (Forests)
All State /Union Territory Governments

Sub: Guidelines for diversion of forest land for non-forest purposes under the Forest (Conservation) Act 1980- Submission of proposals to obtain approval for diversion of entire forest land located within a mining lease.

Sir,

I am directed to refer to this Ministry's letter No. 11-362/2012-FC dated 1st February, 2013 on the above-mentioned subject, wherein this Ministry informed *inter-alia* that in case of mines where approval under the Forest (Conservation) Act, 1980 (FC Act) for diversion of only a part of forest land located within the mining leases has been obtained, after two years from the issue of the said letter mining will be allowed only if the user agency either obtains approval under the FC Act for the entire forest land located within the mining lease or surrenders such forest land for which approval under the FC Act has not been obtained and execute a revised mining lease for the reduced lease area.

2. This Ministry received representations wherein it has *inter-alia* been stated that it is practically not possible to obtain approval under the FC Act for diversion of the entire forest land in two years as the whole process takes more than two years. This Ministry was requested to issue the revised guidelines to prevent disruption in the ongoing mining operations.

3. This Ministry has examined the matter in consultation with the Department of Legal Affairs, Ministry of Law and Justice. After careful examination of the matter and the advice of the Department of Legal Affairs, Ministry of Law and Justice, this Ministry in supersession of the said letter No. 11-362/2012-FC dated 1st February, 2013, hereby decides as below:

(i) Henceforth, in case of mining leases, including those of Government Authorities, having forest land in part or in full, approval of Central Government under Section-2 (iii) of the FC Act, for the entire forest land located within a mining lease shall be obtained before execution (including by way of renewal) of a mining lease in accordance with the provisions of the Mines and Minerals (Development and Regulation) Act, 1957 (MMDR Act) and the Rules framed thereunder.

(ii) User agencies while submitting application to obtain prior approval under Section 2 (iii) of the FC Act, if they so desire, may also seek prior approval of Central Government under Section 2 (ii) of the FC Act for use of the whole or a part of the forest land located within the mining lease for mining and allied non-forest activities. Area of forest land for which approval under Section 2 (ii) and 2 (iii) is sought shall separately be indicated in the proposals submitted by the user agencies. Where at the time of execution of the mining lease prior approval of Central Government under Section 2 (ii) to use the entire forest land falling in the mining lease for mining and allied non-forest activities is not obtained, the user agencies may submit proposal under Section 2 (ii) of the FC Act for the whole or a part of the remaining forest land falling within the mining lease, as and when such forest land is proposed to be utilised for mining and allied non-forest activities.

(iii) Central Government after examination of a proposal and after such other enquiry as it may consider necessary, may accord approvals under Section 2 (iii) and 2 (ii) of the FC Act for assigning on lease and to utilize for mining and allied non-forest activities respectively, such areas of forest land, as it may consider expedient, or reject the same.

(iv) Prior approval of Central Government under Section 2 (iii) of the FC Act shall be subject to payment of Net Present Value (NPV) of the forest land allowed to be assigned on mining lease. Similarly, prior approval of Central Government under Section 2 (ii) shall be subject to other usual conditions apart from realization of NPV of the forest land allowed to be utilised for mining and other allied non-forest activities.

(v) In case of existing mining leases having forest land in part or in full, where approval under Section 2 of the FC Act for a part of the forest land has only been obtained, Central Government hereby accords general approval under Section 2 (iii) of the FC Act for the remaining area of the forest land falling within such mining leases, subject to following conditions:

(a) State Government shall, within a period of one year from the date of issue of this letter, realize from the user agency, NPV of the entire forest land falling in the mining lease, in case NPV of such forest land has not already been realised;

(b) In case State Government fails to realize from the user agency, NPV of the entire forest land falling in a mining lease within a period of one year from the date of issue of this letter, this general approval in respect of such mining lease, shall be kept in abeyance, and shall be deemed to have been kept in abeyance, and all mining activities in such mining lease shall be stopped, till such time, the NPV of such forest land is realised by the State Government;

(c) The general approval shall be valid for a period co-terminus with the period of mining lease in accordance with the provisions of the Mines and Minerals (Development and Regulation) Act, 1957, as amended, and the Rules framed thereunder;

(d) This general approval does not, in any manner, exempt a user agency from obtaining prior approval under Section 2(ii) of the FC Act in regard to such area of forest land which is to be used for non-forest purpose;

(e) Grant of this general approval under Section 2 (iii) does not, in any manner, create any right or equity in favour of the user agency for grant of approval under Section 2 (ii) of the FC Act and decision on proposals under Section 2 (ii) will be taken purely on the merit of each case;

(f) This general approval will not be applicable to the forest land for which Central Government before the issue of this letter has already declined approval under Section 2 of the FC Act; and

(g) Grant of this general approval does not in any manner, exonerate the concerned authorities in the State Government or in any other Authority, from the proceedings under Section 3A and 3B of the FC Act, liable to be initiated for violation, if any, of the FC Act committed by them by assigning such forest land on mining lease without obtaining prior approval of Central Government under Setion-2 of the FC Act.

(vi) The user agency shall be responsible for protection of the forest land located in a mining lease for which prior approval of Central Government under Section 2 (iii) of FC Act, including by way of the afore-mentioned general approval, has only been obtained. However, administrative and management control of such forest land will remain with State Forest Department or other forest land owning agencies and the forests will be managed in accordance with the approved management plan till such time it is not diverted for non-forest purpose, *i.e.*, mining and remains unbroken.

This issues with approval of the Hon'ble Minister of State (Independent Charge) for Environment, Forest and Climate Change.

Yours faithfully,

(H.C. Chaudhary)
Director

Copy to:-

1. Prime Minister's Office (***Kind attn.:*** Shri Santosh D. Vaidya, Director).
2. Secretary, Ministry of Mines, Government of India.
3. Secretary, Ministry of Coal, Government of India.
4. Secretary, Ministry of Steel, Government of India.
5. Principal Chief Conservator of Forests, all States/UTs.
6. Nodal Officer, the Forest (Conservation) Act, 1980, all States/UTs.
7. All Regional Offices, Ministry of Environment, Forest and Climate Change (MoEFCC).
8. Joint Secretary, In-charge, Impact Assessment Division, MoEF.

9. PS to the Hon'ble Minister of State (Independent Charge) for Environment, Forest and Climate Change.
10. Chairman, State Environment Impact Assessment Authority, all States/UTs.
11. Member-Secretary, State Environment Impact Assessment Authority, all States/UTs.
12. All Directors/ Assistant Inspector General of Forests in Forest Conservation Division, MoEFCC.
13. All Advisors/ Directors/ Dy. Directors in the Impact Assessment Division, MoEFCC.
14. Director, Regional Office (Headquarters), MoEFCC. .
15. Sr. Director (Technical), NIC, MoEFCC with a request to place a copy of this letter on website of this Ministry.
16. Sr. PPS to the Secretary, Ministry of Environment, Forest and Climate Change.
17. Sr. PPS to Director General of Forests and Special Secretary, Ministry of Environment, Forest and Climate Change.
18. Sr. PPS to Addl. Director General of Forests (Forest Conservation), Ministry of Environment, Forest and Climate Change.
19. PS to Inspector General of Forests (Forest Conservation), Ministry of Environment, Forest and Climate Change.
20. Guard File.

(H.C. Chaudhary)
Director

ANNEXURE- C

CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE OF M/S A-3 MINERALS & METAL EXPORTS PVT. LTD FOR CHROME ORE BENEFICIATION UNIT OF THROUGHPUT CAPACITY 18,500 TPA OVER AN AREA OF 2.54 ACRE AT VILLAGE- BYREE, PO- BYREE, DIST- JAJPUR FOR OF SRI AKSHAYA KUMAR SAMAL – EC

I. Statutory compliance:

(i) The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1986, in case of the diversion of forest land for non-forest purpose involved in the project.

(ii) The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.

(iii) The project proponent shall prepare a Site-Specific Conservation Plan & Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan / Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report, (incase of the presence of schedule-I species in the study area)

(iv) The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State pollution Control Board.

(v) The project proponent shall obtain the necessary permission from the Central Ground Water Authority and other concerned authority, in case of drawl of ground water / from the competent authority concerned in case of drawl of surface water required for the project.

(vi) The project proponent shall obtain authorization under the Hazardous and other Waste Management Rules, 2016 as amended from time to time.

II. Air quality monitoring and preservation

(i) The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through labs recognized under Environment (Protection) Act, 1986.

(ii) The project proponent shall submit monthly summary report of continuous stack emission and air quality monitoring and results of manual stack monitoring and manual monitoring of air quality /fugitive emissions to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.

(iii) Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply

prescribed stack emission and fugitive emission standards.

(iv) The project proponent use leak proof trucks/dumpers carrying ore and other raw materials and cover them with tarpaulin.

(v) Wind shelter fence and chemical spraying shall be provided on the raw material stock piles.

(vi) Design the ventilation system for adequate air changes as per ACGIH document for all tunnels, motor houses, Oil Cellars.

(vii) The project proponent shall carry out conditioning of the ore with water to mitigate fugitive dust emission, without affecting flow of ore in the ore processing and handling areas.

(viii) Effective safeguard measures such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of air pollutants such as haul road, loading and unloading point and transfer points. It shall be ensured that the Ambient Air Quality parameters conform to the National ambient air quality standards.

(ix) The transportation of mineral shall be carried out through the covered trucks. Vehicular emissions shall be kept under control and regularly monitored. Measures shall be taken for maintenance of vehicles used in beneficiation operations and in transportation of ore to the beneficiation plant. The vehicles carrying the mineral shall not be overloaded.

(x) Mineral handling area shall be provided with adequate number of high efficiency dust extraction system. Loading and unloading areas including all the transfer points should also have efficient dust control arrangements. These should be properly maintained and operated.

(xi) Occupational health surveillance program of the workers shall be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed. Health records of the workers shall be maintained.

(xii) Regular Ambient Air Quality Monitoring shall be carried out. The monitoring stations will be set up in consultation with the SPCB. At least four ambient air quality monitoring stations shall be established in the downward direction as well as where maximum ground level concentration of $PM_{2.5}$, PM_{10}, SO_2 and NOx are anticipated in consultation with the State Pollution control Board. It will be ensured that at least one monitoring station is set up in up-wind & in down-wind direction along with those in other directions. The instruments used for ambient air quality monitoring shall be calibrated regularly.

(xiii) Data on ambient air quality ($PM_{2.5}$, PM_{10}, SO_2, NOx) shall be regularly submitted to the Ministry including its Regional office located at Bhubaneswar and the State Pollution Control Board/Central Pollution Control Board once in six months.

III. Water quality monitoring and preservation

(i) The project proponent shall monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometers/sampling wells in the plant

and adjacent areas through labs recognized under Environment (Protection) Act, 1986 and NABL accredited laboratories.

(ii) Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.

(iii) Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.

(iv) The project proponent shall practice rainwater harvesting to maximum possible extent.

(v) The effluent from the ore beneficiation plant shall be treated in the tailing thickener and the tailings slurry shall be transported through a closed pipeline to the tailing pond.

(vi) The tailing pond shall be lined with appropriate impervious lining on all sides as well as the bottom to prevent any leachate going from the tailing pond into groundwater.

(vii) The garland drain shall be constructed around the tailing pond before the starting operation on the project.

(viii) The decanted water from the tailing pond shall be re-circulated and there should be zero discharge from the tailing pond.

(ix) Appropriate technology shall be used for maximum recovery of ore in order to reduce slurry discharge and to increase the life of the tailing pond.

(x) Garland drains with appropriate size, gradient and length shall be constructed to arrest silt and sediment flows from ore dumps and directly into the water bodies. The water so collected shall be utilized for watering the roads, green belt development etc. The drains shall be regularly desilted particularly after monsoon and maintained properly.

(xi) Effluents containing Cr+6 shall be treated to meet the prescribed standards before reuse. Effluent Treatment Plant should be provided for treatment of wastewater generated from the beneficiation plant.

(xii) Run off from the mineral and reject dumps and other surface run off should be analyzed for Cr+6 and in case its concentration is found higher than the permissible limit the water should be treated before reuse.

(xiii) Adhere to “Zero Liquid Discharge”.

(xiv) Regular monitoring of water quality for surface water sources as well as ground water sources shall be carried out. The groundwater shall be monitored downstream of beneficiation plant as well as tailing pond upto groundwater table and record of monitoring data should be maintained and submitted on six monthly basis to the Ministry of Environment and Forests, its Regional Office, Bhubaneswar, the Central Ground Water Authority, the Regional Director Central Ground Water Board and the State Pollution Control Board.

(xv) Suitable rainwater harvesting measures on long term basis shall be planned and implemented in consultation with the Regional Director, Central Ground Water Board.

(xvi) Appropriate mitigative measures shall be taken to prevent pollution of the nearby surface water source in consultation with the State Pollution control Board.

IV. Noise monitoring and prevention

(i) Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Office, MoEF&CC, Govt. of India, Bhubaneswar as well as SEIAA, Odisha as a part of six-monthly compliance report.

(ii) The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time

V. Energy Conservation measures

(i) Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly;

(ii) Provide LED lights in their offices and residential areas.

VI. Waste management

(i) The waste oil, grease and other hazardous waste shall be disposed of as per the Hazardous & Other waste (Management & Transboundary Movement) Rules, 2016

(ii) Kitchen waste shall be composted or converted to biogas for further use.(/o be decided on case to case basis depending on type and size of plant)

(iii) Separate impervious concrete pits for disposal of sludge shall be provided for the safe disposal of sludge generated from the beneficiation operation.

VII. Green Belt and EMP

(i) Green belt shall be developed in an area equal to 33% of the plant area with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant

(ii) The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration including plantation.

(iii) Plantation shall be raised all around the beneficiation plant site and the tailing pond around the plant, tailing disposal area, roads etc. by planting the native species in consultation with the local DFO/ Agriculture Department.

VIII. Human Health Issues

(i) Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.

(ii) The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms of Factory Act.

(iii) Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile

a) STP, safe drinking water, medical health care, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

(iv) Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.

IX. Corporate Environment Responsibility

(i) The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-1 A.III dated 1st May 2018, as applicable, regarding Corporate Environment Responsibility.

(ii) The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest /wildlife norms/ conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the Regional Office, MoEF&CC, Govt. of India, Bhubaneswar as well as SEIAA, Odisha as a part of six-monthly report.

(iii) A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.

(iv) Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Regional Office, MoEF&CC, Govt. of India, Bhubaneswar as well as SEIAA, Odisha along with the Six Monthly Compliance Report.

(v) Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out

(vi) All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Mineral Beneficiation plants shall be implemented.

X. Miscellaneous

(i) The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this

shall also be displayed in the project proponent's website permanently.

(ii) The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.

(iii) The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.

(iv) The construction and demolition wastes to be generated from the proposed project shall be disposed of in accordance with the provision under "Construction & Demolition Wastes Management Rules 2016".

(v) The project proponent shall monitor the criteria pollutants level namely; PM_{10}, SO_2 , NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.

(vi) The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.

(vii) The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.

(viii) The project proponent shall inform the Regional Office, MoEF&CC, Govt. of India, Bhubaneswar as well as SEIAA, Odisha the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.

(ix) The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.

(x) The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report and also that during their presentation to the State Level Expert Appraisal Committee.

(xi) No further expansion or modifications in the plant shall be carried out without prior approval of the SEIAA, Odisha.

(xii) Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.

(xiii) The SEIAA, Odisha may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.

Environmental Scientist, SEAC

(xiv) The SEIAA, Odisha reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.

(xv) The Regional Office, MoEF&CC, Govt. of India, Bhubaneswar shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.

(xvi) The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.

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

Environmental Scientist, SEAC

ANNEXURE - D

CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE FOR DECORATIVE STONE MINES

A. Specific conditions

1. The Project Proponent shall obtain consent from the State Pollution Control Board, Odisha and effectively implement all the conditions stipulated therein.
2. Project Proponent shall appoint an Occupational Health Specialist for Regular and Periodical medical examination of the workers engaged in the Project and records maintained; also, Occupational health check-ups for workers having some ailments like BP, diabetes, habitual smokers, etc. shall be undertaken once in six months and necessary remedial/preventive measures taken accordingly. Recommendations of National Institute for Labour for ensuring good occupational environment for mine workers would also be adopted; All the old age people of the surrounding villages may be provided medical facilities.
3. Transport of minerals shall be done either by dedicated road or it should be ensured that the trucks/dumpers carrying the mineral should not be allowed to pass through the villages. The Project Proponent shall ensure that the road may not be damaged due to transportation of the mineral; and transport of minerals will be as per IRC Guidelines with respect to complying with traffic congestion and density.
4. Project Proponent shall ensure the safeguard and wellbeing of villagers and school, regular health monitoring of all residents in the area and the compliance Report shall be submitted to the Regional office of the Ministry and SEIAA, Odisha.

B. Standard conditions

1. A Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the SEIAA, Odisha 5 years in advance of final mine closure for approval.
2. No mining activities will be allowed in forest area, if any, for which the Forest Clearance is not available.
3. No change in mining technology and scope of working should be made without prior approval of the SEIAA, Odisha.
4. No change in the calendar plan including excavation, quantum of mineral and waste should be made.
5. The project proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of water (surface water and ground water) for the project.
6. Mining shall be carried out as per the provisions outlined in the approved mining plan as well as by abiding to the guidelines of Directorate General Mines Safety (DGMS).
7. Protection of vegetation in the surrounding areas, and proper storage of solid waste, subgrade ore and their use have to be given priority during mining operation.
8. Digital processing of the entire lease area using remote sensing technique shall be

carried out regularly once in three years for monitoring land use pattern and report submitted to Ministry of Environment, Forest and Climate Change its Regional Office and SEIAA, Odisha.

9. Effective safeguard measures such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of PM10 and PM2.5 such as haul road, loading and unloading point and transfer points. Fugitive dust emissions from all the sources shall be controlled regularly. It shall be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard. Monitoring of Ambient Air Quality to be carried out based on the Notification 2009, as amended from time to time by the Central Pollution Control Board.

10. Regular monitoring of ground water level and quality shall be carried out in and around the mine lease by establishing a network of existing wells and constructing new piezometers during the mining operation. The project proponent shall ensure that no natural water course and/or water resources shall be obstructed due to any mining operations. The monitoring shall be carried out four times in a year pre- monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January) and the data thus collected may be sent regularly to Ministry of Environment, Forest and Climate Change and its Regional Office, Central Ground Water Authority and Regional Director, Central Ground Water Board.

11. Transportation of the minerals by road passing through the village shall not be allowed. A 'bypass' road should be constructed (say, leaving a gap of at least 200 meters) for the purpose of transportation of the minerals so that the impact of sound, dust and accidents could be mitigated. The project proponent shall bear the cost towards the widening and strengthening of existing public road network in case the same is proposed to be used for the Project. No road movement should be allowed on existing village road network without appropriately increasing the carrying capacity of such roads.

12. The illumination and sound at night at project sites disturb the villages in respect of both human and animal population. Consequent sleeping disorders and stress may affect the health in the villages located close to mining operations. Habitations have a right for darkness and minimal noise levels at night. PPs must ensure that the biological clock of the villages is not disturbed; by orienting the floodlights/ masks away from the villagers and keeping the noise levels well within the prescribed limits for day light/night hours.

13. Sufficient number of Gullies to be provided for better management of water. Regular Monitoring of pH shall be included in the monitoring plan and report shall be submitted to the Ministry of Environment, Forest and Climate Change and its Regional Office on six monthly basis.

14. There shall be planning, developing and implementing facility of rainwater harvesting measures on long term basis and implementation of conservation measures to augment ground water resources in the area in consultation with Central Ground Water Board.

15. The Project Proponent has to take care of gullies formed on slopes. Dump mass should be consolidated with proper filling/leveling with the help of dozer/compactors.

16. The reclamation at waste dump sites shall be ecologically sustainable. Scientific reclamation shall be followed. The local species may be encouraged and species are so chosen that the slope, bottom of the dumps and top of the dumps are able to sustain these species. The aspect of the dump is also a factor which regulates some climatic

parameters and allows only species adopted to that micro climate.

17. The top soil, if any, shall temporarily be stored at earmarked site(s) only and it should not be kept unutilized for long. The topsoil shall be used for land reclamation and plantation. The over burden (OB) generated during the mining operations shall be stacked at earmarked dump site(s) only and it should not be kept active for a long period of time. The maximum height of the dumps shall not exceed 8m and width 20 m and overall slope of the dumps shall be maintained to 45°. The OB dumps should be scientifically vegetated with suitable native species to prevent erosion and surface run off. In critical areas, use of geo textiles shall be undertaken for stabilization of the dump. The entire excavated area shall be backfilled and afforested. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment, Forest and Climate Change and its Regional Office on six monthly basis.

18. Catch drains and siltation ponds of appropriate size shall be constructed around the mine working,mineral and OB dumps toprevent run off of water and flow of sediments directly into the river and other water bodies. The water so collected should be utilized for watering the mine area, roads, green belt development etc. The drains shall be regularly desilted particularly after monsoon and maintained properly. The drains, settling tanks and check dams of appropriate size, gradient and length shall be constructed both around the mine pit and over burden dumps to prevent run off of water and flow of sediments directly into the river and other water bodies and sump capacity should be designed keeping 50% safety margin over and above peak sudden rainfall (based on 50 years data) and maximum discharge in the area adjoining the mine site. Sump capacity should also provide adequate retention period to allow proper settling of silt material. Sedimentation pits shall be constructed at the corners of the garland drains and desilted at regular intervals.

19. Plantation shall be raised in a 7.5m wide green belt in the safety zone around the mining lease, backfilled and reclaimed area, around water body, along the roads etc. by planting the native species in consultation with the local DFO/Agriculture Department and as per CPCB Guidelines. The density of the trees should be around 2500 plants per ha. Greenbelt shall be developed all along the mine lease area in a phased manner and shall be completed within first five years.

20. The Project Proponent shall make necessary alternative arrangements, where required, in consultation with the State Government to provide alternate areas for livestock grazing, if any. In this context, Project Proponent should implement the directions of the Hon'ble Supreme Court with regard to acquiring grazing land. The sparse trees on such grazing ground, which provide mid-day shelter from the scorching sun, should be scrupulously guarded against felling and plantation of such trees should be promoted.

21. The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered fauna, if any, spotted in the study area. Action plan for conservation of flora and fauna shall be prepared and implemented in consultation with the State Forest and Wildlife Department. A copy of action plan shall be submitted to the Ministry of Environment, Forest and Climate Change and its Regional Office.

22. As per the Company Act, the CSR cost should be 2 % of average net profit of last three years. Hence CSR expenses should be as per the Company Act/Rule for the Socio

Economic Development of the neighborhood Habitats which could be planned and executed by the Project Proponent more systematically based on the 'Need based door to door survey' by established Social Institutes/Workers. The report shall be submitted to the Ministry of Environment, Forest and Climate Change and its Regional Office on six monthly basis.

23. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

24. Measures should be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in operations of HEMM, etc. should be provided with ear plugs / muffs.

25. Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects.

26. The project authorities should inform to the Regional Office regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.

27. The project proponent shall submit six monthly reports on the status of the implementation of the stipulated environmental safeguards to the Ministry of Environment, Forest and Climate Change, its Regional Office, Central Pollution Control Board and State Pollution Control Board.

28. A copy of clearance letter will be marked to concerned Panchayat / local NGO, if any, from whom suggestion / representation has been received while processing the proposal.

29. State Pollution Control Board should display a copy of the clearance letter at the Regional office, District Industry Centre and Collector's office/ Tehsildar's Office for 30 days.

30. The project authorities should advertise at least in two local newspapers widely circulated, one of which shall be in the vernacular language of the locality concerned, within 7 days of the issue of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution Control Board and also at web site of the Ministry of Environment, Forest and Climate Change at www.environmentclearance.nic.in and a copy of the same should be forwarded to the Regional Office.

31. The SEIAA, Odisha may alter/modify the above conditions or stipulate any further condition in the interest of environment protection.

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

33. The above mentioned stipulated conditions shall be complied in a time-bound manner. Failure to comply with any of the conditions mentioned above may result in cancellation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.

Environmental Scientist, SEAC

ANNEXURE- E

CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE OF M/S NATIONAL ENTERPRISES IN ADAGHAT IRON ORE MINES FOR ENHANCEMENT IN PRODUCTION OF IRON ORE FROM 3,00,300 (0.3 MILLION) TPA TO 7,00,005 (0.7 MILLION) TPA ROM WITH TOTAL EXCAVATION OF 1.024 MILLION TPA (ROM OF 0.7 MILLION TPA + 0.324 MILLION TPA WASTE), SETTING UP TWO MOBILE CRUSHING OF 150 TPH CAPACITY EACH AND TWO MOBILE SCREENING UNITS OF 250 TPH CAPACITY EACH OVER AN AREA OF 15.074 HA. IN VILLAGE- ADAGHAT UNDER BLOCK & TEHSIL: KOIDA, SUBDIVISION- BONAI IN DISTRICT: SUNDARGARH OF SRI CHARANJIT SINGH GREWAL - EC.

(I) Statutory compliance

(i) This Environmental Clearance (EC) is subject to orders/ judgment of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, Common Cause Conditions as may be applicable.

(ii) The Project proponent complies with all the statutory requirements and judgment of Hon'ble Supreme Court dated 2nd August,2017 in Writ Petition (Civil) No. 114 of 2014 in matter of Common Cause versus Union of India & Ors before commencing the mining operations.

(iii) The State Government concerned shall ensure that mining operation shall not be commenced till the entire compensation levied, if any, for illegal mining paid by the Project Proponent through their respective Department of Mining & Geology in strict compliance of Judgment of Hon'ble Supreme Court dated 2nd August, 2017 in Writ Petition (Civil) No. 114 of 2014 in matter of Common Cause versus Union of India & Ors.

(iv) This Environmental Clearance shall become operational only after receiving formal NBWL Clearance from MoEF&CC subsequent to the recommendations of the Standing Committee of National Board for Wildlife, if applicable to the Project,

(v) This Environmental Clearance shall become operational only after receiving formal Forest Clearance (FC) under the provision of Forest Conservation Act, 1980, if applicable to the project.

(vi) Project Proponent (PP) shall obtain Consent to Operate after grant of EC and effectively implement all the conditions stipulated therein. The mining activity shall not commence prior to obtaining Consent to Establish / Consent to Operate from the concerned State Pollution Control Board.

(vii) The PP shall adhere to the provision of the Mines Act, 1952, Mines and Mineral (Development & Regulation), Act, 2015 and rules & regulations made there under. PP shall adhere to various circulars issued by Directorate General Mines Safety (DGMS) and Indian Bureau of Mines from time to time.

(viii) The Project Proponent shall obtain consents from all the concerned land owners, before start of mining operations, as per the provisions of MMDR Act, 1957 and rules made thereunder in respect of lands which are not owned by it.

(ix) The Project Proponent shall follow the mitigation measures provided in MoEF&CC's Office Memorandum No. Z-l1013/57/2014-IA.II (M), dated 29th

October, 2014, titled “Impact of mining activities on Habitations-Issues related to the mining Projects wherein Habitations and villages are the part of mine lease areas or Habitations and villages are surrounded by the mine lease area”.

(x) The Project Proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of surface water and from CGWA for withdrawal of ground water for the project.

(xi) A copy of EC letter will be marked to concerned Panchayat / local NGO etc. if any, from whom suggestion / representation has been received while processing the proposal.

(xii) State Pollution Control Board shall be responsible for display of this EC letter at its Regional office, District Industries Centre and Collector’s office/ Tehsildar’s Office for 30 days.

(xiii) The Project Authorities should widely advertise about the grant of this EC letter by printing the same m at least two local newspapers, one of which shall be in vernacular language of the concerned area. The advertisement shall be done within 7 days of the issue of the clearance letter mentioning that the instant project has been accorded EC and copy of the EC letter is available with the State Pollution Control Board and web site of the Ministry of Environment, Forest and Climate Change (www.environmentclearance. nic.in). A copy of the advertisement may be forwarded to the concerned MoEF&CC Regional Office for compliance and record.

(xiv) The Project Proponent shall inform the MoEF&CC/SEIAA, Odisha for any change in ownership of the mining lease. In case there is any change in ownership or mining lease is transferred than mining operation shall only be carried out after transfer of EC as per provisions of the para 11 of EIA Notification, 2006 as amended from time to time.

(II) <u>Air quality monitoring and preservation</u>

(i) The Project Proponent shall install a minimum of 3 (three) online Ambient Air Quality Monitoring Stations with 1 (one) in upwind and 2 (two) in downwind direction based on long term climatological data about wind direction such that an angle of 120° is made between the monitoring locations to monitor critical parameters, relevant for mining operations, of air pollution viz. PM_{10}, $PM_{2.5}$, $NO_{2;}$ CO and SO_2 etc. as per the methodology mentioned in NAAQS Notification No. B-29016/20/90/PCl/I, dated 18.11.2009 covering the aspects of transportation and use of heavy machinery in the impact zone. The ambient air quality shall also be monitored at prominent places like office building, canteen etc. as per the site condition to ascertain the exposure characteristics at specific places. The above data shall be digitally displayed within 03 months in front of the main Gate of the mine site.

(ii) Effective safeguard measures for prevention of dust generation and subsequent suppression (like regular water sprinkling, metalled road construction etc.) shall be carried out in areas prone to air pollution wherein high levels of PM_{10} and $PM_{2.5}$ are evident such as haul road, loading and unloading point and transfer points. The Fugitive dust emissions from ah

sources shall be regularly controlled by installation of required equipments/ machineries and preventive maintenance. Use of suitable water-soluble chemical dust suppressing agents may be explored for better effectiveness of dust control system. It shall be ensured that air pollution level conform to the standards prescribed by the MoEF&CC/ Central Pollution Control Board.

(III) <u>Water quality monitoring and preservation</u>

(i) In case, immediate mining scheme envisages intersection of ground water table, then Environmental Clearance shall become operational only after receiving formal clearance from CGWA. In case, mining operation involves intersection of ground water table at a later stage, then PP shall ensure that prior approval from CGWA and MoEF&CC is in place before such mining operations. The permission for intersection of ground water table shall essentially be based on detailed hydro-geological study of the area.

(ii) Regular monitoring of the flow rate of the springs and perennial nallahs flowing in and around the mine lease shall be carried out and records maintain. The natural water bodies and or streams which are flowing in an around the village, should not be disturbed. The Water Table should be nurtured so as not to go down below the pre-mining period. In case of any water scarcity in the area, the Project Proponent has to provide water to the villagers for their use. A provision for regular monitoring of water table in open dug wall located in village should be incorporated to ascertain the impact of mining over ground water table. The Report on changes in Ground water level and quality shall be submitted on six-monthly basis to the Regional Office of the Ministry, CGWA and State Groundwater Department / State Pollution Control Board.

(iii) Project Proponent shall regularly monitor and maintain records w.r.t. ground water level and quality in and around the mine lease by establishing a network of existing wells as well as new piezo-meter installations during the mining operation in consultation with Central Ground Water Authority/ State Ground Water Department. The Report on changes in Ground water level and quality shall be submitted on six-monthly basis to the Regional Office of the Ministry, CGWA and State Groundwater Department / State Pollution Control Board.

(iv) The Project Proponent shall undertake regular monitoring of natural water course/ water resources/ springs and perennial nallahs existing/ flowing in and around the mine lease and maintain its records. The project proponent shall undertake regular monitoring of water quality upstream and downstream of water bodies passing within and nearby/ adjacent to the mine lease and maintain its records. Sufficient number of gullies shall be provided at appropriate places within the lease for management of water. PP shall carryout regular monitoring w.r.t. pH and included the same in monitoring plan. The parameters to be monitored shall include their water quality vis-a-vis suitability for usage as per CPCB criteria and flow rate. It shall be ensured that no obstruction and/ or alteration be made to water bodies during mining operations without justification and prior approval of MoEF&CC / SEIAA, Odisha. The monitoring of water courses/ bodies existing in lease area shall be carried out four times in a year viz. pre- monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January) and the

record of monitored data be sent regularly to Ministry of Environment, Forest and Climate Change and its Regional Office, SEIAA, Odisha, Central Ground Water Authority and Regional Director, Central Ground Water Board, State Pollution Control Board and Central Pollution Control Board. Clearly showing the trend analysis on six-monthly basis.

(v) Quality of polluted water generated from mining operations which include Chemical Oxygen Demand (COD) in mines run-off; acid mine drainage and metal contamination in runoff shall be monitored along with Total Suspended Solids (TDS), Dissolved Oxygen (DO), pH and Total Suspended Solids (TSS). The monitored data shall be uploaded on the website of the company as well as displayed at the project site in public domain, on a display board, at a suitable location near the main gate of the Company. The circular No. J-20012/1 /2006-IA.II (M) dated 27.05.2009 issued by Ministry of Environment, Forest and Climate Change may also be referred in this regard.

(vi) The project proponent shall construct retaining wall and settling pond within the lease area. Further, check dams shall be constructed at strategic locations in which rain water passes in rainy season. Finally, the excess supernanted after sedimentation shall be allowed to spill away through stone pitch structure to the nearby valley.

(vii) De-silting of agricultural lands in buffer zone and beyond including nearby Nalas/rivers perennially periodically and perpetually caused due to wash up of minerals/OB/dumps shall be done as per SOP submitted. A legal affidavit shall be submitted within 6 months from the date of issue of Environmental Clearance to this effect with periodicity of de-silting.

(viii) Detail design of the existing retaining wall and the proposed for the expansion from a chartered Civil Engineer shall be submitted within 6 months from the date of issue of Environmental Clearance to ensure that no silt after wash up is escaped from the core / buffer zone of the mines.

(ix) An area of 3.40Ha shall be kept for public use as pond and road. Hence, remaining 52.956Ha shall be planted during life of the mine in a phased manner i.e. within a period of 20 years.

(x) Project Proponent shall plan, develop and implement rainwater harvesting measures on long term basis to augment ground water resources in the area in consultation with Central Ground Water Board/ State Groundwater Department. A report on amount of water recharged needs to be submitted to Regional Office, MoEF&CC annually.

(xi) Industrial waste water (workshop and waste water from the mine) should be properly collected and treated in an ETP as proposed so as to conform to the notified standards prescribed from time to time. The standards shall be prescribed through Consent to Operate (CTO) issued by concerned State Pollution Control Board (SPCB). The workshop effluent shall be treated after its initial passage through Oil and grease trap.

(xii) The water balance/water auditing shall be carried out and measure for reducing the consumption of water shall be taken up and reported to the Regional Office of the MoEF&CC and State Pollution Control Board.

(IV) Noise and vibration monitoring and prevention

(i) The peak particle velocity at 500m distance or within the nearest habitation, whichever is closer shall be monitored periodically as per applicable DGMS guidelines.

(ii) The illumination and sound at night at project sites disturb the villages in respect of both human and animal population. Consequent sleeping disorders and stress may affect the health in the villages located close to mining operations. Habitations have a right for darkness and minimal noise levels at night. PPs must ensure that the biological clock of the villages is not disturbed; by orienting the floodlights/ masks away from the villagers and keeping the noise levels well within the prescribed limits for day /night hours.

(iii) The Project Proponent shall take measures for control of noise levels below 85 dBA in the work environment. The worker engaged in operations of HEMM, etc. should be provided with ear plugs /muffs. All personnel including laborers working in dusty areas shall be provided with protective respiratory devices along with adequate training, awareness and information on safety and health aspects. The PP shall be held responsible in case it has been found that workers/ personals/ laborers are working without personal protective equipment.

(V) Mining Plan

(i) The Project Proponent shall adhere to the working parameters of mining plan which was submitted at the time of EC appraisal wherein year-wise plan was mentioned for total excavation i.e. quantum of mineral, waste, over burden, inter burden and top soil etc.. No change in basic mining proposal like mining technology, total excavation, mineral & waste production, lease area and scope of working (viz. method of mining, overburden & dump management, O.B & dump mining, mineral transportation mode, ultimate depth of mining etc.) shall not be carried out without prior approval of the Ministry of Environment, Forest and Climate Change, which entail adverse environmental impacts, even if it is a part of approved mining plan modified after grant of EC or granted by State Govt. in the form to Short Term Permit (STP), Query license or any other name.

(ii) The Project Proponent shall get the Final Mine Closure Plan along with Financial Assurance approved from Indian Bureau of Mines/Department of Mining & Geology as required under the Provision of the MMDR Act, 1957 and Rules/ Guidelines made there under. A copy of approved final mine closure plan shall be submitted within 2 months of the approval of the same from the competent authority to the concerned Regional Office of the Ministry of Environment, Forest and Climate Change for record and verification.

(iii) The land-use of the mine lease area at various stages of mining scheme as well as at the end-of-life shall be governed as per the approved Mining Plan. The excavation vis-a-vis backfilling in the mine lease area and corresponding afforestation to be raised in the reclaimed area shall be governed as per approved mining plan. PP shall ensure the monitoring and management of rehabilitated areas until the vegetation becomes self-sustaining. The

compliance status shall be submitted half-yearly to the MoEF&CC and its concerned Regional Office / SEIAA, Odisha.

(VI) Land reclamation

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

(ii) The reject/waste generated during the mining operations shall be stacked at earmarked waste dump site(s) only. The physical parameters of the waste dumps like height, width and angle of slope shall be governed as per the approved Mining Plan as per the guidelines/circulars issued by DGMS w.r.t. safety in mining operations shall be strictly adhered to maintain the stability of waste dumps.

(iii) The reclamation of waste dump sites shall be done in scientific manner as per the Approved Mining Plan cum Progressive Mine Closure Plan.

(iv) The slope of dumps shall be vegetated in scientific manner with suitable native species to maintain the slope stability, prevent erosion and surface run off. The selection of local species regulates local climatic parameters and help in adaptation of plant species to the microclimate. The gullies formed on slopes should be adequately taken care of as it impacts the overall stability of dumps. The dump mass should be consolidated with the help of dozer/ compactors thereby ensuring proper filling/ leveling of dump mass. In critical areas, use of geo textiles/ geo-membranes / clay liners / Bentonite etc. shall be undertaken for stabilization of the dump.

(v) The Project Proponent shall carry out slope stability study in case the dump height is more than 30 meters. The slope stability report shall be submitted to concerned regional office of MoEF&CC, Govt. of India, Bhubaneswar as well as SEIAA, Odisha.

(vi) Catch drains, settling tanks and siltation ponds of appropriate size shall be constructed around the mine working, mineral yards and topsoil / OB / waste dumps to prevent runoff of water and flow of sediments directly into the water bodies (Nallah/ River/ Pond etc.). The collected water should be utilized for watering the mine area, roads, green belt development, plantation etc. The drains/ sedimentation sumps etc. shall be de-silted regularly, particularly after monsoon season, and maintained properly.

(vii) Check dams of appropriate size, gradient and length shall be constructed around mine pit and OB dumps to prevent storm run-off and sediment flow into adjoining water bodies. A safety margin of 50% shall be kept for designing of sump structures over and above peak rainfall (based on 50 years data) and maximum discharge in the mine and its adjoining area which shall also help in providing adequate retention time period thereby allowing proper settling of sediments/ silt material. The sedimentation pits/ sumps shall be constructed at the comers of the garland drains.

(viii) The top soil, if any, shall temporarily be stored at earmarked site(s) within the mine lease only and should not be kept unutilized for long. The physical parameters of the top soil dumps like height, width and angle of slope shall be governed as per the approved Mining Plan and as per the guidelines framed by DGMS w.r.t. safety in mining operations shall be strictly adhered to maintain the stability of dumps. The topsoil shall be used for land reclamation and plantation purpose.

(ix) The mining lease holders shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc.

(VII) Transportation

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

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

(iii) Traffic management shall be done as per recommendation of Traffic Management Study Report.

(iv) The Project Proponent shall provide parking plaza for the heavy vehicles within the lease area as recommendation of NEERI.

(VIII) Green Belt

(i) The Project Proponent shall develop greenbelt in 7.5m wide safety zone all along the mine lease boundary as per the guidelines of CPCB in order to arrest pollution emanating from mining operations within the lease. The whole Green belt shall be developed within first 5 years starting from windward side

of the active mining area. The development of greenbelt shall be governed as per the EC granted by the Ministry irrespective of the stipulation made in approved mine plan.

(ii) The Project Proponent shall carryout plantation/ afforestation in backfilled and reclaimed area of mining lease, around water body, along the roadsides, in community areas etc. by planting the native species in consultation with the State Forest Department/ Agriculture Department/ Rural development department/ Tribal Welfare Department/ Gram Panchayat such that only those species be selected which are of use to the local people. The CPCB guidelines in this respect shall also be adhered. The density of the trees should be around 2500 saplings per Hectare. Adequate budgetary provision shall be made for protection and care of trees.

(iii) The Project Proponent shall make necessary alternative arrangements for livestock feed by developing grazing land with a view to compensate those areas which are coming within the mine lease. The development of such grazing land shall be done in consultation with the State Government. In this regard, Project Proponent should essentially implement the directions of the Hon'ble Supreme Court with regard to acquisition of grazing land. The sparse trees on such grazing ground, which provide mid-day shelter from the scorching sun, should be scrupulously guarded/ protected against felling and plantation of such trees should be promoted.

(iv) The Project Proponent shall undertake all precautionary measures for conservation and protection of endangered flora and fauna and Schedule-I species during mining operation. A Wildlife Conservation Plan shall be prepared for the same clearly delineating action to be taken for conservation of flora and fauna. The Plan shall be approved by Chief Wild Life Warden of the State Govt.

(v) And implemented in consultation with the State Forest and Wildlife Department. A copy of Wildlife Conservation Plan and its implementation status (annual) shall be submitted to the Regional Office of the Ministry.

(IX) <u>Public hearing and human health issues</u>

(i) The Project Proponent shall appoint an Occupational Health Specialist for Regular as well as Periodical medical examination of the workers engaged in the mining activities, as per the DGMS guidelines. The records shall be maintained properly. PP shall also carryout Occupational health check-ups in respect of workers which are having ailments like BP, diabetes, habitual smoking, etc. The check-ups shall be undertaken once in six months and necessary remedial/ preventive measures be taken. A status report on the same may be sent to MoEF&CC Regional Office and DGMS on half-yearly basis.

(ii) A commitment in form of an undertaking for periodical occupational health checkup of the employee and the local people shall be done through an occupational health expert as per the detailed action plan submitted with the proposal within 6 months from the date of issue of Environmental Clearance.

(iii) The Project Proponent must demonstrate commitment to work towards 'Zero Harm' from their mining activities and carry out Health Risk Assessment (HRA) for identification workplace hazards and assess their potential risks to health and determine appropriate control measures to protect the health and wellbeing of workers and nearby community. The proponent shall maintain accurate and systematic records of the HRA. The HRA for neighborhood has to focus on Public Health Problems like Malaria, Tuberculosis, HIV, Anaemia, Diarrhoea in children under five, respiratory infections due to bio mass cooking. The proponent shall also create awareness and educate the nearby community and workers for Sanitation, Personal Hygiene, Hand washing, not to defecate in open, Women Health and Hygiene (Providing Sanitary Napkins), hazard of tobacco and alcohol use. The Proponent shall carryout base line HRA for all the category of workers and thereafter every five years.

(iv) The Proponent shall carry out Occupational health surveillance which be a part of HRA and include Biological Monitoring where practical and feasible, and the tests and investigations relevant to the exposure (e.g. for Dust a X-Ray chest; For Noise Audiometric; for Lead Exposure Blood Lead, For Welders Full Ophthalmologic Assessment; for Manganese Miners a complete Neurological Assessment by a Certified Neurologist, and Manganese (Mn) estimation in Blood; For Inorganic Chromium- Fortnightly skin inspection of hands and forearms by a responsible person. Except routine tests all tests would be carried out in a Lab accredited by NABH. Records of Health Surveillance must be kept for 30 years, including the results of and the records of Physical examination and tests. The record of exposure due to materials like Asbestos, Hard Rock Mining, Silica, Gold, Kaolin, Aluminium, Iron, Manganese, Chromium, Lead, Uranium need to be handed over to the Mining Department of the State in case the life of the mine is less than 30 years. It would be obligatory for the State Mines Departments to make arrangements for the safe and secure storage of the records including X-Ray. Only conventional X-Ray will be accepted for record purposes and not the digital one). X-Ray must meet ILO criteria (17 x l4 inches and of good quality).

(v) The Proponent shall maintained a record of performance indicators for workers which includes (a) there should not be a significant decline in their Body Mass Index and it should stay between 18.5 -24.9, (b) the Final Chest X-Ray compared with the base line X-Ray should not show any capacities, (c) At the end of their leaving job there should be no Diminution in their Lung Functions Forced Expiratory Volume in one second (FEV1),Forced Vital Capacity (FVC), and the ratio) unless they are smokers which has to be adjusted, and the effect of age, (d) their hearing should not be affected. As a proof an Audiogram (first and last need to be presented), (e) they should not have developed any Persistent Back Pain, Neck Pain, and the movement of their Hip, Knee and other joints should have normal range of movement, (f) they should not have suffered loss of any body part. The record of the same should be submitted to the Regional Office, MoEF&CC annually along with details of the relief and compensation paid to workers having above indications.

(vi) The Project Proponent shall ensure that Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects.

(vii) Project Proponent shall make provision for the housing for workers/labors or shall construct labor camps within/outside (company owned land) with necessary basic infrastructure/ facilities like fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche for kids etc. The housing may be provided in the form of temporary structures which can be removed after the completion of the project related infrastructure. The domestic waste water should be treated with STP in order to avoid contamination of underground water.

(viii) The activities proposed in Action plan prepared for addressing the issues raised during the Public Hearing shall be completed as per the budgetary provisions mentioned in the Action Plan and within the stipulated time frame. The Status Report on implementation of Action Plan shall be submitted to the concerned Regional Office of the Ministry along with District Administration.

(ix) Issues raised and recorded in proceedings of public hearing w.r.t. environment / pollution / CER shall be complied by the Mining Authority as per OM F. No. 22-65/2017-IA.III, dated 30.09.2020 of MoEF&CC, Govt. of India.

(X) Corporate Environment Responsibility (CER)

(i) The activities and budget earmarked for Corporate Environmental Responsibility (CER) as per Ministry's O.M No 22-65/2017-IA. II (M) dated 01.05.2018 or as proposed by SEAC should be kept in a separate bank account. The activities proposed for CER shall be implemented in a time bound manner and annual report of implementation of the same along with documentary proof viz. photographs, purchase documents, latitude & longitude of infrastructure developed & road constructed needs to be submitted to Regional Office MoEF&CC annually along with audited statement.

(ii) Project Proponent shall keep the funds earmarked for environmental protection measures in a separate account and refrain from diverting the same for other purposes. The Year wise expenditure of such funds should be reported to the MoEF&CC and its concerned Regional Office / SEIAA, Odisha.

(XI) Miscellaneous

(i) The Project Proponent shall prepare digital map (land use & land cover) of the entire lease area once in five years purpose of monitoring land use pattern and submit a report to concerned Regional Office of the MoEF&CC.

(ii) The Project Authorities should inform to the Regional Office regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.

(iii) The project proponent shall establish a solar power plant with 30KVA capacity within the lease area as proposed.

(iv) The Project Proponent shall submit six monthly compliance reports on the status of the implementation of the stipulated environmental safeguards to the MoEF&CC & its concerned Regional Office, SEIAA, Odisha, Central Pollution Control Board and State Pollution Control Board.

(v) A separate 'Environmental Management Cell' with suitable qualified manpower should be set-up under the control of a Senior Executive. The Senior Executive shall directly report to Head of the Organization. Adequate number of qualified Environmental Scientists and Mining Engineers shall be appointed and submit a report to RO, MoEF&CC.

(vi) The proponent shall comply all the specific conditions as recommended by CSIR-NEERI on carrying capacity study (as applicable) in time bound manner as proposed.

(vii) The mining lease holders shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc.

(viii) The project proponent shall augment infrastructure on drinking water, health care and education in nearby villages as per time bound action plan submitted.

(ix) The project proponent shall obtain permission from DGMS under 106(2b) to carry out blasting operation within the lease area.

(x) The concerned Regional Office of the MoEF&CC shall randomly monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the MoEF&CC officer(s) by furnishing the requisite data / information / monitoring reports.

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

Environmental Scientist, SEAC

ANNEXURE - F

CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE OF M/S. RUNGTA MINES LTD. FOR CONSTRUCTION OF PROPOSED (S+9) STORIED KANTHER-KOIDA RESIDENTIAL COLONY OVER AN BUILT-UP AREA 57963.68 SQM LOCATED IN VILLAGE KANTHER-KOIRA IN DISTRICT, SUNDERGARH OF SRI HIRAK MAZUMDER - EC.

PART A - SPECIFIC CONDITIONS:

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

TOPOGRAPHY AND NATURAL DRAINAGE

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

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

9. As proposed, fresh water requirement from surface water shall not exceed 229 m^3 per day.
10. A certificate shall be obtained from the local body supplying water, specifying the total annual water availability with the local authority, the quantity of water already committed, the quantity of water allotted to the project under consideration and the balance water available. This should be specified separately for ground water and surface water sources, ensuring

that there is no impact on other users.

11. The quantity of fresh water usage, water recycling and rainwater harvesting shall be measured and recorded to monitor the water balance as projected by the project proponent. The record shall be submitted to the Regional Office, MoEF&CC and SEIAA, Odisha along with six monthly Monitoring reports.
12. Installation of dual pipe plumbing for supplying fresh water for drinking, cooking and bathing etc. and other for supply of recycled water for flushing, landscape irrigation, car washing, thermal cooling, conditioning etc. shall be done.
13. Use of water saving devices/ fixtures (viz. low flow flushing systems; use of low flow faucets tap aerators etc.) for water conservation shall be incorporated in the building plan.
14. Separation of grey and black water should be done by the use of dual plumbing system. In case of single stack system separate recirculation lines for flushing by giving dual plumbing system be done.
15. Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.
16. The local bye-law provisions on rain water harvesting should be followed. If local bye-law provision is not available, adequate provision for storage and recharge should be followed as per the Ministry of Urban Development Model Building Byelaws, 2016. Rain water harvesting recharge pits of 79 nos. shall be provided.
17. Any ground water dewatering should be properly managed and shall conform to the approvals and the guidelines of the CGWA in the matter. Formal approval shall be taken from the CGWA for any ground water abstraction or dewatering. The proponent shall also obtain permission from Water Resources Department, Govt. of Odisha for drawl of water.
18. The proponent shall keep one bore well as standby domestic water source once municipal water supply is made available in the project area.

SOLID WASTE MANAGEMENT

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

generated from project shall be obtained.

SEWAGE TREATMENT PLANT

24. Sewage shall be treated in STP of capacity 1500 KLD. The treated effluent from STP shall be reused for flushing, horticulture & Filter backwash.
25. Excess treated water shall be discharged to the drain only after getting the permission from the concerned authority. The proponent shall renovate the existing drain to accommodate the discharge and maintain it perennially. To this effect the proponent has to give a legal affidavit before going for construction activity.
26. A certificate from the competent authority shall be obtained for discharging treated effluent/ untreated effluents into the Public sewer/disposal/drainage systems along with the final disposal point.
27. Separate large recharge pits shall be constructed inside the project area to accommodate the rainwater in case the housing project period and the CDP of the Govt. does not synchronize with reference to construction of road and drain.
28. No sewage or untreated effluent water would be discharged through storm water drains.
29. The installation of the Sewage Treatment Plant (STP) shall be certified by an independent expert and a report in this regard shall be submitted to the SEIAA, Odisha before the project is commissioned for operation. Periodical monitoring of water quality of treated sewage shall be conducted. Necessary measures should be made to mitigate the odour problem from STP.
30. Sludge from the onsite sewage treatment, including septic tanks, shall be collected, conveyed and disposed as per the Ministry of Urban Development, Central Public Health and Environmental Engineering Organization (CPHEEO) Manual on Sewerage and Sewage Treatment Systems, 2013.
31. The proponent shall obtain permission from the concerned authority to discharge the liquid waste to any drain i.e. the competent authority of the drain and “Nala” before commencement of any activity at the project site.

ENERGY

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

34. Solar, wind or other Renewable Energy shall be installed to meet electricity generation equivalent to 5% of the demand load or as per the state level/ local building bye-laws requirement, whichever is higher. Follow super ECBC requirement of ECBC 2017 and provide compliance report.

35. Solar power shall be used for lighting in the apartment to reduce the power load on grid. Separate electric meter shall be installed for solar power. Solar water heating shall be provided to meet 20% of the hot water demand of the commercial and institutional building or as per the requirement of the local building bye-laws, whichever is higher. Residential buildings are also recommended to meet its hot water demand from solar water heaters, as far as possible.

36. Use of environment friendly materials in bricks, blocks and other construction materials, shall be required for at least 20% of the construction material quantity. These include Fly Ash bricks, hollow bricks, AACs, Fly Ash Lime Gypsum blocks, compressed earth blocks, and other environment friendly materials. Fly ash should be used as building material in the construction as per the provision of Fly Ash Notification of September, 1999 and amended as on 27th August, 2003 and 25th January, 2016. Ready mixed concrete must be used in building construction.

37. A certificate of adequacy of available power from the agency supplying power to the project along with the load allowed for the project shall be submitted.

AIR QUALITY AND NOISE

38. Construction site shall be adequately barricaded before the construction begins. Dust, smoke & other air pollution prevention measures shall be provided for the building as well as the site. These measures shall include screens for the building under construction, continuous dust/ wind breaking walls all around the site (at least 3-meter height). Plastic/tarpaulin sheet covers shall be provided for vehicles bringing in sand, cement, murram and other construction materials prone to causing dust pollution at the site as well as taking out debris from the site. Sand, murram, loose soil, cement, stored on site shall be covered adequately so as to prevent dust pollution. Wet jet shall be provided for grinding and stone cutting. Unpaved surfaces and loose soil shall be adequately sprinkled with water to suppress dust.

39. AII construction and demolition debris shall be stored at the site (and not dumped on the roads or open spaces outside) before they are properly disposed. All demolition and construction waste shall be managed as per the provisions of the Construction and Demolition Waste Rules, 2016. All workers working at the construction site and involved in loading, unloading, carriage of construction material and construction debris or working in any area with dust pollution shall be provided with dust mask.

40. **Notification GSR 94(E) dated 25.01.2018 of MoEF&CC regarding Mandatory Implementation of Dust Mitigation Measures for Construction and Demolition Activities for projects requiring Environmental Clearance shall be complied with.**

41. The gaseous emissions from DG set shall be dispersed through adequate stack height as per CPCB standards. Acoustic enclosure shall be provided to the DG sets to mitigate the noise pollution. Low sulphur diesel shall be used. The location of the DG set and exhaust pipe height shall be as per the provisions of the Central Pollution Control Board (CPCB) norms.

42. For indoor air quality the ventilation provisions as per National Building Code of India shall be provided.

43. Ambient noise levels shall conform to residential standard both during day and night as per Noise Pollution (Control and Regulation) Rules, 2000. Incremental pollution loads on the ambient air and noise quality shall be closely monitored during construction phase. Adequate measures shall be made to reduce ambient air and noise level during construction phase, so as to conform to the stipulated standards by CPCB / SPCB.

GREEN COVER

44. No tree cutting/transplantation of existing trees has been proposed in the instant project. A minimum of 1 tree for every 80 m^2 of land should be planted and maintained. The existing trees will be counted for this purpose. The landscape planning should include plantation of native species. The species with heavy foliage, broad leaves and wide canopy cover are desirable. Water intensive and/or invasive species should not be used for landscaping. As proposed approx. 2,48,078 sqft (20.02 % of Plot area) of plot area shall be provided for green area development.

TOP SOIL PRESERVATION AND REUSE

45. Topsoil should be stripped to a depth of 20 cm from the areas proposed for buildings, roads, paved areas, and external services. It should be stockpiled appropriately in designated areas and reapplied during plantation of the proposed vegetation on site.

TRANSPORT

46. A comprehensive mobility plan, as per Ministry of Urban Development best practices guidelines (URDPFI), shall be prepared to include motorized, non-motorized, public, and private networks. Road should be designed with due consideration for environment, and safety of users. The road system can be designed with these basic criteria.
    - Hierarchy of roads with proper segregation of vehicular and pedestrian traffic.
    - Traffic calming measures
    - Proper design of entry and exit points.
    - Parking norms as per local regulation

47. A detailed traffic management and traffic decongestion plan shall be drawn up to ensure that the current level of service of the roads within a 05 kms radius of the project is maintained and improved upon after the implementation of the project.

48. This plan should be based on cumulative impact of all development and increased habitation being carried out or proposed to be carried out by the project or other agencies in this 05 Kms radius of the site in different scenarios of space and time and the traffic management plan shall be duly validated and certified by the State Urban Development department and the P.W.D./ competent authority for road augmentation and shall also have their consent to the implementation of components of the plan which involve the participation of these departments.

49. Vehicles hired for bringing construction material to the site should be in good condition and should have a pollution check certificate and should conform to applicable air and noise emission standards be operated only during non-peak hours.

50. A dedicated entry/exit and parking shall be provided for commercial activities.
51. Barricades shall be provided around project boundary.
52. Speed of the vehicles shall be restricted upto 15 kmph by erecting speed bumps at regular intervals at project site and proper signage shall be provided for guided vehicular movement and speed restrictions.
53. Parking shall be prohibited on the access road to the proposed project site.
54. Footpath shall be seamless with sufficient width.
55. No vehicles shall be allowed to stop and stand in front of the gate on main access.
56. A buffer of minimum 10 m shall be maintained between the entry/exit gate and the road to avoid traffic congestion.
57. The Traffic Management Plan prepared by the proponent shall be duly validated and certified by the State Concerned Competent Authority and shall have also their consent before implementation.

ENVIRONMENT MANAGEMENT PLAN

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

OTHERS

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

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

PART B – GENERAL CONDITIONS

1. A copy of the Environmental Clearance letter shall also be displayed on the website of the concerned State Pollution Control Board. The EC letter shall also be displayed at the Regional Office, District Industries centre and Collector's Office/ Tehsildar's office for 30 days.
2. The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year-wise expenditure shall be reported to the SEIAA, Odisha and MoEF&CC, Govt. of India and its concerned Regional Office.
3. Officials from the Regional Office of MoEF&CC, Bhubaneswar who would be monitoring the implementation of environmental safeguards should be given full cooperation, facilities and documents/data by the project proponents during their inspection.
4. In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by the SEIAA, Odisha.
5. The SEIAA, Odisha reserves the right to add additional safeguard measures subsequently, if found necessary, and to take action including revoking of the environment clearance under the provisions of the Environmental (Protection) Act, 1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.
6. All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department, the Forest Conservation Act, 1980 and the Wildlife (Protection) Act, 1972 etc. shall be obtained, as applicable by project proponents from the respective competent authorities.
7. These stipulations would be enforced among others under the provisions of the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and the EIA Notification, 2006.
8. The project proponent shall advertise in at least two local Newspapers widely circulated in the region, one of which shall be in the vernacular language informing that the project has been accorded Environmental Clearance and copies of clearance letters are available with the State Pollution Control Board and may also be seen on the website of the SEIAA, Odisha. The advertisement shall be made within Seven days from the date of receipt of the Clearance letter and a copy of the same shall be forwarded to the Regional Office of MoEF&CC, Bhubaneswar.
9. Any appeal against this clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.
10. A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zilla Parisad / Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal. The

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

11. The proponent shall submit/upload six monthly reports on the status of compliance of the stipulated Environmental Clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MoEF&CC, Govt. of India, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; SPM, RSPM, SO_2, NO_x (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.

12. The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the respective Regional Offices of MoEF&CC, Govt. of India by E-mail.

Environmental Scientist, SEAC

ANNEXURE -G

STANDARD TERMS OF REFERENCE FOR CONDUCTING EIA STUDY FOR ENVIRONMENTAL CLEARANCE OF M/S K R ENTERPRISES FOR ADDITIONAL 2.4 MTPA OF COAL WASHERY UNIT IN THE EXISTING COAL CRUSHING AND SCREENING PLANT OF CAPACITY 2.4 MTPA AT VILLAGE - REMUAN, TEHSIL – TALCHER, DISTRICT – ANGUL, ODISHA OF SRI JAYABARDHAN MISHRA (PARTNER) – VIOLATION -TOR

1) Siting of washery is critical considering to its environmental impacts. Preference should be given to the site located at pit head; in case such a site is not available, the site should be as close to the pit head as possible and coal should be transported from mine to the washery preferably through closed conveyer belt to avoid air pollution.
2) The washery shall not be located in eco-sensitive zones areas.
3) The washery should have a closed system and zero discharge. The storm drainage should be treated in settling ponds before discharging into rivers/streams/water bodies.
4) A thick green belt of about 50 m width should be developed surrounding the washery.
5) A brief description of the plant alongwith a layout, the specific technology used and the source of coal should be provided.
6) The EIA-EMP Repot should cover the impacts and management plan for the project of the capacity for which EC is sought and the impacts of specific activities, including the technology used and coal used, on the environment of the area (within 10km radius), and the environmental quality of air, water, land, biotic community, etc. through collection of data and information, generation of data on impacts for the rated capacity. Cumulative impacts for air and water should be a part of EIA in case coal mine, TPP and other washeries are located within 10km radius. The EIA should also include mitigative measures needed to minimize adverse environmental impacts.
7) A Study Area Map of the core zone as well as the 10km area of buffer zone showing major industries/ mines and other polluting sources should be submitted. These maps shall also indicate the migratory corridors of fauna, if any and areas of endangered fauna; plants of medicinal and economic importance; any ecologically sensitive areas within the 10 km buffer zone; the shortest distance from the National Park/WL Sanctuary Tiger Reserve, etc. alongwith the comments of the Chief Wildlife Warden of the State Government.
8) Data of one-season (non-monsoon) primary- base-line data on environmental quality of air (PM_{10}, $PM_{2.5}$, SOx and NOx, noise, water

(surface and groundwater), soil be submitted.

9) The wet washery should generally utilize mine water only. In case mine water is not available, the option of storage of rain water and its use should be examined. Use of surface water and ground water should be avoided.

10) Detailed water balance should be provided. The break-up of water requirement as per different activities in the mining operations vis-a-vis washery should be given. If the source of water is from surface water and/or ground water, the same may be justified besides obtaining approval of the Competent Authority for its drawl.

11) The entire sequence of mineral production, transportation, handling, transfer and storage of mineral and waste, if any, and their impacts on air quality should be shown in a flow chart with specific points where fugitive emissions can arise and specific pollution control/mitigative measures proposed to be put in place. The washed coal and rejects should be transport by train as far as possible. Road transport of washed coal and rejects should generally be avoided. In case, the TPP is within 10km radius, it should be through conveyer belt. If transport by rail is not feasible because of the topography of the area, the option for transport by road be examined in detail and its impacts along with the mitigation measures should be clearly brought out in EIA/EMP report.

12) Details of various facilities proposed to be provided in terms of parking, rest areas, canteen etc.to the personnel involved in mineral transportation, workshop and effluents/pollution load from these activities should be provided.

13) Impacts of CHP, if any, on air and water quality should also be spelt out alongwith Action Plan.

14) O.M. No. J-llOl3/25/2014-IA.I dated 11th August, 2014 to be followed with regard to CSR activities.

15) Details of Public Hearing, Notice(s) issued in newspapers, proceedings/minutes of Public Hearing, points raised by the general public and response/commitments made by the proponent along with the Action Plan and budgetary provisions be submitted in tabular form. If the Public Hearing is in the regional language, an authenticated English translation of the same should be provided. Status of any litigations/ court cases filed/pending, if any, against the project should be mentioned in EIA.

16) Analysis of samples indicating the following be submitted:

- Characteristics of coal prior to washing (this includes grade of coal, other characteristics of ash, S and heavy levels of metals such as Hg, As, Pb, Cr etc).
- Characteristics and quantum of coal after washing.

- Characteristics and quantum of coal rejects.

17) Details of management/disposal/use of coal rejects should be provided. The rejects should be used in TPP located close to the washery as far as possible. If TPP is within a reasonable distance (10 km), transportation should be by conveyor belt. If it is far away, the transportation should be by rail as far as possible.

18) Copies of MOU/Agreement with linkages (for stand-alone washery) for the capacity for which EC is being sought should be submitted.

19) Corporate Environment Responsibility:

a) The Company must have a well laid down Environment Policy approved by the Board of Directors.

b) The Environment Policy must prescribe for standard operating process/procedures to bring into focus any infringements/deviation/violation of the environmental or forest norms/ conditions.

c) The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions must be furnished.

d) To have proper checks and balances, the company should have a well laid down 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.

20) A detailed action Plan for Corporate Social Responsibility for the project affected people and people living in and around the project area should be provided.

21) Permission of drawl of water shall be pre-requisite for consideration of EC.

22) Wastewater /effluent should confirm to the effluent standards as prescribed under Environment (Protection) Act, 1986

23) Details of washed coal, middling and rejects along with the MoU with the end-users should be submitted.

24) **This Terms of References (TORs) is valid for a period of four years from the date of issue of TORs for submission of the final EIA/EMP report after conducting public hearing.**

(1) The SEAC in its meeting dated 20-02-2023 recommended for grant of Environmental Clearance with stipulated conditions.
(2) Proposal was placed in the 116th meeting of SEIAA held on 28.04.2023 for consideration of EC. The Authority deliberated on the matter and it was decided that, the PP may apply afresh and rejected the proposal as certified compliance report was not satisfactory and some conditions of earlier EC were not complied.
(3) The following documents, asked by SEIAA, have been submitted by PP. Hence, the SEAC recommended to return this proposal to SEIAA, Odisha as decision will be taken by the SEIAA.